

Section 3.2

Air Quality and Meteorology**SECTION SUMMARY**

This section describes existing air quality and meteorology within the Port, potential impacts on air quality and human health associated with operation of the Proposed Project (the Berths 121-131 container terminal improvements), Alternative 1 (No Project, a CEQA-only alternative) and Alternative 2 (No Federal Action), and mitigation measures applied to reduce those impacts.

Section 3.2, Air Quality and Meteorology, provides the following:

- a description of existing air quality in the Port area;
- a list of local, state, and federal regulations and policies that apply to the Proposed Project as well as the alternatives (a full description is in Appendices A1 – A3 in Volume II of this Draft EIS/EIR);
- a discussion on the methodology used to determine whether the Proposed Project or alternatives would result in an impact on air quality from air emissions;
- an impact analysis of the Proposed Project and alternatives;
- a description of any mitigation measures proposed to reduce potential impacts, as applicable

Key Points of Section 3.2:**Construction Impacts**

Construction, conservatively assumed to occur in 2026 and 2027, is expected to happen concurrently with reduced B121-131 Terminal operations. Construction of the Proposed Project would result in air quality emissions impacts for NO_x that are significant under CEQA and NEPA and for CO that are significant under CEQA. Application of the mitigation measures listed below would reduce those impacts, but they would remain significant and unavoidable under CEQA and NEPA. The No Project Alternative (Alternative 1) would have no construction-related air quality impacts because it would not include any construction. Construction of the No Federal Action Alternative (Alternative 2) would result in a significant air quality impact for CO under CEQA; after mitigation, that impact would be significant and therefore unavoidable. Alternative 2 would have no impacts related to mass emissions under NEPA.

Construction-related emissions for the Proposed Project would result in off-site ambient air concentrations of PM₁₀ (24-hour and annual average), PM_{2.5} (24-hour), and NO₂ (annual average and federal and state 1-hr average) that would represent significant impacts under CEQA and NEPA. After application of the construction mitigation measures listed below, construction-related mass emission impacts related to NO_x for the Proposed Project would remain significant and unavoidable. The No Project Alternative (Alternative 1) would have no construction-related air quality impacts related to ambient air concentrations because it would not include any construction. Construction-related emissions

1 for the No Federal Action Alternative (Alternative 2) would result in no exceedances of off-site ambient
2 air concentration thresholds. Accordingly, impacts would be less than significant under CEQA. There
3 would be no impact under NEPA.

4 Application of the construction and operational mitigation measures listed below would reduce the
5 magnitude of impacts from construction emissions of the Proposed Project. However, impacts would
6 remain significant and unavoidable for NO₂.

7 **MM AQ-1: Harbor Craft Used During Construction.**

8 **MM AQ-2: On-Road Trucks Used during Construction.**

9 **MM AQ-3: Non-Road Construction Equipment.**

10 **MM AQ-4: Cargo Ships Used During Construction.**

11 **MM AQ-5: Dredging Non-Road Equipment.**

12 **MM AQ-6: General Construction Mitigation Measure.**

13 **MM AQ-7: Renewable Diesel Fuel**

14 **MM AQ-8: Vessel Speed Reduction Program**

15 **MM AQ-9: Yard Tractor Emissions Standards**

16 **MM AQ-10: Cargo-Handling Equipment Emissions Standards**

17 **Operational Impacts**

18 Operation of the Proposed Project would result in significant impacts from emissions of VOC, CO, and
19 NO_x under CEQA and NEPA. Operation of the No Project (Alternative 1) and No Federal Action
20 (Alternative 2) would result in significant air quality emissions impacts of VOC and CO under CEQA in
21 at least one future year; the No Project Alternative is not analyzed under NEPA and the No Federal
22 Action Alternative would have no impacts under NEPA. Application of the operational mitigation
23 measures listed below would reduce the magnitude of impacts from operational mass emissions for the
24 Proposed Project, but impacts would be significant and unavoidable for NO_x under CEQA and NEPA.
25 Mitigation would reduce the impacts of Alternative 2's operational impacts under CEQA, but they would
26 remain significant and unavoidable for CO.

27 Operation of the Proposed Project would result in significant ambient air concentrations of PM₁₀ (24-hour
28 and annual average) under CEQA and NEPA in at least one future year. Ambient air concentrations
29 related to operation of Alternative 1 and Alternative 2 would be significant for 24-hour and annual
30 average PM₁₀ under CEQA. The No Project Alternative is not analyzed under NEPA and the No Federal
31 Action Alternative would have no impacts under NEPA. Application of the operational mitigation
32 measures listed below would reduce the magnitude of impacts from operational emissions of the Proposed
33 Project, but impacts would be significant and unavoidable for 24-hour and annual average PM₁₀ under
34 CEQA and NEPA. Mitigation would reduce the impacts of Alternative 2 under CEQA to less than
35 significant.

36 **MM AQ-8: Vessel Speed Reduction Program (VSRP).**

37 **MM AQ-9: Yard Tractor Emissions Standards.**

38 **MM AQ-10: Cargo-Handling Equipment Emissions Standards.**

39 Lease measures would be included in the tenant's lease. Although not quantifiable, these measures would
40 further reduce future air emissions and would comply with Port air quality plans and programs.

41 **LM AQ-1: Zero-Emission Cargo Handling Equipment (CHE) Transition.**

1 **LM AQ-2: Priority Access for Drayage.**

2 **Health Risk Impacts**

3 Under both CEQA and NEPA, the residential and occupational cancer risk impacts of the Proposed
4 Project would be less than significant before and after mitigation. The residential and occupational cancer
5 risk impacts of both Alternative 1 “No Project” and Alternative 2 “No Federal Action” would be less than
6 significant under CEQA. Alternative 2 (No Federal Action) would have no impact with respect to
7 residential and occupational cancer risk under NEPA.

8 Under CEQA, the acute and chronic hazard index impacts and the population cancer burden of the
9 Proposed Project and both alternatives would be less than significant and no mitigation is required. The
10 Proposed Project’s impacts would be less than significant under NEPA and Alternative 2 (No Federal
11 Action) would have no acute and chronic hazard index impact under NEPA.

12

3.2.1 Introduction

Emissions from construction and operation of the Proposed Project and alternatives would affect air quality in the immediate area of the Proposed Project and the surrounding region. This section includes a description of the affected air quality environment, predicted impacts of the Proposed Project and Alternatives, and mitigation measures that would reduce significant impacts. Emission and dispersion modeling details are provided in Appendices A1 and A2, respectively, of Volume II. Appendix A3 presents the detailed Health Risk Assessment.

3.2.2 Environmental Setting

The Proposed Project is located in the Harbor District of the City of Los Angeles, within the South Coast Air Basin (SCAB). The SCAB consists of the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties and all of Orange County. The air basin covers an area of approximately 6,000 square miles and is bounded on the west by the Pacific Ocean; on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains; and on the south by the San Diego County line.

3.2.2.1 Regional Climate and Meteorology

The climate of the SCAB is classified as Mediterranean, characterized by warm, rainless summers and mild, wet winters. The major influence on the regional climate is the Eastern Pacific High (a strong persistent area of high atmospheric pressure over the northeastern Pacific Ocean), topography, and the moderating thermal effects of the Pacific Ocean. Seasonal variations in the position and strength of the Eastern Pacific High are a key factor in the weather changes in the area.

The Eastern Pacific High attains its greatest strength and most northerly position during the summer, when it is centered west of northern California. Large-scale atmospheric subsidence associated with the Eastern Pacific High produces an elevated temperature inversion along the West Coast. Vertical mixing is often limited to the base of the inversion, and air pollutants are trapped in the lower atmosphere. The mountain ranges that surround the Los Angeles Basin constrain the horizontal movement of air and also inhibit the dispersion of air pollutants out of the region. These two factors, combined with the air pollution sources of more than 15 million people, are responsible for the high pollutant concentrations that can occur in the SCAB. In addition, the warm temperatures and high solar radiation during the summer months promote the formation of ozone, which has its highest levels during the summer.

3.2.2.2 Existing Air Quality

Criteria Pollutants

Air quality at a given location can be characterized by the concentration of various pollutants in the air. Units of concentration are generally expressed as parts per million by volume (ppmv) or micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) of air. The significance of a pollutant concentration is determined by comparing the concentration to an appropriate national or state ambient air quality standard. These standards represent the allowable atmospheric concentrations at which the public health and welfare are protected. They include a reasonable margin of safety to protect the more sensitive individuals in the population.

1 Pollutants for which ambient air quality standards have been adopted are known as
2 criteria pollutants. These pollutants can harm human health and the environment, and
3 cause property damage. They are called "criteria" air pollutants because they are
4 regulated by developing human health-based and/or environmentally based criteria
5 (science-based guidelines) for setting permissible levels. The set of limits based on
6 human health is called the primary standards; another set of limits intended to prevent
7 environmental and property damage is called the secondary standards. The criteria
8 pollutants of greatest concern in this air quality assessment are ozone (O₃), carbon
9 monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate
10 matter less than 10 micrometers in diameter (PM₁₀), and fine particulate matter less than
11 2.5 micrometers in diameter (PM_{2.5}). Nitrogen oxides (NO_x) and sulfur oxides (SO_x) refer
12 to generic groups of compounds that include NO₂ and SO₂, respectively. These oxides are
13 produced during combustion. Because members of these compound groups typically
14 change rapidly from one form to another, emissions from combustion sources such as
15 diesel engines are often stated in terms of total NO_x and total SO_x emissions, rather than
16 being listed by individual compound.

17 EPA establishes the National Ambient Air Quality Standards (NAAQS) pursuant to the
18 Clean Air Act (42 U.S.C. 7401), and defines how to demonstrate whether an area meets
19 the NAAQS. CARB establishes the California Ambient Air Quality Standards (CAAQS),
20 which must be equal to or more stringent than the NAAQS when initially adopted. CARB
21 defines how to demonstrate whether an area meets the CAAQS. As discussed above, one
22 of the main concerns with criteria pollutants is that they contribute directly to regional
23 human health problems. The known adverse effects associated with these criteria
24 pollutants are shown in Table 3.2-1.

25 Ozone is a unique criteria pollutant of concern because it is not directly emitted from
26 project-related sources. Rather, ozone is a secondary pollutant formed from the precursor
27 pollutants volatile organic compounds (VOC) and NO_x. VOC and NO_x react to form
28 ozone in the presence of sunlight through a complex series of photochemical reactions.
29 As a result, unlike inert pollutants, ozone concentrations usually peak several hours after
30 the precursors are emitted and many miles downwind of the source. Because of the
31 complexity and uncertainty of predicting photochemical pollutant concentrations, ozone
32 impacts are indirectly addressed in this study by comparing emissions of VOC and NO_x
33 generated by the Proposed Project or the alternatives to daily emission thresholds set by
34 the South Coast Air Quality Management District (SCAQMD). These emission
35 thresholds are discussed in Section 3.2.3.4.

36 Generally, concentrations of photochemical pollutants, such as ozone, are highest during
37 the summer and coincide with the season of maximum solar insolation. Concentrations of
38 inert pollutants, such as CO, tend to be the greatest during the winter and are a product of
39 light wind conditions and surface-based temperature inversions that are frequent during
40 that time of year and that limit atmospheric dispersion. However, in the case of PM₁₀
41 impacts from fugitive dust sources, maximum concentrations may occur during high
42 wind events or near man-made ground-disturbing activities, such as vehicular activities
43 on roads and earth moving during construction activities.

Table 3.2-1: Adverse Effects Associated with Criteria Pollutants

Pollutant ^d	Adverse Effects
Ozone (O ₃)	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals and (2) Risk to public health implied by alterations in pulmonary morphology and host defence in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; and (d) Property damage
Carbon Monoxide (CO)	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses
Nitrogen Dioxide (NO ₂)	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration
Sulfur Dioxide (SO ₂)	(a) Broncho-constriction accompanied by symptoms that may include wheezing, shortness of breath, and chest tightness during exercise or physical activity in persons with asthma
Suspended Particulate Matter less than 10 Microns (PM ₁₀)	(a) Excess deaths from short-term and long-term exposures; (b) excess seasonal declines in pulmonary function, especially in children; (c) asthma exacerbation and possibly induction; (d) adverse birth outcomes including low birth weight; (e) increased infant mortality; (f) increased respiratory symptoms in children such as cough and bronchitis; and (g) increased hospitalization for both cardiovascular and respiratory disease (including asthma) ^a
Suspended Particulate Matter less than 2.5 microns (PM _{2.5})	(a) Excess deaths from short-term and long-term exposures; (b) excess seasonal declines in pulmonary function, especially in children; (c) asthma exacerbation and possibly induction; (d) adverse birth outcomes including low birth weight; (e) increased infant mortality; (f) increased respiratory symptoms in children such as cough and bronchitis; and (g) increased hospitalization for both cardiovascular and respiratory disease (including asthma) ^a
Lead ^b	(a) Increased body burden; and (b) impairment of blood formation, nerve conduction, and neurotoxin
Sulfates ^c	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardiopulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; and (f) Property damage

Source: SCAQMD (2017).

Notes:

^a More detailed discussions on the health effects associated with exposure to suspended particulate matter can be found in the EPA's 2009 Integrated Science Assessment for Particulate Matter (EPA 2009).

^b Lead is not a pollutant of concern for the Proposed Project.

^c Sulfate is not a pollutant of concern for the Proposed Project. SCAQMD has not established an emissions thresholds for sulfates.

^d CAAQS have also been established for hydrogen sulfide, vinyl chloride, and visibility reducing particles. They are not shown in this table because they are not pollutants of concern for the Proposed Project.

1 Diesel particulate matter (DPM) is a key pollutant evaluated in this analysis. DPM is one
2 of the components of ambient PM₁₀ and PM_{2.5} and is classified as a toxic air contaminant
3 (TAC) by CARB. Accordingly, DPM is evaluated in this study both as a criteria pollutant
4 (as a component of PM₁₀ and PM_{2.5}) and as a TAC.

Regional Air Quality

EPA designates all areas of the United States according to whether they meet the NAAQS, pursuant to the Clean Air Act. A *nonattainment* designation means that one or more of the six criteria pollutants considered as indicators of air quality exceeds the primary NAAQS in any given area, over a period of time specified by the NAAQS. States with nonattainment areas must prepare a State Implementation Plan (SIP) that demonstrates how those areas will come into attainment. EPA currently designates the SCAB as a nonattainment area for ozone, PM_{2.5} (24-hour standard), and lead (lead is not emitted by the Proposed Project or the alternatives). The severity of nonattainment has been classified by EPA for several pollutants. EPA currently classifies the SCAB as extreme nonattainment for the 8-hour ozone NAAQS and serious nonattainment for PM_{2.5} (24-hour standard). The SCAB is in attainment/maintenance of the NAAQS for CO, SO₂, NO₂, and PM₁₀.

CARB also designates areas of the state according to whether they meet the CAAQS. A nonattainment designation means that a CAAQS has been exceeded more than once in three years. CARB currently designates the SCAB as a nonattainment area for ozone, PM₁₀, PM_{2.5}, and NO₂. The air basin is in attainment of the CAAQS for CO, SO₂, lead and sulfates, and is unclassified for hydrogen sulfide and visibility reducing particles (CARB 2020).

Local Air Quality

LAHD has been conducting its own air quality monitoring program since February 2005. This monitoring program supports the Port's commitment to improve air quality within the San Pedro Bay Ports area under the Clean Air Action Plan (CAAP), by helping to better manage and provide feedback on the Port's air quality improvement efforts. The monitoring program includes a network of four air monitoring stations that measure a comprehensive set of air pollutants within the Port's region of influence. The program includes a number of real-time air quality measurements: ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide, two sizes of particulate matter (PM₁₀ or coarse particles, and PM_{2.5} or fine particles), polycyclic aromatic hydrocarbons (PAHs), and ultrafine particles. As part of the program, meteorological monitoring stations operate adjacent to each air monitoring station, to help interpret the air quality data and for use in other Port programs. Each meteorological monitoring station collects wind speed, wind direction, and temperature data; in addition, one station also collects solar radiation, relative humidity, and barometric pressure data.

The monitoring stations are strategically located within the Port's region of influence at: 1) Saints Peter and Paul School (Wilmington Community Station), 2) Berth 47 in the Outer Harbor (Coastal Boundary Station), 3) Terminal Island Water Reclamation Plant (TITP) (Source-Dominated Station), and 4) along Harbor Boulevard near 3rd Street, adjacent to the San Pedro Waterfront Promenade (San Pedro Community Station). Meteorological data from the Saints Peter and Paul School (Wilmington Community Station) was used in this air quality analysis to model human health risks and criteria pollutant impacts associated with the Proposed Project and alternatives. Table 3.2-2 shows the highest pollutant concentrations recorded at the Saints Peter and Paul School (Wilmington Community Station), for 2022 through 2024, the most recent complete 3-year period of data available.

Table 3.2-2: Maximum Pollutant Concentrations Measured at the Wilmington Community Monitoring Station (SPPS)

Pollutant	Averaging Period	National Standard	State Standard	Highest Monitored Concentration		
				2022 ^f	2023 ^f	2024 ^f
Ozone (ppm)	1-hour ^a	--	0.09	0.072	0.089	0.083
	8-hour National ^b	0.070	--	0.058	0.060	0.058
	8-hour State ^a	--	0.07	0.059	0.071	0.066
CO (ppm)	1-hour ^a	35	20	4.2	5.1	3.0
	8-hour ^a	9	9	2.2	2.4	1.9
NO ₂ (ppm)	1-hour National ^c	0.100	--	0.055	0.052	0.048
	1-hour State ^a	--	0.18	0.060	0.052	0.053
	Annual	0.053	0.030	0.014	0.013	0.012
SO ₂ (ppm)	1-hour National ^d	0.075	--	0.011	0.009	0.007
	1-hour State ^a	--	0.25	0.01	0.008	0.016
	24-hour ^a	--	0.04	0.0070	0.002	0.0013
PM ₁₀ (µg/m ³)	24-hour ^a	150	50	44.6	60.8	67.6
	Annual	--	20	24.7	22.5	21.1
PM _{2.5} (µg/m ³)	24-hour ^e	35	--	22	28.6	22.8
	Annual	12	12	6.2	7.0	6.5

Source: Leidos, Inc. (2022, 2023, 2024).

Notes:

a Exceedances of the standards are shown in bold. All reported values represent the highest recorded concentration during the year unless otherwise noted.

b The monitored concentrations reported for the national 8-hour ozone standard represent the 3-year average (including the reported year and the prior 2 years) of the fourth-highest 8-hour concentration each year, whereas the state value is simply the highest reported value for that year.

c The monitored concentrations reported for the national 1-hour NO₂ standard represent the 3-year average (including the reported year and the prior 2 years) of the 98th percentile of the annual distribution of daily maximum 1-hour average concentrations.

d The monitored concentrations reported for the national 1-hour SO₂ standard represent the 3-year average (including the reported year and the prior 2 years) of the 99th percentile of the annual distribution of daily maximum 1-hour average concentrations.

e The monitored concentrations reported for the national 24-hour PM_{2.5} standard represent the 3-year average (including the reported year and the prior 2 years) of the 98th percentile of the annual distribution of daily average concentrations.

f Year 2022 represents the period May 2021-April 2022, year 2023 represents the period May 2022-April 2023, and year 2024 represents the period May 2023-April 2024.

Toxic Air Contaminants

The California Office of Environmental Health Hazard Assessment (OEHHA) determines the toxicity of regulated substances in the state. TACs include air pollutants that can produce adverse human health effects, including carcinogenic effects, after short-term (acute) or long-term (chronic) exposure. Examples of TAC sources within the SCAB include dry cleaners, gasoline stations, paint and solvent operations, and fossil fuel combustion sources.

SCAQMD's *Multiple Air Toxics Exposure Study V* (MATES V)¹ determined that about 50 percent of the background airborne cancer risk in the SCAB is due to diesel exhaust (SCAQMD 2021), with the highest modeled air toxics risk near the ports. Other areas of elevated risk were identified near Central Los Angeles and transportation corridors and freeways. Compared to the MATES IV² (SCAQMD 2015a) and MATES II³ (SCAQMD 2000) studies, the MATES V study found a large decrease in carcinogenic risk, with the population-weighted risk in the basin down by 40 percent from the analysis in MATES IV and 84 percent lower than the average in MATES II. The MATES V study concluded that, "The air toxics cancer risk in the ports areas decreased by approximately 57% between MATES IV and MATES V. Overall, air toxics risk improved significantly, consistent with air toxic emissions reductions that occurred over the time period." The

In 2006, LAHD, in conjunction with the Port of Long Beach and regional regulatory agencies, developed the San Pedro Bay Ports (SPBP) CAAP, which targets all emissions related to the ports (SPBP 2006). In 2010 the ports released a CAAP update, with emission reduction goals for 2019 and 2023 and uniform air quality standards at the program level, project-specific level, and the source-specific level. In 2017 the ports released the 2017 CAAP Update, which committed the ports to continued air quality improvement efforts and outlined the path toward zero emissions technology, the next iteration of the Clean Truck Program and innovative strategies to encourage the deployment of cleaner ships.

Sensitive Receptors

The impact of air emissions on sensitive members of the population is a special concern. Sensitive receptor groups include children, the elderly, and the acutely and chronically ill. The locations of these groups include residences, schools, child care centers, elder care facilities, and hospitals. For health risk assessment purposes (Impact AQ-6), LAHD also treats recreational areas, such as parks, marinas, and public waterfront areas, as sensitive receptors.

Figure 3.2-1 shows the locations of sensitive receptors; a table listing the name and locations of each sensitive receptor is included in Appendix A3. For this assessment, sensitive receptors were identified and included in the model but, for simplification, sensitive receptors were conservatively assumed to have a residential exposure. This assumption is conservative and overestimates cancer risk for sensitive receptors. Additional information regarding this methodology can be found in Appendix A3.

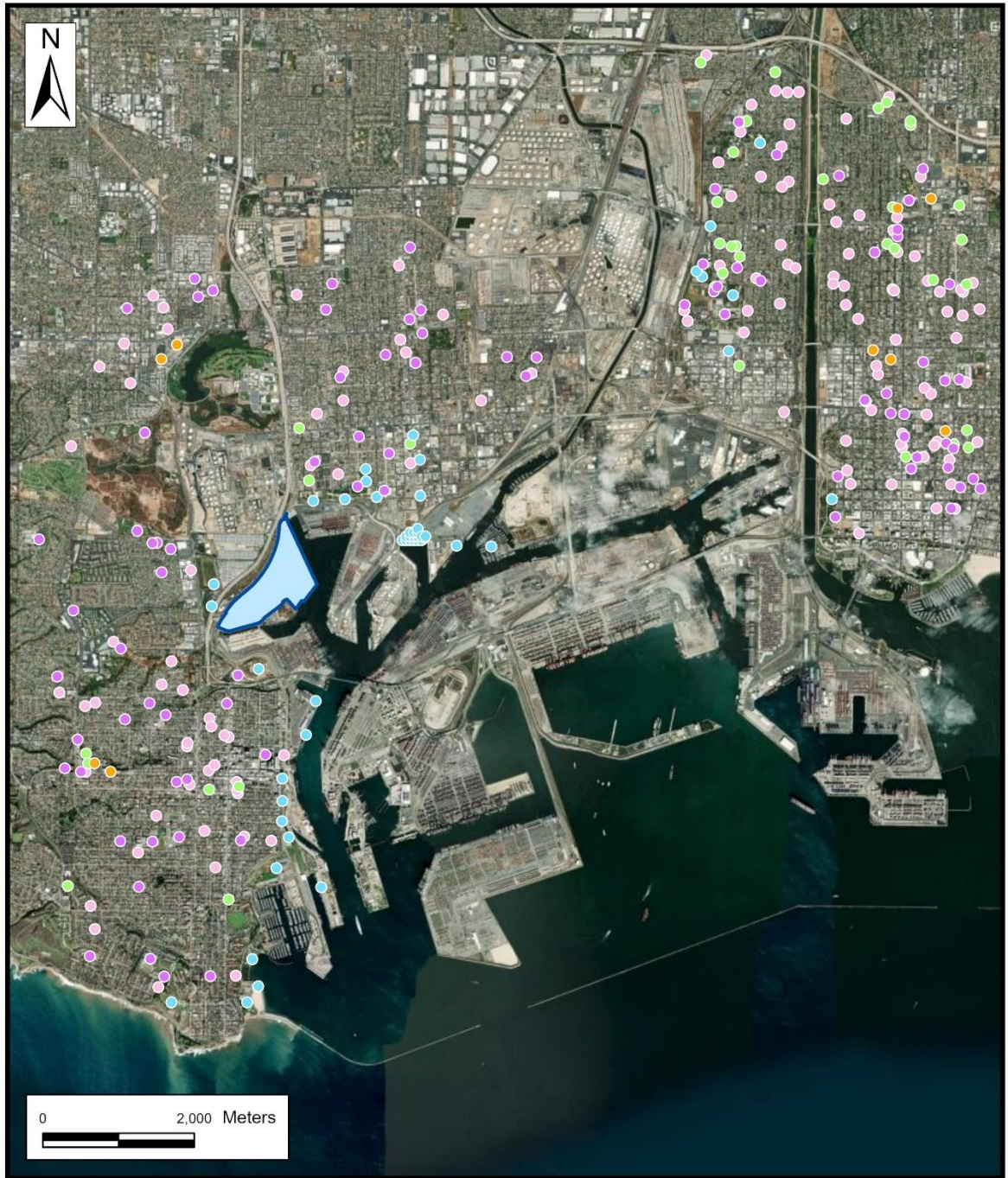
1 MATES V focuses on measurements during 2018 and 2019 with a comprehensive modeling analysis and emissions inventory based on 2018 data.

2 The MATES IV analysis was based on measurements during 2012-2013 and the 2012 emission inventory.

3 The MATES II analysis was based on sampling data from 1998-1999.

1

Figure 3.2-1. Sensitive Receptors near B121-131 Terminal Operations



Legend

- | | |
|---|--|
|  Berth 121-131 |  Hospital |
|  Child Care |  Recreational |
|  Elder Care |  School |

2

1 The nearest sensitive receptors to the project site are located at the Gaffey Street
2 Community Gardens, approximately 1/5 mile west of the project site and the nearest
3 residents are homes along N. Gaffey Street, approximately 1/5 mile west of the project
4 site. The nearest school is the Harbor Occupational Center on North Pacific Avenue
5 about 1/3 mile south of the project site. The nearest daycare center is the YWCA Venture
6 Park Pre-School, approximately 1/3 mile west of the project site. The nearest assisted
7 living home is Grandma's House, about 1/3 mile north of the project site. The nearest
8 hospital is the Little Company of Mary San Pedro Hospital, about 1.5 miles southwest of
9 the project site.

10 **3.2.3 Regulatory Setting**

11 The Federal Clean Air Act of 1970 and its subsequent amendments established air quality
12 regulations and the NAAQS, and delegated enforcement of these standards to the states.
13 In California, CARB is responsible for enforcing air pollution regulations. CARB has, in
14 turn, delegated the responsibility of regulating stationary emission sources to the local air
15 agencies. In the SCAB, the local air agency is SCAQMD.

16 The following subsections list the key federal, state, and local air quality rules, policies,
17 and agreements that potentially apply to the Proposed Project and alternatives. A
18 description of each is presented in Appendix A1.

19 **3.2.3.1 International Rules, Policies, and Agreements:**

20 **International Maritime Organization International Convention for** 21 **the Prevention of Pollution from Ships Annex VI**

22 The International Maritime Organization (IMO) International Convention for the
23 Prevention of Pollution from Ships (MARPOL) Annex VI, which came into force in May
24 2005, set new international nitrogen oxides (NOX) emission limits on marine engines
25 over 130 kilowatts (kW) installed on new vessels retroactive to the year 2000. In October
26 2008, IMO adopted amendments to international requirements under MARPOL Annex
27 VI, which introduced NOX emission standards for new engines and more stringent fuel
28 quality requirements. In April 2014, amendments to MARPOL Annex VI were adopted
29 regarding the effective date of NOx Tier III standards (DieselNet 2022a; IMO 2008). The
30 Annex VI North American Emission Control Area (ECA) requirements applicable to the
31 Revised Project include:

- 32 • Limits on the sulfur content of fuel as a measure to control sulfur oxides (SOx)
33 emissions and, indirectly, particulate (PM) emissions. For ECAs, the sulfur limits
34 are capped at 0.1 percent effective in 2015. The Proposed Project assumes full
35 compliance with MARPOL Annex VI SOx limits.
- 36 • Ships constructed on or after January 1, 2016 shall comply with the Tier III NOx
37 emission limits when operating within the North American ECA (IMO 2010).
38 Tier I and Tier II limits effective 2000 and 2011 are global limits, whereas Tier
39 III limits, effective in 2016, apply only in NOx ECAs.

40 **3.2.3.2 Federal Rules, Policies, and Agreements:**

- 41 • State Implementation Plan

- 1 • EPA Emissions Standards for Category 1, 2, and 3 Marine Diesel Compression
2 Ignition Engines
- 3 • EPA Emission Standards for Non-Road Diesel Engines
- 4 • EPA Emission Standards for Locomotives
- 5 • EPA Emission Standards for On-Road Trucks
- 6 • EPA Non-Road Diesel Fuel Rule
- 7 • EPA and National Highway Traffic Safety Administration Light-Duty Vehicle
8 GHG Emission Standards and Corporate Average Fuel Economy Standards
- 9 • EPA General Conformity Rule
- 10 • Clean Air Act Conformity Statement

11 State Implementation Plan

12 In federal nonattainment areas, the Federal Clean Air Act (CAA) requires preparation of
13 a SIP detailing how the state will attain the NAAQS within mandated timeframes. In
14 response to this requirement, SCAQMD, in collaboration with other agencies, such as
15 CARB and Southern California Association of Governments (SCAG), periodically
16 prepares an Air Quality Management Plan (AQMP) designed to bring the SCAB into
17 attainment with federal requirements and/or to incorporate the latest technical planning
18 information. The AQMP is then incorporated into the SIP, which is submitted by CARB
19 to EPA for approval.

20 SCAQMD has prepared AQMPs in 1997, 2003, 2007, 2012, 2016, and most recently in
21 2022. Each iteration of the AQMP is an update of the previous AQMP. The focus of the
22 2007 AQMP (SCAQMD 2007) was to demonstrate compliance with the NAAQS for
23 PM_{2.5} and 8-hour ozone and other planning requirements, including compliance with the
24 NAAQS for PM₁₀. The SCAQMD did not meet the standards by the original attainment
25 year; therefore, subsequent AQMPs address new attainment deadlines.

26 The 2012 AQMP (SCAQMD 2013) focused on PM_{2.5} control measures designed to attain
27 the federal 24-hour PM_{2.5} standard and contained proposed actions to reduce ozone. The
28 2016 AQMP (SCAQMD 2017) focused primarily on addressing the ozone and PM_{2.5}
29 standards. The 2022 AQMP, released in December 2022 (SCAQMD 2022), addresses
30 requirements for meeting the 70ppb ozone standard and focuses on NO_x control measures
31 for residential, commercial, and large industrial combustion sources. Many of the control
32 measures rely on research and development, demonstration, and incentives to facilitate
33 the widespread deployment of zero-emissions (ZE) and low NO_x technologies alongside
34 funding programs to support research, development, demonstration of such advanced
35 technologies

36 USEPA Emissions Standards for Marine Diesel Compression 37 Ignition Engines—Category 1 and 2 Engines

38 Category 1 and Category 2 (engine displacements per cylinder less than 30 liters) engines
39 are often the auxiliary engines on large ocean going vessels (OGVs) as well as auxiliary
40 and propulsion engines on harbor craft. To reduce emissions from these marine diesel
41 engines, USEPA established 1999 emission standards for newly built engines, referred to
42 as *Tier 2 marine engine standards*. These standards were based on the land-based

1 standard for non-road engines. The Tier 2 standards were phased in from 2004 to 2007
2 (year of manufacture), depending on the engine size.

3 In 2008, USEPA finalized a program to reduce emissions from marine diesel Category 1
4 and 2 engines (73 FR 88 25098-25352). The regulations introduced Tier 3 and Tier 4
5 standards, which apply to both new and remanufactured diesel engines. The phase-in of
6 Tier 3 standards extended from 2009 to 2014 for new Category 1 engines and from 2013
7 to 2014 for new Category 2 engines. Tier 4 standards were phased in for new Category 1
8 and 2 engines above 600 kW from 2014 to 2017. For remanufactured engines, standards
9 apply only to commercial marine diesel engines above 600 kW when the engines are re-
10 manufactured and as soon as certified systems are available.

11 For the Proposed Project, this rule is assumed to affect harbor craft but not oceangoing
12 vessel auxiliary engines because the latter would likely be manufactured overseas and,
13 therefore, would not be subject to the rule.

14 **USEPA Emission Standards for Large Marine Diesel Engines—** 15 **Category 3 Engines**

16 Category 3 engines (greater than 30 liters) represent the main propulsion engines on
17 OGVs and are regulated by NO_x standards for Category 3 marine propulsion engines on
18 U.S. flagged ocean-going vessels (40 CFR Part 9 and 94; 68 FR 9745-9789). The
19 standards went into effect for new engines built in 2004 and later and cover Tier 1
20 through Tier 4 engines. In December 2009, USEPA adopted Tier 2 and Tier 3 emissions
21 standards for newly built Category 3 engines installed on U.S. flagged vessels, as well as
22 marine fuel sulfur limits. The Tier 2 and 3 engines standards and fuel limits are
23 equivalent to the amendments to MARPOL Annex VI. Tier 2 NO_x standards for newly
24 built engines applied beginning in 2011 and require the use of engine-based controls,
25 such as engine timing, engine cooling, and advanced electronic controls. Tier 3 standards
26 applied beginning in 2016 in ECAs and are met with the use of high efficiency emission
27 control technology, such as selective catalytic reduction. The Tier 2 standards are
28 anticipated to result in a 15 to 25 percent NO_x reduction below the Tier 1 levels; Tier 3
29 standards are expected to achieve NO_x reductions 80 percent below the Tier 1 levels
30 (DieselNet 2022a). In addition to the Tier 2 and Tier 3 NO_x standards, the final
31 regulation established standards for hydrocarbon (HC) and carbon monoxide (CO).

32 **USEPA Emission Standards for Non-Road Diesel Engines**

33 To reduce emissions from non-road diesel equipment, USEPA established a series of
34 increasingly strict emission standards for new non-road diesel engines (DieselNet 2022b).
35 Tier 1 standards were phased in on newly manufactured equipment from 1996 through
36 2000 (year of manufacture), depending on the engine horsepower category. Tier 2
37 standards were phased in on newly manufactured equipment from 2001 through 2006.
38 Tier 3 standards were phased in on newly manufactured equipment from 2006 through
39 2008. Tier 4 standards, which require advanced emission control technology to attain
40 them, were phased in between 2008 to 2015. These standards apply to construction off-
41 road land-based equipment.

42 **USEPA Emission Standards for Locomotives**

43 EPA has established a series of increasingly strict emission standards for new or
44 remanufactured locomotive engines (63 FR 18997-19084). In 2008, EPA strengthened

1 the Tier 0 through 2 standards to apply to existing locomotives and introduced more
2 stringent Tier 3 and 4 emission requirements (73 FR 88 25098-25352).

3 **USEPA Emission Standards for On-Road Trucks**

4 Heavy-duty trucks are subdivided into three categories by the vehicle's GVWR: light
5 heavy-duty engines (8,500 to 19,500 pounds), medium heavy-duty engines (19,500 to
6 33,000 pounds), and heavy heavy-duty engines (greater than 33,000 pounds).

7 To reduce emissions from on-road, heavy-duty diesel trucks, USEPA established a series
8 of increasingly strict emission standards for new truck engines (DieselNet 2022a). The
9 latest U.S. federal emission standards affecting criteria pollutants from heavy-duty
10 engines were adopted by USEPA on December 20, 2022. These standards set new limits
11 for NO_x, PM, volatile organic compounds (VOC), and CO for heavy-duty engines
12 starting with model year 2027 and newer.

13 In 2011, USEPA and Department of Transportation's National Highway Traffic Safety
14 Administration (NHTSA) finalized regulations to reduce greenhouse gas (GHG)
15 emissions and improve fuel efficiency of medium- and heavy-duty vehicles (USEPA
16 2011a), including large pickup trucks and vans, semi-trucks, and all types and sizes of
17 work trucks and buses. The regulations incorporate all on-road vehicles rated at a gross
18 vehicle weight at or above 8,500 pounds, and the engines that power them. Under the
19 regulations, fuel economy will be improved and GHG emissions will be reduced in model
20 years 2014 to 2018. In 2016, USEPA and NHTSA implemented Phase 2 of the Heavy-
21 Duty National Program to cover model years 2018 to 2027 for certain trailers and model
22 years 2021 to 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of
23 buses and work trucks.

24 **USEPA Non-Road Diesel Fuel Rule**

25 With this rule, USEPA set sulfur limitations for non-road diesel fuel, including
26 locomotives and marine vessels (though not for the marine residual fuel used by large
27 engines on oceangoing vessels). For the Proposed Project, this rule affects line-haul
28 locomotives; the California Diesel Fuel Regulation (described below) (CARB 2005a)
29 generally pre-empts this rule for other sources such as yard locomotives, construction
30 equipment, terminal equipment, and harbor craft. Under this rule, the diesel fuel used by
31 line-haul locomotives was limited to 15 ppm sulfur content (ultra-low-sulfur diesel)
32 starting January 1, 2010 for non-road fuel, and June 2012 for marine and locomotive
33 fuels (EPA 2004b).

34 **USEPA and National Highway Traffic Safety Administration 35 Medium- and Heavy-Duty Engines and Vehicles GHG Emission 36 Standards and Fuel Economy Standards**

37 In 2011, USEPA, in conjunction with the Department of Transportation's National
38 Highway Traffic Safety Administration (NHTSA), established GHG emission standards
39 and fuel efficiency standards for medium- and heavy-duty engines and vehicles. Final
40 GHG emissions and fuel consumption standards apply to 2017 and newer model year
41 vehicles.

42 In 2010, USEPA, in conjunction with the Department of Transportation's National
43 Highway Traffic Safety Administration (NHTSA), finalized the Light-Duty Vehicle Rule
44 that establishes a national program consisting of greenhouse gas (GHG) emissions

standards and Corporate Average Fuel Economy standards for light-duty vehicles (USEPA 2010). Light-Duty Vehicle Rule standards first apply to new cars and trucks starting with model year 2012. Although the rule is primarily designed to address GHG emissions, the fuel economy standards portion of the rule also serves to reduce criteria pollutant emissions. On August 28, 2012, USEPA and NHTSA extended the National Program of harmonized GHG and fuel economy standards to model year 2017 through 2025 passenger vehicles (USEPA 2012). The rules affect passenger vehicles (i.e., terminal workers) and other light-duty vehicles traveling to the terminal.

3.2.3.3 State Rules, Policies, and Agreements

California Clean Air Act

AB 2650 (2002), California Port Community Air Quality Program

CARB Heavy Duty Diesel Vehicle Idling Emission Reduction Regulation

CARB 1998 South Coast Locomotive Emissions Agreement

CARB California Diesel Fuel Regulation

CARB General Requirements for In-Use Off-Road Diesel-Fueled Fleets Regulation

CARB Measures to Reduce Emissions from Goods Movement Activities

Emission Reduction Plan for Ports and Goods Movement in California

CARB Regulations for Fuel Sulfur and Other Operational Requirements for OGVs within California Waters and 24 Nautical Miles of the California Baseline

CARB Regulation to Reduce Emissions from Diesel Auxiliary Engines on OGVs while at Berth at a California Port

CARB Regulation Related to Ocean Going Ship Onboard Incineration

CARB Mobile Cargo-Handling Equipment at Ports and Intermodal Rail Yards

CARB Emission Standards, Test Procedures, for Large Spark Ignition Engine Forklifts and Other Industrial Equipment

CARB California Drayage Truck Regulation

CARB On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation—Truck and Bus Regulation

CARB Commercial Harbor Craft Regulation

CARB Statewide Portable Equipment Registration Program California Clean Air Act

The California Clean Air Act of 1988, as amended in 1992, outlines a program to attain the CAAQS by the earliest practical date. Because the CAAQS are more stringent than the NAAQS, attainment of the CAAQS requires more emissions reductions than what would be required to show attainment of the NAAQS. Consequently, the main focus of attainment planning in California has shifted from the federal to state requirements. Similar to the federal system, the state requirements and compliance dates are based upon the severity of the ambient air quality standard violation within a region.

SB-1

On April 28, 2017 Governor Brown signed into law Senate Bill 1 (SB-1). Among the changes to California state law was the addition of Health and Safety Code Section 43021. This section, in part, sets strict restrictions on the ability of the California Air Resources Board's (CARB) and other agencies to require the "...retirement, replacement, retrofitting, or repower" of commercial trucks as defined by Section 34601 of the California Vehicle Code "...until the later of the following":

1. Thirteen years from the model year the engine and emissions control system are first certified for use in self-propelled commercial motor vehicles by the state board or other applicable state and federal agencies.
2. When the vehicle reaches the earlier of either 800,000 vehicle miles travelled or 18 years from the model year the engine and emissions control system are first certified for use in self-propelled commercial motor vehicles by the state board or other applicable state and federal agencies.

Section 43021, by its terms, restricts the ability of CARB and other agencies to mandate the retirement, replacement, or retrofit of trucks from California's public highways and roads. The stated legislative intent of SB-1 "to provide owners of self-propelled commercial motor vehicles...certainty about the useful life of engines certified by the state board and other applicable agencies to meet required environmental standards..." Nevertheless, Section 43021, by its terms, applies only to laws or regulations adopted or amended after January 1, 2017, and "does not apply to voluntary incentive or grant programs, including but not limited to, those that give preferential access to a facility to a particular vehicle or class of vehicles."

AB 2650

Under AB 2650, shipping terminal operators are required to limit truck-waiting times to no more than 30 minutes at the Ports of Los Angeles, Long Beach, and Oakland, or face fines of \$250 per violation. A companion piece of legislation (AB 1971) ensures that the intent of AB 2650 is not circumvented by moving trucks with appointments inside the terminal gates to wait.

CARB Heavy Duty Diesel Vehicle Idling Emission Reduction Regulation

This CARB rule has been in effect for heavy-duty diesel trucks in California since 2008. The rule requires that heavy-duty trucks be equipped with a non-programmable engine shutdown system that shuts down the engine after five minutes or optionally meet a stringent NO_x idling emission standard (CCR Title 13, Section 1956.8 and 2485). This regulation applies to trucks used during construction and operation.

CARB 1998 South Coast Locomotive Emissions Agreement

In 1998, CARB, Class I freight railroads operating in the SCAB (Burlington Northern and Santa Fe and Union Pacific Railroad), and EPA signed the 1998 Memorandum of Understanding (MOU) agreeing to a locomotive fleet average emissions program in the SCAQMD. The 1998 MOU requires that the Class I freight railroad fleet of locomotives in the SCAQMD, both line-haul (freight) and switch locomotives, achieve average emissions equivalent to the NO_x emission standard established by EPA for Tier 2 locomotives (5.5 g/bhp-hr). This emission level is equivalent, on a district-wide average,

1 to operating only federal Tier 2 NO_x-compliant locomotives in the SCAQMD (CARB
2 1998).

3 **CARB 2005 Railroad Statewide Agreement**

4 In 2005, CARB, Class I freight railroads operating in the SCAB, and EPA signed the
5 2005 MOU agreeing to programs intended to reduce the emission impacts of rail-yard
6 operations on local communities. The 2005 MOU includes a locomotive idling-reduction
7 program, early introduction of lower-sulfur diesel fuel in interstate locomotives, and a
8 visible emission reduction and repair program (CARB 2005b).

9 **CARB California Diesel Fuel Regulation**

10 With this rule, CARB set sulfur limitations for diesel fuel sold in California for use in on-
11 road and off-road motor vehicles (CCR Title 13, Sections 2281–2285; CCR Title 17,
12 Section 93114). Harbor craft and intrastate locomotives were originally excluded from
13 the rule, but were later included by a 2004 rule amendment (CARB 2005a). Under this
14 rule, diesel fuel used in motor vehicles, harbor craft, and intrastate locomotives has been
15 limited to 15 ppm sulfur since 2007. A federal diesel rule similarly limited sulfur content
16 in diesel fuel used in motor vehicles nationwide to 15 ppm by October 2006.

17 **CARB General Requirements for In-Use Off-road Diesel-Fueled 18 Fleets**

19 In 2007, CARB adopted a rule that requires owners of off-road mobile equipment
20 powered by diesel engines 25 hp or larger to meet or exceed the fleet average or best
21 available control technology (BACT) requirements for NO_x and PM emissions by
22 January 1 of each year between 2014 and 2023 (CCR Title 13, Section 2449.1). The rule
23 is structured by fleet size: large, medium, and small fleets. The regulation was adopted in
24 April 2008 and subsequently amended to delay the turnover of Tier 1 equipment for
25 meeting the NO_x performance requirements of the regulation, and then to delay overall
26 implementation of the equipment turnover compliance schedule in response to the
27 economic downturn in 2008 and 2009.

28 In 2013, CARB received authorization from USEPA to enforce the In-Use Off-road
29 Diesel Vehicle Regulation, including the regulation's performance requirements, such as
30 turnover requirements and restrictions on adding older, dirtier Tier 0 and 1 vehicles.
31 Enforcement of the restrictions on adding Tier 0 and 1 vehicles began January 1, 2014.
32 Enforcement of the restrictions on adding Tier 2 vehicles began January 1, 2018, for large
33 and medium fleets and began on January 1, 2023, for smaller fleets (CARB 2022a).
34 Enforcement of the first fleet average requirements for large fleets (greater than 5,000
35 total fleet horsepower) began on July 1, 2014.

36 CARB approved amendments to the regulation in November 2023, which will require
37 once it comes into effect, the fleets to phase-out use of the oldest and highest polluting
38 off-road diesel vehicles in California; prohibit the addition of high-emitting vehicles to a
39 fleet; and require the use of R99 or R100 renewable diesel in off-road diesel vehicles.

40 **CARB Measures to Reduce Emissions from Goods Movement 41 Activities**

42 In 2006, CARB approved the *Emission Reduction Plan for Ports and Goods Movement in
43 California* (CARB 2006a). The Goods Movement Plan proposes measures that would

1 reduce emissions from the main sources associated with port cargo-handling activities,
2 including ships, harbor craft, terminal equipment, trucks, and locomotives. This effort
3 was a step in implementing the *Goods Movement Action Plan (GMAP)* developed by the
4 California Business, Transportation, and Housing Agency (BTH) and Cal/EPA. The final
5 GMAP was released in January, 2007, and includes the following measures to address the
6 various layers of the goods movement system throughout the state including freeways,
7 rail, and ports.

8 **CARB Airborne Toxic Control Measure for Diesel-Fueled** 9 **Transport Refrigeration Units, Generator Sets, and Facilities** 10 **Where Transport Refrigeration Units Operate**

11 In 2011, CARB amended the 2004 rule designed to reduce the DPM emissions from in-
12 use TRUs) and TRU generator set engines (CCR Title 13, Section 2477). Under the rule,
13 TRU engines are required to meet in-use performance standards by installing the required
14 level of verified diesel emission control strategy (VDECS) or using an alternative
15 technology. Compliance may also be maintained by replacing the engine with a cleaner
16 new or rebuilt engine. The in-use performance standards have two levels of stringency
17 (Low Emission and Ultra Low Emission in-use performance standards) that are phased in
18 per the compliance scheduled set forth in the rule.

19 **CARB Regulations for Fuel Sulfur and Other Operational** 20 **Requirements for OGVs within California Waters and 24** 21 **Nautical Miles of the California Baseline**

22 In 2008, CARB approved the Regulation for Fuel Sulfur and Other Operational
23 Requirements for Ocean-Going Vessels within California Waters and 24 Nautical Miles
24 of the California Baseline (CCR Title 13, Section 2299.2). These regulations have
25 required ship main engines, auxiliary engines, and auxiliary boilers operating in
26 California waters since July 2009 to either use Marine Diesel Oil (MDO) with a
27 maximum sulfur content of 0.5 percent or MGO with a maximum sulfur content of 1.5
28 percent. By August 1, 2012, these source activities were required to meet an MDO limit
29 of 0.5 percent or MGO limit of 1.0 percent (CARB 2011a). Starting in 2009, this
30 regulation has gradually reduced the permitted sulfur content of OGV fuels. Currently,
31 ship main engines, auxiliary engines, and auxiliary boilers operating in California waters
32 must use MDO or Marine Gas Oil (MGO) with a maximum sulfur content of 0.1 percent.

33 **CARB Regulation to Reduce Emissions from Diesel Auxiliary** 34 **Engines on OGVs While at Berth at a California Port (At-Berth** 35 **Regulations)**

36 In 2007, CARB adopted a regulation to reduce emissions from diesel auxiliary engines on
37 OGVs while at berth for container, cruise, and refrigerated cargo vessels (CCR Title 17,
38 Section 93118.3). The original regulation required container vessels, cruise ships, and
39 refrigerated cargo vessels at the State's largest ports to meet emission or power reduction
40 standards while at berth, increasing to 80-percent reduction requirement for 80-percent of
41 vessel calls.

42 In 2020, CARB updated and expanded the regulation to cover tankers and roll-on/roll-off
43 vessels (CCR Title 17, Sections 93130-93130.22 [At-Berth Regulations]). The updated
44 At-Berth Regulations took effect in 2023, with implementation for the various vessel

1 classes through 2027. Auto carriers (roll-on/roll-off vessels) and tanker ships are required
2 to control hoteling emissions at-berth starting in 2025 for the Ports of Los Angeles and
3 Long Beach (CARB 2020). The regulation requires 100-percent of container vessels to
4 control emissions (primarily via shore power), with limited exceptions (capped at 10-
5 percent of vessel visits starting in 2025) for Vessel Incident Events (VIE) or Terminal
6 Incident Events (TIE) that prevent the use of shore power or other emission reduction
7 control technology. The At-Berth Regulations mandate that all AMP-capable vessels use
8 shore power (CCR Title 17, Section 93130.7(a)). Vessels are required to use either shore
9 power or a CARB-approved emission control strategy (CAECS) to reduce emissions,
10 unless they have been granted a waiver by CARB under the Regulation’s Innovative
11 Concepts provision. The At-Berth Regulations include a research exception to allow for
12 testing of CAECS; vessels participating in such testing may be exempt from the
13 Regulations’ requirements if they have a CARB-approved test plan. This process allows
14 for the development and approval of new technologies to reduce at-berth emissions. A
15 remediation fund is also available for shipping lines or terminal operators who are unable
16 to use their primary compliance strategy to remain compliant for any given vessel visit
17 (CCR Title 17, Sections 93130.8(d), (f)-(h), 93130.10(e)-(h)).

18 The At-Berth Regulations do not require the use of shore power due to “safety and
19 emergency event[s]” (CCR Title 17, Sections 93130.8(a), 93130.10(a)). The At-Berth
20 Regulations defined a “safety and emergency event” as “an event where a responsible
21 official reasonably determines that compliance with this Control Measure would endanger
22 the safety of the vessel, crew, cargo, passengers, terminal, or terminal staff because of
23 severe weather conditions, a utility event, or other extraordinary reasons beyond the control
24 of the terminal operator or vessel operator” (CCR Title 17, Section 93130.2(70)). The At-
25 Berth Regulations do not require the use of shore power while hoteling when a vessel is
26 “commissioning” (CCR Title 17, Sections 93130.8(c), 93130.10(c)). This process is
27 “undertaken by the vessel operator and terminal operator to ensure that the shore power
28 equipment on the vessel is compatible with the shore power equipment on the terminal and
29 that there are no safety issues for both the equipment and the personnel handling the
30 connection.” (CCR Title 17, Section 93130.2(84).)

31 All parties necessary to achieving emission reductions from ocean-going vessels at berth
32 have responsibilities and requirements under the At-Berth Regulations, including, but not
33 limited to, vessel operators, terminal operators, and ports (CCR Title 17, Section 93130.1).
34 The At-Berth Regulations require terminal and vessel operators to submit data to CARB to
35 demonstrate compliance with its requirements (CCR Title 17, Section 93130.9(d)). All
36 vessels are required to complete compliance checklists for each visit, and to submit detailed
37 reports directly to CARB within 30 days of departure (CCR Title 17, Section 93130.7(e)).
38 Terminal operators have similar requirements, ensuring that all AMP-capable vessels
39 connect to shore power (CCR Title 17, Section 93130.9(a)). Terminal operators are also
40 required to complete compliance checklists for each vessel visit and submit detailed reports
41 directly to CARB within 30 days of a vessel’s departure (CCR Title 17, Section
42 93130.9(d)).

43 **CARB Regulation Related to Ocean Going Ship Onboard** 44 **Incineration**

45 CARB adopted this regulation in 2005 and amended it in 2006. The regulation prohibits
46 all OGVs greater than 300 registered gross tons from conducting on-board incineration
47 within 3 nautical miles of the California coast.

CARB Mobile Cargo-Handling Equipment at Ports and Intermodal Rail Yards

The Regulation for Mobile CHE at Ports and Intermodal Rail Yards (CCR Title 13, Section 2479) uses BACT to reduce diesel PM and NO_x emissions from mobile CHE at ports and intermodal rail yards. Since 2007, the regulation has imposed emission performance standards on new and in-use terminal equipment that vary by equipment type. The regulation also includes recordkeeping and reporting requirements. The effects of this regulation are accounted for in CARB's CHE Inventory Model emission factors used in this study (CARB 2022). In October 2012, the Office of Administrative Law approved amendments to the CARB regulation to provide additional flexibility for CHE owners/operators in an effort to reduce compliance costs while continuing to reduce emissions (CARB 2012).

CARB Emission Standards, Test Procedures, for Large Spark Ignition Engine Forklifts and Other Industrial Equipment

Since 2007, CARB has promulgated more stringent emissions standards for hydrocarbon and oxides of nitrogen combined (HC + NO_x) emissions and test procedures. The engine emission standards and test procedures were implemented in two phases. The first phase was implemented for engines built between January 2007 and December 2009. The second more stringent phase was implemented for engines built starting in January 2010. The regulation was amended in 2010 to establish fleet average emissions requirements for existing engines and in 2016 to extend and supplement existing record-keeping requirements.

CARB On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation—Truck and Bus Regulation

In December 2011, CARB amended the 2008 State-wide Truck and Bus Regulation to modernize in-use heavy-duty vehicles operating throughout the state. Under this regulation, existing heavy-duty trucks are required to be replaced with trucks meeting the latest NO_x and PM Best Available Control Technologies (BACT) or retrofitted to meet these levels.

Trucks with GVWR less than 26,000 (most construction trucks) were required to replace engines with 2010 or newer engines, or equivalent, by January 2023. Trucks with GVWR greater than 26,000 (most heavy-duty trucks) must meet PM BACT and upgrade to a 2010 or newer model year emissions equivalent engine pursuant to the compliance schedule set forth by the rule. By January 1, 2023, all model year 2007 Class 8 heavy-duty trucks were required to meet NO_x and PM BACT (i.e., USEPA 2010 and newer standards) (CARB 2022b).

For purposes of this analysis, this regulation affects the drayage truck fleet mix projections for the Proposed Project. The mix of model years in the truck fleet is used to determine composite truck emission factors.

CARB Heavy-Duty Trucks Inspection and Maintenance Program

Under the Clean Air Act, CARB has introduced the Clean Truck Check – Heavy-Duty Inspection and Maintenance (HD I/M) Program. The program aims to address air pollution from heavy-duty diesel vehicles over 14,000 pounds – a major source of NO_x and PM_{2.5} emissions in the state. The program ensures vehicles are well-maintained and

1 repaired promptly by implementing a comprehensive strategy: roadside emissions
2 screening, improved onboard diagnostics testing, regular emissions reporting and
3 compliance checks for related freight industries. When fully enacted by 2037, the
4 program is expected to reduce NO_x emissions by over 81 tons/day and PM by 0.7
5 tons/day.

6 **CARB Regulation to Reduce Emissions from Diesel Engines on** 7 **Commercial Harbor Craft**

8 In 2007, CARB adopted a regulation to reduce diesel particulate matter (DPM) and NO_x
9 emissions from new and in-use commercial harbor crafts (CHC). Under CARB's
10 definition, commercial harbor crafts include tugboats, tow boats, ferries, excursion
11 vessels, work boats, crew boats, and fishing vessels. The regulation implemented
12 stringent emission limits on harbor craft auxiliary and propulsion engines. In 2010,
13 CARB amended the regulation to add specific in-use requirements for barges, dredges,
14 and crew/supply vessels.

15 The regulation requires that all in-use, newly purchased, or replacement engines meet
16 USEPA's most stringent emission standards per a compliance schedule set forth by
17 CARB. For harbor crafts with home ports in the SCAQMD, the compliance schedule is
18 accelerated by two years, as compared to state-wide requirements. The compliance
19 schedule as listed in the 2007 regulation ("2007 CHC ruling") for in-use engine
20 replacement was supposed to begin in 2009, but was not enforced until August 2012,
21 after USEPA approved CARB's regulation (CCR Title 13 Section 2299.5; CCR Title 17
22 Section 93118.5). The revised 2010 regulation required accelerated turnover to Tier 2 and
23 3 engines for select categories between 2009 and 2022. The CARB compliance schedule
24 for harbor crafts is applied to determine the average model year of the tug assist fleet,
25 ultimately shaping emission factors. In 2022, a new set of amendments were adopted to
26 expand the applicability of the regulation to more vessel types and require cleaner
27 upgrades and newer technology, including adoption of zero emission options where
28 feasible and Tier 3 and Tier 4 engines with diesel particulate filters on all other harbor
29 craft. These amendments also declared that effective January 2023, all CHC operating
30 within regulated California Waters must comply with the renewable diesel fuel
31 requirements as laid forth in Section 93118.5. Similarly, under the amendment, new and
32 newly acquired engines are required to meet the most stringent marine standards (Tier 4
33 for most applications, and Tier 3 or cleaner for commercial fishing) based on the rule's
34 implementation schedule that begins in 2024 (CARB 2023).

35 On January 6, 2025, CARB received partial authorization covering most elements of its
36 revised 2022 Commercial Harbor Craft (CHC) Regulation amendments. However, for
37 purposes of the current study, because emissions calculations were completed prior to
38 USEPA's January 2025 granting of a partial waiver under the Clean Air Act, the analysis
39 does not quantify potential reductions benefits of the 2022 CHC rule amendments.

40 **CARB Statewide Portable Equipment Registration Program**

41 The Portable Equipment Registration Program (PERP) establishes a uniform program to
42 regulate portable engines and portable engine-driven equipment units (CARB, 2011c).
43 Once registered in the PERP, engines and equipment units may operate throughout
44 California without the need to obtain individual permits from local air districts.
45 Equipment subject to the PERP must meet weighted fleet average PM emission

1 requirements, per CARB’s phased-in compliance schedule, based on engine size. The
2 PERP generally would apply to construction-related dredging and barge equipment.

3 **Other Pending CARB Rules**

4 On January 13, 2025, CARB sent letters to the USEPA withdrawing CARB’s requests for
5 EPA’s Clean Air Act (CAA) waivers allowing CARB to implement and enforce the
6 following adopted state regulations:

- 7 • Advanced Clean Fleets – Complete Withdrawal
- 8 • In-Use Locomotive Standards - Complete Withdrawal
- 9 • Commercial Harbor Craft – Partial Withdrawal
- 10 • Transport Refrigeration Unit Engine Standards - Partial Withdrawal.

11 Below is key information on each of the regulations. Regulatory details and copies of the
12 CARB EPA letters are available on CARB’s website, [https://www.epa.gov/state-and-](https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations)
13 [local-transportation/vehicle-emissions-california-waivers-and-authorizations](https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations).

14 The Advanced Clean Fleets (ACF) regulation, adopted by CARB in April, 2023,
15 contained requirements for drayage fleets, government fleets and high priority fleets.
16 New drayage trucks registered in the State’s drayage truck registry would have been
17 required to be Zero Emissions (ZE) effective January 1, 2024. Combustion engine trucks
18 registered in the State’s drayage truck registry prior January 1, 2024 (legacy trucks)
19 would have been gradually removed from the registry as they reached 13 years (if over
20 800,000 miles) or a maximum of up to 18 years (if under 800,000 miles). All drayage
21 trucks would have been required to change over to ZE trucks by 2035. ACF also included
22 requirements for all government fleets to purchase new ZE vehicles at a 50% rate starting
23 in 2024 and 100% in 2027. However, in 2023 and 2024, CARB issued enforcement
24 advisories advising it was exercising ‘enforcement discretion’ not to enforce certain ACF
25 ZE sales requirements for MY 24, MY 25 and MY 26, due to lack of ZE heavy-duty
26 truck commercial availability from engine manufacturers. California withdrew its waiver
27 request, instead urging voluntary emissions reduction efforts by the trucking industry.
28 Without a USEPA waiver, emissions reduction credit for on-road ZE trucks to Port
29 terminals could not be included in the Draft RSEIR analysis.

30 The In-Use Locomotive regulation, approved by CARB in April, 2023, contained
31 requirements for any locomotive operator within California. Only locomotives less than
32 23 years old would have been acceptable for use in California, unless operated in a ZE
33 configuration. Switch locomotives with an original engine build date of 2030 and beyond
34 would have been required to operate in a ZE configuration for use in California. Freight
35 line-haul locomotives with an original engine build date of 2035 and beyond would have
36 been required to operate in a ZE configuration for use in California. Without a USEPA
37 waiver, emissions reduction credit for in-use locomotives with ZE configuration could
38 not be included in the Draft RSEIR analysis.

39 The Commercial Harbor Craft (CHC) regulation, adopted in 2008 and amended in 2022,
40 regulates transitioning to cleaner engines for tugboats, as well as various other vessel
41 types not relevant to the Proposed Project. The partial waiver withdrawal for CHC
42 pertains to ZE and advanced technologies standards for emissions “standards for in-use
43 engines and vessels (excluding commercial fishing vessels) that would apply after the
44 expiration of the feasibility extensions.” The CHC regulation still requires turnover of
45 engines to Tier 3 or Tier 4 (with diesel particulate filters). Facility/fleet reporting and

1 associated fees will still be required. Without a USEPA waiver, however, emissions
2 reduction credit for CHC transitioning to higher tier levels could not be included in the
3 Draft RSEIR analysis.

4 The Transport Refrigeration Unit (TRU) regulation was adopted in 2004 and has been
5 amended several times, most recently in 2022. The partial waiver withdrawal removes
6 “requirements for the turnover of at least 15 percent of [the] diesel-fueled truck TRU fleet
7 to ZE TRU by December 31, 2023, and each year thereafter” within the 2022 TRU
8 Amendments. TRU fleets will still need to comply with CARB’s lower global warming
9 emissions requirements but will not need to be phased to ZE. Port tenants will still need
10 to report on TRU activities at their facilities. Without a USEPA waiver, emissions
11 reduction credit for TRU fleet turnover to ZE could not be included in the Draft RSEIR
12 analysis.

13 **3.2.3.4 Local Rules, Policies, and Agreements**

14 SCAQMD develops Rules and Regulations to regulate sources of air pollution in the
15 SCAB. SCAQMD’s regulatory authority applies primarily to stationary sources. The
16 emission sources associated with the Proposed Project are mobile sources and as such
17 are, for the most part, not subject to the SCAQMD rules that apply to stationary sources,
18 such as Regulation XIII (New Source Review), Rule 1401 (New Source Review of Toxic
19 Air Contaminants), or Rule 431.2 (Sulfur Content of Liquid Fuels). However,
20 SCAQMD’s Rule 402 would apply to the Proposed Project as discussed below.

21 In addition, SCAQMD’s Community Emission Reduction Program (CERP) would apply,
22 specifically the CERP developed for the Wilmington community.

23 **SCAQMD Rule 402—Nuisance**

24 This rule prohibits discharge of air contaminants or other material that cause injury,
25 detriment, nuisance, or annoyance to any considerable number of persons or to the
26 public; or that endanger the comfort, repose, health, or safety of any such persons or the
27 public; or that cause, or have a natural tendency to cause, injury or damage to business or
28 property.

29 **LAHD Emission Reduction Programs**

30 LAHD has developed several programs designed to reduce pollution from mobile sources
31 associated with Port operations. The following programs are pertinent to the Proposed
32 Project.

33 **San Pedro Bay Ports Clean Air Action Plan**

34 The Ports of Los Angeles and Long Beach, with the participation and cooperation of
35 EPA, CARB, and SCAQMD staff, developed the San Pedro Bay Ports CAAP, a planning
36 and policy document that guides the development and implementation of air emissions
37 and health risk reduction activities associated with port operations while allowing port
38 development to continue. The CAAP was updated in 2010 and 2017 to revise and
39 strengthen the control measures established in the 2006 CAAP.

40 The 2006 CAAP (SPBP 2006) sought the reduction of criteria pollutant emissions to the
41 levels that ensure port-related sources decrease their “fair share” of regional emissions to
42 enable the SCAB to attain state and federal ambient air quality standards. The CAAP
43 focuses primarily on reducing DPM, as well as NO_x and SO_x, through emission control

1 measures expressed as Source-Specific Performance Standards, which may be
2 implemented through the environmental review process, or could be included in new
3 leases or port-wide tariffs, MOUs, voluntary action, grants, or incentive programs.

4 The 2010 CAAP Update identified updated and new emission control measures as
5 proposed strategies that support the goals expressed as the Source-Specific Performance
6 Standards and the Project-Specific Standards; the San Pedro Bay Standards, which
7 establish emission and health risk reduction goals to significantly reduce the effects of
8 cumulative port-related operations; and CAAP tracking progress (SPBP 2010).

9 The San Pedro Bay Standards set forth a Bay-wide health risk reduction standard and a
10 Bay-wide mass emission reduction standard, which consist of the following reductions as
11 compared to 2005 emissions levels:

- 12 • Health Risk Reduction Standard: 85% reduction in DPM by 2020
- 13 • Emission Reduction Standards:
 - 14 ○ By 2014, reduce emissions by 72% for DPM, 22% for NO_x, and 93% for SO_x
 - 15 ○ By 2023, reduce emissions by 77% for DPM, 59% for NO_x, and 92% for SO_x

16 The Project-Specific Standard remains as adopted in the original CAAP in 2006,
17 requiring that new projects fall below the 10 in 1,000,000 excess residential cancer risk
18 threshold, as determined by health risk assessments conducted subject to CEQA statutes,
19 regulations, and guidelines, and implemented through required CEQA mitigations and/or
20 lease negotiations. Although each port has adopted the Project-Specific Standard as a
21 policy, the LAHD Board of Harbor Commissioners retains the discretion to consider and
22 approve projects that exceed this threshold if the Board deems it necessary by adoption of
23 a statement of overriding considerations at the time of project approval.

24 The latest CAAP Update, adopted in November 2017 (SPBP 2017), re-affirms the Ports'
25 commitment to the goals and standards of previous CAAP versions, but also introduces
26 new goals, standards, and programs. The 2017 CAAP Update incorporates two new
27 emission reduction targets:

- 28 • Reduce greenhouse gases (GHG) from port-related sources to 40% below 1990
29 levels by 2030.
- 30 • Reduce GHGs from port-related sources to 80% below 1990 levels by 2050.

31 The 2017 update retains the reduction targets for emissions of diesel particulates,
32 nitrogen oxides, and sulfur oxides set in the 2010 update. It also retains the health risk
33 reduction goals set by the 2010 update, re-affirms the Ports' commitment to those goals,
34 and further commits the Ports to working with regulators and stakeholders toward further
35 reductions in emissions and health risks.

36 In addition, the 2017 CAAP Update incorporates commitments by the mayors of Los
37 Angeles and Long Beach to move towards zero emissions at the Ports, including setting
38 goals of zero-emissions cargo-handling equipment by 2030 and zero-emissions drayage
39 trucks by 3035. Accordingly, the updated CAAP includes provisions for new investments
40 in clean technology, expanded use of at-berth emission reduction technologies, and a
41 zero-emissions drayage truck pilot program. The updated CAAP also includes a CAAP
42 Implementation Stakeholder Advisory Group to advise the Ports on details of CAAP
43 implementation and ongoing operational efficiency and energy conservation programs; a
44 commitment to the nationwide Green Ports Collaborative; and a commitment to a joint

1 effort to secure funding for necessary equipment purchases and infrastructure
2 development.

3 The goals set forth as the Source-Specific Performance Standards of the CAAP address a
4 variety of port-related emission sources—ships, trucks, trains, CHE, and harbor craft—
5 and outline specific strategies to reduce emissions from each source category. The
6 Source-Specific Performance Standards have been updated as detailed in Section 2 of the
7 CAAP Update, and the applicable emission control measures (as detailed in Section 4 of
8 the CAAP Update) for the Proposed Project are discussed below.

9 Although LAHD has adopted a general policy that its leases will be compliant with the
10 CAAP, the Board of Harbor Commissioners has discretion regarding the form of all lease
11 provisions and CAAP measures at the time of lease approval. In addition, tenants must
12 comply with all applicable federal, state, and local air quality regulations.

13 As the CAAP is a planning document that sets goals and implementation strategies to
14 guide future actions, it does not constrain the discretion of the Board of Harbor
15 Commissioners as to any specific future action. Each individual CAAP measure is a
16 proposed strategy for achieving necessary emission reductions. The Board of Harbor
17 Commissioners uses its discretion in its approvals of projects, leases, tariffs, contracts, or
18 other implementing activities in order to appropriately apply the CAAP to the particular
19 situation, and may make adjustments if any proposed measure proves infeasible or if
20 better alternatives for a measure emerge.

21 The key CAAP measures relevant to the Proposed Project are summarized below.

22 **CAAP Measure—SPBP-OGV1, Vessel Speed Reduction** 23 **Program**

24 Under this voluntary program, which started in 2001, LAHD has requested that ships
25 coming into the Port reduce their speed to 12 knots or less within 20 nm of the Point
26 Fermin Lighthouse. This reduction of up to 10 knots (depending on the ship's normal
27 cruising speed) can substantially reduce emissions from the main propulsion engines of
28 the ships. The CAAP adopted the VSRP as control measure OGV1 and expanded the
29 program out to 40 nm from the Point Fermin Lighthouse in 2008.

30 **CAAP Measure—SPBP-OGV2, Reduction of At-Berth OGV** 31 **Emissions**

32 This measure requires the use of shore power to reduce hoteling emissions at all container
33 and cruise terminals. The measure also requires demonstration and application of
34 alternative emissions reduction technologies for ships that are not viable candidates for
35 shore power, to be facilitated through the Technology Advancement Program (TAP).

36 **CAAP Measures — SPBP-OGV3 and 4, OGV Low Sulfur Fuel for** 37 **Auxiliary Engines, Auxiliary Boilers, and Main Engines**

38 This measure originally required the use of 0.2 percent or lower sulfur distillate fuels in
39 the auxiliary engines, auxiliary boilers, and main engines of OGVs within 40 nm of Point
40 Fermin and while at-berth. As of January 1, 2014, CARB's regulation surpasses these
41 CAAP measures by requiring the use of MGO and MDO with a sulfur fuel content of 0.1
42 percent within 24 nm of the California coastline. The analysis assumes compliance with
43 CARB's regulation.

1 **CAAP Measure—SPBP-OGV5 and 6, Cleaner OGV Engines and**
2 **OGV Engine Emissions Reduction Technology Improvements**
3 **and Environmental Ship Index Program**

4 Measure OGV5 seeks to maximize the early introduction and preferential deployment of
5 vessels to the San Pedro Bay Ports with cleaner/newer engines meeting the new IMO
6 NO_x standard for ECAs. Measure OGV6 focuses on reducing DPM and NO_x from the
7 legacy fleet through identification and deployment of effective emission reduction
8 technologies.

9 In order to advance the goals of OGV5 and 6, LAHD adopted the voluntary
10 Environmental Ship Index (ESI) Program in May 2012. The ESI Program is an
11 international clean ship indexing program developed through the International
12 Association of Ports and Harbors' World Ports Climate Initiative. Operators registered
13 under this program earn an ESI score for their vessels by using cleaner technology and
14 practices that reduce emissions beyond the regulatory requirements set by IMO. The ESI
15 Program rewards vessel operators for reducing NO_x, SO_x, and GHG emissions in advance
16 of regulatory requirements. The ESI Program also rewards vessel operators for bringing
17 their newest and cleanest vessels to the Port and demonstrating technologies on board
18 their vessels.

19 **CAAP Measure—SPBP-HC1, Performance Standards for Harbor**
20 **Craft**

21 This measure calls for repowering all harbor craft home-based in the San Pedro Bay to
22 Tier 3 within five years after Tier 3 engines become available. The measure also requires
23 the use of shore power. In addition, LAHD plans to accelerate harbor craft emission
24 reductions through emerging technologies, such as hybrid tugs, more efficient engine
25 configurations, and alternative fuels, through incentives or voluntary measures.

26 **CAAP Measure—SPBP-CHE1, Performance Standards for CHE**

27 This measure calls for phased-in CHE emission reductions beyond CARB's CHE
28 regulation, at the time of terminal lease renewal. Since 2014, all CHE with engines
29 greater than 750 hp are required to meet, at a minimum, the EPA Tier 4 off-road engine
30 standards or, until equipment is replaced with Tier 4, to be equipped with the cleanest
31 CARB VDEC.

32 **CAAP Measure—SPBP-RL1, Pacific Harbor Line Rail Switch**
33 **Engine Modernization**

34 This measure implements the switch locomotive engine modernization and emission
35 reduction requirements included in the operating agreements between the ports and the
36 Pacific Harbor Line (PHL). By the end of 2011, PHL had upgraded all of its Tier 2
37 switcher locomotives to meet Tier 3-plus standards.

38 **CAAP Measure—SPBP-RL2, Class 1 Line-Haul and Switcher**
39 **Fleet Modernization**

40 This measure is designed to identify emission reductions associated with the CARB Class
41 1 railroads MOU and the 2008 EPA locomotive engine standards. The goal of this

1 measure is for all Class 1 locomotives entering the ports to meet emissions equivalent to
2 Tier 3 locomotive standards by 2023.

3 **CAAP Measure—SPBP-HDV1, Performance Standards for On-** 4 **Road Heavy-Duty Vehicles; Clean Trucks Program**

5 The Port Clean Trucks Program (CTP) is a central element of the CAAP. The CTP
6 established a progressive ban on polluting trucks. As of January 1, 2012, all trucks that
7 did not meet the 2007 Federal Clean Truck Emissions Standards were banned from the
8 Port. Following full implementation in 2014, Port truck emissions were reduced by more
9 than 90 percent for DPM, PM and SO_x, and by 71 percent for NO_x (LAHD 2014a). The
10 analysis in this Draft RSEIR assumes full compliance with the CTP.

11 **LAHD Sustainable Construction Guidelines**

12 As part of LAHD's overall environmental goals and CAAP strategies, any construction at
13 the Port must follow the Sustainable Construction Guidelines, adopted in February 2008
14 (LAHD 2009). The guidelines reinforce and require sustainability measures under
15 construction contracts, addressing a variety of emission sources that operate at the Port
16 during construction. Examples include ships and barges used to deliver construction
17 related materials, harbor craft, dredging equipment, haul and delivery trucks, and off-road
18 construction equipment. In addition, the LAHD Construction Guidelines include Best
19 Management Practices (BMP)s based on CARB-verified BACT, designed to reduce air
20 emissions from construction sources.

21 **3.2.4 Impacts and Mitigation Measures**

22 This section presents a discussion of the potential air quality impacts associated with
23 construction and operation of the Proposed Project and alternatives. Mitigation measures
24 are provided, where feasible, for impacts found to be significant.

25 **3.2.4.1 General Approach and Methods**

26 The methodologies used to assess air quality impacts under CEQA and NEPA are
27 described in Appendix A1 – Air Emissions Analysis, A2 – Dispersion Modeling, and A3
28 – Health Risk Analysis (see Volume II of this Draft EIS/EIR). The following types of
29 impacts were analyzed:

- 30 • Air pollutant emissions of CO, VOC, NO_x, SO_x, PM₁₀, and PM_{2.5} within the
31 SCAB were estimated for construction and operation of the Proposed Project and
32 the two Alternatives: Alternative 1 (No Project); and Alternative 2 (No Federal
33 Action).

34 Emissions from operational sources were estimated for a 2019 baseline and future
35 analysis years 2026, 2027, 2028, 2036, 2050, 2055, and 2062. Construction was assumed
36 for the purposes of this analysis to be 2026 and 2027, which was reasonable at the time
37 analysis commenced; this assumption is conservative because if construction were to
38 occur later, emissions would be less because of the likely phase-in of cleaner equipment.
39 Emissions related to the construction of the Proposed Project and Alternative 2 were
40 estimated for assumed construction years 2026 and 2027. 2028 is conservatively
41 projected to be the first year of full operations after construction of the Proposed Project;
42 2036 is an interim operational year for the Proposed Project; 2050 is the year the
43 Proposed Project would reach full capacity; 2055 is the end of the occupational exposure

1 period for the health risk assessment for alternatives 1 and 2; and 2062 represents the
2 horizon year for this EIS/EIR when alternatives 1 and 2 would reach full terminal
3 throughput capacity.

4 In addition, since construction is expected to happen concurrently with partial B121-131
5 Terminal operations, operations-related emissions have been estimated for calendar years
6 2026 and 2027. The criteria pollutant emission calculation methodology for every
7 operational and construction source, as well as emission estimates are presented in detail
8 in Appendix A1.

9 To determine the significance impact of pollutant emissions in each future analysis year,
10 the Proposed Project and peak daily emissions of the Proposed Project and alternatives
11 minus the baseline peak daily emissions were compared to significance criterion AQ-1
12 (construction activities and construction with combined operation activities) and AQ-3
13 (operation) identified in Section 3.2.4.4.

14 Dispersion modeling of CO, NO₂, SO₂, PM₁₀, and PM_{2.5} emissions was performed to
15 estimate maximum offsite air pollutant concentrations from emission sources attributed to
16 the Proposed Project and Alternatives. The predicted ambient concentrations associated
17 with construction and operation of the Proposed Project were compared to Significance
18 Criterion AQ-2 and AQ-4, respectively. A summary of the dispersion modeling
19 methodology is presented in this section, while the complete dispersion modeling report
20 is presented in Appendix A2.

21 A Health Risk Assessment (HRA) of toxic air contaminant emissions associated with
22 construction and operation of the Proposed Project and alternatives was conducted in
23 accordance with the methodology in OEHHA's Air Toxics Hot Spots Program Risk
24 Assessment Guidelines (OEHHA 2015). Maximum predicted incremental health risk
25 values in the surrounding communities near the Proposed Project site were compared to
26 Significance Criterion AQ-7. The HRA includes an evaluation of three different types of
27 health effects: individual cancer risk, population cancer burden, chronic non-cancer
28 hazard index, and acute non-cancer hazard index.

29 To better apprise the public and decision makers, the predicted cancer risk for the
30 Proposed Project and alternatives is compared to both a CEQA baseline and a floating
31 future baseline. The CEQA baseline cancer risk uses 2019 activity levels and emission
32 factors. The Floating Future Baseline cancer risk also uses 2019 activity levels, but the
33 emission factors vary by year throughout the long exposure periods (30 years for
34 individual cancer risks for residential and sensitive receptors, 70 years for population
35 cancer burden, and 25 years for occupational cancer risks) to account for the future
36 beneficial effects of existing air quality regulations. The floating future baseline cancer
37 risk is typically lower than the CEQA baseline cancer risk because emission factors for
38 port-related equipment generally decline in the future in response to existing air quality
39 regulations and assumptions regarding equipment fleet turnover. The floating future
40 baseline was used only for cancer risk because of the decades-long exposure periods that
41 are unique to cancer risk. All other criteria pollutant concentrations and non-cancer health
42 risk values modeled in this document are based on durations of a year or less, and
43 therefore are adequately evaluated in comparison with the CEQA baseline. The complete
44 HRA is presented in Appendix A3.

45 Consistency of the Proposed Project and alternatives with the air quality management
46 plan (AQMP), the Wilmington CERP, and CAAP was addressed in accordance with
47 Significance Criterion AQ-8.

1 Mitigation measures were applied to Proposed Project and alternative activities that
2 would exceed a significance criterion prior to mitigation and then evaluated as to their
3 effectiveness in reducing Proposed Project or alternative impacts.

4 The emission estimates, dispersion modeling, and health risk estimates presented in this
5 document were calculated using the latest available data, assumptions, and emission
6 factors at the time this document was prepared. The numerical results presented in the
7 tables of this report were rounded, often to the nearest whole number, for presentation
8 purposes. As a result, the sum of tabular data in the tables could differ slightly from the
9 reported totals. For example, if emissions from Source A equal 1.2 pounds per day
10 (lbs/day) and emissions from Source B equal 1.4 lbs/day, the total emissions from both
11 sources would be 2.6 lbs/day. However, in a table, the emissions would be rounded to the
12 nearest lbs/day, such that Source A would be reported as 1 lbs/day, Source B would be
13 reported as 1 lbs/day, and the total emissions from both sources would be reported as 3
14 lbs/day. Although the rounded numbers create an apparent discrepancy in the table, the
15 underlying addition is accurate and conservative.

16 **3.2.4.2 Methodology for Determining Emissions**

17 Operational emission sources in the B121-131 terminal include ocean-going vessels,
18 tugboats, on-road drayage trucks, worker vehicles, trains (switchers and locomotives),
19 and cargo-handling equipment (CHE). Some of these sources would use diesel fuel and
20 would generate emissions of diesel exhaust, other sources would use other fuel types
21 including liquefied natural gas (LNG), liquified petroleum gas (LPG), and marine oil
22 (used in vessel boilers). All of these sources would generate exhaust emissions in the
23 form of CO, VOC, NO_x, SO_x, PM₁₀, and PM_{2.5}. Worker commute trips would generate
24 primarily gasoline vehicle exhaust and paved road dust emissions. Emissions were
25 evaluated for the baseline 2019, and study years of 2026, 2027, 2028, 2036, 2050, 2055,
26 and 2062.

27 In addition, this Draft EIS/EIR analyzes construction emissions from off-road equipment,
28 delivery and haul trucks, assist tugs, and crane-delivery ocean-going vessels involved in
29 the construction of the Proposed Project and Alternatives. Construction source emissions
30 calculations are explained in detail in Appendix A1. Emissions from partial background
31 operations of the B121-131 Terminal during construction were studied using the same
32 methods as operational emissions for future years 2028 through 2062.

33 Information regarding the activity and characteristics of Proposed Project and
34 Alternatives operational emission sources was obtained primarily from LAHD staff,
35 WBCT staff, the traffic study conducted as part of this Draft EIS/EIR (Section 3.10,
36 Ground Transportation), and the Port Emissions Inventories and methodologies (LAHD
37 2020, Starcrest, 2023). Activity and utilization assumptions used to estimate peak daily
38 operational emissions for comparison to SCAQMD emission thresholds represent upper-
39 bound estimates of activity levels at the terminal, would occur infrequently, and,
40 therefore, represent a conservative set of assumptions.

41 The general methodology for calculating emissions for the various emission sources
42 during Proposed Project and Alternatives operations is presented below. A more detailed
43 discussion of the methodology and presentation of activity, emission factors and other
44 input data is presented in Appendix A1. Because the Proposed Project is within the
45 SCAB, the analysis scope is also limited to the SCAB and to the thresholds established
46 by SCAQMD for that jurisdiction. The SCAQMD thresholds for operations and

1 construction are discussed in Section 3.2.4.4. The construction and operational emission
2 calculations are presented in Appendix A1.

3 **Ocean-Going Vessels**

4 Ocean-going vessel emissions in the 2019 baseline were derived primarily from vessel
5 call records for the terminal and activity data from the 2019 Port Emission Inventory.
6 This includes the number of vessel visits by vessel size (TEU), time spent in transit,
7 maneuvering and hoteling, usage of AMP, and vessel characteristics include installed
8 main engine power, auxiliary engine power, load factors, and speed. In the 2019 baseline
9 this data represents actual vessel calls that occurred in 2019.

10 Ocean-going vessels are tracked from the edge of the SCAB over-water boundary to the
11 berth, and movements include transit to the berth or to an anchorage point, maneuvering
12 at berth, and hoteling at the berth or hoteling at anchorage. In the 2019 baseline the
13 number of ocean-going vessel visits by vessel size (TEU capacity) and type (Container
14 and Roll-on/Roll-off or RoRo) was obtained directly from Wharfingers data.
15 Characteristics of vessel engines, including installed main and auxiliary engine power,
16 emissions factors for main and auxiliary engines, engine load during each mode of travel,
17 time in each mode of travel, and fuel sulfur content were derived from the 2019 Port
18 Emission Inventory. Vessel compliance with AMP and the VSRP were obtained from the
19 2019 call records for the terminal. Peak daily emissions are the peak 24-hour period of
20 emissions considering all actual vessel calls in 2019.

21 Future year ocean-going vessel activity was obtained from the BERTHA model
22 (AECOM 2016) and LAHD staff, including the number of vessel visits annually and in a
23 peak day, the vessel size distribution in future years, and the installed power and load of
24 vessel engines. The BERTHA model assumes the vessel type as container ships which is
25 a conservative assumption for the purpose of estimating future activity; however, this
26 does not limit other vessel types (e.g., RoRo ships) that could visit the terminal in the
27 future. In general, the number of vessel visits is based on the forecasted growth in cargo
28 throughput as presented in Chapter 2 (see Table 2-1), with the same modes of activity
29 (transit, maneuvering, hoteling, anchorage) occurring in the future as under the baseline
30 condition. Future year emissions reflect the Port's revised fleet forecast methodology for
31 turnover of vessels across Tier I, II, and III engine mix (POLA 2015b), which has effects
32 on NO_x emissions rates. For the Proposed Project with mitigation and Alternative 2 with
33 mitigation scenarios, future year emissions were evaluated with application of proposed
34 mitigation measures from this Draft EIS/EIR as outlined in Section 3.2.4.7.

35 **Tug Boats**

36 During terminal operations, tugboats are used to assist container ships while maneuvering
37 and docking inside the Port. Two tugboats were assumed for each arrival/departure assist
38 of a container ship. Tugboat transit time was assumed to equal the average of container
39 ship transit times within the harbor, multiplied by 1.3 to account for tug movement
40 to/from base. Tugboat main and auxiliary engine sizes and load factors were obtained
41 from the Port's emissions inventories. Tugboat emission factors were derived from the
42 CARB Commercial Harborcraft Model (CARB 2021). The applicable engine tiers were
43 determined based on average age and size of tugboats operating in the Port and the
44 CARB harbor craft compliance schedule. CARB requirements for fuel sulfur content
45 were also applied.

Cargo-Handling Equipment (CHE)

CHE includes yard tractors, rubber-tired gantry cranes (RTGs), top handlers, forklifts, and off-road (refueling) trucks. The equipment at the terminal includes a mix of diesel-powered equipment and LPG-powered equipment (primarily the yard tractors). The marine terminal wharf cranes used to lift containers on and off container ships are electric and therefore have no direct on-site emissions. Yard tractors and top handlers would operate at both the B121-131 terminal and the WBICTF on-dock rail yard. Annual 2019 activity was provided by WBCT in hours for each type of CHE. Emission factors for CHE were obtained from the CARB OFFROAD2021 inventory model (CARB 2021) and combined with the activity data to develop the 2019 baseline emissions. CHE activity in future analysis years was derived based on projected terminal throughput. A 2022 equipment inventory list from WBCT was used as the basis for developing future-year (2026-2062) CHE emissions. Unless subject to a mitigation schedule, the useful life of each equipment type was tracked using CARB data and when the useful life was reached, the equipment was assumed to be replaced with a new unit of the same size and fuel type. All equipment emissions were adjusted to comply with CARB regulations as described in Section 3.2.3.

On-Road (Drayage) Trucks

Emissions from on-road, heavy-duty diesel drayage trucks hauling containers during operation of the Proposed Project and alternatives were calculated using emission factors generated by the CARB EMFAC2021 on-road mobile source emission factor model. In accordance with CARB's direction (CARB 2024), the analysis incorporated EMFAC 2021 off-model adjustment factors that account for the emission benefits of California's Heavy-Duty Vehicle Inspection and Maintenance Program (renamed to Clean Truck Check) and EPA's Clean Trucks Plan. Trucks fueled with LNG comprised a small fraction of the fleet in 2019. The emission factors for LNG trucks were obtained from the EMFAC2021 model. Road dust emission factors for on-terminal driving, off-terminal local streets, and freeways were derived from Section 13.2 of EPA's AP-42 compilation of emission factors.

Truck activity on-site included idling at the in-gate, out-gate, and on-terminal idling, as well as on-terminal driving. Truck activity off-site included truck travel along roadway links, as determined through the transportation modelling (see Section 3.10) and input from LAHD staff. Geographical scope of truck emissions cover road links within the SCAB boundary with predicted Project traffic, based on ground transportation modeling.

In the baseline and in future years, truck emissions were based on fleet forecasts of the drayage truck fleet considering the effects of the Clean Truck Program and CARB regulations. The EMFAC2021 model also reflects these heavy duty truck regulations as described in Appendix A1.

Rail

As described in Section 2.5.4.5, the B121-131 Terminal generates train trips to and from the on-dock rail yard (WBICTF) as well as near- and off-dock rail yards. Emissions associated with hauling containers by rail are largely attributed to diesel exhaust from PHL switching locomotives at the on-dock rail yard, Class I switch locomotives at the near- and off-dock rail yards, and Class I line-haul locomotives hauling trains within the SCAB and idling at the rail yards.

1 Emission factors for line haul locomotives were derived from EPA tier level standards.
2 Emission factors by tier level were combined into a composite fleetwide average using
3 the fleet mix percentages forecasts by year obtained through the CARB Locomotive
4 Inventory (CARB, 2021e). The baseline fleet mix for PHL switchers was obtained from
5 the 2019 Port Emission Inventory (LAHD 2020) and it was conservatively assumed to
6 remain constant through 2062 since the baseline fleet mix indicated the engines were
7 composed of Tier 3 and Genset switcher engines; it is likely these would not be replaced
8 by 2062 based on the equipment longevity, unless required. Line haul and switcher
9 engine power and load factors were derived from the 2019 Port Emission Inventory. Line
10 haul and switcher activity, both within the on-dock railyard and for off-site travel, were
11 obtained from LAHD staff, WBCT, and the Port's TrainBuilder model. Geographical
12 scope of rail emissions for evaluation of criteria pollutant impacts cover linehaul travel
13 and off-site railyard activity within the SCAB.

14 Other Considerations

15 Appendix A1 contains details of the emissions calculations, including those for
16 construction sources and operational sources such as AMP power generation and worker
17 vehicle commutes.

18 In general, the 2019 baseline activity data were obtained from LAHD staff, WBCT, and
19 the 2019 Port Emission Inventory (LAHD 2020). Future year emissions were forecasted
20 as described above, and using a variety of models that forecast activity and emissions for
21 various source categories. Future activity was primarily based on the projected TEU
22 throughput at the terminal on an annual basis. Peak daily emissions were derived either
23 directly from models (e.g., for container vessels, the BERTHA model defines the peak
24 day), or from peaking factors that represent the peak daily throughput relative to an
25 average daily throughput. Peak daily emissions were used to derive peak hourly and 8-
26 hour emissions, as needed, to evaluate various pollutant concentration thresholds.

27 3.2.4.3 Dispersion Modeling Methodology

28 The dispersion modeling methodology was based on U.S. EPA and SCAQMD modeling
29 guidance (EPA 2017, SCAQMD 2025). The USEPA dispersion model AERMOD,
30 version 24142, was used to predict maximum ambient pollutant concentrations at or
31 beyond the project site boundary. The following presents a brief summary of the
32 dispersion modeling methodology and assumptions; the complete dispersion modeling
33 report is included in Appendix A2 .

- 34 • The analysis modeled peak 1-hour and annual NO_x emissions, peak 1-hour and 8-
35 hour CO emissions, peak 24-hour and annual PM₁₀ emissions, and peak 24-hour
36 PM_{2.5} emissions.
- 37 • To ensure the capture of maximum ambient pollutant concentrations in
38 AERMOD, peak 1-hour, 8-hour (if applicable) and 24-hour Emissions of NO₂,
39 PM₁₀, PM_{2.5}, and CO were modeled for each emission source category, for each
40 analysis year, separately. Seven future-year scenarios were modeled for NO₂,
41 PM_{2.5}, PM₁₀, and CO.
- 42 • Valid receptors included all locations along and outside the Proposed Project
43 footprint boundary and excluded over-water non-marina receptors.
- 44 • Significance concentration thresholds for PM₁₀ and PM_{2.5} are incremental
45 thresholds. Therefore, impacts of both pollutants were determined by subtracting
46 Baseline modeled concentrations from the Proposed Project or alternative's

1 modeled concentrations (i.e., Proposed Project/alternative minus Baseline =
2 increment) at each receptor. Significance is determined by comparing the
3 modeled receptor with the greatest increment to the thresholds.

- 4 • Significance thresholds for NO₂ and CO concentration are absolute thresholds
5 based on the ambient air quality standards. Therefore, the change in modeled
6 concentrations relative to existing conditions (i.e., modeled 2019 Baseline) is
7 determined at each receptor, and the receptor with the highest change in
8 concentration is added to the ambient background concentration to yield a total
9 concentration. Significance is determined by comparing the total concentration
10 (Proposed Project or alternative increment plus background) to the threshold.
- 11 • For this dispersion analysis, the meteorological data collected at the Wilmington
12 Community Station, located at Saints Peter and Paul School (SPPS), was used for
13 dispersion modeling. SPPS is located about 1 mile northeast of the Berths 121-
14 131 terminal, and is considered the most representative meteorological station for
15 the terminal in accordance with the “Sphere of Influence” analysis conducted by
16 POLA and POLB in 2010 (LAHD 2010).
- 17 • Ambient background concentrations were obtained from the Wilmington
18 Community Station. Because this air monitoring station is part of the Port’s site-
19 specific monitoring network, it was assumed that the station captures the existing
20 effects of the B121-131 Terminal on air quality. Therefore, the Proposed Project
21 or alternative’s incremental concentrations (i.e., Proposed Project/alternative
22 minus 2019 Baseline) were added to the ambient background concentration from
23 the Wilmington Community monitoring station to yield a total concentration for
24 comparison to the significance concentration thresholds for NO₂ and CO.

25 **3.2.4.4 Health Risk Assessment Methodology**

26 To inform the public and decision makers of the environmental impacts of the Proposed
27 Project and alternatives, the predicted cancer risk under CEQA for the Proposed
28 Project/alternative is compared to both a Baseline and a Floating Future Baseline. The
29 use of the Floating Future Baseline provides a conservative exposure scenario for the
30 cancer risk analysis because it results in a lower baseline and higher increment than
31 comparison to the fixed 2019 Baseline. Therefore, comparison to both the fixed 2019
32 Baseline and the Floating Future Baseline will better apprise the public and decision
33 makers of the environmental impacts of the Proposed Project and alternatives relative to
34 two different baseline conditions.

35 The Baseline cancer risk uses 2019 activity levels and emission factors. The Floating
36 Future Baseline cancer risk also uses 2019 activity levels, but the emission factors vary
37 by year throughout the long exposure periods (30 years for individual cancer risks for
38 residential and sensitive receptors, 70 years for population cancer burden, and 25 years
39 for occupational cancer risks) to account for the future beneficial effects of existing air
40 quality regulations. The Baseline cancer risk is typically higher than the Floating Future
41 Baseline cancer risk because the floating future emission factors for port-related
42 equipment generally decline in response to existing air quality regulations and
43 assumptions regarding cleaner equipment due to equipment fleet turnover. The predicted
44 cancer risk under NEPA is compared to the NEPA baseline, which can change over time.
45 The NEPA baseline includes increases in operations for each study year (2028, 2036,
46 2050, 2055, and 2062) which are projected to occur absent a federal permit. The NEPA
47 baseline is described in more detail in Section 3.2. 4.1. The complete HRA Report is
48 presented in Appendix A3 .

1 LAHD has developed a methodology for assessing mortality and morbidity in CEQA
2 documents based on the health effects associated with changes in PM_{2.5} concentrations.
3 Because mortality and morbidity studies represent major inputs used by CARB and EPA
4 to set CAAQS and NAAQS, project-level mortality and morbidity is presented in LAHD
5 CEQA documents as a further elaboration of local PM_{2.5} impacts, which are already
6 addressed in Impact AQ-4. Per LAHD policy, mortality and morbidity are quantified if
7 dispersion modeling of ambient air quality concentrations during project operation
8 identifies a significant impact for 24-hour PM_{2.5}. Mortality and morbidity effects are
9 calculated for the population living inside the 2.5 µg/m³ project increment isopleth
10 identified during the dispersion modeling.

11 The EPA dispersion model AERMOD, version 21112, was used to predict ambient
12 pollutant concentrations at or beyond the project site boundary. Health risk assessment
13 databases were then used to perform health risk calculations based on output from the
14 AERMOD dispersion model, using assumptions and procedures described in OEHHA's
15 Air Toxics Hot Spots Program Risk Assessment Guidelines (OEHHA 2015) and
16 SCAQMD's Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics
17 "Hot Spots" Information and Assessment Act (SCAQMD 2020).

18 The HRA evaluated four different types of health effects: individual cancer risk,
19 population cancer burden, chronic noncancer hazard index, and acute non-cancer hazard
20 index. Individual cancer risk is the additional chance for a person to contract cancer after
21 long-term exposure to Project emissions. The exposure durations assumed in this HRA
22 are 30 years for residential and sensitive receptors and 25 years for occupational
23 receptors. The period from 2026 (when construction is assumed to start) to 2055 was
24 used as the 30-year residential period.

25 Cancer burden is an estimate of the expected number of additional cancer cases in a
26 population exposed to Project-generated TAC emissions and is the product of individual
27 lifetime incremental cancer risk multiplied by the population exposed to that level of
28 incremental risk, calculated at the census tract or block level. For purposes of calculating
29 the cancer burden, a residential lifetime exposure period of 70 years (2026 – 2095) was
30 assumed in accordance with OEHHA's guidance (OEHHA 2015); exposures for 2026 –
31 2055 were calculated as for the individual lifetime cancer risk (described above), and
32 exposures beyond 2049 were assumed to remain constant through the remainder of the
33 70-year period. In accordance with SCAQMD guidance (SCAQMD 2020), cancer burden
34 was calculated in this analysis for all census blocks with an individual lifetime residential
35 cancer risk increment exceeding one in one million.

- 36 • The chronic hazard index is a ratio of the annual average concentrations of TACs
37 in the air to established reference exposure levels. A chronic hazard index below
38 1.0 indicates that adverse non-cancer health effects from long-term exposure are
39 not expected. Similarly, the acute hazard index is a ratio of the maximum 1-hour
40 average concentrations of TACs in the air to established reference exposure
41 levels. An acute hazard index below 1.0 indicates that adverse noncancer health
42 effects from short-term exposure are not expected.

43 The main sources of TACs from operation of the Proposed Project and the alternatives
44 would be DPM emissions from container ships, tugboats, cargo handling equipment,
45 locomotives, and trucks. For cancer risk or the chronic hazard index, CARB considers
46 DPM as representative of the total health effects associated with the combustion of diesel
47 fuel. TAC emissions from non-diesel sources (such as alternative fuel engines) and diesel
48 non-internal combustion sources (such as auxiliary boilers) also were evaluated in the
49 HRA, although their impacts were minor in comparison to DPM.

1 To determine significance, this HRA evaluated the incremental change in health effects
2 associated with the Proposed Project and the alternatives relative to the Baseline health
3 effects. The resulting incremental health effects values were compared to the significance
4 thresholds for health risk described in Section 3.2.4.6.

5 To estimate individual cancer risk impacts for residential and sensitive receptors, TAC
6 emissions were projected over a 30-year period, from 2026 to 2055. To estimate
7 occupational cancer risk impacts, TAC emissions were projected over a 25-year period,
8 from 2026 through 2050. To calculate the 30-year and 25-year emissions, estimates of
9 activity levels and emission factors were made for the years 2019 (CEQA Baseline),
10 2026, 2027, 2028, 2036, 2050, and 2055. For the 70-year period used in the cancer
11 burden analysis, estimates of activity levels and emission factors were made for the years
12 2019 (CEQA Baseline), 2026, 2027, 2028, 2036, 2050, 2055, and 2062. Emissions were
13 assumed to remain constant after 2062 until 2095, which is the end of the exposure
14 period. Emissions between the analysis years for all alternatives and baselines were
15 determined through interpolation.

16 Activity levels after 2050 were held constant at their 2050 values for the Proposed
17 Project. Activity levels beyond 2050 were projected to increase in accordance with
18 changes in throughput for Alternative 1 ‘No Project’ and Alternative 2 ‘No Federal
19 Action’. Activity levels for the Baseline and Floating Future Baseline were held constant
20 at their 2019 values for the entire 25-year or 30-year period assumed in the individual
21 cancer risk evaluation and 70-year period assumed in the cancer burden evaluation.

22 In the Floating Future Baseline used in the health risk analysis, yearly emission factors
23 are allowed to change with time in accordance with normal fleet turnover rates (for
24 terminal equipment, trucks, line haul locomotives, and tugboats) and existing regulations
25 and agreements, while activity levels are kept constant to the 2019 baseline level, as
26 described in the Methodology introduction of Section 3.2.4.1.

27 The use of both the Baseline and Floating Future Baseline for cancer risk helps to resolve
28 the complication of evaluating the terminal during a fixed point in time (2019 baseline
29 conditions) for a health impact that is based on decades-long exposure periods. This
30 complication does not exist for the chronic and acute hazard indices because they are
31 based on modeled TAC concentrations of one year and one hour, respectively, both of
32 which fit within the 2019 baseline period. Therefore, the Floating Future Baseline was
33 used only for cancer risk. This approach is consistent with the methodology developed by
34 the Port for previous health risk analyses and with the *Neighbors for Smart Rail v.*
35 *Exposition Metro Line Const. Authority* (2013) 57 Cal.4th 439, regarding CEQA
36 baselines.

37 **PM_{2.5} Morbidity and Mortality**

38 Mortality and morbidity calculations are required for all areas (with residential
39 populations) where PM_{2.5} or PM₁₀ concentrations exceed the SCAQMD threshold
40 (SCAQMD 2023). For this project, the residential population is zero within the isopleth
41 of 1µg/m³, which is just outside the terminal boundary; accordingly, analyses of PM_{2.5}
42 morbidity and mortality were not conducted.

1 3.2.4.5 Baselines

2 CEQA Baseline

3 As described in Section 2.7, the CEQA baseline that is used for assessing the air quality
 4 and related impacts of the Proposed Project in this Draft EIS/EIR consists of activity
 5 levels during calendar year 2019. During 2019, the terminal handled approximately
 6 353,924 TEUs. Table 3.2-4 describes the terminal activity during the 2019 baseline.

Table 3.2-4. B121-131 Terminal CEQA Baseline (2019) Activity Parameters

Calendar Year 2019	
Annual Throughput (TEUs)	353,924
%TEUs by Truck	83%
%TEUs by On-Dock Railyard	17%
Annual Vessel Calls	153
Annual Truck One-Way Trips	319,282
Annual On-Dock Train Trips	142
Number of Wharf Cranes	5

7 The emission sources operating during the 2019 CEQA baseline were:

- 8 • Container and RoRo ships, referred to in this document as OGVs for “ocean
 9 going vessels”,
- 10 • Assist tugboats, also referred to in this document as harbor craft,
- 11 • Drayage trucks,
- 12 • Switcher and line-haul locomotives,
- 13 • Cargo handling equipment (CHE), and
- 14 • Worker commute vehicles (passenger cars).

15 More detailed annual and peak day terminal and source activity information for 2019 is
 16 presented in Appendix A1. Only rules and regulations effective by December 31, 2019,
 17 were considered in the 2019 Baseline. Future conditions that could be affected by rules
 18 and regulations implemented over time were not considered in the 2019 CEQA Baseline.
 19 The methodology used to quantify baseline emissions is presented in Appendix A1 (see
 20 Volume II).

21 Table 3.2-5 summarizes the peak daily emissions within the SCAB associated with
 22 operation of the existing B121-131 terminal during the 2019 baseline year. Peak daily
 23 emissions represent reasonable upper-bound estimates of activity levels at the terminal
 24 and would occur infrequently. Baseline peak daily emissions are compared to future
 25 Proposed Project peak daily emissions to determine CEQA significance for the Proposed
 26 Project and alternatives.

Table 3.2-5: Peak Daily Operational Emissions: CEQA Baseline (2019) (lbs/day)

Source Category	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Cargo Handling Equipment	45	539	189	4	4	<1
Harbor Craft	2	9	51	<1	<1	<1
Worker Vehicles Offsite	<1	46	3	3	<1	<1
Trucks Offsite Driving	9	60	320	16	6	1
Ocean Going Vessels	52	173	3,543	42	38	105
Worker Vehicles Onsite Driving	<1	2	<1	<1	<1	<1
Trucks Onsite Driving/Idling	4	33	67	7	1	<1
Rail Offsite Operations	18	103	447	11	11	<1
Rail On Dock Operations	1	7	30	<1	<1	<1
Total	131	972	4,650	85	62	107

Notes:

Emissions might not add precisely due to rounding.

The emission estimates presented in this table were calculated using the latest available data, assumptions, and emission factors at the time this document was prepared. Future studies might use updated data, assumptions, and emission factors that were not available at the time of this document.

NEPA Baseline

As described in Section 1.6, the NEPA baseline, for purposes of this Draft EIS/EIR, is the same as the No Federal Action Alternative (Alternative 2). Under the No Federal Action Alternative, none of the in-water or over-water construction activities would occur at Berths 126-129 (i.e., dredging and dredged material disposal, wharf construction, shoreline reconstruction, pile installation, or new crane installation). The No Federal Action Alternative includes only backlands improvements to the WBICTF railyard, which could be implemented without a USACE permit. The No Federal Action Alternative's operations would differ from those of the No Project Alternative only in the percentage of cargo that is moved by rail. Table 3.2-6 presents the peak day criteria pollutant emissions within the SCAB associated with NEPA baseline construction. Peak day construction emissions for the NEPA baseline represent the estimate of highest daily emissions during each year of the construction schedule for the No Federal Action Alternative from activities related to the intermodal railyard expansion. Detailed information on the development of construction emissions estimates are shown in Appendix A1.

Table 3.2-6: Peak Daily Construction Emissions— NEPA Baseline (lbs/day)

Source Category	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Construction Year 2026						
Off-road Construction Equipment	3	23	20	<1	<1	<1
Ocean Going Vessels	0	0	0	0	0	0
Harbor Craft	0	0	0	0	0	0
Worker Vehicles Onsite & Offsite	<1	<1	<1	<1	<1	<1
Trucks Onsite & Offsite	<1	<1	<1	<1	<1	<1
Construction Year 2026 Total	3	23	20	<1	<1	<1

Table 3.2-6: Peak Daily Construction Emissions— NEPA Baseline (lbs/day)

Source Category	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Construction Year 2027						
Off-road Construction Equipment	<1	3	3	<1	<1	<1
Ocean Going Vessels	0	0	0	0	0	0
Harbor Craft	0	0	0	0	0	0
Worker Vehicles Onsite & Offsite	<1	<1	<1	<1	<1	<1
Trucks Onsite & Offsite	<1	<1	<1	<1	<1	<1
Construction Year 2027 Total	<1	3	3	<1	<1	<1

Notes:

NEPA Baseline Emissions reflect the construction of the No Federal Action Alternative, which consists of reconstruction/improvement of intermodal railyard at WBICTF.

On-road construction vehicle emissions include exhaust, road dust, tire wear, and brake wear emissions from haul trucks and material delivery trucks.

Worker Vehicle emissions include exhaust, road dust, tire wear, and brake wear emissions from construction worker commute.

Emissions might not add precisely due to rounding.

The emission estimates presented in this table were calculated using the latest available data, assumptions, and emission factors at the time this document was prepared.

1 Because the NEPA baseline is equivalent to the No Federal Action Alternative, the
 2 NEPA baseline operational activity levels and emissions vary for each analysis year.
 3 Levels of activity for the NEPA baseline and/or No Federal Action Alternative are
 4 detailed for each source in Appendix A1. In addition to accounting for growth in cargo
 5 throughput and ship calls, the NEPA baseline emissions account for changes in emission
 6 factors due to existing regulations that would reduce future emissions from container
 7 ships, trucks, locomotives, and cargo handling equipment, as these sources use cleaner
 8 fuels or are replaced over time with newer equipment meeting more stringent emission
 9 standards. The B121-131 Terminal would continue to operate (i.e., handle cargo)
 10 concurrently with construction activities; hence, emissions related to background
 11 operations during construction are included in Table 3.2.7 along with peak daily
 12 operational emissions for analysis years 2028, 2036, 2050, 2055, and 2062. Peak day
 13 emissions represent upper-bound estimates of activity levels at the terminal that would
 14 occur infrequently. The peak daily NEPA baseline emissions are later compared in
 15 Section 2.3.4.5 to peak daily emissions for Proposed Project and alternatives to determine
 16 significance under NEPA.

Table 3.2-7. Peak Daily Operational Emissions—NEPA Baseline (lbs/day)

Source Category	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Construction Year 2026						
Cargo Handling Equipment	22	1,721	94	5	5	<1
Harbor Craft	<1	11	24	<1	<1	<1
Worker Vehicles Offsite	<1	35	2	4	<1	<1
Trucks Offsite Driving	<1	33	61	16	5	1
Ocean Going Vessels	93	182	3,841	44	40	140
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1

Table 3.2-7. Peak Daily Operational Emissions—NEPA Baseline (lbs/day)

Source Category	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Trucks Onsite Driving/Idling	3	54	27	8	1	<1
Rail Offsite Operations	8	57	231	5	5	<1
Rail On Dock Operations	1	7	27	<1	<1	<1
Total Operational Year 2026	130	2,102	4,308	83	58	142
Construction Year 2027						
Cargo Handling Equipment	22	1,855	73	5	5	<1
Harbor Craft	<1	11	24	<1	<1	<1
Worker Vehicles Offsite	<1	34	2	4	<1	<1
Trucks Offsite Driving	<1	33	60	17	5	1
Ocean Going Vessels	110	218	4,128	51	47	162
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	3	57	26	9	1	<1
Rail Offsite Operations	9	58	235	5	5	<1
Rail On Dock Operations	1	7	27	<1	<1	<1
Total Operational Year 2027	147	2,275	4,576	92	65	164
Year 2028						
Cargo Handling Equipment	23	1,871	70	5	5	<1
Harbor Craft	<1	10	21	<1	<1	<1
Worker Vehicles Offsite	<1	34	2	4	<1	<1
Trucks Offsite Driving	<1	32	57	17	5	1
Ocean Going Vessels	82	167	2,688	42	38	132
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	3	59	25	9	1	<1
Rail Offsite Operations	8	56	228	5	5	<1
Rail On Dock Operations	1	10	37	<1	<1	<1
Total Operational Year 2028	120	2,241	3,128	83	56	134
Year 2036						
Cargo Handling Equipment	27	2,129	64	6	6	<1
Harbor Craft	<1	12	26	<1	<1	<1
Worker Vehicles Offsite	<1	11	<1	2	<1	<1
Trucks Offsite Driving	<1	29	40	20	6	1
Ocean Going Vessels	97	186	1,188	44	41	144
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	4	73	20	11	2	<1
Rail Offsite Operations	8	76	240	5	4	<1
Rail On Dock Operations	3	25	77	2	1	<1
Total Operational Year 2036	141	2,542	1,657	90	61	146
Year 2050						
Cargo Handling Equipment	42	3,612	99	8	8	<1

Table 3.2-7. Peak Daily Operational Emissions—NEPA Baseline (lbs/day)

Source Category	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Harbor Craft	<1	12	26	<1	<1	<1
Worker Vehicles Offsite	<1	13	<1	2	<1	<1
Trucks Offsite Driving	1	50	45	33	10	2
Ocean Going Vessels	105	189	1,285	47	43	153
Worker Vehicles Onsite Driving	<1	2	<1	<1	<1	<1
Trucks Onsite Driving/Idling	5	96	18	16	3	<1
Rail Offsite Operations	4	97	114	2	2	<1
Rail On Dock Operations	2	39	51	<1	<1	<1
Total Operational Year 2050	161	4,110	1,638	112	68	157
Year 2055						
Cargo Handling Equipment	49	4,187	115	10	10	<1
Harbor Craft	<1	13	30	<1	<1	<1
Worker Vehicles Offsite	<1	15	<1	2	<1	<1
Trucks Offsite Driving	2	58	52	39	11	2
Ocean Going Vessels	121	219	1,490	55	50	178
Worker Vehicles Onsite Driving	<1	2	<1	<1	<1	<1
Trucks Onsite Driving/Idling	6	112	21	19	3	<1
Rail Offsite Operations	5	113	133	2	2	<1
Rail On Dock Operations	2	45	59	<1	<1	<1
Total Operational Year 2055	187	4,764	1,899	130	78	182
Year 2062						
Cargo Handling Equipment	60	5,103	140	12	12	<1
Harbor Craft	1	16	36	<1	<1	<1
Worker Vehicles Offsite	<1	18	<1	3	<1	<1
Trucks Offsite Driving	2	71	63	47	14	3
Ocean Going Vessels	148	267	1,816	67	61	217
Worker Vehicles Onsite Driving	<1	2	<1	1	<1	<1
Trucks Onsite Driving/Idling	8	136	25	23	4	<1
Rail Offsite Operations	6	137	162	3	2	<1
Rail On Dock Operations	3	55	72	1	1	<1
Total Operational Year 2062	228	5,806	2,314	158	96	222

Notes:

On-road vehicle emissions include exhaust, road dust, tire wear, and brake wear emissions.

Worker vehicles emissions include exhaust, road dust, tire wear, and brake wear emissions.

Emissions might not add precisely due to rounding.

The emission estimates presented in this table were calculated using the latest available data, assumptions, and emission factors at the time this document was prepared.

3.2.4.6 Thresholds of Significance

CEQA Guidelines Appendix G suggests the following criteria for determining the significance of impacts related to air quality. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project

- a) Conflict with or obstruct implementation of the applicable air quality plan?
- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
- d) Expose sensitive receptors to substantial pollutant concentrations?
- e) Create objectionable odors affecting a substantial number of people

The following thresholds were used to determine the significance of air quality impacts of the Proposed Project and alternatives for CEQA and NEPA. The thresholds were based on LAHD guidance from the CAAP for health risk and standards established by the City of Los Angeles in the *L.A. CEQA Thresholds Guide* (City of Los Angeles 2006). The *L.A. CEQA Thresholds Guide* incorporates, by reference, the CEQA Air Quality Handbook and associated significance thresholds developed by the SCAQMD (SCAQMD 1993; SCAQMD 2023). For the purposes of this EIS/EIR, USACE has adopted the CEQA thresholds.

CO Hot Spots

Information presented by SCAQMD in the 2003 AQMP indicates that CO hotspot analysis is unnecessary because CO hotspots are unlikely to occur. A study of the four most congested intersections in the Los Angeles region found no exceedances of ambient air quality standards for CO, indicating that hotspots did not occur. Since the study intersections for the Proposed Project would experience lower traffic volumes than SCAQMD's study intersections, even with increased throughput, a hotspot analysis is not required.

Construction Thresholds

The LAHD and the USACE as lead agencies on the EIR and EIS, respectively, have adopted the following thresholds for this document.

Construction-related air emissions would be considered significant if:

Criterion AQ-1: The Proposed Project or Alternative would result in construction-related peak day emissions that exceed any of the SCAQMD thresholds of significance in Table 3.2-8.

Construction and operational activities overlap during certain analysis years and the combined emissions are therefore evaluated in this document. For determining CEQA significance, the thresholds in Table 3.2-8 are compared to the net change in Proposed Project, or alternative, emissions relative to CEQA baseline emissions. For determining NEPA significance, the thresholds are compared to the net change in Proposed Project or alternative emissions relative to NEPA baseline emissions.

1

Table 3.2-8. SCAQMD Thresholds for Construction Emissions

Air Pollutant	Emission Threshold (pounds/day)
Volatile Organic Compounds (VOC)	75
Carbon Monoxide (CO)	550
Nitrogen Oxides (NO _x)	100
Sulfur Oxides (SO _x)	150
Particulates (PM ₁₀)	150
Particulates (PM _{2.5})	55

2

Source: SCAQMD 2023

3

Note: these thresholds are also used when evaluating significance for combined construction and operations-related emissions.

4

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Criterion AQ-2: The Proposed Project or Alternative construction would result in off-site ambient air pollutant concentrations that exceed the SCAQMD thresholds of significance in Table 3.2-9.

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These ambient concentration thresholds target those pollutants the SCAQMD has determined are most likely to cause or contribute to an exceedance of the NAAQS or CAAQS. Although the thresholds represent the levels at which the SCAQMD considers the impacts to be significant, the thresholds are not necessarily the same as the NAAQS or CAAQS. For determining significance, predicted ambient air quality pollutant concentrations are compared to the thresholds shown in Table 3.2-9.

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Table 3.2-9. SCAQMD Thresholds for Ambient Air Quality Concentrations Associated with Project Construction

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Air Pollutant ^a	Construction Ambient Concentration Threshold
Nitrogen Dioxide (NO₂)^b	
1-hour average (Federal) ^c	0.100 ppm (188 µg/m ³)
1-hour average (State)	0.18 ppm (339 µg/m ³)
Annual average (Federal)	0.0534 ppm (100 µg/m ³)
Annual average (State)	0.030 ppm (57 µg/m ³)
Sulfur Dioxide (SO₂)	
1-hour average (Federal) ^d	0.075 ppm (197 µg/m ³)
1-hour average (State)	0.25 ppm (655 µg/m ³)
24-hour average	0.04 ppm (105 µg/m ³)
Carbon Monoxide (CO)	
1-hour average	20 ppm (23,000 µg/m ³)
8-hour average	9.0 ppm (10,000 µg/m ³)
Particulates (PM₁₀ or PM_{2.5})^e	
24-hour average (PM ₁₀ and PM _{2.5})	10.4 (µg/m ³)
Annual average (PM ₁₀ only)	1.0 (µg/m ³)

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Notes:

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a The SCAQMD has also established concentration thresholds for sulfates and lead, but construction emissions of these pollutants would be negligible; thus, concentration standards would not be exceeded. The NO₂, SO₂, and CO thresholds are absolute thresholds; the maximum predicted impact

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1 from Proposed Project and alternatives operations is added to the background concentration and
2 compared to the threshold.

3 b To evaluate proposed project impacts on ambient NO₂ levels, the analysis included the use of both
4 the current SCAQMD NO₂ threshold (0.18 ppm) and the newer, more stringent 1-hour federal ambient
5 air quality standard (0.100 ppm). To attain the federal standard, the 3-year average of the 98th
6 percentile of the daily maximum 1-hour averages at a receptor must not exceed 0.100 ppm.

7 c Federal 1-hour average NO₂ concentration is based on the NAAQS because it is more stringent than
8 the SCAQMD thresholds.

9 d To attain the SO₂ federal 1-hour standard, the 3-year average of the 99th percentile of the daily
10 maximum 1-hour averages at a receptor must not exceed 0.075 ppm.

11 e The PM₁₀ and PM_{2.5} thresholds are incremental thresholds; the maximum predicted impact from
12 construction activities (without adding the background concentration) is compared to these thresholds.

13 Sources: SCAQMD (2019), EPA (2022).

14 Operational Thresholds

15 Operational-related air emissions would be considered significant if:

16 **Criterion AQ-3: The Proposed Project or Alternative would result in operational**
17 **emissions that exceed the SCAQMD peak day emission thresholds of significance in**
18 **Table 3.2-10.**

19 For determining CEQA significance, these thresholds are compared to the net change in
20 Proposed Project or alternative operational peak daily emissions relative to CEQA
21 Baseline emissions. For determining NEPA significance, the Proposed Project or
22 alternative operational peak daily emissions are compared to the NEPA baseline peak
23 daily operational emissions.

24 **Table 3.2-10. SCAQMD Thresholds for Operational Emissions**

Air Pollutant	Peak Day Emission Threshold (pounds/day)
Volatile organic compounds (VOC)	55
Carbon monoxide (CO)	550
Nitrogen oxides (NO _x)	55
Sulfur oxides (SO _x)	150
Particulates (PM ₁₀)	150
Particulates (PM _{2.5})	55

Source: SCAQMD (2019)

25 **Criterion AQ-4: The Proposed Project or Alternative operations would result in**
26 **offsite ambient air pollutant concentrations that exceed any of the SCAQMD**
27 **thresholds of significance in Table 3.2-11**

28 These ambient concentration thresholds target those pollutants the SCAQMD has
29 determined are most likely to cause or contribute to an exceedance of the NAAQS or
30 CAAQS. Although the thresholds represent the levels at which the SCAQMD considers
31 the impacts to be significant, the thresholds are not necessarily the same as the NAAQS
32 or CAAQS.

33 **Criterion AQ-5: The Proposed Project or Alternative would create an objectional**
34 **odor at the nearest sensitive receptor.**

1 Due to the subjective nature of odor impacts, the number of variables that can influence
2 the potential for an odor impact, and the variety of odor sources, there are no quantitative
3 or formulaic methods to determine the presence of a significant odor impact. The
4 potential for Proposed Project and alternatives-generated odors at sensitive receptors in
5 the project vicinity is assessed qualitatively. Some factors considered to qualitatively
6 evaluate potential odor impacts include the nature of the odor source, distance between
7 the receptor and odor source, and local meteorological conditions and any documented
8 odor complaint history. Both the AQMD and local governments receive complaints about
9 dust and offensive odors. Odors and dust are air pollutants that can have negative health
10 impacts. While almost any source may emit objectionable odors, some land uses will be
11 more likely to produce odors or dust because of their operation. Complaints about odors
12 sources received by AQMD include rail yards (SCAQMD 2005). Although less common,
13 construction activities that include the operation of a substantial number of diesel-fueled
14 construction equipment and heavy-duty trucks can generate odorous diesel particulate
15 matter.

16 **Criterion AQ-6: The Proposed Project or Alternative would expose receptors to**
17 **significant levels of toxic air contaminants.**

18 The determination of significance for AQ-7 is made as follows according to SCAQMD's
19 significance thresholds for the health risks of TACs (SCAQMD 2023):

- 20 • Maximum Incremental Cancer Risk is greater than or equal to 10 in 1 million.
- 21 • Cancer Burden is greater than 0.5 excess cancer cases in areas where the
22 maximum incremental cancer risk for residential receptors is greater than 1 in
23 one million.
- 24 • Non-cancer Hazard Index is greater than or equal to 1.0 (project increment).

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2**Table 3.2-11. SCAQMD Thresholds for Ambient Air Quality Concentrations Associated with Project Operation**

Air Pollutant ^a	Operation Ambient Concentration Threshold
Nitrogen Dioxide (NO ₂) ^b	
1-hour average (federal) ^c	0.100 ppm (188 µg/m ³)
1-hour average (state)	0.18 ppm (339 µg/m ³)
Annual average (federal)	0.0534 ppm (100 µg/m ³)
Annual average (state)	0.030 ppm (57 µg/m ³)
Sulfur Dioxide (SO ₂)	
1-hour average (federal) ^d	0.075 ppm (197 µg/m ³)
1-hour average (state)	0.250 ppm (655 µg/m ³)
24-hour average	0.040 ppm (105 µg/m ³)
Carbon Monoxide (CO)	
1-hour average	20 ppm (23,000 µg/m ³)
8-hour average	9.0 ppm (10,000 µg/m ³)
Particulates (PM ₁₀ or PM _{2.5}) ^e	
24-hour average (PM ₁₀ and PM _{2.5})	2.5 µg/m ³
Annual average (PM ₁₀ only)	1.0 µg/m ³

Notes:

a The NO₂, SO₂, and CO thresholds are absolute thresholds; the maximum predicted impact from Proposed Project operations is added to the background concentration and compared to the threshold.

b To evaluate the Proposed Project's impacts on ambient NO₂ levels, the analysis included the use of both the current SCAQMD NO₂ threshold (0.18 ppm) and the newer, more stringent 1-hour federal ambient air quality standard (0.100 ppm). To attain the federal standard, the 3-year average of the 98th percentile of the daily maximum 1-hour averages at a receptor must not exceed 0.100 ppm.

c Federal 1-hour average NO₂ concentration is based on the NAAQS because it is more stringent than the SCAQMD thresholds.

d To attain the SO₂ federal 1-hour standard, the 3-year average of the 99th percentile of the daily maximum 1-hour averages at a receptor must not exceed 0.075 ppm.

e The PM₁₀ and PM_{2.5} thresholds are incremental thresholds; the maximum predicted impact from operational activities (without adding the background concentration) is compared to these thresholds.

Sources: SCAQMD (2023), USEPA (2022).

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15**Criterion AQ-7: The Proposed Project or Alternative would conflict with or obstruct implementation of an applicable air quality plan.**

The consistency of the Proposed Project or alternative with an applicable air quality plan is assessed qualitatively. The Proposed Project or alternative would be considered consistent with the local AQMP and not interfere with attainment goals if its activity levels (e.g. cargo throughput, ship calls) are consistent with the projections utilized in the formulation of the AQMP; in other words if the activity levels do not exceed the assumptions in the latest AQMP.

Other criteria consider whether the project would be consistent with the CAAP and other applicable air quality plans, result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP (SCAQMD 1993).

3.2.4.7 Mitigation Measures

Mitigation measures that are feasible and would avoid or substantially reduce significant air quality impacts are incorporated into the analysis contained in Section 3.2. 5 below. The purpose of this summary is to provide context on the application of mitigation measures during construction and operations and to discuss the relationship of these measures with 1) LAHD plans, policies, and requirements imposed as lease measures, 2) Proposed Project/alternative features that are designed to improve air quality, and 3) compliance with applicable air quality regulations. Lastly, a discussion on other potential mitigation measures that were found to be infeasible is provided herein.

Construction Mitigation Measures

In accordance with LAHD's Sustainable Construction Guidelines, the following mitigations are expected to reduce emissions and air quality effects related to construction. These mitigation measures would be implemented by the responsible parties identified in Section 3.2.5. Note that MM AQ-6 is not quantified under the current EIR/EIS.

MM AQ-1: Harbor Craft Used During Construction. Tug assist boats used during construction must be equipped with U.S. Environmental Protection Agency (EPA) Tier 3 engine standards or cleaner at all times during construction.

MM AQ-2: On-road Trucks Used During Construction. On-road trucks shall comply with the following USEPA standards according to their utility:

1. Trucks hauling materials such as debris or fill shall be fully covered while operating off Port property.
2. Idling shall be restricted to a maximum of 5 minutes when not in use.
3. Tier Specifications for all on-road trucks except Import Haulers and Earth Movers:
 - Until December 31, 2026: All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used on site or to transport materials to and from the site shall comply with 2012 emission standards, or newer, where available.
 - Post January 1, 2027: All on-road heavy duty diesel trucks used on site or to transport materials to and from the site shall comply with 2015 emission standards, or newer, where available.
4. Import hauler trucks that are on-road heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used to move dirt to and from the construction site via public roadways at the Port of Los Angeles will comply with EPA 2004 on-road emission standards for PM₁₀ and NO_x (0.10 g/bhp-hr and 2.0 g/bhp-hr, respectively).
5. Earth mover trucks, that are heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used to move dirt within the construction site at the Port of Los Angeles will comply with EPA 2004 on-road emission standards for PM₁₀ and NO_x (0.10 g/bhp-hr and 2.0 g/bhp-hr, respectively).

1 A copy of each unit's certified U.S. Environmental Protection Agency
2 (USEPA) rating, Best Available Control Technology (BACT)
3 documentation, and CARB or SCAQMD operating permit shall be
4 provided at the time of mobilization of each applicable unit of
5 equipment.

6 **MM AQ-3: Non-Road Construction Equipment.** (except vessels, harbor craft, on-
7 road trucks, and dredging equipment). All non-road construction
8 equipment greater than 50 hp must meet EPA Tier 4 emission standards,
9 unless the contractor can reasonably demonstrate that such equipment is
10 unavailable to the satisfaction of LAHD.

11 **MM AQ-4: Cargo Ships Used During Construction.** All ships and barges used
12 primarily to deliver construction-related materials or cranes shall
13 comply with the expanded Vessel Speed Reduction Program (VSRP) of
14 12 knots between 40 nautical miles (nm) from Point Fermin and the
15 Precautionary Area. Vessel speed is confirmed by the Marine Exchange.
16 Vessels experiencing a maritime emergency [1] that prevents
17 compliance with the expanded VSRP may be exempt from this measure.

18 [1] Maritime emergencies may include, but are not limited to,
19 suspicious activity, drone/plane activity, security breaches or attempts,
20 United States Coast Guard safety/security/protection zone violations,
21 crimes on land and water, navigation rule violations, vessels in distress,
22 rescues, and fires and emergencies, as defined by the Port of Los
23 Angeles Mariners Guide.

24 **MM AQ-5: Dredging Non-Road Equipment.** The dredger must be electric. This
25 mitigation does not include barges, support vessels, trucks, or land-
26 based construction equipment.

27 **MM AQ-6: General Construction Mitigation Measure.** For any of the above
28 mitigation measures (MM AQ-1 through MM AQ-5), if a CARB-
29 certified technology becomes available that is as good as or better in
30 terms of emissions performance than the existing measure, the
31 technology could replace the existing technology pending approval by
32 LAHD.

33 **MM AQ-7: Renewable Diesel Fuel for Construction Equipment and On-Road
34 Trucks.** Diesel-powered construction equipment and on-road trucks
35 shall be fueled with renewable diesel fuel during construction. The
36 renewable diesel product that is used shall comply with American
37 Society for Testing and Materials (ATSM) fuel standards.

38 In the event of renewable diesel supply challenges or disruptions, ultra-
39 low sulfur diesel (ULSD) shall be used as a secondary fuel provided the
40 contractor can demonstrate to the LAHD substantial evidence of a
41 supply disruption or event in a timely manner.

42 **Operations-related Mitigation Measures**

43 Operational mitigation measures are described below. These mitigation measures would
44 reduce criteria pollutant emissions associated with operations related to the movement of
45 cargo and are organized by source categories.

Ocean-Going Vessels

The Proposed Project does not include a mitigation measure related to at-berth emissions by oceangoing vessels (OGVs) because such a measure is unnecessary due to compliance with state regulation. The CARB 2020 At-Berth Rule, for which the CARB received authorization from USEPA in 2023, requires that by January 1, 2023, all container vessels that visit a regulated California port or marine terminal must use a CARB Approved Emission Control Strategy (CAECS) to control emissions for the duration of the visit, unless the visit qualifies for an exception or an alternative compliance option is used. As described in Section 2.6.1.2, the Proposed Project includes the construction of a new wharf equipped with new AMP infrastructure at Berth 126-129 to allow cargo vessels to utilize shoreside electrical power instead of on-board generators while at berth. AMP qualifies as a CAECS and is considered a project feature. Accordingly, at the completion of construction the Proposed Project would further support compliance with the rule, and no additional mitigation measure is needed. Note that the analysis in this DEIS/DEIR quantifies the compliance rate with the CARB rule at 95% consistent with the limited exceptions (5%) that CARB allows for terminals and OGVs, in order to provide a realistic estimate of at-berth emissions.

In addition, although the terminal has existing AMP infrastructure at Berths 121-125, the design of that system has prevented many vessels from aligning with the existing shore power connections due to changes in the size and configuration of vessels calling at the terminal. As a result, LAHD has been working with the terminal operator on moveable AMP connection points in an effort to overcome the inability to line up vessels with the shore AMP infrastructure. Moveable connection point systems require permits and approval from the appropriate entities. These improvements are considered a project feature of the Proposed Project and will prepare the terminal for meeting current and future shore power regulations by CARB.

MM AQ-8: Vessel Speed Reduction Program (VSRP). During operations, 100 percent of vessels calling at Berths 121-131 shall comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area. Vessel speed is confirmed by the Marine Exchange. Vessels experiencing a maritime emergency [1] that prevents compliance with the expanded VSRP may be exempt from this measure.

[1] Maritime emergencies may include, but are not limited to, suspicious activity, drone/plane activity, security breaches or attempts, United States Coast Guard safety/security/protection zone violations, crimes on land and water, navigation rule violations, vessels in distress, rescues, and fires and emergencies, as defined by the Port of Los Angeles Mariners Guide.

This mitigation measure is consistent with the 2017 CAAP Update, which seeks to expand the participation rate of vessels slowing down within 40 nm of the Ports. Application of this mitigation measure would also make VSR compliance mandatory at the terminal rather than a voluntary program. To avoid overstating actual emission reductions, the Draft EIS/EIR's analysis calculated the effectiveness of the measure at 99%, thereby taking into account exemptions per note [1].

Cargo Handling Equipment

In support of the Port's CAAP goal of 100% zero emissions cargo-handling equipment by 2030, the LAHD has developed a new requirement and review process to ensure the timely implementation of achieving that goal through imposing Lease Measure LM AQ-1

1 in the new 30-year permit for the operation of the terminal by a future tenant. This lease
2 measure would potentially reduce future emissions under the Proposed Project; however,
3 it does not qualify as mitigation, and it cannot be quantified in the analysis because the
4 future technologies and systems that may be implemented have not yet been identified.
5 As discussed in Section 2.5.3 of this Draft EIS/EIR, the number of zero-emission units,
6 equipment type, and charging/fuel type to be selected by the tenant are unknown at this
7 time. However, the analysis contained in this document assumes that some future
8 construction of electrical charging infrastructure is needed to support the conversion. This
9 could include equipment charging stations and pads, upgraded on-site electrical
10 substations, and trenching for electrical supply feeds. The analysis does not preclude the
11 selection of other fueling infrastructure such as hydrogen, which would involve less
12 intensive construction. Equipment could be battery-electric, fuel cell, or another zero-
13 emission technology, depending on the available technologies at the time. Because of
14 those uncertainties, future zero-emissions infrastructure is not included in this Draft
15 EIS/EIR (except for the construction activity related to the installation of electrical
16 charging equipment on-site) and would be evaluated by a separate environmental
17 document once a specific project is proposed.

18 **LM AQ-1: Zero Emission Cargo Handling Equipment (CHE) Transition.**

19 1) Annual Equipment Procurement Planning. Prior to the effective date of the
20 new Permit, Tenant shall submit to the Port an inventory of all existing terminal
21 cargo handling equipment covered by the Clean Air Action Plan (“CAAP”)
22 Feasibility Assessment (“Cargo Handling Equipment”), including equipment on-
23 site, off-site equipment that is relocated for on-site use, and ordered equipment,
24 including its useful life, as defined by i) the Original Equipment Manufacturer
25 specifications or ii) Applicable Law, if an Applicable Law comes into effect that
26 supersedes useful life defined by OEM. For avoidance of doubt, Tenant shall be
27 entitled to continue using Cargo Handling Equipment listed in the inventory for
28 its useful life, notwithstanding any new feasibility assessment, unless if a piece of
29 Cargo Handling Equipment has not yet reached the end of its useful life as
30 defined by OEM and an Applicable Law comes into effect that requires that same
31 piece of Cargo Handling Equipment to be replaced by Zero Emission equipment,
32 the Applicable Law would govern, and Tenant shall replace the Cargo Handling
33 Equipment prior to the end of the OEM’s useful life.

34 Within one (1) year following the effective date of the Permit, and updated
35 annually thereafter, Tenant shall develop a replacement plan, for all existing
36 Cargo Handling Equipment, including the planned replacement year for each
37 piece of equipment based on the expected useful life of existing terminal
38 equipment. If there is any deviation from the equipment replacement plan for a
39 given year that involves non-zero emissions equipment, Tenant agrees to notify
40 the Executive Director prior to the purchase of any new or replacement terminal
41 Cargo Handling Equipment that deviates from the equipment replacement plan.
42 Tenant agrees to meet and confer with the Executive Director or his/her designee,
43 upon request, regarding such deviation concerns within fourteen (14) days of
44 Tenant’s original notice of the proposed deviation, unless the parties agree to
45 extend the time period. Tenant shall identify any Cargo Handling Equipment that
46 is not required to be replaced pursuant to current cargo handling equipment
47 regulations in accordance with Applicable Law.

48 Notwithstanding the foregoing, Tenant shall be required to purchase cleanest
49 feasible available technology as defined, by Applicable Law.

1 2) Zero Emission Equipment and Infrastructure Plan. Within one (1) year
2 following the effective date of the Permit, Tenant shall develop a plan to
3 transition terminal Cargo Handling Equipment to zero emissions that will achieve
4 the following goal:

- 5 • Before January 1, 2030, terminal Cargo Handling Equipment must
6 begin transitioning to zero emissions, if feasible.

7 For equipment covered by the Clean Air Action Plan (CAAP) Feasibility
8 Assessment, the most recent CAAP Feasibility Assessment shall determine
9 whether zero emissions Cargo Handling Equipment is feasible from a financial,
10 technical, and operational perspective, and if not, the cleanest feasible alternative
11 Cargo Handling Equipment. In the event the Tenant performs its own feasibility
12 assessment which differs from the CAAP Feasibility Assessment, the Tenant
13 may request a re-evaluation in writing to the Executive Director or his/her
14 designee and provide a written report detailing the evidence and supporting
15 documentation concerning feasibility and other relevant factors. The re-
16 evaluation and feasibility determination shall be subject to mutual agreement
17 between the Board of Harbor Commissioners and Tenant, which shall not be
18 unreasonably withheld by Tenant. Tenant is responsible for furnishing its own
19 evidence and agrees to pay for any reasonable and actual expenses incurred by
20 the City in processing the Tenant's request for a re-evaluation, including
21 retaining an independent third-party verifier to peer review the Tenant's report.
22 Parties shall split the costs of an independent third-party verifier on a 50/50 basis,
23 subject to the following conditions: i) Tenant participated by submitting written
24 comments on the then-most recent CAAP Feasibility Assessment; ii) new data
25 that has arisen since the time of the most-recent CAAP feasibility analysis to
26 support Tenant's assertion that zero emissions Cargo Handling Equipment is not
27 feasible from a financial, technical, and operational perspective; and iii) the
28 City's portion of the expenditure may not exceed \$150,000, in aggregate, over
29 the term of the Agreement. The parties shall appoint the independent third-party
30 verifier within ninety (90) days of Tenant's request for the reevaluation; if the
31 parties cannot agree on the independent third party within that timeframe, the
32 Board shall make the appointment.

33 For all other terminal equipment not covered by the CAAP Feasibility
34 Assessment, the cleanest feasible equipment includes, but is not limited to
35 equipment that is determined in writing by the Executive Director and Tenant, to
36 be feasible from a financial, technical, and operational perspective. Tenant agrees
37 to provide any updates to its plan to the Executive Director or his/her designee
38 consistent with the requirements of this measure.

39 Tenant shall submit an Application for Port Permit (APP) to the Executive
40 Director prior to implementing the plan and installing any necessary charging
41 and/or fueling equipment to support the operation of zero emission equipment,
42 which shall be subject to all necessary environmental review in accordance with
43 the California Environmental Quality Act and/or the National Environmental
44 Policy Act and agency permitting and approvals.

45 This lease measure also recognizes CARB's ongoing evaluation of zero-emissions CHE
46 and the likelihood that future amendments to the existing CHE regulations will require
47 that zero-emissions CHE be phased into marine terminals (CARB 2018).

1 For this Draft EIS/EIR, mitigation measures were identified to quantify the minimum
2 amount of emission reductions achieved based on current standards and the cleanest
3 available technologies at the time of the analysis. Implementation of these mitigation
4 measures would require zero emissions for certain types of equipment that are determined
5 to be feasible as noted below. However, if any of the equipment specified in the
6 mitigation does not meet zero emissions, the review process established in LM AQ-1
7 would be triggered prior to the implementation of the mitigation.

8 **MM AQ-9: Yard Tractor Emissions Standards.** 1) No later than one year after
9 the effective date of the permit, all yard tractors shall be alternative-fuel
10 units that are equivalent to or cleaner than a NO_x emission rate of 0.02
11 g/bhp-hr and Tier 4 final off-road emission rates for other criteria
12 pollutants.

13 2) By no later than 2035, all yard tractors shall be zero-emission units.

14 MM AQ-9 is subject to the review process established in LM AQ-1 because low NO_x
15 alternative-fueled yard tractors are the cleanest available technology that are near-zero
16 emissions. While demonstration projects for zero-emission yard tractors are underway as
17 presented at the CAAP stakeholder meeting on April 2, 2025 (LAHD 2025) and the
18 current commercially available models are operating under the full range of container
19 terminal operating conditions, improvements are still needed to achieve comparable
20 performance with diesel-powered equipment. Furthermore, infrastructure readiness is
21 estimated at 4-5 years for full buildout (SPBP 2022, LAHD 2025). MM AQ-9 recognizes
22 that full feasibility is probable in the near future and thus mandates its use by no later
23 than 2035.

24 **MM AQ-10: Cargo-Handling Equipment Emissions Standards.** All yard
25 equipment at the terminal, except for yard tractors, shall implement the
26 following requirements:

27 Forklifts

- 28 1) No later than one year after the effective date of the permit, all
29 heavy-duty (18-ton) forklifts shall be equivalent to or cleaner
30 than Tier 4 final off-road engine emission rates for PM and NO_x.
31 2) No later than one year after the effective date of the permit, all 5-
32 ton forklifts shall be zero-emission units.
33 3) By no later than 2035, all heavy-duty (18-ton) forklifts shall be
34 zero-emission units.

35 Toppicks

- 36 1) By no later than one year after the effective date of the permit,
37 all diesel top-picks shall be equivalent to or cleaner than Tier 4
38 final off-road engine emission rates for PM and NO_x. All diesel
39 top-picks will be required to use renewable diesel fuel.
40 2) By no later than 2035, all toppicks shall be zero-emission units.

41 Rubber-Tired Gantry (RTG) Cranes

42 No later than one year after the effective date of the permit, all diesel
43 RTGs shall be diesel-electric hybrid units with diesel engines that be
44 equivalent to or cleaner than Tier 4 final off-road engine emission rates
45 for PM and NO_x. All diesel-hybrid RTGs will be required to use
46 renewable diesel fuel.

1 Sweepers

- 2 1) No later than one year after the effective date of the permit,
3 sweeper(s) shall be alternative fuel or the cleanest available
4 technology.

5 Shuttle Buses

- 6 1) By no later than 2030, shuttle buses shall be zero emissions.

7 MM AQ-10 is subject to the review process established in LM AQ-1 for the following
8 units:

- 9 1) Battery-electric heavy-duty forklifts above 5-ton capacity have progressed to
10 commercialization (SPBP 2022); for example, Kalmar advertises several battery-
11 electric models on their website. At this time, their feasibility for the rigorous
12 container terminal duty cycle requirements has been established but
13 infrastructure readiness is in the planning stages (LAHD 2025). The Port expects
14 that infrastructure upgrades through the Port-wide Electrical Infrastructure
15 Improvement Program will occur in time to meet the 2035 requirement of MM
16 AQ-10.
- 17 2) Toppicks are commercially available as zero-emission units, with limited
18 improvements needed to achieve diesel-equivalent performance where units have
19 been deployed at Port terminals (LAHD 2025). Infrastructure readiness is in the
20 planning stages (LAHD 2025) and the Port expects that infrastructure upgrades
21 through the Port-wide Electrical Infrastructure Improvement Program will occur
22 in time to meet the 2035 requirement of MM AQ-10.
- 23 3) Hybrid RTGs are considered near-zero emissions because they still require the
24 use of a small diesel engine. All-electric RTGs would be feasible if electrification
25 of the terminal infrastructure was in place, but the physical limitations and
26 terminal configuration make installation of the necessary infrastructure and
27 operating units infeasible at the B121-131 Terminal as a grid based system.
28 Battery-electric RTGs appear to be infeasible for the foreseeable future (SPBP
29 2022). Hydrogen fuel-cell technology for RTGs appears not to be advancing
30 (RMI 2024), although there is one prototype in the early stages of development
31 that has been deployed at POLA for testing (LAHD 2025).

32 **Drayage Trucks**

33 This lease measure would potentially reduce future emissions by encouraging preferential
34 access to zero-emission drayage trucks calling at the terminal in the future; however it
35 does not qualify as mitigation and it cannot be quantified in the analysis because the
36 future technologies and systems that may be implemented have not yet been identified
37 and its effectiveness in any future year is unknown at this time.

38 **LM AQ-2: Priority Access for Drayage.** A priority access system shall be
39 implemented at the B121-131 Terminal to provide preferential access to
40 zero- and near-zero-emission trucks.

41 **Feasibility of Additional Mitigation Measures**

42 No additional feasible mitigation measures for the Proposed Project or Alternative 2 were
43 identified that could reduce emissions below those shown above (mitigation cannot be
44 applied to Alternative 1 ‘No Project’). Mitigation measure feasibility for each major
45 source category is discussed below.

1 **Ocean-going Vessels:** The Port does not have the authority to impose any specific
2 emissions reduction technology on OGVs as they are internationally flagged vessels
3 subject only to IMO regulations. Therefore, no other feasible operational measures within
4 the Port’s authority were identified that could result in reductions in ship emissions.

5 Ongoing international efforts are expected to reduce OGV emissions in coming years.
6 For example, the ports of Los Angeles, Long Beach, and Shanghai have outlined an
7 implementation plan for a ”green shipping corridor” across the Pacific Ocean (C40 Cities
8 et al. 2023). In this plan, ports will facilitate deployment of shore power (e.g., AMP) and
9 clean marine fueling infrastructure, and ocean carriers will “begin deploying reduced or
10 zero lifecycle carbon-capable ships on the corridor by 2025, and work together to
11 demonstrate by 2030 the feasibility of deploying the world’s first zero lifecycle carbon
12 emission container ship(s).”

13 Another approach to OGV emissions reduction is the introduction of dual-fuel-capable
14 vessels into the world fleet. For example, Reuters (2024) reports that container shipping
15 companies have started to order dual-fuel vessels to help them comply with regulations
16 and customer demand regarding greenhouse gas emissions (Reuters 2024). Although
17 there is some uncertainty regarding preferable alternative fuels, the Reuters report
18 indicates that over 500 new dual-fuel vessels are on order, mostly for LNG or methanol
19 fuels. If it turns out to be practicable, the technology would help the industry meet the
20 IMO’s goal of eliminating OGV greenhouse gas emissions by 2050 and would enable
21 vessels to switch to cleaner fuels as they approach port, thus reducing diesel emissions
22 near population centers. Such efforts, while promising for the future, do not constitute
23 feasible mitigation as their enforceability by LAHD and their implementation schedules
24 are unknown at this time.

25 **Tugboats:** No feasible operational or technology-based mitigation measures were
26 identified that could further reduce tugboat emissions. The 2010 CAAP update measure
27 HC-1 already identifies compliance with the CARB fleet average emissions regulation,
28 which requires turnover of harbor craft engines to higher tier levels following the phase-
29 in schedule of the regulation. Measure HC-1 also identifies the goal of encouraging
30 shoreside power use by harbor craft when at their home port locations. Harbor craft that
31 would assist container ships calling on the B121-131 Terminal are not controlled by
32 either the Port of Los Angeles or the B121-131 Terminal. They are owned and operated
33 by separate, private companies that contract with shipping lines to provide vessel assist.
34 Because neither LAHD nor the terminal controls the tugboats, it is not feasible to require
35 the use of advanced emissions reduction technology, such as hybrid main propulsion
36 engines. Instead, state and federal regulations must control harbor craft sources.

37 CARB’s latest Commercial Harbor Craft regulation, effective January 1, 2023, imposes
38 more stringent emissions and fuel standards on harbor craft fleets and is expected to
39 reduce future emissions from these sources. In January 2025, CARB withdrew elements
40 of its request to USEPA for a waiver to implement and enforce the regulation. Without a
41 USEPA waiver, emissions reduction credit for CHC transitioning to higher tier levels
42 could not be included in the Draft EIS/EIR’s analysis.

43 **Drayage Trucks:** The LAHD has studied the feasibility of imposing truck mitigation
44 measures such as technology requirements for drayage trucks (LAHD 2017). The
45 conclusion of this study is that there are industry structural, technology, and financial
46 constraints to requiring specific truck technologies for drayage trucks that call on
47 individual terminals such as the Berths 121-131 terminal. Instead, as described below, the
48 drayage truck fleet serving the San Pedro Bay ports will transition to near-zero- and zero-

1 emission technology by 2035 through a combination of state regulations and port-
2 sponsored measures.

3 In April 2023, CARB adopted its Advanced Clean Truck Regulation (ACT, 13 CCR
4 Section 1963), which established a system of introducing zero-emission heavy-duty
5 trucks into the California fleet. This regulation required that a proportion of new trucks
6 sold in California be zero- or near-zero-emission technology, the proportion increasing
7 over the years through 2035. Accordingly, the drayage truck fleet would contain
8 increasing numbers of zero-emission trucks in the future, ultimately becoming 100%
9 zero-emissions. However, in January 2025, California withdrew its waiver request,
10 instead urging voluntary emissions reduction efforts by the trucking industry. Without a
11 USEPA waiver, emissions reduction credit for on-road ZE trucks to Port terminals cannot
12 be enforced as a mitigation measure, nor included in the Draft EIS/EIR's analyses.

13 The San Pedro Bay ports, through the CAAP, are also working towards a zero-emission
14 drayage fleet. The 2017 CAAP Update reiterates the ports' commitment to a zero-
15 emission drayage fleet by 2035. Through the Clean Trucks Program, the ports are using
16 the ACT's schedule to establish standards for trucks entering the Ports' Drayage Truck
17 Registry, fees for trucks that do not meet a near-zero-emissions standard or better, and
18 incentives for those that do. This program will, in concert with state regulations,
19 accelerate the transition to zero-emission technology in the fleet that serves port
20 terminals, thereby reducing emissions from truck activity associated with the B121-131
21 Terminal.

22 Based on the above, no other feasible operational mitigation measures were identified
23 that could reduce drayage emissions. Nevertheless, the LAHD is recommending a new
24 lease measure, LM AQ-2 (Priority Access System), described above, that is intended to
25 reduce drayage truck emissions by incentivizing the use of cleaner trucks.

26 **Rail:** The 2010 CAAP identified feasible measures, which were affirmed in the 2017
27 CAPP Update, to address switcher and line-haul locomotive emissions at railyard
28 facilities. CAAP measures RL-1, RL-2, and RL-3 set goals for modernizing switcher and
29 line-haul locomotives to the extent feasible. Neither switching locomotives, which are
30 owned and operated by Pacific Harbor Line, nor line-haul locomotives, which are owned
31 and operated by the Class I railroads (i.e., BNSF and UP), are under the control of LAHD
32 or the operators of the B121-131 terminal. As a result, it is not within the authority of
33 LAHD to impose, or of the B121-131 terminal to require, more advanced locomotive
34 emissions control than is achievable through the CAAP measures, federal regulations,
35 and the CARB MOU (see Section 3.2.2.1). No other feasible operational or technological
36 measures were identified that could reduce rail emissions at the WBCT on-dock railyard.
37 However, electric RMG cranes supporting the on-dock railyard are included as a project
38 feature of the Proposed Project that would replace diesel-powered equipment with zero-
39 emissions technology.

40 3.2.5 Impact Determination

41 3.2.5.1 Proposed Project

42 Impact AQ-1: Would the Proposed Project result in construction-related 43 emissions that exceed the SCAQMD threshold of significance in Table 3.2- 44 8?

45 Construction activities related to the Proposed Project are described in Section 2.6. Key
46 construction activities of the Proposed Project include dredging, disposal of dredging

1 material on land and in ocean disposal sites, wharf demolition and rock dike construction,
2 pile driving, installation of new container and railyard cranes, and intermodal railyard
3 expansion. Emissions produced by off-road equipment and onroad and marine sources
4 involved in these activities constitute the Proposed Project construction emissions
5 inventory. Maximum daily emissions for each construction year were determined by
6 adding the daily emissions from those construction activities that overlap in the proposed
7 construction schedule. Table 3.2-12 presents peak-day criteria pollutant emissions
8 associated with construction of the Proposed Project.

9 This Draft EIS/EIR assumes that approximately 260,000 cubic yards (cy) of dredged
10 material would be disposed by truck in an upland facility or in-port confined disposal
11 facility and approximately 50,000 cy would be disposed of at the LA-2 ocean disposal
12 site via tugboat and barge. The construction emissions shown in Table 3.2-12 represent
13 this scenario, which is more conservative in terms of emissions than disposal of all
14 dredged material at an upland or in-port confined disposal facility. This statement reflects
15 the reduction in truck emissions factors as trucks turn over to newer model years with
16 cleaner emissions standards. Because harbor craft (tugboats) do not turn over as quickly
17 and are not subject to the same stringent emission standards, assuming a mix of land-
18 based and ocean-based disposal of dredge material represents a more conservative
19 scenario for purposes of air quality analysis than does a 100 percent land-based disposal
20 scenario.

21 The B121-131 Terminal would continue to operate at reduced levels during construction
22 of the Proposed Project; construction and reduced operational activities would overlap
23 during this time. Total Proposed Project emissions from combined construction and
24 reduced operational activities are presented in Table 3.2-13.

25 Emissions from the construction activities required for the future installation of electrical
26 charging infrastructure (in support of MM AQ-9 and AQ-10), which would facilitate
27 future all-electric cargo-handling equipment, have been integrated with the 2036
28 operational year emissions of the cargo-handling equipment. The analysis assumed that
29 infrastructure would be installed at the terminal and that construction would involve
30 modest amounts of construction equipment and activity (detailed in Appendix A, see
31 Volume II).

Table 3.2-12: Peak Daily Construction Emissions — Proposed Project (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Construction Year 2026												
Off-road Construction Equipment	21	133	381	9	8	<1	7	73	16	1	<1	<1
Ocean Going Vessels	0	0	0	0	0	0	0	0	0	0	0	0
Harbor Craft	7	39	244	4	4	<1	7	39	244	4	4	<1
Worker Vehicles Onsite & Offsite	<1	1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1
Trucks Onsite & Offsite	1	10	32	13	4	<1	<1	7	33	13	4	<1
Construction Year 2026 Total	29	184	657	27	16	2	15	120	293	19	8	1
CEQA Impacts												
CEQA Baseline Emissions	0	0	0	0	0	0	0	0	0	0	0	0
Project Minus CEQA Baseline	29	184	657	27	16	2	15	120	293	19	8	1
Significance Threshold	75	550	100	150	55	150	75	550	100	150	55	150
Significant?	No	No	Yes	No	No	No	No	No	Yes	No	No	No
NEPA Impacts												
NEPA Baseline Emissions	3	23	20	<1	<1	<1	3	23	20	<1	<1	<1
Project Minus NEPA Baseline	26	160	637	26	15	2	12	97	273	18	8	1
Significance Threshold	75	550	100	150	55	150	75	550	100	150	55	150
Significant?	No	No	Yes	No	No	No	No	No	Yes	No	No	No
Construction Year 2027												
Off-road Construction Equipment	5	36	29	1	1	<1	3	33	8	<1	<1	<1
Ocean Going Vessels	50	114	1,259	17	16	38	50	114	1,259	17	16	38
Harbor Craft	<1	2	11	<1	<1	<1	<1	2	11	<1	<1	<1
Worker Vehicles Onsite & Offsite	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trucks Onsite & Offsite	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Construction Year 2027 Total	55	152	1,299	19	17	38	54	150	1,278	18	17	38
CEQA Impacts												
CEQA Baseline Emissions	0	0	0	0	0	0	0	0	0	0	0	0

Table 3.2-12: Peak Daily Construction Emissions — Proposed Project (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Project Minus CEQA Baseline	55	152	1,299	19	17	38	54	150	1,278	18	17	38
Significance Threshold	75	550	100	150	55	150	75	550	100	150	55	150
Significant?	No	No	Yes	No	No	No	No	No	Yes	No	No	No
NEPA Impacts												
NEPA Baseline Emissions	<1	3	3	<1	<1	<1	<1	3	3	<1	<1	<1
Project Minus NEPA Baseline	55	149	1,296	19	17	38	53	146	1,275	18	16	38
Significance Threshold	75	550	100	150	55	150	75	550	100	150	55	150
Significant?	No	No	Yes	No	No	No	No	No	Yes	No	No	No

Notes:

Construction emissions reflect the construction activities consisting broadly of rebuilding the wharf at Berth 126-129 and expansion of the intermodal railyard

On-road construction vehicle emissions include exhaust, road dust, tire wear, and brake wear emissions from haul trucks and material delivery trucks.

Worker Vehicle emissions include exhaust, road dust, tire wear, and brake wear emissions from construction worker commute.

Construction emissions "with mitigation" are controlled based on the mitigation measures MM AQ-1 through MM-AQ-7 presented in this document.

NEPA baseline emissions are emissions presented in Peak Daily Construction Emissions—NEPA Baseline, Table 3.2-6. CEQA baseline emissions are zero as there are no construction activities during the baseline.

Emissions might not add precisely due to rounding.

Table 3.2-13: Peak Daily Combined Construction and Operational Emissions — Proposed Project (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Construction 2026												
All source categories	29	184	657	27	16	2	15	120	293	19	8	1
Operation 2026												
Cargo Handling Equipment	13	1,045	57	3	3	<1	13	1,045	57	3	3	<1
Harbor Craft	<1	10	21	<1	<1	<1	<1	10	21	<1	<1	<1
Worker Vehicles Offsite	<1	21	1	2	<1	<1	<1	21	1	2	<1	<1
Trucks Offsite Driving	<1	20	36	9	3	<1	<1	20	36	9	3	<1
Ocean Going Vessels	81	157	3,308	37	34	118	81	157	3,308	37	34	118
Worker Vehicles Onsite Driving	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	2	32	16	5	<1	<1	2	32	16	5	<1	<1
Rail Offsite Operations	5	34	138	3	3	<1	5	34	138	3	3	<1
Rail On Dock Operations	<1	5	18	<1	<1	<1	<1	5	18	<1	<1	<1
Total Construction and Operation Year 2026	132	1,507	4,253	87	61	121	118	1,444	3,889	79	53	121
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Project Minus CEQA Baseline	<1	535	- 397	2	- 1	14	- 13	471	- 761	- 6	- 9	14
Significance Threshold	75	550	100	150	55	150	75	550	100	150	55	150
Significant?	No	No	No	No	No	No	No	No	No	No	No	No
NEPA Impacts												
NEPA Baseline Emissions	133	2,126	4,328	84	59	142	133	2,126	4,328	84	59	142
Project Minus NEPA Baseline	- 1	- 618	- 75	3	2	- 21	- 15	- 682	- 439	- 5	- 5	- 22
Significance Threshold	75	550	100	150	55	150	75	550	100	150	55	150
Significant?	No	No	No	No	No	No	No	No	No	No	No	No
Construction 2027												
All source categories	55	152	1,299	19	17	38	54	150	1,278	18	17	38

Table 3.2-13: Peak Daily Combined Construction and Operational Emissions — Proposed Project (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Operation 2027												
Cargo Handling Equipment	13	1,123	44	3	3	<1	13	1,123	44	3	3	<1
Harbor Craft	<1	13	28	<1	<1	<1	<1	13	28	<1	<1	<1
Worker Vehicles Offsite	<1	21	<1	2	<1	<1	<1	21	<1	2	<1	<1
Trucks Offsite Driving	<1	19	35	10	3	<1	<1	19	35	10	3	<1
Ocean Going Vessels	81	157	3,074	37	34	118	81	157	3,074	37	34	118
Worker Vehicles Onsite Driving	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	2	34	16	5	<1	<1	2	34	16	5	<1	<1
Rail Offsite Operations	5	35	140	3	3	<1	5	35	140	3	3	<1
Rail On Dock Operations	<1	5	18	<1	<1	<1	<1	5	18	<1	<1	<1
Total Construction and Operation Year 2027	158	1,559	4,655	80	62	157	157	1,556	4,634	79	62	157
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Project Minus CEQA Baseline	27	586	4	- 5	<1	51	26	584	- 17	- 6	<1	51
Significance Threshold	75	550	100	150	55	150	75	550	100	150	55	150
Significant?	No	Yes	No	No	No	No	No	Yes	No	No	No	No
NEPA Impacts												
NEPA Baseline Emissions	148	2,278	4,579	92	65	164	148	2,278	4,579	92	65	164
Project Minus NEPA Baseline	11	- 720	76	- 11	- 3	- 7	9	- 722	55	- 12	- 3	- 7
Significance Threshold	75	550	100	150	55	150	75	550	100	150	55	150
Significant?	No	No	No	No	No	No	No	No	No	No	No	No

Notes:

Emissions assume the simultaneous occurrence of maximum daily emissions for each source category. Such levels would rarely occur during day-to-day terminal operations.

Truck, train, ship, and worker commute emissions include transport within the South Coast Air Basin.

Construction emissions reflect construction activities consisting broadly of rebuilding of the wharf at Berth 126-129 and expansion of the intermodal railyard.

"With mitigation" reflects mitigation measures MM AQ-1 through MM AQ-7 for construction and mitigation measures MM AQ-8 through MM AQ-10 for operation.

NEPA baseline emissions include the NEPA baseline construction emissions plus the NEPA baseline operational emissions, presented in Table 3.2-6 and Table 3.2-7.

Emissions might not precisely add due to rounding.

CEQA Impact Determination

Table 3.2-12 shows that unmitigated peak daily construction emissions would exceed the SCAQMD daily emission thresholds for NO_x. Therefore, impacts of Proposed Project construction emissions would be significant for NO_x prior to mitigation. The largest contributors to construction-related peak daily NO_x emissions are construction off-road equipment and oceangoing vessels for crane delivery.

Table 3.2-13 shows that combined construction and operational emissions would exceed the SCAQMD daily emission thresholds for CO. Therefore, impacts under CEQA would be significant for CO during years of combined construction and operations prior to mitigation.

Mitigation Measures

The following mitigation measures would reduce criteria pollutant emissions associated with Proposed Project construction. These mitigation measures would be implemented by the responsible parties identified in Section 3.2.5. Note that mitigation measure MM AQ-6 is not quantified in this analysis. Table 3.2-12 presents the peak day criteria pollutant emissions associated with construction of the Proposed Project after the application of mitigation measures MM AQ-1 through MM AQ-7. Table 3.2-13 presents the peak day combined construction and operational emissions after the application of construction and operational mitigation measures MM AQ-1 through MM AQ-10.

MM AQ-1: Harbor Craft Used During Construction.

MM AQ-2: On-road Trucks Used During Construction.

MM AQ-3: Non-Road Construction Equipment.

MM AQ-4: Cargo Ships Used During Construction.

MM AQ-5: Dredging Non-Road Equipment.

MM AQ-6: General Construction Mitigation Measure.

MM AQ-7: Renewable Diesel Fuel

MM AQ-8: Vessel Speed Reduction Program

MM AQ-9: Yard Tractor Emissions Standards

MM AQ-10: Cargo-Handling Equipment Emissions Standards

Residual Impacts

Emissions from construction of the Proposed Project would be reduced with mitigation but would remain significant and unavoidable under CEQA for NO_x as shown in Table 3.2-12. In addition, emissions of CO from combined construction and operation would be reduced with mitigation but would remain significant and unavoidable, as shown in Table 3.2-13.

NEPA Impact Determination

Table 3.2-12 shows that unmitigated peak daily construction emissions would exceed the SCAQMD daily thresholds for NO_x. Therefore, Proposed Project construction emissions would be significant under NEPA for NO_x prior to mitigation.

Table 3.2-13 shows that combined construction and operational emissions of criteria pollutants would not exceed the SCAQMD daily emission thresholds. Therefore, emission impacts would be less than significant for combined construction and operations under NEPA.

1 **Mitigation Measures**

2 Table 3.2-12 presents the peak day criteria pollutant emissions associated with
3 construction of the Proposed Project after the application of mitigation measures MM
4 AQ-1 through MM AQ-10. No mitigation is required under NEPA for impacts of
5 combined construction and operational emissions.

6 **Residual Impacts**

7 Emissions from construction of the Proposed Project would remain significant and
8 unavoidable under NEPA for NO_x, as shown in Table 3.2-12.

9 **Impact AQ-2: Would Proposed Project construction result in off-site**
10 **ambient air pollutant concentrations that exceed a SCAQMD threshold of**
11 **significance in Table 3.2-9?**

12 Table 3.2-14 presents the maximum off-site ground-level concentrations of CO from
13 construction with and without mitigation. Table 3.2-15 presents the maximum off-site
14 ground-level concentrations of PM₁₀ and PM_{2.5} from construction with and without
15 mitigation. Note that SO₂ is not modeled. The primary source of SO₂ emissions during
16 construction is exhaust from construction equipment. As state and federal regulations
17 (California Ocean-Going Vessel Fuel Regulation SCAQMD Rule 431.2) require the use
18 of low-sulfur fuels, SO₂ emissions are expected to be insignificant. For this reason, SO₂
19 emissions from construction of the Proposed Project are not expected to cause or
20 contribute to any exceedance of NAAQS or CAAQS.

21 Table 3.2-16 presents maximum off-site ground-level concentrations of NO₂ and CO
22 when peak construction activity would overlap with terminal operations with and without
23 mitigation. Table 3.2-17 presents the maximum off-site ground-level concentrations of
24 PM₁₀ and PM_{2.5}, when peak construction activity would overlap with terminal operations
25 with and without mitigation.

26 Decreased operational emissions at the terminal during construction would result in
27 operational ambient concentrations that would be lower than baseline ambient
28 concentrations in some locations.

29 **CEQA Impact Determination**

30 Table 3.2-14 shows that the maximum off-site CO concentration increments from
31 construction activities would not exceed SCAQMD thresholds. Accordingly, impacts
32 would be less than significant.

33 Table 3.2-15 shows that the maximum off-site incremental PM₁₀ (24-hour and annual
34 average) and PM_{2.5} (24-hour) concentrations from construction activities would exceed
35 SCAQMD thresholds. Therefore, without mitigation, maximum off-site ambient pollutant
36 concentrations associated with the construction of the Proposed Project would be
37 significant under CEQA for PM₁₀ (24-hour and annual average) and PM_{2.5} (24-hour).

Table 3.2-14 Maximum Off-site Ambient CO Concentrations (CEQA) — Proposed Project Construction

Pollutant ^a	Averaging Time	Analysis Years ^a	Background Concentration (µg/m ³) ^b	Maximum Unmitigated Modeled Project Concentration Increment (µg/m ³)	Total Unmitigated Ground-Level Concentration (µg/m ³)	Maximum Mitigated Modeled Project Concentration (µg/m ³)	Total Mitigated Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
CO	1-hour	2026	8,821	884	9,705	524	9,345	23,000	No	No
		2027	8,821	144	8,965	129	8,950	23,000	No	No
	8-hour	2026	2,749	458	3,207	238	2,988	10,000	No	No
		2027	2,749	27	2,776	24	2,774	10,000	No	No

Notes:

^a Since the Project's construction activities would overlap with operations, combined Project construction and operation NO₂ impacts were modeled for 2026 and 2027. Please refer to Table 3.2-16 for the NO₂ impacts. NO₂ modeling was not performed for construction only. The combined impacts represent the worst-case scenario and allow AERMOD to model all contemporaneous NO_x sources to predict the ambient NO_x/NO₂ ratio accurately using Ambient Ratio Method for NO₂ modeling.

^b The background concentrations for CO were obtained from the Wilmington Community Monitoring Station (Saints Peter and Paul School).

Table 3.2-15. Maximum Off-site Ambient PM₁₀ and PM_{2.5} Concentrations (CEQA) — Proposed Project Construction

Pollutant	Averaging Time	Analysis Years	Unmitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^{a,b,c}	Mitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^c	SCAQMD Threshold (µg/m ³)	Unmitigated CEQA Concentration above Threshold?	Mitigated CEQA Concentration above Threshold?
PM ₁₀	24-hour	2026	27	3.2	10.4	Yes	No
		2027	1.0	0.5	10.4	No	No
	Annual	2026	4.8	0.4	1	Yes	No
		2027	0.1	0.02	1	No	No
PM _{2.5}	24-hour	2026	25	2.8	10.4	Yes	No
		2027	0.9	0.4	10.4	No	No

Notes:

^a A value of “-” represents values that were not modeled given that there is no unmitigated construction emissions in 2036.

^b Exceedances of the threshold are indicated in **bold**. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the incremental concentration without background is compared to the threshold.

^c The CEQA increment represents the Proposed Project minus CEQA baseline. Because the CEQA baseline for construction is zero, the CEQA increment equals the maximum modeled concentration.

1

Table 3.2-16. Maximum Off-site Ambient NO₂ and CO Concentrations (CEQA) — Proposed Project Combined Construction and Operation

Pollutant	Averaging Time	Analysis Years	Background Concentration (µg/m ^{3b})	Maximum Unmitigated Modeled Project Concentration Increment (µg/m ^{3c,d})	Total Unmitigated Ground-Level Concentration (µg/m ^{3c,d})	Maximum Mitigated Modeled Project Concentration Increment (µg/m ^{3c})	Total Mitigated Ground-Level Concentration (µg/m ^{3c,d})	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
NO ₂	Federal 1-hour ^a	2026	97	700	797	100	197	188	Yes	Yes
		2027	97	37	134	36	133	188	No	No
	State 1-hour	2026	113	817	930	121	234	339	Yes	No
		2027	113	44	157	41	154	339	No	No
	Federal annual	2026	26	130	157	4	31	100	Yes	No
		2027	26	-0.02	26	-0.02	26	100	No	No
	State annual	2026	26	130	157	4	31	57	Yes	No
		2027	26	-0.02	26	-0.02	26	57	No	No
CO	1-hour	2026	8,821	1,176	9,998	816	9,637	23,000	No	No
		2027	8,821	498	9,319	485	9,306	23,000	No	No
	8-hour	2026	2,749	632	3,381	419	3,168	10,000	No	No
		2027	2,749	254	3,003	253	3,003	10,000	No	No

Notes:

^a The federal 1-hour NO₂ modeled concentration represents the 98th percentile of the daily maximum 1-hour averages.

^b The background concentrations for NO₂ and CO were obtained from the Wilmington Community Monitoring Station (Saints Peter and Paul School).

^c The maximum modeled concentration increment represents Proposed Project construction plus operations minus CEQA baseline terminal operations.

^d Exceedances of the thresholds are indicated in **bold**.

2

Table 3.2-17. Maximum Off-site Ambient PM₁₀ and PM_{2.5} Concentrations (CEQA) — Proposed Project Combined Construction and Operation

Pollutant	Averaging Time	Analysis Years	Unmitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^{a,b}	Mitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^b	SCAQMD Threshold (µg/m ³)	Unmitigated CEQA Concentration above Threshold?	Mitigated CEQA Concentration above Threshold?
PM ₁₀	24-hour	2026	26	2.6	10.4	Yes	No
		2027	0.4	0.1	10.4	No	No
	Annual	2026	4.6	0.3	1	Yes	No
		2027	0.01	0.01	1	No	No
PM _{2.5}	24-hour	2026	24	2.4	10.4	Yes	No
		2027	0.5	0.1	10.4	No	No

Notes:

^a Exceedances of the threshold are indicated in **bold**. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the incremental concentration without background is compared to the threshold.

^b The CEQA increment represents the Proposed Project minus CEQA baseline. Exceedances of the threshold are indicated in bold. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the incremental concentration without background is compared to the threshold.

1 Table 3.2-16 shows that the maximum off-site NO₂ (annual average and federal and state
2 1-hour and annual average) concentration from combined construction and operational
3 activities would exceed the SCAQMD thresholds. CO concentration increments would
4 not exceed significance thresholds. Table 3.2-17 shows that the maximum off-site
5 incremental PM₁₀ (24-hour and annual average) and PM_{2.5} (24-hour) concentrations from
6 combined construction and operational activities would exceed SCAQMD thresholds in
7 2026. Therefore, without mitigation, maximum off-site ambient pollutant concentrations
8 associated with the combined construction and operation of the Proposed Project would
9 be significant under CEQA for NO₂ (annual average and federal and state 1-hour
10 average), PM₁₀ (24-hour and annual average), and PM_{2.5} (24-hour).

11 **Mitigation Measures**

12 To reduce the level of impacts during construction, MM AQ-1 through MM AQ-10
13 would be applied. These mitigation measures would be implemented by the responsible
14 parties identified in Section 3.2.5

15 Table 3.2-15 presents the maximum off-site ground-level concentrations of PM₁₀ (24-
16 hour and annual average) and PM_{2.5} (24-hour) from construction with mitigation. Table
17 3.2-16 presents the maximum concentration of annual average and federal and state 1-
18 hour average NO₂, and Table 3.2-17 presents the maximum off-site ground-level
19 concentration of PM₁₀ (24-hour and annual average) and PM_{2.5} (24-hour) when peak
20 construction activity with mitigation would overlap with terminal operations.

21 **Residual Impacts**

22 Table 3.2-15 shows that the maximum off-site ground-level concentration of PM₁₀ (24-
23 hour and annual average) and PM_{2.5} (24-hour) from construction after mitigation would
24 be reduced to less than significant.

25 Table 3.2-16 shows that the maximum off-site federal 1-hour NO₂ concentration from
26 combined construction and operational activities would be reduced with mitigation but
27 would remain significant. With mitigation, the maximum offsite NO₂ annual average and
28 state 1-hour impacts would be reduced to less than significant. Table 3.2-17 shows that
29 the impact of off-site ground-level concentrations of PM₁₀ (24-hour and annual average)
30 and PM_{2.5} (24-hour) from combined construction and operational activities would be
31 reduced with mitigation to less than significant.

32 Therefore, following mitigation, maximum off-site ambient pollutant concentrations
33 associated with the combined construction and operation of the Proposed Project would
34 be significant and unavoidable under CEQA for NO₂ (federal 1-hour average).

35 **NEPA Impact Determination**

36 Table 3.2-18 presents the maximum off-site ground-level concentrations of CO from
37 construction with and without mitigation. Table 3.2-19 presents the maximum off-site
38 ground level concentrations of PM₁₀ and PM_{2.5} from construction with and without
39 mitigation. Table 3.2-20 presents maximum off-site ground level concentrations of NO₂
40 and CO when peak construction activity would overlap with terminal operations with and
41 without mitigation. Table 3.2-21 presents the maximum off-site ground-level
42 concentrations of PM₁₀ and PM_{2.5} when peak construction activity would overlap with
43 terminal operations with and without mitigation. Decreases in predicted activity levels at
44 the terminal during construction resulted in a reduction of total emissions from
45 construction and operations, hence lower concentrations at specific locations were
46 predicted for some pollutants when construction and operational sources were both
47 modeled.

Table 3.2-18 Maximum Off-site Ambient CO Concentrations (NEPA) — Proposed Project Construction

Pollutant ^a	Averaging Time	Analysis Years ^a	Background Concentration (µg/m ³) ^b	Maximum Unmitigated Modeled Project Concentration Increment (µg/m ³)	Total Unmitigated Ground-Level Concentration (µg/m ³)	Maximum Mitigated Modeled Project Concentration (µg/m ³)	Total Mitigated Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
CO	1-hour	2026	8,821	874	9,695	514	9,335	23,000	No	No
		2027	8,821	142	8,963	128	8,949	23,000	No	No
	8-hour	2026	2,749	456	3,205	236	2,986	10,000	No	No
		2027	2,749	26	2,776	24	2,773	10,000	No	No

Notes:

^a Since the Project's construction activities overlap with operations, combined Project's construction and operation NO₂ impacts were modeled for 2026 and 2027. Please refer to Table 3.2-20 for the NO₂ impacts. NO₂ modeling was not performed for construction only. The combined impacts also allow AERMOD to model all contemporaneous NO_x sources to predict the ambient NO_x/NO₂ ratio accurately using Ambient Ratio Method for NO₂ modeling.

^b The background concentrations for CO were obtained from the Wilmington Community Monitoring Station (Saints Peter and Paul School).

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Table 3.2-19. Maximum Off-site Ambient PM₁₀ and PM_{2.5} Concentrations (NEPA) — Proposed Project Construction

Pollutant	Averaging Time	Analysis Years	Unmitigated Ground-Level Concentration NEPA Increment (µg/m ³) ^{a,b}	Mitigated Ground-Level Concentration NEPA Increment (µg/m ³) ^b	SCAQMD Threshold (µg/m ³)	Unmitigated NEPA Concentration above Threshold?	Mitigated NEPA Concentration above Threshold?
PM ₁₀	24-hour	2026	27	3.2	10.4	Yes	No
		2027	1.0	0.5	10.4	No	No
	Annual	2026	4.8	0.4	1	Yes	No
		2027	0.1	0.02	1	No	No
PM _{2.5}	24-hour	2026	24	2.8	10.4	Yes	No
		2027	0.9	0.4	10.4	No	No

Notes:

^a Exceedances of the threshold are indicated in **bold**. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the incremental concentration without background is compared to the threshold.

^b The NEPA increment represents the Proposed Project minus NEPA baseline.

Table 3.2-20. Maximum Off-site Ambient NO₂ and CO Concentrations (NEPA) — Proposed Project Combined Construction and Operation

Pollutant	Averaging Time	Analysis Years ^b	Background Concentration (µg/m ³) ^b	Maximum Unmitigated Modeled Project Concentration Increment (µg/m ³) ^{c,d}	Total Unmitigated Ground-Level Concentration (µg/m ³) ^{c,d}	Maximum Mitigated Modeled Project Concentration Increment (µg/m ³) ^c	Total Mitigated Ground-Level Concentration (µg/m ³) ^{c,d}	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
NO ₂	Federal 1-hour ^a	2026	97	749	847	150	247	188	Yes	Yes
		2027	97	71	168	61	158	188	No	No
	State 1-hour	2026	113	863	976	168	281	339	Yes	No
		2027	113	82	195	69	181	339	No	No
	Federal annual	2026	26	137	163	10	36	100	Yes	No
		2027	26	-0.002	26	-0.003	26	100	No	No
	State annual	2026	26	137	163	10	36	57	Yes	No
		2027	26	-0.002	26	-0.003	26	57	No	No
CO	1-hour	2026	8,821	444	9,265	86	8,907	23,000	No	No
		2027	8,821	-5	8,817	-5	8,817	23,000	No	No
	8-hour	2026	2,749	196	2,946	-1	2,749	10,000	No	No
		2027	2,749	-1	2,749	-1	2,749	10,000	No	No

Notes:

^a The federal 1-hour NO₂ modeled concentration represents the 98th percentile of the daily maximum 1-hour averages.

^b The background concentrations for NO₂ and CO were obtained from the Wilmington Community Monitoring Station (Saints Peter and Paul School).

^c The maximum modeled concentration increment represents proposed project construction plus operations minus NEPA baseline terminal operations.

^d Exceedances of the thresholds are indicated in **bold**.

Table 3.2-21. Maximum Off-site Ambient PM₁₀ and PM_{2.5} Concentrations (NEPA) — Proposed Project Combined Construction and Operation

Pollutant	Averaging Time	Analysis Years	Unmitigated Ground-Level Concentration NEPA Increment (µg/m ³) ^{a,b}	Mitigated Ground-Level Concentration NEPA Increment (µg/m ³) ^b	SCAQMD Threshold (µg/m ³)	Unmitigated NEPA Concentration above Threshold?	Mitigated NEPA Concentration above Threshold?
PM ₁₀	24-hour	2026	26	3	10.4	Yes	No
		2027	0.3	0.02	10.4	No	No
	Annual	2026	5	0.3	1	Yes	No
		2027	-0.0001	-0.0001	1	No	No
PM _{2.5}	24-hour	2026	24	2	10.4	Yes	No
		2027	0.5	0.1	10.4	No	No

Notes:

^a Exceedances of the threshold are indicated in **bold**. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the incremental concentration without background is compared to the threshold.

^b The NEPA increment represents Proposed Project minus NEPA baseline.

1 Table 3.2-19 shows that the maximum off-site incremental PM₁₀ (24-hour and annual
2 average) and PM_{2.5} (24-hour) concentrations from construction activities would exceed
3 SCAQMD thresholds. Therefore, without mitigation, maximum off-site ambient pollutant
4 concentrations associated with the construction of the Proposed Project would be
5 significant under NEPA for PM₁₀ (24-hour and annual average) and PM_{2.5} (24-hour).

6 Table 3.2-20 shows that the maximum off-site NO₂ (federal and state annual average and
7 1-hour average) concentration from combined construction and operational activities
8 would exceed SCAQMD thresholds. Table 3.2-21 shows that the maximum off-site PM₁₀
9 (24-hour and annual average) and PM_{2.5} (24-hour) concentration increments from
10 combined construction and operational activities would exceed SCAQMD thresholds.
11 Therefore, without mitigation, maximum off-site ambient pollutant concentrations
12 associated with the combined construction and operation of the Proposed Project would
13 be significant under NEPA for NO₂ (federal and state annual average and 1-hour
14 average), PM₁₀ (24-hour and annual average), and PM_{2.5} (24-hour).

15 **Mitigation Measures**

16 To reduce the magnitude of impacts during construction, MM AQ-1 through MM AQ-10
17 would be applied. These mitigation measures would be implemented by the responsible
18 parties identified in Section 3.2.5

19 **Residual Impacts**

20 As shown in Table 3.2-19, mitigation would reduce the maximum off-site ground-level
21 concentration increments of PM₁₀ (24-hour and annual average) and PM_{2.5} (24-hour)
22 from construction to less than significant.

23 As shown in Table 3.2-20 shows that the maximum off-site federal 1-hour NO₂
24 concentration from combined construction and operational activities would be reduced
25 with mitigation but would remain significant. With mitigation, the maximum offsite NO₂
26 state 1-hour and annual average impacts would be reduced to less than significant. Table
27 3.2-21 shows that the maximum off-site ground-level concentration of PM₁₀ (24-hour and
28 annual average) and PM_{2.5} (24-hour) from combined construction and operational
29 activities would be reduced with mitigation to less than significant. Therefore, with
30 mitigation, maximum off-site ambient pollutant concentrations associated with combined
31 construction and operation of the Proposed Project would be significant and unavoidable
32 under NEPA for NO₂ (federal 1-hour average).

33 **Impact AQ-3: Would the Proposed Project result in operational emissions** 34 **that exceed an SCAQMD threshold of significance in Table 3.2-10?**

35 Table 3.2-22 presents peak daily criteria pollutant emissions associated with operation of
36 the Proposed Project. Emissions were estimated for seven study years: 2026, 2027, 2028,
37 2036, 2050, 2055, and 2062. Operational sources of emissions at the B121-131 Terminal
38 are comprised of container ships, tugboats, drayage trucks, linehaul locomotives and
39 switcher locomotives, CHE, and worker vehicles. Operational peak daily emissions of
40 mobile sources are tracked outside of the terminal (referred to as off-site) up to the SCAB
41 border. Peak daily emissions represent upper-bound estimates of activity levels at the
42 terminal and as such would occur infrequently. Comparisons to the CEQA and NEPA
43 baseline emissions are presented to determine CEQA and NEPA significance,
44 respectively. Emissions by source characteristics, activity levels, fuel sulfur content,
45 emission factors, and other parameters assumed in the operational emissions calculations
46 are discussed in detail in Appendix A1.

Table 3.2-22. Peak Daily Operational Emissions — Proposed Project (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Year 2026												
Cargo Handling Equipment	13	1,045	57	3	3	<1	13	1,045	57	3	3	<1
Harbor Craft	<1	10	21	<1	<1	<1	<1	10	21	<1	<1	<1
Worker Vehicles Offsite	<1	21	1	2	<1	<1	<1	21	1	2	<1	<1
Trucks Offsite Driving	<1	20	36	9	3	<1	<1	20	36	9	3	<1
Ocean Going Vessels	81	157	3,308	37	34	118	81	157	3,308	37	34	118
Worker Vehicles Onsite Driving	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	2	32	16	5	<1	<1	2	32	16	5	<1	<1
Rail Offsite Operations	5	34	138	3	3	<1	5	34	138	3	3	<1
Rail On Dock Operations	<1	5	18	<1	<1	<1	<1	5	18	<1	<1	<1
Total Operational Year 2026	103	1,324	3,596	60	45	119	103	1,324	3,596	60	45	119
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Project Minus CEQA Baseline	- 28	351	- 1054	- 25	- 17	13	- 28	351	- 1054	- 25	- 17	13
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	No	No	No	No	No	No	No	No	No	No	No	No
NEPA Impacts												
NEPA Baseline Emissions	130	2,102	4,308	83	58	142	130	2,102	4,308	83	58	142
Project Minus NEPA Baseline	- 27	- 779	- 712	- 22	- 13	- 23	- 27	- 779	- 712	- 22	- 13	- 23
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	No	No	No	No	No	No	No	No	No	No	No	No
Year 2027												
Cargo Handling Equipment	13	1,123	44	3	3	<1	13	1,123	44	3	3	<1
Harbor Craft	<1	13	28	<1	<1	<1	<1	13	28	<1	<1	<1

Table 3.2-22. Peak Daily Operational Emissions — Proposed Project (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Worker Vehicles Offsite	<1	21	<1	2	<1	<1	<1	21	<1	2	<1	<1
Trucks Offsite Driving	<1	19	35	10	3	<1	<1	19	35	10	3	<1
Ocean Going Vessels	81	157	3,074	37	34	118	81	157	3,074	37	34	118
Worker Vehicles Onsite Driving	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	2	34	16	5	<1	<1	2	34	16	5	<1	<1
Rail Offsite Operations	5	35	140	3	3	<1	5	35	140	3	3	<1
Rail On Dock Operations	<1	5	18	<1	<1	<1	<1	5	18	<1	<1	<1
Total Operational Year 2027	103	1,406	3,356	61	45	119	103	1,406	3,356	61	45	119
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Project Minus CEQA Baseline	- 28	434	- 1294	- 24	- 17	13	- 28	434	- 1294	- 24	- 17	13
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	No	No	No	No	No	No	No	No	No	No	No	No
NEPA Impacts												
NEPA Baseline Emissions	147	2,275	4,576	92	65	164	147	2,275	4,576	92	65	164
Project Minus NEPA Baseline	- 44	- 869	- 1220	- 30	- 20	- 45	- 44	- 869	- 1220	- 30	- 20	- 45
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	No	No	No	No	No	No	No	No	No	No	No	No
Year 2028												
Cargo Handling Equipment	42	3,526	132	9	9	<1	19	290	24	2	2	<1
Harbor Craft	<1	12	25	<1	<1	<1	<1	12	25	<1	<1	<1
Worker Vehicles Offsite	<1	55	3	6	1	<1	<1	55	3	6	1	<1
Trucks Offsite Driving	2	61	108	32	9	2	2	61	108	32	9	2
Ocean Going Vessels	101	186	4,264	46	43	155	101	186	4,264	46	43	155

Table 3.2-22. Peak Daily Operational Emissions — Proposed Project (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Worker Vehicles Onsite Driving	<1	2	<1	<1	<1	<1	<1	2	<1	<1	<1	<1
Trucks Onsite Driving/Idling	7	111	48	17	3	<1	7	111	48	17	3	<1
Rail Offsite Operations	15	105	420	9	9	<1	15	105	420	9	9	<1
Rail On Dock Operations	3	18	69	1	1	<1	3	18	69	1	1	<1
Total Operational Year 2028	171	4,076	5,069	122	76	159	147	840	4,961	116	69	159
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Project Minus CEQA Baseline	39	3,103	419	37	14	52	16	- 132	311	30	7	52
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	No	Yes	Yes	No	No	No	No	No	Yes	No	No	No
NEPA Impacts												
NEPA Baseline Emissions	120	2,241	3,128	83	56	134	120	2,241	3,128	83	56	134
Project Minus NEPA Baseline	51	1,834	1,941	39	19	25	28	- 1401	1,834	33	12	25
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	No	Yes	Yes	No	No	No	No	No	Yes	No	No	No
Year 2036												
Cargo Handling Equipment	53	4,172	126	11	11	<1	29	291	217	15	8	1
Harbor Craft	<1	6	13	<1	<1	<1	<1	6	13	<1	<1	<1
Worker Vehicles Offsite	<1	20	<1	3	<1	<1	<1	20	<1	3	<1	<1
Trucks Offsite Driving	2	61	84	42	12	3	2	61	84	42	12	3
Ocean Going Vessels	124	245	2,854	55	51	173	124	245	2,854	55	51	173
Worker Vehicles Onsite Driving	<1	2	<1	1	<1	<1	<1	2	<1	1	<1	<1
Trucks Onsite Driving/Idling	9	146	40	22	3	<1	9	146	40	22	3	<1
Rail Offsite Operations	16	155	487	10	9	<1	16	155	487	10	9	<1

Table 3.2-22. Peak Daily Operational Emissions — Proposed Project (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Rail On Dock Operations	5	43	132	3	2	<1	5	43	132	3	2	<1
Total Operational Year 2036	209	4,850	3,737	147	90	178	185	970	3,827	150	87	178
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Project Minus CEQA Baseline	78	3,878	- 914	61	28	71	54	- 3	- 823	65	25	72
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	Yes	Yes	No	No	No	No	No	No	No	No	No	No
NEPA Impacts												
NEPA Baseline Emissions	141	2,542	1,657	90	61	146	141	2,542	1,657	90	61	146
Project Minus NEPA Baseline	69	2,308	2,080	56	29	32	44	- 1573	2,170	60	26	32
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	Yes	Yes	Yes	No	No	No	No	No	Yes	No	No	No
Year 2050												
Cargo Handling Equipment	84	7,170	196	17	17	1	7	40	5	<1	<1	<1
Harbor Craft	<1	12	26	<1	<1	<1	<1	12	26	<1	<1	<1
Worker Vehicles Offsite	<1	29	1	5	<1	<1	<1	29	1	5	<1	<1
Trucks Offsite Driving	3	99	88	68	19	4	3	99	88	68	19	4
Ocean Going Vessels	124	245	1,459	55	51	173	124	245	1,459	55	51	173
Worker Vehicles Onsite Driving	<1	3	<1	2	<1	<1	<1	3	<1	2	<1	<1
Trucks Onsite Driving/Idling	11	194	36	33	5	<1	11	194	36	33	5	<1
Rail Offsite Operations	9	206	242	4	4	<1	9	206	242	4	4	<1
Rail On Dock Operations	4	68	89	1	1	<1	4	68	89	1	1	<1
Total Operational Year 2050	236	8,026	2,139	185	99	180	158	896	1,947	168	82	179

Table 3.2-22. Peak Daily Operational Emissions — Proposed Project (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Project Minus CEQA Baseline	104	7,054	- 2512	100	37	73	27	- 76	- 2703	83	21	72
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	Yes	Yes	No	No	No	No	No	No	No	No	No	No
NEPA Impacts												
NEPA Baseline Emissions	161	4,110	1,638	112	68	157	161	4,110	1,638	112	68	157
Project Minus NEPA Baseline	75	3,916	500	73	31	23	- 3	- 3214	309	57	15	22
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	Yes	Yes	Yes	No	No	No	No	No	Yes	No	No	No
Year 2055												
Cargo Handling Equipment	84	7,170	196	17	17	1	7	40	5	<1	<1	<1
Harbor Craft	<1	12	26	<1	<1	<1	<1	12	26	<1	<1	<1
Worker Vehicles Offsite	<1	29	1	5	<1	<1	<1	29	1	5	<1	<1
Trucks Offsite Driving	3	99	88	68	19	4	3	99	88	68	19	4
Ocean Going Vessels	124	245	1,459	55	51	173	124	245	1,459	55	51	173
Worker Vehicles Onsite Driving	<1	3	<1	2	<1	<1	<1	3	<1	2	<1	<1
Trucks Onsite Driving/Idling	11	194	36	33	5	<1	11	194	36	33	5	<1
Rail Offsite Operations	9	206	242	4	4	<1	9	206	242	4	4	<1
Rail On Dock Operations	4	68	89	1	1	<1	4	68	89	1	1	<1
Total Operational Year 2055	236	8,026	2,139	185	99	180	158	896	1,947	168	82	179
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Project Minus CEQA Baseline	104	7,054	- 2512	100	37	73	27	- 76	- 2703	83	21	72

Table 3.2-22. Peak Daily Operational Emissions — Proposed Project (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	Yes	Yes	No	No	No	No	No	No	No	No	No	No
NEPA Impacts												
NEPA Baseline Emissions	187	4,764	1,899	130	78	182	187	4,764	1,899	130	78	182
Project Minus NEPA Baseline	49	3,262	240	55	20	- 2	- 28	- 3868	48	39	4	- 3
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	No	Yes	Yes	No	No	No	No	No	No	No	No	No
Year 2062												
Cargo Handling Equipment	84	7,170	196	17	17	1	7	40	5	<1	<1	<1
Harbor Craft	<1	12	26	<1	<1	<1	<1	12	26	<1	<1	<1
Worker Vehicles Offsite	<1	29	1	5	<1	<1	<1	29	1	5	<1	<1
Trucks Offsite Driving	3	99	88	68	19	4	3	99	88	68	19	4
Ocean Going Vessels	124	245	1,459	55	51	173	124	245	1,459	55	51	173
Worker Vehicles Onsite Driving	<1	3	<1	2	<1	<1	<1	3	<1	2	<1	<1
Trucks Onsite Driving/Idling	11	194	36	33	5	<1	11	194	36	33	5	<1
Rail Offsite Operations	9	206	242	4	4	<1	9	206	242	4	4	<1
Rail On Dock Operations	4	68	89	1	1	<1	4	68	89	1	1	<1
Total Operational Year 2062	236	8,026	2,139	185	99	180	158	896	1,947	168	82	179
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Project Minus CEQA Baseline	104	7,054	- 2512	100	37	73	27	- 76	- 2703	83	21	72
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	Yes	Yes	No	No	No	No	No	No	No	No	No	No

Table 3.2-22. Peak Daily Operational Emissions — Proposed Project (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
NEPA Impacts												
NEPA Baseline Emissions	228	5,806	2,314	158	96	222	228	5,806	2,314	158	96	222
Project Minus NEPA Baseline	8	2,220	- 176	27	3	- 42	- 69	- 4910	- 367	11	- 13	- 43
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No	No	No	No	No	No	No

Notes:

- Emissions assume the simultaneous occurrence of peak daily equipment activity levels. Such levels would rarely occur during day-to-day terminal operations.
- Truck, train, ship, and worker commute emissions include transport within the South Coast Air Basin.
- Operational emissions “with mitigation” are controlled based on operational emissions mitigation measures MMAQ-7, MMAQ-8, MMAQ-9, MMAQ-10 presented in this document
- Emissions from the construction activities required for the installation of electrical chargers, which will facilitate future all-electric cargo-handling equipment, have been integrated with the 2036 operational year emissions of the cargo-handling equipment
- NEPA baseline emissions reflect the NEPA baseline operational, presented in Table 3.2-7.
- Emissions might not precisely add due to rounding.

Discussion of Proposed Project Emissions Trends

Table 3.2-23 shows existing and projected activity parameters for the operations of the B121-131 Terminal during analysis years of the Proposed Project and alternatives. Emissions would vary over the life of the Proposed Project due to several factors, such as regulatory requirements, activity levels, equipment turnover schedule, and emission factors. The combination of these factors can result in emissions that do not always decrease or increase consistently over time.

For the Proposed Project, terminal throughput would increase through 2050 and then remain steady through 2062. However, regulatory requirements described in Appendix A1 would serve to decrease emission factors from most project sources at varying levels for each pollutant. In addition, as equipment ages, engine efficiency would decrease and emission factors would increase in comparison to brand-new equipment. The main drivers of the operational emissions presented for the Proposed Project under Impact AQ-3 are the following:

Terminal throughput: Terminal throughput would increase from approximately 354,000 TEUs during 2019 to nearly 1,872,000 TEUs in year 2050 and thereafter (Table 3.2-23).

Container ships: The number of container ship visits would decrease from 153 annual calls to 86 annual calls through 2028, then increase to 156 annual calls in 2050 and remain constant through 2062. This trend is the result of much larger OGVs able to call at the new wharf compared to baseline, so that more cargo would be carried by a similar number of vessels. Furthermore, NO_x emission factors for vessels would decrease as vessels are turned over from lower tiers to Tier III vessels in accordance with the Port's OGV fleet forecast. Finally, more vessels would be able to use AMP while at berth compared to baseline conditions as a result of the CARB at-berth rule.

Harbor Craft (Tugboats): Assist tugboat activity would increase in proportion to the number of container ship visits. Tugboat emission factors would decline in compliance with CARB's Regulation to Reduce Emissions from Diesel Engines on Commercial Harbor Craft Operated within California Waters and 24 nm of the California Baseline.

CHE: CHE hours of operation would increase in proportion to terminal throughput. CHE emission factors would decline over time based on equipment turnover guided by CARB's Mobile CHE at Ports and Intermodal Rail Yards compliance schedule, by equipment expected useful life (CARB, 2012), and by the requirements of MM AQ-9 (Yard Tractor Emissions Standards) and MM AQ-10 (Cargo-Handling Equipment Emissions Standards). Each CHE type (e.g. yard tractors, rubber-tired gantry cranes, top-picks, etc.) has unique turnover schedules related to useful life and regulatory requirements. Deterioration of off-road equipment would produce emission factors to increase between turnover years; however, the majority of the CHE would be zero-emissions by 2036 under the mitigated scenario.

Table 3.2-23. Existing and Projected B121-131 Terminal Activity under the Proposed Project and Alternatives

Scenario	Element	CEQA Baseline	Interim Years (for No Project) or Construction Years (for NFA/Project)			Scenario Years				
			2019	2026	2027	2028	2036	2050	2055	2062
Proposed Project	Annual Throughput (TEUs)	353,924	270,000	278,100	900,000	1,221,424	1,871,405	1,871,405	1,871,405	
	%TEUs by Truck	83%	82%	83%	79%	75%	75%	75%	75%	
	%TEUs by On-Dock	17%	18%	17%	21%	25%	25%	25%	25%	
	Annual Vessel Calls ^[1]	153	63	63	86	126	156	156	156	
	Annual One-Way Truck Trips	319,282	234,790	245,403	812,000	1,056,000	1,602,000	1,602,000	1,602,000	
	Annual On-Dock Train Trips	142	88	88	340	667	1067	1067	1067	
	RMG Cranes	n/a	n/a	n/a	Yes	Yes	Yes	Yes	Yes	
	Number of Wharf Cranes	5	5	5	15	15	15	15	15	
No Project	Annual Throughput (TEUs)	353,924	444,745	459,511	477,713	623,306	942,806	1,104,970	1,332,000	
	%TEUs by Truck	83%	80%	79%	79%	80%	82%	85%	85%	
	%TEUs by On-Dock	17%	20%	21%	21%	20%	18%	15%	15%	
	Annual Vessel Calls ^[1]	153	104	104	104	107	148	172	208	
	Annual One-Way Truck Trips	319,282	402,000	415,000	431,000	466,000	882,000	1,033,705	1,246,093	
	Annual On-Dock Train Trips	142	164	172	180	303	592	694	836	
	RMG Cranes	n/a	n/a	n/a	No	No	No	No	No	
	Number of Wharf Cranes	5	5	5	5	5	5	5	5	
No Federal Action/ NEPA Baseline	Annual Throughput (TEUs)	353,924	444,745	459,511	477,713	623,306	942,806	1,104,970	1,332,000	
	%TEUs by Truck	83%	83%	84%	79%	72%	69%	70%	70%	
	%TEUs by On-Dock	17%	17%	16%	21%	28%	31%	30%	30%	
	Annual Vessel Calls ^[1]	153	104	104	104	107	148	172	208	
	Annual One-Way Truck Trips	319,282	399,525	418,097	431,000	530,000	798,000	935,257	1,127,418	
	Annual On-Dock Train Trips	142	133	132	180	392	665	779	939	
	RMG Cranes	n/a	n/a	n/a	Yes	Yes	Yes	Yes	Yes	
	Number of Wharf Cranes	5	5	5	5	5	5	5	5	

Notes:

[1] Reconstruction of the wharf at Berths 126-129 does not directly affect the number of annual vessels calling at berth during construction but it does affect the percentage of vessel calls that must anchor before arriving at berth as a result of berth unavailability.

- 1 **Trucks:** Drayage truck activity would increase as terminal throughput increases. Truck
- 2 emission factors in 2019 reflect the San Pedro Bay Ports’ Clean Truck Program that
- 3 required all drayage trucks to meet 2007 EPA emission standards starting January 2012.
- 4 Emission factors are predicted to decline below 2019 levels in response to the CARB’s

1 Truck and Bus Regulation, the Advanced Clean Truck Regulation (Fleet Reporting
2 Requirements), and the requirements of the SPBP Clean Air Action Plan.

3 **Rail Locomotives:** Line-haul and switcher locomotive activity would increase as
4 terminal throughput increases, particularly on-dock and off-dock throughput. Line haul
5 locomotive emission factors would decline as older locomotives reach the end of their
6 useful life and are replaced by newer, cleaner locomotives that meet EPA tiered emission
7 standards, such as the Tier 4 standards that apply to new and remanufactured locomotives
8 starting in 2014.

9 **CEQA Impact Determination**

10 Table 3.2-22 shows that Proposed Project unmitigated peak daily operational emissions
11 minus the CEQA baseline would exceed the operational SCAQMD daily emission
12 thresholds shown in Table 3.2-10. Therefore, impacts would be significant under CEQA
13 for NO_x in 2028, for CO in 2028 through 2062, and for VOC in 2036, 2050, 2055, and
14 2062 under the Proposed Project prior to mitigation.

15 The largest contributors to unmitigated peak daily operational emissions of NO_x in every
16 analysis year 2062 are ocean going vessels hotelling and transit. After OGVs, rail
17 emissions from off-site operations/transit and CHE are the second and third largest
18 sources, respectively, of NO_x in every analysis year. The largest contributor to CO
19 operational-related peak daily emissions in every analyzed year of the Proposed Project is
20 CHE, specifically LPG yard tractors, for which equipment deterioration increases the CO
21 emissions annually until they are retired. The largest source of VOC unmitigated peak
22 daily operational emissions is OGVs, followed by CHE. Detailed emission factors and
23 activity for these sources in the unmitigated Proposed Project can be found in Appendix
24 A1.

25 **Mitigation Measures**

26 The Proposed Project operational mitigation measures are described below. These
27 mitigation measures would reduce criteria pollutant emissions associated with Project
28 operation (i.e. movement of cargo). Table 3.2-22 shows the peak daily criteria pollutant
29 emissions associated with operation of the Proposed Project after the application of MM
30 AQ-7, MM AQ-8, and MM AQ-9.

31 **MM AQ-8: Vessel Speed Reduction Program (VSRP).**

32 **MM AQ-9: Yard Tractor Emissions Standards.**

33 **MM AQ-10: Cargo-Handling Equipment Emissions Standards.**

34 The following lease measures would also potentially reduce future emissions under the
35 Proposed Project. The measures were not quantified as CEQA mitigation measures in the
36 analysis because the future technologies and systems that may be implemented have not
37 yet been identified and their effectiveness is speculative.

38 **LM AQ-1: Zero-Emission Cargo Handling Equipment (CHE) Transition.**

39 **LM AQ-2: Priority Access for Drayage.**

40 **Residual Impacts**

41 Although emissions from operation would be reduced with mitigation, impacts would
42 remain significant and unavoidable for NO_x in 2028.

43 **NEPA Impact Determination**

44 Table 3.2-22 shows that unmitigated peak daily operational emissions for the Proposed
45 Project minus the NEPA baseline would exceed the operational SCAQMD emission

1 thresholds for VOC in 2036 and 2050, CO in 2028, 2036, 2050, 2055, and 2062 and for
2 NO_x in 2028, 2036, 2050 and 2055. Therefore, impacts of Proposed Project operation
3 would be significant under NEPA in 2028, 2036, 2050, 2055, and 2062 prior to
4 mitigation.

5 ***Mitigation Measures***

6 Table 3.2-22 presents the peak daily operational emissions of the Proposed Project after
7 the application of MM AQ-8 through MM AQ-10.

8 ***Residual Impacts***

9 Although emissions from operation would be reduced with mitigation, they would remain
10 significant and unavoidable under NEPA for NO_x in 2028, 2036, and 2050.

11 **Impact AQ-4: Would operation of the Proposed Project result in offsite 12 ambient air pollutant concentrations that exceed a SCAQMD threshold of 13 significance?**

14 Dispersion modeling of onsite and offsite Proposed Project emissions was performed to
15 assess the impact of the Proposed Project on local ambient air concentrations for each
16 analysis year. A summary of the dispersion modeling results is presented here; the
17 complete dispersion modeling report is included in Appendix A2.

18 ***CEQA Impact Determination***

19 Table 3.2-24 presents the maximum off-site concentrations of NO₂ and CO from
20 operational activities with and without mitigation. Table 3.2-25 presents the maximum
21 off-site concentrations of PM₁₀ and PM_{2.5} from operational activities with and without
22 mitigation.

23 Table 3.2-25 shows that the maximum off-site incremental PM₁₀ (24-hr and annual
24 average) concentrations from operational activities would exceed SCAQMD thresholds
25 in 2036 through 2062. Therefore, without mitigation, maximum off-site ambient pollutant
26 concentrations associated with operation of the Proposed Project would be significant
27 under CEQA for PM₁₀ (24-hour and annual average).

28 ***Mitigation Measures***

29 To reduce the level of impact during operations, MM AQ-8 through MM AQ-10 would
30 be applied. These mitigation measures would be implemented by the responsible parties
31 identified in Section 3.2.5.

32 ***Residual Impacts***

33 Table 3.2-25 shows that the maximum off-site 24-hr and annual average PM₁₀
34 concentration from operational activities would be reduced with mitigation but would
35 remain significant for the 24-hr threshold in 2036 through 2062 and for the annual
36 threshold in 2050 through 2062.

37 Therefore, with mitigation, maximum off-site ambient pollutant concentrations associated
38 with combined construction and operation of the Proposed Project would be significant
39 and unavoidable under CEQA for PM₁₀ (24-hr and annual average) concentrations.

40 ***NEPA Impact Determination***

41 Table 3.2-26 presents the maximum off-site concentrations of NO₂ and CO from
42 operational activities with and without mitigation. Table 3.2-27 presents the maximum
43 off-site concentrations of PM₁₀ and PM_{2.5} from operational activities with and without
44 mitigation.

1 Table 3.2-26 shows that the maximum off-site NO₂ (federal 1-hour average)
2 concentration from combined operational activities would exceed SCAQMD thresholds
3 in 2050 through 2062. Table 3.2-27 shows that the maximum off-site incremental PM₁₀
4 (24-hr and annual average) concentrations from operational activities would exceed
5 SCAQMD thresholds. Therefore, without mitigation, maximum off-site ambient pollutant
6 concentrations associated with operation of the Proposed Project would be significant
7 under CEQA for NO₂ and PM₁₀.

8 ***Mitigation Measures***

9 To reduce the level of impact during operations, MM AQ-8 through MM AQ-10 would
10 be applied. These mitigation measures would be implemented by the responsible parties
11 identified in Section 3.2.5.

12 ***Residual Impacts***

13 Table 3.2-26 shows that the impact of maximum off-site ground level concentrations of
14 NO₂ (federal 1-hour average) would be reduced to less than significant by mitigation.

15 Table 3.2-27 shows that the impacts of maximum off-site 24-hr average PM₁₀
16 concentrations from operational activities would be reduced with mitigation but would
17 remain significant in 2050 and 2055 and that the maximum off-site annual average PM₁₀
18 concentration from operation after mitigation would be reduced to less than significant.

19 Therefore, with mitigation, maximum off-site ambient pollutant concentrations associated
20 with operation of the Proposed Project would be significant and unavoidable under
21 NEPA for PM₁₀ (24-hr average) concentrations.

Table 3.2-24. Maximum Off-site Ambient NO₂ and CO Concentrations (CEQA) — Proposed Project Operation

Pollutant	Averaging Time	Analysis Years ^b	Background Concentration (µg/m ³) ^c	Maximum Unmitigated Modeled Project Concentration Increment (µg/m ³) ^d	Total Unmitigated Ground-Level Concentration (µg/m ³)	Maximum Mitigated Modeled Project Concentration Increment (µg/m ³) ^d	Total Mitigated Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
NO ₂	Federal 1-hour ^a	2027	97	37	134	36	133	188	No	No
		2028	97	36	133	34	131	188	No	No
		2036	97	9	106	9	106	188	No	No
		2050	97	2	99	0.5	98	188	No	No
		2055	97	2	99	0.5	98	188	No	No
		2062	97	2	99	0.5	98	188	No	No
	State 1-hour	2027	113	44	157	41	154	339	No	No
		2028	113	42	155	40	153	339	No	No
		2036	113	10	123	10	123	339	No	No
		2050	113	5	118	1	113	339	No	No
		2055	113	5	118	1	113	339	No	No
		2062	113	5	118	1	113	339	No	No
	Federal annual	2027	26	0	26	-0.02	26	100	No	No
		2028	26	1	28	1	28	100	No	No
		2036	26	6	32	5	32	100	No	No
		2050	26	3	29	2	28	100	No	No
		2055	26	3	29	2	28	100	No	No
		2062	26	3	29	2	28	100	No	No
	State annual	2027	26	0	26	-0.02	26	57	No	No
		2028	26	1	28	1	28	57	No	No
2036		26	6	32	5	32	57	No	No	
2050		26	3	29	2	28	57	No	No	

Table 3.2-24. Maximum Off-site Ambient NO₂ and CO Concentrations (CEQA) — Proposed Project Operation

Pollutant	Averaging Time	Analysis Years ^b	Background Concentration (µg/m ³) ^c	Maximum Unmitigated Modeled Project Concentration Increment (µg/m ³) ^d	Total Unmitigated Ground-Level Concentration (µg/m ³)	Maximum Mitigated Modeled Project Concentration Increment (µg/m ³) ^d	Total Mitigated Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
CO		2055	26	3	29	2	28	57	No	No
		2062	26	3	29	2	28	57	No	No
	1-hour	2027	8,821	389	9210	389	9210	23,000	No	No
		2028	8,821	2,155	10976	27	8849	23,000	No	No
		2036	8,821	2,643	11464	93	8826	23,000	No	No
		2050	8,821	4,790	13612	81	8902	23,000	No	No
		2055	8,821	4,790	13612	81	8902	23,000	No	No
		2062	8,821	4,790	13612	81	8902	23,000	No	No
	8-hour	2027	2,749	247	2996	247	2996	10,000	No	No
		2028	2,749	1,364	4113	13	2762	10,000	No	No
		2036	2,749	1,667	4416	23	2752	10,000	No	No
		2050	2,749	3,044	5793	43	2792	10,000	No	No
		2055	2,749	3,044	5793	43	2792	10,000	No	No
		2062	2,749	3,044	5793	43	2792	10,000	No	No

Notes:

^a The federal 1-hour NO₂ modeled concentration represents the 98th percentile of the daily maximum 1-hour averages.

^b Since the construction activities would overlap with operations in 2027, combined construction and operation NO₂ impacts were modeled for 2027. NO₂ modeling was not performed for operations only. The combined impacts also allow AERMOD to model all contemporaneous NO_x sources to predict the ambient NO_x/NO₂ ratio accurately using Ambient Ratio Method for NO₂ modeling. Additionally, 2035 emissions from the construction activities required for the installation of electrical chargers, which would facilitate future all-electric cargo-handling equipment, have been modeled with the 2036 operational year emissions of the cargo-handling equipment

^c The background concentrations for NO₂ and CO were obtained from the Wilmington Community Monitoring Station (Saints Peter and Paul School).

^d The maximum modeled concentration increment represents proposed project operations minus CEQA baseline terminal operations.

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Table 3.2-25. Maximum Off-site Ambient PM₁₀ and PM_{2.5} Concentrations (CEQA) — Proposed Project Operation

Pollutant	Averaging Time	Analysis Years	Unmitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^{a,b}	Mitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^{a,b,c}	SCAQMD Threshold (µg/m ³)	Unmitigated CEQA Concentration above Threshold?	Mitigated CEQA Concentration above Threshold?
PM ₁₀	24-hour	2027	0.1	0.1	2.5	No	No
		2028	2.0	1.1	2.5	No	No
		2036	3.2	5.9	2.5	Yes	Yes
		2050	5.7	4.2	2.5	Yes	Yes
		2055	5.7	4.2	2.5	Yes	Yes
		2062	5.7	4.2	2.5	Yes	Yes
	Annual	2027	0.01	0.01	1	No	No
		2028	0.7	0.4	1	No	No
		2036	1.1	0.7	1	Yes	No
		2050	2.0	1.3	1	Yes	Yes
		2055	2.0	1.3	1	Yes	Yes
		2062	2.0	1.3	1	Yes	Yes
PM _{2.5}	24-hour	2027	0.1	0.1	2.5	No	No
		2028	0.8	0.2	2.5	No	No
		2036	1.2	2.1	2.5	No	No
		2050	2.2	0.6	2.5	No	No
		2055	2.2	0.6	2.5	No	No
		2062	2.2	0.6	2.5	No	No

Notes:

^a Exceedances of the threshold are indicated in **bold**. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the incremental concentration without background is compared to the threshold.

^b The CEQA increment represents Proposed Project minus CEQA baseline.

^c 2035 emissions from the construction activities required for the installation of electrical chargers, which will facilitate future all-electric cargo-handling equipment, have been modeled with the 2036 operational year emissions of the cargo-handling equipment.

Table 3.2-26. Maximum Off-site Ambient NO₂ and CO Concentrations (NEPA) — Proposed Project Operation

Pollutant	Averaging Time	Analysis Years ^b	Background Concentration (µg/m ³) ^c	Maximum Unmitigated Modeled Project Concentration Increment (µg/m ³) ^d	Total Unmitigated Ground-Level Concentration (µg/m ³) ^e	Maximum Mitigated Modeled Project Concentration Increment (µg/m ³) ^d	Total Mitigated Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
NO ₂	Federal 1-hour ^a	2027	97	71	168	61	158	188	No	No
		2028	97	79	177	28	126	188	No	No
		2036	97	66	163	32	129	188	No	No
		2050	97	101	198	17	114	188	Yes	No
		2055	97	101	198	17	114	188	Yes	No
		2062	97	101	198	17	114	188	Yes	No
	State 1-hour	2027	113	82	195	69	181	339	No	No
		2028	113	83	196	32	145	339	No	No
		2036	113	64	177	67	180	339	No	No
		2050	113	109	222	23	136	339	No	No
		2055	113	109	222	23	136	339	No	No
		2062	113	109	222	23	136	339	No	No
	Federal annual	2027	26	-0.002	26	-0.003	26	100	No	No
		2028	26	4	30	2	29	100	No	No
		2036	26	5	31	4	30	100	No	No
		2050	26	5	31	2	28	100	No	No
		2055	26	5	31	2	28	100	No	No
		2062	26	5	31	2	28	100	No	No
	State annual	2027	26	-0.002	26	-0.003	26	57	No	No
		2028	26	4	30	2	29	57	No	No
2036		26	5	31	4	30	57	No	No	
2050		26	5	31	2	28	57	No	No	

Table 3.2-26. Maximum Off-site Ambient NO₂ and CO Concentrations (NEPA) — Proposed Project Operation

Pollutant	Averaging Time	Analysis Years ^b	Background Concentration (µg/m ³) ^c	Maximum Unmitigated Modeled Project Concentration Increment (µg/m ³) ^d	Total Unmitigated Ground-Level Concentration (µg/m ³) ^e	Maximum Mitigated Modeled Project Concentration Increment (µg/m ³) ^d	Total Mitigated Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
CO		2055	26	5	31	2	28	57	No	No
		2062	26	5	31	2	28	57	No	No
	1-hour	2027	8,821	142	8,963	128	8,949	23,000	No	No
		2028	8,821	1,212	10,033	153	8,974	23,000	No	No
		2036	8,821	1,506	10,327	115	8,936	23,000	No	No
		2050	8,821	2,591	11,412	160	8,981	23,000	No	No
		2055	8,821	2,172	10,993	135	8,956	23,000	No	No
		2062	8,821	1,504	10,325	94	8,915	23,000	No	No
	8-hour	2027	2,749	26	2,776	24	2,773	10,000	No	No
		2028	2,749	768	3,517	80	2,829	10,000	No	No
		2036	2,749	950	3,699	59	2,808	10,000	No	No
		2050	2,749	1,646	4,396	83	2,832	10,000	No	No
		2055	2,749	1,380	4,130	70	2,819	10,000	No	No
		2062	2,749	956	3,705	50	2,799	10,000	No	No

Notes:

^a The federal 1-hour NO₂ modeled concentration represents the 98th percentile of the daily maximum 1-hour averages.

^b Since the construction activities would overlap with operations in 2027, combined construction and operation NO₂ impacts were modeled for 2027. NO₂ modeling was not performed for operations only. The combined impacts also allow AERMOD to model all contemporaneous NO_x sources to predict the ambient NO_x/NO₂ ratio accurately using the Ambient Ratio Method for NO₂ modeling. Additionally, 2035 emissions from the construction activities required for the installation of electrical chargers, which will facilitate future all-electric cargo-handling equipment, have been modeled with the 2036 operational year emissions of the cargo-handling equipment

^c The background concentrations for NO₂ and CO were obtained from the Wilmington Community Monitoring Station (Saints Peter and Paul School).

^d The maximum modeled concentration increment represents proposed project operation minus NEPA baseline.

^e Exceedances of the thresholds are indicated in **bold**.

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Table 3.2-27. Maximum Off-site Ambient PM₁₀ and PM_{2.5} Concentrations (NEPA) — Proposed Project Operation

Pollutant	Averaging Time	Analysis Years	Unmitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^{a,b}	Mitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^{a,b,c}	SCAQMD Threshold (µg/m ³)	Unmitigated CEQA Concentration above Threshold?	Mitigated CEQA Concentration above Threshold?
PM ₁₀	24-hour	2027	0.01	0.01	2.5	No	No
		2028	1.8	1.6	2.5	No	No
		2036	2.5	2.3	2.5	Yes	No
		2050	3.9	3.7	2.5	Yes	Yes
		2055	3.3	3.1	2.5	Yes	Yes
		2062	2.4	2.2	2.5	No	No
	Annual	2027	-0.0001	-0.0001	1	No	No
		2028	0.6	0.5	1	No	No
		2036	0.9	0.6	1	No	No
		2050	1.3	1.0	1	Yes	No
		2055	1.1	0.8	1	Yes	No
		2062	0.8	0.6	1	No	No
PM _{2.5}	24-hour	2027	0.01	0.01	2.5	No	No
		2028	0.7	0.4	2.5	No	No
		2036	1.0	0.5	2.5	No	No
		2050	1.5	0.8	2.5	No	No
		2055	1.3	0.6	2.5	No	No
		2062	0.9	0.4	2.5	No	No

Notes:

^a Exceedances of the threshold are indicated in **bold**. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the incremental concentration without background is compared to the threshold.

^b The NEPA increment represents Proposed Project minus NEPA baseline.

^c 2035 emissions from the construction activities required for the installation of electrical chargers, which will facilitate future all-electric cargo-handling equipment, have been modeled with the 2036 operational year emissions of the cargo-handling equipment.

1 **Impact AQ-5: Would the Proposed Project create an objectional odor at the**
2 **nearest sensitive receptor?**

3 Operation of the Proposed Project would increase air pollutants primarily due to the
4 combustion of diesel fuel. Some individuals might find diesel combustion emissions to be
5 objectionable in nature, although quantifying the odorous impacts of these emissions to
6 the public is difficult due to the complex mixture of chemicals in diesel exhaust, the
7 differing odor thresholds of these constituent species, and the difficulty quantifying the
8 potential for changes in perceived odors even when air contaminant concentrations are
9 known. Their mobile nature would serve to disperse the majority of Proposed Project
10 emissions. Additionally, the distance between Proposed Project emission sources and the
11 nearest residents is expected to be far enough to allow for adequate dispersion of these
12 emissions to below objectionable odor levels. Furthermore, the existing industrial setting
13 of the Proposed Project represents an already complex odor environment. For example,
14 existing nearby container terminals include freight and goods movement activities that
15 use diesel trucks and diesel cargo-handling equipment that generate similar diesel exhaust
16 odors as would the Proposed Project. Within this context, the Proposed Project would not
17 likely result in changes to the overall odor environment in the vicinity.

18 ***CEQA Impact Determination***

19 The potential is low for the Proposed Project to produce objectionable odors that would
20 affect a sensitive receptor. Odor impacts under CEQA, therefore, would be less than
21 significant.

22 ***Mitigation Measures***

23 No mitigation is required.

24 ***Residual Impacts***

25 Impacts would be less than significant.

26 ***NEPA Impact Determination***

27 Given the above analysis, the potential is low for the Proposed Project to produce
28 objectionable odors that would affect a sensitive receptor. Odor impacts under NEPA,
29 therefore, would be less than significant.

30 ***Mitigation Measures***

31 No mitigation is required.

32 ***Residual Impacts***

33 Impacts would be less than significant.

34 **Impact AQ-6: Would the Proposed Project expose receptors to significant**
35 **levels of TACs?**

36 Proposed project activities would emit TACs that could affect public health. An HRA
37 was conducted to address potential public health effects from TACs generated by the
38 Proposed Project. The results of the HRA are summarized below, with impacts shown
39 relative to the CEQA baseline, floating future baseline (for cancer risk), and NEPA
40 baseline. The rationale for a CEQA analysis based on both the CEQA baseline and
41 floating future baseline is discussed in detail in Section 3.2.4.1, Methodology. Details of
42 the analysis, including TAC emissions, the dispersion modeling approach, and the risk
43 calculation approach, are presented in Appendix A3.

CEQA Impact Determination

Table 3.2-28 presents the maximum predicted CEQA health impacts associated with the Proposed Project with and without mitigation. The table includes estimates of incremental individual cancer risk, chronic noncancer hazard index, and acute noncancer hazard index at the maximally exposed residential, occupational, and sensitive receptors. Results are presented for the CEQA increment (Proposed Project minus CEQA baseline) and future CEQA increment (Proposed Project minus floating future baseline), with and without mitigation. For definition of the floating future baseline, see Section 3.2.4.1. The table also presents the CEQA increment and future CEQA increment for the population cancer burden. Significance findings are made by comparing the increments to the significance thresholds.

Table 3.2-28 shows that the unmitigated Proposed Project would produce the following health risk impacts under CEQA:

Individual Cancer Risk

In relation to both the fixed CEQA baseline and floating future baseline, the maximum incremental cancer risks without mitigation (“Unmitigated CEQA Increment” and “Unmitigated Future CEQA Increment”) are predicted to be below the significance threshold for all receptor types. Therefore, the Proposed Project would result in a less-than-significant cancer risk impact. Moreover, the negative values for the CEQA increment indicate that the cancer risk from Proposed Project would be less than the cancer risk from the CEQA baseline and floating future baseline at all the residential receptors. This is primarily due to lower activity levels for the Proposed Project during construction compared to the 2019 baseline level and the beneficial effect of existing air quality rules and regulations on future emissions.

Figure 3.2-2 shows individual cancer risk contours of the future CEQA increment for the mitigated Proposed Project, assuming residential (30-year) exposure parameters. The maximum incremental risk at a residential receptor is predicted to be less than zero, and impacts would be less than significant. This is because the future floating baseline risks are higher than those for the mitigated Proposed Project at all residential/sensitive receptors.

Population Cancer Burden

In relation to both the CEQA baseline and the floating future baseline, the cancer burden increment is predicted to be below the significance threshold. Therefore, the Proposed Project would result in a less-than-significant cancer burden impact.

Chronic and Acute Hazard Indices

Because chronic and acute hazard indices are based on annual- and peak-hour emissions instead of multiple-year emissions like cancer risk, they are determined by comparing impacts only to the CEQA baseline, calendar year 2019.

The maximum chronic hazard index increment and the acute hazard index increment are both predicted to be less than the significance threshold for all receptor types. Therefore, the Proposed Project would result in less-than-significant chronic and acute noncancer impacts.

Appendix A3 includes figures showing the locations of the maximally impacted receptors under CEQA.

Mitigation Measures

No mitigation is required. However, LAHD notes that application of MM AQ-1 through MM AQ-7, applied to construction sources, and MM AQ-8 through MM AQ-10, applied to operational sources, to mitigate emissions impacts would further reduce health impacts. These mitigation measures would be implemented by the responsible parties identified in Section 3.2.5. LM AQ-1 and LM AQ-2 are lease measures that may reduce future emissions; however, these lease measures were not quantified in the analysis because the future technologies that may be implemented through these measures have not yet been identified.

Table 3.2-28 presents the maximum predicted CEQA health impacts associated with the Proposed Project with mitigation.

Residual Impacts

Table 3.2-28 shows that, with the application of mitigation, the maximum incremental health impacts (“Mitigated CEQA Increment” and “Mitigated Future CEQA Increment”) at all receptors would remain less than significant.

NEPA Impact Determination

Table 3.2-29 presents the maximum predicted NEPA health impacts associated with the Proposed Project with and without mitigation. The table includes estimates of individual cancer risk, chronic noncancer hazard index, and acute noncancer hazard index at the maximally exposed residential, occupational, and sensitive receptors. Results are presented for the Proposed Project (before subtracting baseline), the NEPA baseline, and the NEPA increment (Proposed Project minus NEPA baseline). The table also presents the NEPA increment for the population cancer burden. Significance findings are made by comparing the increments to the significance thresholds.

Table 3.2-29 shows that the unmitigated Proposed Project would produce the following health risk impacts under NEPA:

Individual Cancer Risk

In relation to the NEPA baseline, the maximum incremental cancer risk for the Proposed Project without mitigation is predicted to be below the significance threshold for all receptor types. Therefore, the Proposed Project would result in a less-than-significant cancer risk impact.

Figure 3.2-3 shows individual cancer risk contours of the NEPA increment for the mitigated Proposed Project, assuming residential (30-year) exposure parameters. The residential/sensitive receptor with the maximum incremental risk of 6 in a million is predicted to occur in Wilmington, northeast of Wilmington Waterfront Promenade.

Population Cancer Burden

In relation to the NEPA baseline, the cancer burden increment is predicted to be less than the significance threshold. Therefore, the Proposed Project would result in a less-than-significant cancer burden impact.

1 **Figure 3.2-2: Isopleth of Residential 30-year Cancer Risk – Mitigated Proposed Project –**
2 **Future CEQA Increment**



3

1 **Figure 3.2-3: Isopleth of Residential 30-year Cancer Risk – Mitigated Proposed Project –**
2 **NEPA Baseline Increment**



3

Table 3.2-28. Maximum CEQA Health Impacts Estimated for Construction and Operation of the Proposed Project

Health Impact	Receptor Type	Unmitigated CEQA Increment ^{a,b,c}	Mitigated CEQA Increment ^{a,b,c}	Unmitigated Future CEQA Increment ^{b,c,d}	Mitigated Future CEQA Increment ^{b,c,d}	Significance Threshold	Unmitigated Significant?	Mitigated Significant?
Cancer Risk ^e	Residential/Sensitive	<0 × 10 ⁻⁶ <0 in a million	<0 × 10 ⁻⁶ <0 in a million	<0 × 10 ⁻⁶ <0 in a million	<0 × 10 ⁻⁶ <0 in a million	10 × 10 ⁻⁶ 10 in a million	No	No
	Occupational	2.6 × 10 ⁻⁶ 3 in a million	1.9 × 10 ⁻⁶ 2 in a million	2.6 × 10 ⁻⁶ 3 in a million	1.9 × 10 ⁻⁶ 2 in a million		No	No
Chronic Hazard Index	Residential/Sensitive	0.062	0.055	n/a ^g	n/a ^g	1.0	No	No
	Occupational	0.22	0.066	n/a ^g	n/a ^g		No	No
Acute Hazard Index	Residential/Sensitive	<1 ^f	<1 ^f	n/a ^g	n/a ^g	1.0	No	No
	Occupational	<1 ^f	<1 ^f	n/a ^g	n/a ^g		No	No
Population Cancer Burden		0.0053	<0	0.12	0.0033	0.5	No	No

Notes:

^aThe CEQA Increment column represents the maximum difference of the Proposed Project minus the CEQA baseline.

^bA CEQA increment or a future CEQA increment less than zero means that the Proposed Project health values would be less than the CEQA baseline or the future CEQA baseline health values at all modeled receptors.

^cEach positive result shown in the table for cancer risk and chronic hazard index represents the modeled receptor location with the maximum increment. The increments at all other receptors would be less than the values in the table.

^dThe Future CEQA Increment column represents the maximum difference of the Proposed Project minus the floating future baseline.

^eValues displayed for individual cancer risk have been rounded to the nearest integer.

^fThe CEQA increments for acute HI were not calculated. They would be below the threshold because the absolute project acute HI is below the threshold (see details in Appendix A3).

^gThe future CEQA baseline and Future CEQA increment are applicable only to cancer risk because cancer risk has a uniquely long exposure period (30 years for residential and sensitive exposure, and 70 years for population cancer burden)

1
2

Table 3.2-29. Maximum NEPA Health Impacts Estimated for Construction and Operation of the Proposed Project

Health Impact	Receptor Type	Unmitigated NEPA Increment ^{a,b,c}	Mitigated NEPA Increment ^{a,b,c}	Significance Threshold	Unmitigated Significant?	Mitigated Significant?
Cancer Risk ^b	Residential/Sensitive	6.6 × 10 ⁻⁶ 7 in a million	6.2 × 10 ⁻⁶ 6 in a million	10 × 10 ⁻⁶ 10 in a million	No	No
	Occupational	3.5 × 10 ⁻⁶ 4 a million	1.8 × 10 ⁻⁶ 2 a million		No	No
Chronic Hazard Index	Residential/Sensitive	0.022	0.015	1.0	No	No
	Occupational	0.15	0.022		No	No
Acute Hazard Index	Residential/Sensitive	0.028	<0	1.0	No	No
	Occupational	0.080	<0		No	No
Population Cancer Burden		0.14	0.011	0.5	No	No

Notes:

^aThe NEPA Increment column represents the maximum difference of the Proposed Project minus the NEPA baseline.

^bValues displayed for individual cancer risk have been rounded to the nearest integer.

^cEach positive result shown in the table for cancer risk, chronic hazard index, and acute hazard index represents the modeled receptor location with the maximum increment. The increments at all other receptors would be less than the values in the table.

1

Chronic and Acute Hazard Indices

The maximum chronic hazard index increment is predicted to be less than the significance threshold for all receptor types. Therefore, the Proposed Project would result in a less-than-significant chronic noncancer impact.

The maximum acute hazard index impact is predicted to be less than the significance threshold for all receptor types. Therefore, the Proposed Project would result in a less-than-significant acute noncancer impact.

Appendix A3 (see Volume II) includes figures showing the locations of the maximally impacted receptors under NEPA.

Mitigation Measures

No mitigation is required. However, to reduce health risks associated with the Proposed Project, MM AQ-1 through MM AQ-7 would be applied during construction, and MM AQ-8 through MM AQ-10 would be applied during operation. These mitigation measures would be implemented by the responsible parties identified in Section 3.2.5. LM AQ-1 and LM AQ-2 are lease measures that may reduce future emissions; however, these lease measures were not quantified in the analysis because the future technologies that may be implemented through these measures have not yet been identified.

Table 3.2-29 presents the maximum predicted NEPA health impacts associated with the Proposed Project with mitigation.

Residual Impacts

Table 3.2-29 shows that, with mitigation, the maximum incremental health risk impacts for all receptor types would remain less than significant under NEPA.

Impact AQ-7: Would the Proposed Project conflict with or obstruct implementation of the applicable air quality plan?

Project operations would produce emissions of nonattainment pollutants primarily in the form of diesel exhaust. The SCAQMD prepared AQMPs in 1997, 2003, 2007, 2012, and 2016. The most recent update (the Final 2022 AQMP) was adopted by CARB on December 2, 2022. Each iteration of the AQMP is an update of the previous AQMP.

The Final 2022 AQMP (SCAQMD 2022) and former iterations, propose emission reduction measures that are designed to bring the SCAB into attainment of the state and national ambient air quality standards. The Final 2022 AQMP, as well as the CARB Mobile Source Strategy, contains key control measures related to ports, which include the following: Emission Reductions at Commercial Marine Ports, Tier 4 Vessel Standards, At-Berth Regulation Amendments, Emission Reductions at Rail Yards and Internodal Facilities and More Stringent National Locomotive Emission Standards, Accelerated Retirement of Older On-Road Heavy-Duty Vehicles, and Emission Reductions from Incentive Programs. The SCAQMD also adopts AQMP control measures into the SCAQMD rules and regulations, which are then used to regulate sources of air pollution in the SCAB. Therefore, compliance with these SCAQMD regulations and control programs would ensure that the Proposed Project would not conflict with or obstruct implementation of the AQMP. In addition, LAHD regularly provides SCAG with its Port-wide cargo forecasts for development of the AQMP. Therefore, the attainment demonstrations included in each AQMP account for the emissions generated by projected future growth at the Port. The Proposed Project increases cargo throughput at the Port, and the emissions are included in the General Conformity budgets established in the Final 2022 AQMP (SCAQMD 2022).

1 In addition to the region-wide AQMP, the SCAQMD, in response to Assembly Bill (AB)
2 617, has prepared the Community Emissions Reduction Plan (CERP) for the
3 communities nearest to the Project site, i.e., Wilmington, Carson, and West Long Beach
4 (SCAQMD 2019). Chapter 5c of the plan addresses air quality and emissions issues
5 associated with the ports of Los Angeles and Long Beach that affect those communities.
6 It identifies three air quality priorities (zero- and near-zero-emissions technology, oil
7 tanker leaks, and targeted enforcement of existing CARB regulations) and presents
8 opportunities for action to address those priorities. The oil tanker priority is not
9 applicable to the Proposed Project, but the other two priorities are, to some extent. The
10 plan identifies two actions that would address those priorities: Action 2 targeting ships
11 and harbor craft and Action 3 targeting cargo-handling equipment and drayage trucks.
12 The actions include measures such as supporting the Port's clean air initiatives and
13 CAAP measures, identifying and implementing demonstration and incentive programs,
14 and supporting and enforcing CARB rules and rule development. The Proposed Project is
15 consistent with applicable provisions of the CERP because it includes the deployment of
16 the cleanest available equipment (i.e., cleanest diesel tier CHE in the near term, ZE
17 equipment by 2035). In terms of the vessels, the terminal would comply with CARB rules
18 regarding vessel emissions, and mitigation measure MM AQ-8 would specifically apply
19 to vessels. Accordingly, vessel activities would not conflict with goals of the CERP.

20 Furthermore, LAHD, in conjunction with the Port of Long Beach, implements the 2017
21 CAAP Update, which sets goals and implementation strategies that reduce air emissions
22 and health risks from Port operations. Operational activities associated with the Proposed
23 Project would comply with the source-specific performance standards identified in the
24 2010 CAAP and 2017 CAAP Update. Mitigation measures, lease measures and the
25 operational activities of the Proposed Project would also be consistent with the San Pedro
26 Bay Ports 2017 Clean Air Action Plan Update, including feasibility demonstration of
27 electric and other zero emission technologies, accelerating the use of the cleanest
28 available technology for a number of sources, and improving the efficiency of the
29 terminal's operations. In turn, these measures are also consistent with the emission
30 reduction goals of the SCAQMD's 2022 AQMP.

31 ***CEQA Impact Determination***

32 The Proposed Project would not conflict with or obstruct implementation of the AQMP.
33 Therefore, significant impacts under CEQA are not anticipated.

34 ***Mitigation Measures***

35 No mitigation is required.

36 ***Residual Impacts***

37 Impacts would be less than significant.

38 ***NEPA Impact Determination***

39 The Proposed Project would not conflict with or obstruct implementation of the AQMP.
40 Therefore, impacts would be less than significant.

41 ***Mitigation Measures***

42 No mitigation is required.

43 ***Residual Impacts***

44 Impacts would be less than significant.

3.2.5.2 Alternative 1 – No Project

Alternative 1 is a CEQA-only alternative. The No Project Alternative is not evaluated under NEPA because NEPA requires an evaluation of the No Federal Action Alternative (see Section 2.9.1.2).

Under Alternative 1, none of the proposed construction activities would occur in water or in water-side or backland areas. Terminal improvements of WBICTF railyard expansion and wharf reconstruction of Berths 126-129 would not be implemented. No raising of existing cranes and no new cranes would be added and no dredging would occur.

Under the No Project Alternative, the existing Berths 121-B131 Container Terminal would continue to operate with business as usual under the same acreage and railyard characteristics of the baseline. The only changes expected to railyard equipment, drayage trucks and vessel fleet would be a result of end-of-life turnover and local, state, and federal regulatory requirements. Based on the throughput projections under the No Project Alternative, the Berths 121-B131 Container Terminal is expected to have to steadily increase to reach approximately 1,332,000 TEUs by 2062. This is approximately 539,400 TEUs less than the projected throughput of the Proposed Project at the horizon (2062).

Any future legally enacted Port-wide environmental program, such as tariff change to support the CAAP measure, would be applied to the No Project Alternative as long as they do not conflict with the terms of the operating lease. In addition, any adopted rules or regulations, such as from SCAQMD or other regulatory agencies, would be applied to the No Project Alternative.

Impact AQ-1: Would Alternative 1 result in construction-related emissions that exceed the SCAQMD threshold of significance in Table 3.2-8?

CEQA Impact Determination

Alternative 1 would not generate construction emissions; therefore, Alternative 1 would not create a significant impact under CEQA.

Mitigation Measures

Not applicable.

Residual Impacts

Not applicable.

NEPA Impact Determination

NEPA does not require analysis of the No Project Alternative. NEPA requires the analysis of a No Federal Action Alternative (see Alternative 2 in this document).

Mitigation Measures

Not applicable.

Residual Impacts

Not applicable.

1 **Impact AQ-2: Would Alternative 1 construction result in off-site ambient air**
2 **pollutant concentrations that exceed a SCAQMD threshold of significance**
3 **in Table 3.2-9?**

4 ***CEQA Impact Determination***

5 Alternative 1 would not generate construction emissions; therefore, Alternative 1 would
6 not create a significant impact under CEQA.

7 ***Mitigation Measures***

8 Not applicable.

9 ***Residual Impacts***

10 Not applicable.

11 ***NEPA Impact Determination***

12 NEPA does not require analysis of the No Project Alternative. NEPA requires the
13 analysis of a No Federal Action Alternative (see Alternative 2 in this document).

14 ***Mitigation Measures***

15 Not applicable.

16 ***Residual Impacts***

17 Not applicable.

18 **Impact AQ-3: Would Alternative 1 result in operational emissions that**
19 **exceed an SCAQMD threshold of significance in Table 3.2-10?**

20 Table 3.2-30 presents peak daily criteria pollutant emissions associated with terminal
21 operations under the No Project Alternative 1. Emissions were estimated for eight study
22 years: 2019, 2026, 2027, 2028, 2036, 2050, 2055, and 2062. Operational sources at the
23 Berths B121-B131 container terminal under the No Project are comprised of container
24 ships, tugboats, drayage trucks, linehaul locomotives and switcher locomotives, CHE,
25 and worker vehicles. Comparisons to the CEQA baseline operational emissions are
26 included in Table 3.2-30 and compared to SCAQMD operational emission thresholds to
27 determine significant under CEQA. NEPA does not require analysis of the No Project
28 Alternative, therefore a comparison to the NEPA baseline is not presented for the No
29 Project Alternative. Emissions by source characteristics, activity levels, fuel sulfur
30 content, emission factors, and other parameters assumed in the operational emissions
31 calculations for the No Project Alternative 1 are discussed in detail in Appendix A1 (see
32 Volume II).

Table 3.2-30. Peak Daily Operational Emissions—Alternative 1, No Project (lbs/day)

Source Category	Daily Emissions (lb/day)					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Year 2026						
Cargo Handling Equipment	22	1,721	94	5	5	<1
Harbor Craft	<1	11	24	<1	<1	<1
Worker Vehicles Offsite	<1	35	2	4	<1	<1
Trucks Offsite Driving	<1	33	62	16	5	1
Ocean Going Vessels	93	182	3,841	44	40	140
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	3	55	27	8	1	<1
Rail Offsite Operations	8	54	220	5	5	<1
Rail On Dock Operations	1	9	34	<1	<1	<1
Total Operational Year 2026	130	2,102	4,304	83	58	142
CEQA Impacts						
CEQA Baseline Emissions	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	- 1	1,130	- 347	- 2	- 4	35
Significance Threshold	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No
Year 2027						
Cargo Handling Equipment	22	1,855	73	5	5	<1
Harbor Craft	<1	11	24	<1	<1	<1
Worker Vehicles Offsite	<1	34	2	4	<1	<1
Trucks Offsite Driving	<1	33	60	16	5	1
Ocean Going Vessels	110	218	4,128	51	47	162
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	3	57	26	9	1	<1
Rail Offsite Operations	8	55	222	5	5	<1

Table 3.2-30. Peak Daily Operational Emissions—Alternative 1, No Project (lbs/day)

Source Category	Daily Emissions (lb/day)					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Rail On Dock Operations	1	9	35	<1	<1	<1
Total Operational Year 2027	147	2,273	4,570	91	65	164
CEQA Impacts						
CEQA Baseline Emissions	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	16	1,301	- 80	6	3	57
Significance Threshold	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No
Year 2028						
Cargo Handling Equipment	23	1,871	70	5	5	<1
Harbor Craft	<1	10	21	<1	<1	<1
Worker Vehicles Offsite	<1	34	2	4	<1	<1
Trucks Offsite Driving	<1	32	57	17	5	1
Ocean Going Vessels	82	167	2,688	42	38	132
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	3	59	25	9	1	<1
Rail Offsite Operations	8	56	227	5	5	<1
Rail On Dock Operations	1	10	37	<1	<1	<1
Total Operational Year 2028	120	2,241	3,127	83	56	134
CEQA Impacts						
CEQA Baseline Emissions	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	- 12	1,269	- 1523	- 2	- 6	27
Significance Threshold	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No

Table 3.2-30. Peak Daily Operational Emissions—Alternative 1, No Project (lbs/day)

Source Category	Daily Emissions (lb/day)					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Year 2036						
Cargo Handling Equipment	27	2,129	64	6	6	<1
Harbor Craft	<1	12	26	<1	<1	<1
Worker Vehicles Offsite	<1	11	<1	2	<1	<1
Trucks Offsite Driving	<1	26	35	18	5	1
Ocean Going Vessels	97	186	1,188	44	41	144
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	4	65	18	10	2	<1
Rail Offsite Operations	9	83	260	5	5	<1
Rail On Dock Operations	2	19	59	1	1	<1
Total Operational Year 2036	140	2,530	1,651	87	60	146
CEQA Impacts						
CEQA Baseline Emissions	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	9	1,558	- 3000	1	- 2	39
Significance Threshold	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No
Year 2050						
Cargo Handling Equipment	42	3,612	99	8	8	<1
Harbor Craft	<1	12	26	<1	<1	<1
Worker Vehicles Offsite	<1	21	<1	3	<1	<1
Trucks Offsite Driving	2	54	47	36	10	2
Ocean Going Vessels	105	189	1,285	47	43	153
Worker Vehicles Onsite Driving	<1	2	<1	1	<1	<1
Trucks Onsite Driving/Idling	6	107	20	18	3	<1

Table 3.2-30. Peak Daily Operational Emissions—Alternative 1, No Project (lbs/day)

Source Category	Daily Emissions (lb/day)					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Rail Offsite Operations	5	103	159	3	2	<1
Rail On Dock Operations	2	33	52	<1	<1	<1
Total Operational Year 2050	163	4,132	1,690	118	70	157
CEQA Impacts						
CEQA Baseline Emissions	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	32	3,160	- 2961	33	8	50
Significance Threshold	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No
Year 2055						
Cargo Handling Equipment	49	4,187	115	10	10	<1
Harbor Craft	<1	13	30	<1	<1	<1
Worker Vehicles Offsite	<1	24	<1	4	<1	<1
Trucks Offsite Driving	2	62	55	41	12	2
Ocean Going Vessels	121	219	1,490	55	50	178
Worker Vehicles Onsite Driving	<1	3	<1	1	<1	<1
Trucks Onsite Driving/Idling	7	124	23	21	3	<1
Rail Offsite Operations	6	120	184	3	3	<1
Rail On Dock Operations	2	38	61	<1	<1	<1
Total Operational Year 2055	189	4,790	1,959	137	81	182
CEQA Impacts						
CEQA Baseline Emissions	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	57	3,818	- 2692	52	19	75
Significance Threshold	55	550	55	150	55	150
Significant?	Yes	Yes	No	No	No	No

Table 3.2-30. Peak Daily Operational Emissions—Alternative 1, No Project (lbs/day)

Source Category	Daily Emissions (lb/day)					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Year 2062						
Cargo Handling Equipment	60	5,103	140	12	12	<1
Harbor Craft	1	16	36	<1	<1	<1
Worker Vehicles Offsite	<1	29	1	5	<1	<1
Trucks Offsite Driving	2	76	67	50	14	3
Ocean Going Vessels	148	267	1,816	67	61	217
Worker Vehicles Onsite Driving	<1	3	<1	2	<1	<1
Trucks Onsite Driving/Idling	9	151	28	26	4	<1
Rail Offsite Operations	8	146	225	4	3	<1
Rail On Dock Operations	3	46	74	1	1	<1
Total Operational Year 2062	230	5,838	2,387	167	98	222
CEQA Impacts						
CEQA Baseline Emissions	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	99	4,866	- 2263	82	36	115
Significance Threshold	55	550	55	150	55	150
Significant?	Yes	Yes	No	No	No	No

Notes:

- Emissions assume the simultaneous occurrence of peak daily equipment activity levels. Such levels would rarely occur during day-to-day terminal operations.
- Truck, train, ship, and worker commute emissions include transport within the South Coast Air Basin.
- NEPA does not require analysis of the No Project Alternative.
- Emissions might not precisely add due to rounding.

The emission estimates presented in this table were calculated using the latest available data, assumptions, and emission factors at the time this document was prepared. Future studies might use updated data, assumptions, and emission factors that are not currently available.

Discussion of Alternative 1 Emissions Trends

Operational emissions in the No Project Alternative would vary due to several factors, such as regulatory requirements, activity levels, characteristics of container ships, tugboats, trucks, locomotives, CHE, and worker vehicles due to turnover, and emission factors. Regulatory requirements described in detail in Appendix A1 would serve to decrease emission factors from emission sources. In addition, as equipment ages, engine efficiency would decrease, and emission factors would increase in comparison to brand-new equipment. The combination of these factors can result in emissions that do not always decrease or increase consistently over time.

As shown in Table 3.2-23, under Alternative 1 terminal activity would increase in each study year. The main drivers of the operational emissions presented under the No Project Alternative 1 are the following:

Terminal throughput: Terminal throughput would increase from approximately 354,000 TEUs during 2019 to just over 1,332,000 TEUs in horizon year 2062 (Table 3.2-23).

Container ships: The number of container ship visits would increase from 153 annual calls in the baseline to 208 vessel calls in horizon year 2062. This is a larger number of annual vessel visits than projected under the Proposed Project since with the current characteristics for the wharf at Berth 126-129, only container vessels of size 6000 TEU or smaller are expected to visit at B121-131 terminal in future years. Hence, it is projected that under the No Project increased cargo volumes in the future would be handled through smaller vessels requiring a higher frequency of vessel visits in 2062 to meet throughput predictions. As vessel activity increases in future analysis years of the No Project, NO_x emission factors for vessels would decrease as vessels are turned over from lower tiers to Tier III vessels in accordance with the Port's fleet forecast.

Harbor Craft (Tugboats): Assist tugboat activity would increase in proportion to the number of container ship visits. Tugboat emission factors would decline in compliance with CARB's Regulation to Reduce Emissions from Diesel Engines on Commercial Harbor Craft Operated within California Waters and 24 nm of the California Baseline.

CHE: CHE hours of operation would increase in proportion to terminal throughput projected for the No Project scenario, which is lower than that of the Proposed Project scenario. Conversely, CHE emission factors would decline over time based on equipment turnover guided by CARB's *Mobile CHE at Ports and Intermodal Rail Yards* compliance schedule, by equipment expected useful life (CARB 2012), and by the requirements of the SPBP CAAP for zero-emissions CHE by 2035. Each CHE type (e.g. yard tractors, rubber-tired gantry cranes, top-picks, etc.) has unique turnover schedules related to useful life and regulatory requirements. Deterioration of off-road equipment would produce emission factors to increase between turnover years.

Trucks: Drayage truck activity would increase as terminal throughput increases. In relation to throughput, daily and annual truck trips under the No Project are projected to be lower from 2028 to 2062 under the No Project than under the Proposed Project, as shown in Table 3.2-23. Truck emission factors in 2019 reflect the San Pedro Bay Ports' Clean Truck Program that required all drayage trucks to meet 2007 EPA emission standards starting January 2012. Emission factors are predicted to decline below 2019 levels in response to the CARB's Truck and Bus Regulation, CARB's Advanced Clean Fleet Regulation, and the SPBP Clean Trucks Program.

1 **Rail Locomotives:** Line-haul and switcher locomotive activity would increase as
2 terminal throughput increases, particularly on-dock and off-dock throughput. Compared
3 to the Proposed Project, daily and annual train trips under the No Project would be lower
4 due to the lack of expansion to the WBICTF railyard for 2028, 2036, 2050, 2055 and
5 2062. Line haul locomotive emission factors would decline as older locomotives reach
6 the end of their useful life and are replaced by newer, cleaner locomotives that meet EPA
7 tiered emission standards, such as the Tier 4 standards that apply to new and
8 remanufactured locomotives starting in 2014.

9 **CEQA Impact Determination**

10 Table 3.2-30 shows that peak daily operational emissions under Alternative 1 would
11 exceed the SCAQMD daily emission thresholds for operationals and would be significant
12 under CEQA for VOC in 2055 and 2062, and for CO in all analysis years.

13 **Mitigation Measures**

14 There are no project components or discretionary actions under this alternative, therefore,
15 no mitigation is applicable or required.

16 **Residual Impacts**

17 Impacts would remain significant and unavoidable for CO in 2026, 2027, 2028, 2036,
18 2050, 20255, and 2062, and for VOC in 2055 and 2062.

19 **NEPA Impact Determination**

20 NEPA does not require analysis of the No Project Alternative. NEPA requires the
21 analysis of a No Federal Action Alternative (see Alternative 2 in this document).

22 **Mitigation Measures**

23 Not applicable.

24 **Residual Impacts**

25 Not applicable.

26 **Impact AQ-4: Would operation of Alternative 1 result in offsite ambient air
27 pollutant concentrations that exceed a SCAQMD threshold of significance
28 in Table 3.2-11?**

29 Dispersion modeling of on- and off-site operational emissions was performed to assess
30 the impact of Alternative 1 on local ambient air concentrations. A summary of the
31 dispersion modeling results is presented here; the complete dispersion modeling report is
32 included in Appendix A2.

1 **CEQA Impact Determination**

2 Tables 3.2-31 and 3.2-32 present the maximum off-site ground level concentrations of
3 NO₂, CO, PM₁₀, and PM_{2.5} from operation of Alternative 1 without mitigation.

4 Table 3.2-31 shows that the maximum off-site NO₂ and CO concentration from
5 operational activities would not exceed SCAQMD thresholds. Table 3.2-32 shows that
6 the maximum off-site incremental PM₁₀ (24-hr and annual average) concentrations from
7 operational activities would exceed SCAQMD thresholds in 2055 and 2062. Therefore,
8 impacts would be significant.

9 **Mitigation Measures**

10 There are no discretionary actions under this alternative; therefore, mitigation is not
11 applicable.

12 **Residual Impacts**

13 Impacts would be significant and unavoidable.

14 **NEPA Impact Determination**

15 NEPA does not require analysis of the No Project Alternative. NEPA requires the
16 analysis of a No Federal Action Alternative (see Alternative 1 in this document).

17 **Mitigation Measures**

18 Not applicable.

19 **Residual Impacts**

20 Not applicable.

Table 3.2-31. Maximum Off-site Ambient NO₂ and CO Concentrations (CEQA) — Alternative 1 No Project Operation

Pollutant	Averaging Time	Analysis Years	Background Concentration (µg/m ³) ^b	Maximum Unmitigated Modeled No Project Concentration Increment (µg/m ³) ^c	Total Unmitigated Ground-Level Concentration (µg/m ³)	Maximum Mitigated Modeled No Project Concentration Increment (µg/m ³) ^c	Total Mitigated Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
NO ₂	Federal 1-hour ^a	2027	97	30	127	n/a	n/a	188	No	n/a
		2028	97	27	124	n/a	n/a	188	No	n/a
		2036	97	-1	96	n/a	n/a	188	No	n/a
		2050	97	-1	97	n/a	n/a	188	No	n/a
		2055	97	0.4	98	n/a	n/a	188	No	n/a
		2062	97	2	99	n/a	n/a	188	No	n/a
	State 1-hour	2027	113	35	148	n/a	n/a	339	No	n/a
		2028	113	31	144	n/a	n/a	339	No	n/a
		2036	113	-2	111	n/a	n/a	339	No	n/a
		2050	113	-0.2	113	n/a	n/a	339	No	n/a
		2055	113	1	114	n/a	n/a	339	No	n/a
		2062	113	3	116	n/a	n/a	339	No	n/a
	Federal annual	2027	26	-0.01	26	n/a	n/a	100	No	n/a
		2028	26	-0.01	26	n/a	n/a	100	No	n/a
		2036	26	1	27	n/a	n/a	100	No	n/a
		2050	26	0.4	27	n/a	n/a	100	No	n/a
		2055	26	1	27	n/a	n/a	100	No	n/a
		2062	26	2	28	n/a	n/a	100	No	n/a
	State annual	2027	26	-0.01	26	n/a	n/a	57	No	n/a
		2028	26	-0.01	26	n/a	n/a	57	No	n/a
		2036	26	1	27	n/a	n/a	57	No	n/a
2050		26	0.4	27	n/a	n/a	57	No	n/a	
2055		26	1	27	n/a	n/a	57	No	n/a	

Table 3.2-31. Maximum Off-site Ambient NO₂ and CO Concentrations (CEQA) — Alternative 1 No Project Operation

Pollutant	Averaging Time	Analysis Years	Background Concentration (µg/m ³) ^b	Maximum Unmitigated Modeled No Project Concentration Increment (µg/m ³) ^c	Total Unmitigated Ground-Level Concentration (µg/m ³)	Maximum Mitigated Modeled No Project Concentration Increment (µg/m ³) ^c	Total Mitigated Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
		2062	26	2	28	n/a	n/a	57	No	n/a
CO	1-hour	2027	8,821	929	9750	n/a	n/a	23,000	No	n/a
		2028	8,821	943	9764	n/a	n/a	23,000	No	n/a
		2036	8,821	1,128	9949	n/a	n/a	23,000	No	n/a
		2050	8,821	2,211	11032	n/a	n/a	23,000	No	n/a
		2055	8,821	2,632	11453	n/a	n/a	23,000	No	n/a
		2062	8,821	3,302	12123	n/a	n/a	23,000	No	n/a
	8-hour	2027	2,749	588	3337	n/a	n/a	10,000	No	n/a
		2028	2,749	596	3346	n/a	n/a	10,000	No	n/a
		2036	2,749	714	3464	n/a	n/a	10,000	No	n/a
		2050	2,749	1,401	4150	n/a	n/a	10,000	No	n/a
		2055	2,749	1,668	4417	n/a	n/a	10,000	No	n/a
		2062	2,749	2,093	4842	n/a	n/a	10,000	No	n/a

Notes:

^a The federal 1-hour NO₂ modeled concentration represents the 98th percentile of the daily maximum 1-hour averages.

^b The background concentrations for NO₂ and CO were obtained from the Wilmington Community Monitoring Station (Saints Peter and Paul School).

^c The maximum modeled concentration increment represents No Project operations minus CEQA baseline terminal operations.

1

2

Table 3.2-32. Maximum Off-site Ambient PM₁₀ and PM_{2.5} Concentrations (CEQA) — Alternative 1 No Project Operation

Pollutant	Averaging Time	Analysis Years	Unmitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^{a,b}	Mitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^b	SCAQMD Threshold (µg/m ³)	Unmitigated CEQA Concentration above Threshold?	Mitigated CEQA Concentration above Threshold?
PM ₁₀	24-hour	2027	0.2	n/a	2.5	No	n/a
		2028	0.2	n/a	2.5	No	n/a
		2036	0.4	n/a	2.5	No	n/a
		2050	2.2	n/a	2.5	No	n/a
		2055	2.9	n/a	2.5	Yes	n/a
		2062	4.0	n/a	2.5	Yes	n/a
	Annual	2027	0.1	n/a	1	No	n/a
		2028	0.1	n/a	1	No	n/a
		2036	0.2	n/a	1	No	n/a
		2050	0.8	n/a	1	No	n/a
		2055	1.0	n/a	1	Yes	n/a
		2062	1.4	n/a	1	Yes	n/a
PM _{2.5}	24-hour	2027	0.1	n/a	2.5	No	n/a
		2028	0.1	n/a	2.5	No	n/a
		2036	0.2	n/a	2.5	No	n/a
		2050	0.7	n/a	2.5	No	n/a
		2055	1.0	n/a	2.5	No	n/a
		2062	1.4	n/a	2.5	No	n/a

Notes:

^a Exceedances of the threshold are indicated in **bold**. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the incremental concentration without background is compared to the threshold.

^b The CEQA increment represents No Project minus CEQA baseline.

1 **Impact AQ-5: Would Alternative 1 create an objectional odor at the nearest**
2 **sensitive receptor?**

3 Similar to the Proposed Project, the mobile nature of the emission sources associated with
4 Alternative 1 would serve to disperse emissions. Additionally, the distance between
5 Alternative 1 emission sources and the nearest residents would be far enough to allow for
6 adequate dispersion of these emissions to below objectionable odor levels.

7 ***CEQA Impact Determination***

8 Because the potential is low for the Alternative 1 to produce objectionable odors that
9 would affect a sensitive receptor, odor impacts under CEQA would be less than
10 significant.

11 ***Mitigation Measures***

12 No mitigation is required.

13 ***Residual Impacts***

14 Impacts would be less than significant.

15 ***NEPA Impact Determination***

16 NEPA does not require analysis of the No Project Alternative. NEPA requires the
17 analysis of a No Federal Action Alternative (see Alternative 2 in this document).

18 ***Mitigation Measures***

19 Not applicable.

20 ***Residual Impacts***

21 Not applicable.

22 **Impact AQ-6: Would Alternative 1 expose receptors to significant levels of**
23 **TACs?**

24 An HRA was conducted to address potential public health effects from TACs generated
25 by Alternative 1. The results of the HRA are summarized below, with impacts shown
26 relative to the CEQA baseline and floating future baseline (for cancer risk). The rationale
27 for a CEQA analysis based on both the CEQA baseline and floating future baseline is
28 discussed in detail in Section 3.2.4.1, Methodology. Details of the analysis, including
29 TAC emissions, the dispersion modeling approach, and the risk calculation approach, are
30 presented in Appendix A3.

31 ***CEQA Impact Determination***

32 Table 3.2-33 presents the maximum predicted CEQA health impacts associated with
33 Alternative 1. The table includes estimates of individual cancer risk, chronic noncancer
34 hazard index, and acute noncancer hazard index at the maximally exposed residential,
35 occupational, and sensitive receptors. Results are presented for Alternative 1 (before
36 subtracting baseline), the CEQA baseline, the CEQA increment (Alternative 1 minus
37 CEQA baseline), and future CEQA increment (Alternative 1 minus floating future
38 baseline). The table also presents the CEQA increment and future CEQA increment for
39 the population cancer burden. Significance findings are made by comparing the
40 increments to the significance thresholds.

41 Alternative 1 would produce the following health risk impacts under CEQA:

1 **Individual Cancer Risk**

2 In relation to the CEQA baseline, the maximum incremental cancer risk is predicted to be
3 below the significance threshold for all receptor types. Therefore, Alternative 1 would
4 result in a less-than-significant cancer risk impact.

5 In relation to the floating future baseline, the incremental cancer risk is predicted to be
6 below the significance threshold for all receptor types. Therefore, Alternative 1 would
7 result in a less-than-significant cancer risk impact.

8 Because incremental cancer risks assuming residential (30-year) exposure parameters are
9 less than zero for Alternative 1, individual cancer risk contours of both the CEQA
10 increment and future CEQA increment are not shown.

11 **Population Cancer Burden**

12 In relation to the CEQA baseline, the cancer burden increment is predicted to be less than
13 the significance threshold. Therefore, Alternative 1 would result in a less-than-significant
14 cancer burden impact.

15 In relation to the floating future baseline, the cancer burden increment is predicted to be
16 less than the significance threshold. Therefore, Alternative 1 would result in a less-than-
17 significant cancer burden impact.

18 **Chronic and Acute Hazard Indices**

19 Because chronic and acute hazard indices are based on annual and peak hour emissions
20 instead of multiple-year emissions like cancer risk, they are determined by comparing
21 impacts only to the CEQA baseline, which is the baseline at the time of the NOP.

22 The maximum chronic hazard index increment is predicted to be less than the
23 significance threshold for all receptor types. Therefore, Alternative 1 would result in a
24 less-than-significant chronic noncancer impact. The maximum acute hazard index
25 increment is predicted to be less than the significance threshold for all receptor types.
26 Therefore, Alternative 1 would result in a less-than-significant acute noncancer impact.

27 Appendix A3 includes figures showing the locations of the maximally impacted receptors
28 under CEQA.

29 **Mitigation Measures**

30 There are no project components or discretionary actions under this alternative; therefore,
31 no mitigation is applicable or required.

32 **Residual Impacts**

33 Impacts would be less than significant.

Table 3.2-33. Maximum CEQA Health Impacts Estimated for Operation of No Project Alternative 1

Health Impact	Receptor Type	Unmitigated CEQA Increment ^{a,b,c}	Mitigated CEQA Increment ^d	Unmitigated Future CEQA Increment ^{b,c,e}	Mitigated Future CEQA Increment ^d	Significance Threshold	Unmitigated Significant?	Mitigated Significant?
Cancer Risk ^f	Residential/Sensitive	<0 <0 in a million	n/a	<0 × 10 ⁻⁶ <0 in a million	n/a	10 × 10 ⁻⁶ 10 in a million	No	n/a
	Occupational	<0 × 10 ⁻⁶ <0 in a million	n/a	<0 × 10 ⁻⁶ <0 in a million	n/a		No	n/a
Chronic Hazard Index	Residential/Sensitive	0.043	n/a	n/a ^h	n/a	1.0	No	n/a
	Occupational	0.070	n/a	n/a ^h	n/a		No	n/a
Acute Hazard Index	Residential/Sensitive	<1 ^g	n/a	n/a ^h	n/a	1.0	No	n/a
	Occupational	<1 ^g	n/a	n/a ^h	n/a		No	n/a
Population Cancer Burden		<0	n/a	<0	n/a	0.5	No	n/a

Notes:

^aThe CEQA Increment column represents the maximum difference of No Project minus the CEQA baseline.

^bA CEQA increment or a future CEQA increment less than zero means that the No Project Alternative health values would be less than the CEQA baseline or the future CEQA baseline health values at all modeled receptors.

^cEach positive result shown in the table for cancer risk and chronic hazard index represents the modeled receptor location with the maximum increment. The increments at all other receptors would be less than the values in the table.

^d There are no project components or discretionary actions under the No Project Alternative; therefore, no mitigation is applicable or required.

^eThe future CEQA Increment column represents the maximum difference of No Project minus the future CEQA baseline.

^fValues displayed for individual cancer risk have been rounded to the nearest integer.

^gThe CEQA increments for acute HI were not calculated. They would be below the threshold because the absolute acute HIs for the No Project Alternative are all below the threshold (see details in Appendix A3).

^hThe future CEQA baseline and Future CEQA increment are applicable only to cancer risk because cancer risk has a uniquely long exposure period (30 years for residential and sensitive exposure, and 70 years for population cancer burden).

1 **NEPA Impact Determination**

2 NEPA does not require analysis of the No Project Alternative. NEPA requires the
3 analysis of a No Federal Action Alternative (see Alternative 2 in this document).

4 **Mitigation Measures**

5 Not applicable.

6 **Residual Impacts**

7 Not applicable.

8 **Impact AQ-7: Would Alternative 1 conflict with or obstruct implementation**
9 **of an applicable AQMP?**

10 Similar to the Project, this alternative would comply with SCAQMD rules and
11 regulations and would be consistent with SCAG regional employment and population
12 growth forecasts. Thus, this alternative would not conflict with or obstruct
13 implementation of the AQMP.

14 Alternative 1 operations would produce emissions of nonattainment pollutants primarily
15 in the form of diesel exhaust. LAHD regularly provides SCAG with its Port-wide cargo
16 forecasts for development of the AQMP. Therefore, the attainment demonstrations
17 included in each AQMP account for the emissions generated by projected future growth
18 at the Port. Alternative 1 (No Federal Action) increases cargo throughput at the Port, and
19 the emissions are included in the General Conformity budgets established in the Final
20 2022 AQMP (SCAQMD 2022).

21 With respect to the Community Emissions Reduction Plan (CERP) for the communities
22 nearest to the Project site, i.e., Wilmington, Carson, and West Long Beach, Action 2 and
23 Action 3 would be relevant to Alternative 1. The actions include measures such as
24 supporting the Port's clean air initiatives and CAAP measures, identifying and
25 implementing demonstration and incentive programs, and supporting and enforcing
26 CARB rules and rule development. Alternative 1 would be subject to CARB rules and
27 CAAP initiatives, including those regarding transition to zero-emission CHE and the
28 terminal would comply with CARB rules regarding vessel emissions, including the At-
29 Berth Regulation. However, mitigation measure MM AQ-8 specifically applying to
30 vessels included in the Proposed Project would not apply to Alternative 1. Nevertheless,
31 because vessels would be subject to CARB regulations, vessel activities would not
32 conflict with goals of the CERP.

33 Furthermore, LAHD, in conjunction with the Port of Long Beach, implements the 2017
34 CAAP Update, which sets goals and implementation strategies that reduce air emissions
35 and health risks from Port operations. Operational activities associated with the
36 Alternative 1 would comply with the source-specific performance standards identified in
37 the 2010 CAAP and with the 2017 CAAP Update, including accelerating the use of the
38 cleanest available technology for a number of sources and improving the efficiency of the
39 terminal's operations. These measures are also consistent with the emission reduction
40 goals of the SCAQMD's 2022AQMP.

41 **CEQA Impact Determination**

42 Alternative 1 would not conflict with or obstruct implementation of the AQMP;
43 therefore, impacts under CEQA are not anticipated.

44 **Mitigation Measures**

45 No mitigation is required.

1 **Residual Impacts**
 2 Impacts would be less than significant.

3 **NEPA Impact Determination**
 4 NEPA does not require analysis of the No Project Alternative. NEPA requires the
 5 analysis of a No Federal Action Alternative (see Alternative 2 in this document).

6 **Mitigation Measures**
 7 Not applicable.

8 **Residual Impacts**
 9 Not applicable.

10 **3.2.5.3 Alternative 2 – No Federal Action**

11 Alternative 2 is a NEPA-required no action alternative. This alternative (which is
 12 equivalent to the NEPA baseline) includes the activities that would occur absent a
 13 USACE (Department of the Army – DA) permit but could include improvements that
 14 require a local permit. Absent a DA permit, no dredging, dredged material disposal, in-
 15 water pile installation, or new crane installation would occur; in other words, the wharf
 16 reconstruction at Berth 126-129 would not take place under Alternative 2. The existing
 17 terminal is berth-constrained, and its ability to handle larger ships (compared to current
 18 terminal constraints) would be facilitated by activities that require a DA permit
 19 (dredging, in-water pile driving, and new cranes). The No Federal Action Alternative
 20 includes the expansion of backlands intermodal railyard (WBICTF) and installation of
 21 electric-powered, rail-mounted gantry cranes (RMGs). The expanded railyard would not
 22 change the capacity of the existing terminal but it would increase the capacity of the on-
 23 dock railyard , allowing a greater proportion of cargo to be moved by trains rather than
 24 trucks.

25 Under the No Federal Action Alternative, the existing B121-131 Container Terminal
 26 would continue to operate under the same acreage but with an expanded railyard
 27 capacity, compared to the baseline, as described in detail in Section 2.9.1.2. RMGs, as
 28 electric-powered sources, are not quantified as a localized source of criteria pollutant
 29 emissions. Changes in emissions are expected for railyard equipment, drayage trucks, and
 30 OGVs as a result of end-of-life turnover and local, state, and federal regulatory
 31 requirements.

32 Under the No Federal Action Alternative, the B121-B131 Container Terminal is expected
 33 to have steady increases in annual throughput, reaching approximately 1,332,000 TEUs
 34 by 2062. This is approximately 539,400 TEUs less than the projected throughput of the
 35 Proposed Project in 2062.

36 **Impact AQ-1: Would Alternative 2 construction result in construction- 37 related emissions that exceed the SCAQMD threshold of significance in 38 Table 3.2-8?**

39 Table 3.2-34 presents the peak day criteria pollutant emissions associated with
 40 construction activities of Alternative 2, with and without mitigation. Construction
 41 activities would be only those that would occur in the absence of federal action and
 42 would consist of backland improvements to the railyard behind Berths 121-131. The
 43 B121-131 Container Terminal would continue to operate during construction of No
 44 Federal Action Alternative 2; construction and operational activities would overlap
 45 during this time. Total Alternative 2 emissions from combined construction and

1 operational activities are presented to show the overall impacts of the No Federal Action
2 Alternative. Table 3.2-35 presents the overlap of project-related construction and
3 operations emissions.

Table 3.2-34. Peak Daily Construction Emissions — Alternative 2, No Federal Action (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Construction Year 2026 Total												
Off-road Construction Equipment	3	23	20	<1	<1	<1	2	22	5	<1	<1	<1
Ocean Going Vessels	0	0	0	0	0	0	0	0	0	0	0	0
Harbor Craft	0	0	0	0	0	0	0	0	0	0	0	0
Worker Vehicles Onsite & Offsite	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trucks Onsite & Offsite	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Construction Year 2026 Total	3	23	20	<1	<1	<1	2	22	5	<1	<1	<1
CEQA Impacts												
CEQA Baseline Emissions	0	0	0	0	0	0	0	0	0	0	0	0
Alternative Minus CEQA Baseline	3	23	20	<1	<1	<1	2	22	5	<1	<1	<1
Significance Threshold	75	550	100	150	55	150	75	550	100	150	55	150
Significant?	No	No	No	No	No	No	No	No	No	No	No	No
Construction Year 2027 Total												
Off-road Construction Equipment	<1	3	3	<1	<1	<1	<1	3	<1	<1	<1	<1
Ocean Going Vessels	0	0	0	0	0	0	0	0	0	0	0	0
Harbor Craft	0	0	0	0	0	0	0	0	0	0	0	0
Worker Vehicles Onsite & Offsite	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trucks Onsite & Offsite	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Table 3.2-34. Peak Daily Construction Emissions — Alternative 2, No Federal Action (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Construction Year 2027 Total	<1	3	3	<1	<1	<1	<1	3	<1	<1	<1	<1
CEQA Impacts												
CEQA Baseline Emissions	0	0	0	0	0	0	0	0	0	0	0	0
Alternative Minus CEQA Baseline	<1	3	3	<1	<1	<1	<1	3	<1	<1	<1	<1
Significance Threshold	75	550	100	150	55	150	75	550	100	150	55	150
Significant?	No	No	No	No	No	No	No	No	No	No	No	No

Notes:

Construction emissions reflect the construction of the No Federal Action Alternative 2, which consists of reconstruction/improvement of intermodal railyard at WBICTF.

On-road construction vehicle emissions include exhaust, road dust, tire wear, and brake wear emissions from haul trucks, material delivery trucks, and worker vehicles.

Emissions "with mitigation" are controlled based on the mitigation measures MM AQ-2, MM-AQ-3, MM AQ-6, and MM AQ-7 presented in this document.

Incremental NEPA impacts are zero because NEPA baseline is the same as the No Federal Action for this EIS/EIR; accordingly, NEPA impacts are not presented in this table.

Emissions might not add precisely due to rounding.

The emission estimates presented in this table were calculated using the latest available data, assumptions, and emission factors at the time this document was prepared.

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Table 3.2-35. Peak Daily Combined Construction and Operational Emissions — Alternative 2, No Federal Action (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Construction 2026												
Construction Emissions	3	23	20	<1	<1	<1	2	22	5	<1	<1	<1
Operation 2026												
Cargo Handling Equipment	22	1,721	94	5	5	<1	22	1,721	94	5	5	<1
Harbor Craft	<1	11	24	<1	<1	<1	<1	11	24	<1	<1	<1
Worker Vehicles Offsite	<1	35	2	4	<1	<1	<1	35	2	4	<1	<1
Trucks Offsite Driving	<1	33	61	16	5	1	<1	33	61	16	5	1
Ocean Going Vessels	93	182	3,841	44	40	140	93	182	3,841	44	40	140
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	3	54	27	8	1	<1	3	54	27	8	1	<1
Rail Offsite Operations	8	57	231	5	5	<1	8	57	231	5	5	<1
Rail On Dock Operations	1	7	27	<1	<1	<1	1	7	27	<1	<1	<1
Total Operations and Construction 2026	133	2,126	4,328	84	59	142	132	2,124	4,313	83	58	142
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	6	1,180	- 300	<1	- 2	36	1	1,152	- 337	- 2	- 4	35
Significance Threshold	75	550	100	150	55	150	75	550	100	150	55	150
Significant?	No	Yes	No	No	No	No	No	Yes	No	No	No	No
Construction 2027												
Construction Emissions	<1	3	3	<1	<1	<1	<1	3	<1	<1	<1	<1
Operation 2027												
Cargo Handling Equipment	22	1,855	73	5	5	<1	22	1,855	73	5	5	<1
Harbor Craft	<1	11	24	<1	<1	<1	<1	11	24	<1	<1	<1
Worker Vehicles Offsite	<1	34	2	4	<1	<1	<1	34	2	4	<1	<1

Table 3.2-35. Peak Daily Combined Construction and Operational Emissions — Alternative 2, No Federal Action (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Trucks Offsite Driving	<1	33	60	17	5	1	<1	33	60	17	5	1
Ocean Going Vessels	110	218	4,128	51	47	162	110	218	4,128	51	47	162
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	3	57	26	9	1	<1	3	57	26	9	1	<1
Rail Offsite Operations	9	58	235	5	5	<1	9	58	235	5	5	<1
Rail On Dock Operations	1	7	27	<1	<1	<1	1	7	27	<1	<1	<1
Total Operations and Construction 2027	148	2,278	4,579	92	65	164	148	2,278	4,577	92	65	164
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	17	1,306	- 72	6	3	57	16	1,306	- 73	6	3	57
Significance Threshold	75	550	100	150	55	150	75	550	100	150	55	150
Significant?	No	Yes	No	No	No	No	No	Yes	No	No	No	No

Notes:

Emissions assume the simultaneous occurrence of maximum daily emissions for each source category. Such levels would rarely occur during day-to-day terminal operations.

Truck, train, ship, and worker commute emissions include transport within the South Coast Air Basin.

Construction emissions reflect the construction of the No Federal Action Alternative 2, which consists of reconstruction/improvement of intermodal railyard at WBICTF.

Construction emissions "with mitigation" are controlled based on the mitigation measures MM AQ-2, MM AQ-3, MM AQ-6, and MM-AQ-7 presented in this document. Operational emissions "with mitigation" are controlled based on operational emissions mitigation measures MM AQ-8, MM AQ-9, and MM AQ-10 presented in this document

Incremental NEPA impacts are zero because NEPA baseline is the same as the No Federal Action for this EIS/EIR; accordingly, NEPA impacts are not presented in this table.

Emissions might not precisely add due to rounding.

CEQA Impact Determination

Table 3.2-34 shows that unmitigated peak daily construction emissions for Alternative 2 would not exceed the SCAQMD daily construction emission thresholds during construction. Therefore, construction impacts would be less than significant under CEQA. The largest contributors to peak daily construction emissions are off-road construction equipment and haul and material delivery trucks used for hauling of soil, concrete/base material/asphalt delivery.

Table 3.2-35 shows that combined construction and operational emissions for Alternative 2 would exceed the SCAQMD daily emission thresholds for CO during construction. Therefore, CO emissions impacts would be significant under CEQA for overlapping construction and operations prior to mitigation.

Mitigation Measures

To reduce the level of impact, MM AQ-2, MM AQ-3, MM AQ-6, MM AQ-7, and MM AQ-8 through MM AQ-10 would be applied. MM AQ-1, MM AQ-4, and MM AQ-5 apply to sources that would not be utilized under the No Federal Action Alternative and thus are not evaluated here. Mitigation measures would be implemented by the responsible parties identified in Section 3.2.5.

Residual Impacts

As shown in Table 3.2-35, emissions from combined construction and operation of Alternative 2 No Federal Action would be reduced with mitigation but would remain significant and unavoidable for CO.

NEPA Impact Determination

The No Federal Action Alternative 2 would involve the same operational activities, at the same activity levels, as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no incremental impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact AQ-2: Would Alternative 2 construction result in off-site ambient air pollutant concentrations that exceed a SCAQMD threshold of significance in Table 3.2-9?

Dispersion modeling of on-site Alternative 2 construction emissions was performed to assess the impact of Alternative 2 on local ambient air concentrations. A summary of the dispersion modeling results is presented here; the complete dispersion modeling report is included in Appendix A2.

CEQA Impact Determination

Table 3.2-36 presents the maximum off-site ground level concentrations of CO from construction. Table 3.2-37 presents the maximum off-site ground level concentrations of PM₁₀, and PM_{2.5} from construction. Table 3.2-38 presents maximum off-site ground level concentrations of NO₂ and CO when peak construction activity would overlap with terminal operations. Table 3.2-39 presents maximum off-site ground level concentrations of PM₁₀ and PM_{2.5} when peak construction activity would overlap with terminal

1 operations. Decrease in operation at the terminal during construction resulted in lower
2 concentrations for some pollutants when construction and operational sources were both
3 modeled.

4 Table 3.2-36 and 3.2-37 show that Alternative 2 construction activities would cause no
5 exceedances of off-site ambient air concentrations under CEQA. Therefore, without
6 mitigation, maximum off-site ambient pollutant concentrations associated with
7 construction of the Alternative 2 would be less than significant under CEQA.

8 Table 3.2-38 shows that the maximum off-site NO₂ and CO concentrations from
9 combined construction and operational activities for Alternative 2 would not exceed the
10 SCAQMD thresholds for any averaging period. Table 3.2-39 shows that the maximum
11 off-site incremental PM₁₀ and PM_{2.5} concentrations from combined construction and
12 operational activities would not exceed the SCAQMD threshold for any averaging period.

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Table 3.2-36. Maximum Off-site Ambient CO Concentrations (CEQA) — Alternative 2 Construction

Pollutant ^a	Averaging Time	Analysis Years ^a	Background Concentration (µg/m ³) ^b	Maximum Unmitigated Modeled No Federal Action Concentration (µg/m ³)	Total Unmitigated Ground-Level Concentration (µg/m ³) ^b	Maximum Mitigated Modeled No Federal Action Concentration (µg/m ³)	Total Mitigated Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
CO	1-hour	2026	8,821	53	8,874	50	8,871	23,000	No	No
		2027	8,821	8	8,829	7	8,828	23,000	No	No
	8-hour	2026	2,749	16	2,765	15	2,764	10,000	No	No
		2027	2,749	2	2,752	2	2,752	10,000	No	No

Notes:

^a Since Alternative 2's construction activities would overlap with operations, combined Alternative 2's construction and operation NO₂ impacts were modeled. Please refer to Table 3.2-38 for the NO₂ impacts. NO₂ modeling was not performed for construction only. The combined impacts also allow AERMOD to model all contemporaneous NO_x sources to predict the ambient NO_x/NO₂ ratio accurately using Ambient Ratio Method for NO₂ modeling.

^b The background concentrations for NO₂ and CO were obtained from the Wilmington Community Monitoring Station (Saints Peter and Paul School).

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Table 3.2-37. Maximum Off-site Ambient PM₁₀ and PM_{2.5} Concentrations (CEQA) — Alternative 2 Construction

Pollutant	Averaging Time	Analysis Years	Unmitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^a	Mitigated Ground-Level Concentration CEQA Increment (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated CEQA Concentration above Threshold?	Mitigated CEQA Concentration above Threshold?
PM ₁₀	24-hour	2026	1	0.2	10.4	No	No
		2027	0.07	0.03	10.4	No	No
	Annual	2026	0.003	0.001	1	No	No
		2027	0.01	0.002	1	No	No
PM _{2.5}	24-hour	2026	0.5	0.2	10.4	No	No
		2027	0.06	0.02	10.4	No	No

Notes:

^a The CEQA increment represents No Federal Action minus CEQA baseline.

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Table 3.2-38. Maximum Off-site Ambient NO₂ and CO Concentrations (CEQA) — No Federal Action Combined Construction and Operation

Pollutant	Averaging Time	Analysis Years	Background Concentration (µg/m ^{3b})	Maximum Unmitigated Modeled No Federal Action Concentration Increment (µg/m ^{3c})	Total Unmitigated Ground-Level Concentration (µg/m ³)	Maximum Mitigated Modeled No Federal Action Concentration Increment (µg/m ^{3c})	Total Mitigated Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
NO ₂	Federal 1-hour ^a	2026	97	33	130	33	130	188	No	No
		2027	97	30	127	30	127	188	No	No
	State 1-hour	2026	113	39	152	39	152	339	No	No
		2027	113	35	148	35	148	339	No	No
	Federal annual	2026	26	-0.01	26	-0.01	26	100	No	No
		2027	26	-0.01	26	-0.01	26	100	No	No
	State annual	2026	26	-0.01	26	-0.01	26	57	No	No
		2027	26	-0.01	26	-0.01	26	57	No	No
CO	1-hour	2026	8,821	848	9,669	847	9,668	23,000	No	No
		2027	8,821	932	9,753	931	9,753	23,000	No	No
	8-hour	2026	2,749	529	3,278	529	3,278	10,000	No	No
		2027	2,749	588	3,338	588	3,338	10,000	No	No

Notes:

^a The federal 1-hour NO₂ modeled concentration represents the 98th percentile of the daily maximum 1-hour averages.

^b The background concentrations for NO₂ and CO were obtained from the Wilmington Community Monitoring Station (Saints Peter and Paul School).

^c The maximum modeled concentration increment represents No Federal Action construction plus operations minus CEQA baseline terminal operations.

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Table 3.2-39. Maximum Off-site Ambient PM₁₀ and PM_{2.5} Concentrations (CEQA) — No Federal Action Combined Construction and Operation

Pollutant	Averaging Time	Analysis Years	Unmitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^a	Mitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^a	SCAQMD Threshold (µg/m ³)	Unmitigated CEQA Concentration above Threshold?	Mitigated CEQA Concentration above Threshold?
PM ₁₀	24-hour	2026	0.5	0.2	10.4	No	No
		2027	0.2	0.2	10.4	No	No
	Annual	2026	0.1	0.1	1	No	No
		2027	0.1	0.1	1	No	No
PM _{2.5}	24-hour	2026	0.4	0.1	10.4	No	No
		2027	0.1	0.1	10.4	No	No

Notes:

^a The CEQA increment represents No Federal Action construction plus operations minus CEQA baseline. Because the CEQA baseline for construction is zero, the CEQA increment equals the maximum modeled concentration.

1 **Mitigation Measures**

2 Because impacts would be less than significant, mitigation is not required.

3 **Residual Impacts**

4 Impacts of maximum off-site ambient pollutant concentrations associated with
5 construction of the Proposed Project would be less than significant.

6 **NEPA Impact Determination**

7 Alternative 2 would include only minor upland improvements. No construction of in-
8 water or over-water features would occur under Alternative 2. The No Federal Action
9 Alternative would involve the same construction activities as would occur under the
10 NEPA baseline. Therefore, there would be no incremental difference between Alternative
11 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no incremental
12 impact under NEPA.

13 **Mitigation Measures**

14 No mitigation is required.

15 **Residual Impacts**

16 No impacts would occur.

17 **Impact AQ-3: Would Alternative 2 operations result in operational**
18 **emissions that exceed an SCAQMD threshold of significance in Table 3.2-**
19 **10?**

20 Table 3.2-40 presents unmitigated peak daily criteria pollutant emissions associated with
21 operation of Alternative 2 No Federal Action. Operational sources at the B121-131
22 terminal under Alternative 2 are comprised of container ships, tugboats, drayage trucks,
23 linehaul locomotives and switcher locomotives, CHE, and worker vehicles. Comparisons
24 to the CEQA baseline emissions are presented to determine CEQA significance. The No
25 Federal Action Alternative 2 would involve the same operational activities and thus,
26 emissions, as would occur under the NEPA baseline. Therefore, a comparison of
27 emissions against the NEPA baseline is not included in Table 3.2-40 as significant impact
28 would be zero. Alternative 2 source characteristics, activity levels, sulfur fuel content,
29 emission factors, and other parameters assumed in the operational emissions under the
30 No Federal Action Alternative 2 are discussed in detail in Appendix A1.

Table 3.2-40. Peak Daily Operational Emissions—Alternative 2, No Federal Action (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Year 2026												
Cargo Handling Equipment	22	1,721	94	5	5	<1	22	1,721	94	5	5	<1
Harbor Craft	<1	11	24	<1	<1	<1	<1	11	24	<1	<1	<1
Worker Vehicles Offsite	<1	35	2	4	<1	<1	<1	35	2	4	<1	<1
Trucks Offsite Driving	<1	33	61	16	5	1	<1	33	61	16	5	1
Ocean Going Vessels	93	182	3,841	44	40	140	93	182	3,841	44	40	140
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	3	54	27	8	1	<1	3	54	27	8	1	<1
Rail Offsite Operations	8	57	231	5	5	<1	8	57	231	5	5	<1
Rail On Dock Operations	1	7	27	<1	<1	<1	1	7	27	<1	<1	<1
Total Operational Year 2026	130	2,102	4,308	83	58	142	130	2,102	4,308	83	58	142
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	- 1	1,130	- 343	- 2	- 4	35	- 1	1,130	- 343	- 2	- 4	35
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No	No	Yes	No	No	No	No
Year 2027												
Cargo Handling Equipment	22	1,855	73	5	5	<1	22	1,855	73	5	5	<1
Harbor Craft	<1	11	24	<1	<1	<1	<1	11	24	<1	<1	<1
Worker Vehicles Offsite	<1	34	2	4	<1	<1	<1	34	2	4	<1	<1

Table 3.2-40. Peak Daily Operational Emissions—Alternative 2, No Federal Action (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Trucks Offsite Driving	<1	33	60	17	5	1	<1	33	60	17	5	1
Ocean Going Vessels	110	218	4,128	51	47	162	110	218	4,128	51	47	162
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	3	57	26	9	1	<1	3	57	26	9	1	<1
Rail Offsite Operations	9	58	235	5	5	<1	9	58	235	5	5	<1
Rail On Dock Operations	1	7	27	<1	<1	<1	1	7	27	<1	<1	<1
Total Operational Year 2027	147	2,275	4,576	92	65	164	147	2,275	4,576	92	65	164
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	16	1,302	- 74	6	3	57	16	1,302	- 74	6	3	57
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No	No	Yes	No	No	No	No
Year 2028												
Cargo Handling Equipment	23	1,871	70	5	5	<1	10	154	13	1	<1	<1
Harbor Craft	<1	10	21	<1	<1	<1	<1	10	21	<1	<1	<1
Worker Vehicles Offsite	<1	34	2	4	<1	<1	<1	34	2	4	<1	<1
Trucks Offsite Driving	<1	32	57	17	5	1	<1	32	57	17	5	1
Ocean Going Vessels	82	167	2,688	42	38	132	82	167	2,688	42	38	132
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	3	59	25	9	1	<1	3	59	25	9	1	<1

Table 3.2-40. Peak Daily Operational Emissions—Alternative 2, No Federal Action (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Rail Offsite Operations	8	56	228	5	5	<1	8	56	228	5	5	<1
Rail On Dock Operations	1	10	37	<1	<1	<1	1	10	37	<1	<1	<1
Total Operational Year 2028	120	2,241	3,128	83	56	134	107	524	3,071	79	53	134
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	- 11	1,269	- 1523	- 2	- 6	27	- 24	- 448	- 1580	- 6	- 9	27
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No	No	No	No	No	No	No
Year 2036												
Cargo Handling Equipment	27	2,129	64	6	6	<1	27	279	213	15	8	<1
Harbor Craft	<1	12	26	<1	<1	<1	<1	12	26	<1	<1	<1
Worker Vehicles Offsite	<1	11	<1	2	<1	<1	<1	11	<1	2	<1	<1
Trucks Offsite Driving	<1	29	40	20	6	1	<1	29	40	20	6	1
Ocean Going Vessels	97	186	1,188	44	41	144	97	186	1,188	44	41	144
Worker Vehicles Onsite Driving	<1	1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1
Trucks Onsite Driving/Idling	4	73	20	11	2	<1	4	73	20	11	2	<1
Rail Offsite Operations	8	76	240	5	4	<1	8	76	240	5	4	<1
Rail On Dock Operations	3	25	77	2	1	<1	3	25	77	2	1	<1
Total Operational Year 2036	141	2,542	1,657	90	61	146	140	692	1,805	99	63	147

Table 3.2-40. Peak Daily Operational Emissions—Alternative 2, No Federal Action (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	9	1,570	- 2994	5	- 1	40	9	- 280	- 2846	14	1	40
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No	No	No	No	No	No	No
Year 2050												
Cargo Handling Equipment	42	3,612	99	8	8	<1	3	20	3	<1	<1	<1
Harbor Craft	<1	12	26	<1	<1	<1	<1	12	26	<1	<1	<1
Worker Vehicles Offsite	<1	13	<1	2	<1	<1	<1	13	<1	2	<1	<1
Trucks Offsite Driving	1	50	45	33	10	2	1	50	45	33	10	2
Ocean Going Vessels	105	189	1,285	47	43	153	105	189	1,285	47	43	153
Worker Vehicles Onsite Driving	<1	2	<1	<1	<1	<1	<1	2	<1	<1	<1	<1
Trucks Onsite Driving/Idling	5	96	18	16	3	<1	5	96	18	16	3	<1
Rail Offsite Operations	4	97	114	2	2	<1	4	97	114	2	2	<1
Rail On Dock Operations	2	39	51	<1	<1	<1	2	39	51	<1	<1	<1
Total Operational Year 2050	161	4,110	1,638	112	68	157	122	517	1,542	103	59	156
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	30	3,137	- 3012	27	6	50	- 9	- 455	- 3109	18	- 2	50
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150

Table 3.2-40. Peak Daily Operational Emissions—Alternative 2, No Federal Action (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Significant?	No	Yes	No	No	No	No	No	No	No	No	No	No
Year 2055												
Cargo Handling Equipment	49	4,187	115	10	10	<1	4	23	3	<1	<1	<1
Harbor Craft	<1	13	30	<1	<1	<1	<1	13	30	<1	<1	<1
Worker Vehicles Offsite	<1	15	<1	2	<1	<1	<1	15	<1	2	<1	<1
Trucks Offsite Driving	2	58	52	39	11	2	2	58	52	39	11	2
Ocean Going Vessels	121	219	1,490	55	50	178	121	219	1,490	55	50	178
Worker Vehicles Onsite Driving	<1	2	<1	<1	<1	<1	<1	2	<1	<1	<1	<1
Trucks Onsite Driving/Idling	6	112	21	19	3	<1	6	112	21	19	3	<1
Rail Offsite Operations	5	113	133	2	2	<1	5	113	133	2	2	<1
Rail On Dock Operations	2	45	59	<1	<1	<1	2	45	59	<1	<1	<1
Total Operational Year 2055	187	4,764	1,899	130	78	182	142	600	1,787	120	69	181
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	55	3,792	- 2751	44	16	75	10	- 372	- 2863	35	7	75
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	Yes	Yes	No	No	No	No	No	No	No	No	No	No
Year 2062												
Cargo Handling Equipment	60	5,103	140	12	12	<1	5	28	4	<1	<1	<1
Harbor Craft	1	16	36	<1	<1	<1	1	16	36	<1	<1	<1

Table 3.2-40. Peak Daily Operational Emissions—Alternative 2, No Federal Action (lbs/day)

Source Category	Without Mitigation						With Mitigation					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Worker Vehicles Offsite	<1	18	<1	3	<1	<1	<1	18	<1	3	<1	<1
Trucks Offsite Driving	2	71	63	47	14	3	2	71	63	47	14	3
Ocean Going Vessels	148	267	1,816	67	61	217	148	267	1,816	67	61	217
Worker Vehicles Onsite Driving	<1	2	<1	1	<1	<1	<1	2	<1	1	<1	<1
Trucks Onsite Driving/Idling	8	136	25	23	4	<1	8	136	25	23	4	<1
Rail Offsite Operations	6	137	162	3	2	<1	6	137	162	3	2	<1
Rail On Dock Operations	3	55	72	1	1	<1	3	55	72	1	1	<1
Total Operational Year 2062	228	5,806	2,314	158	96	222	172	731	2,178	146	84	221
CEQA Impacts												
CEQA Baseline Emissions	131	972	4,650	85	62	107	131	972	4,650	85	62	107
Alternative Minus CEQA Baseline	96	4,834	- 2336	73	34	115	41	- 241	- 2472	61	22	114
Significance Threshold	55	550	55	150	55	150	55	550	55	150	55	150
Significant?	Yes	Yes	No	No	No	No	No	No	No	No	No	No
Notes: <ul style="list-style-type: none"> Emissions assume the simultaneous occurrence of peak daily equipment activity levels. Such levels would rarely occur during day-to-day terminal operations. Truck, train, ship, and worker commute emissions include transport within the South Coast Air Basin. Operational emissions “with mitigation” are controlled based on operational emissions mitigation measures MMAQ-7, MMAQ-8, MMAQ-9, MMAQ-10 presented in this document <ul style="list-style-type: none"> Emissions from the construction activities required for the installation of electrical chargers, which will facilitate usage of future all-electric cargo-handling equipment, have been integrated with the 2036 operational year emissions of the cargo-handling equipment <ul style="list-style-type: none"> NEPA does not require analysis of the No Project Alternative. Emissions might not precisely add due to rounding. 												

Discussion of Alternative 2 Emissions Trends

Operational emissions in the No Federal Action Alternative 2 would vary due to several factors, such as regulatory requirements, activity levels, characteristics of container ships, tugboats, trucks, locomotives, CHE, and worker vehicles due to turnover schedule, and consequently emission factors. Regulatory requirements described in detail in Appendix A1 would serve to decrease emission factors from emission sources. In addition, as equipment ages, engine efficiency would decrease and emission factors would increase in comparison to brand-new equipment. The combination of these factors can result in emissions that do not always decrease or increase consistently over time.

As shown in Table 3.2-23, under Alternative 2, No Federal Action, terminal activity would increase in each study year. The main drivers of the operational emissions presented under the Alternative 2 are the following:

Terminal throughput: Total terminal throughput would increase steadily from approximately 354,000 TEUs during 2019 to just over 1,330,000 TEUs in horizon year 2062 (Table 3.2-23).

Container ships: The number of container ship visits would increase from 153 annual calls in the baseline to 208 vessel calls in horizon year 2062. This is a larger number of annual vessel visits than projected under the Proposed Project. Under the No Federal Action Alternative, with the baseline characteristics for the wharf at Berth 126-129, only container vessels of size 6000 TEU or smaller are expected to visit B121-131 terminal in future years. Hence, it is projected that under the No Federal Action Alternative increased cargo volumes in the future would be handled through smaller vessels, therefore requiring more vessels than in the Proposed Project. As vessel activity increases towards the horizon year of Alternative 2, NO_x emission factors for vessels would decrease as vessels are turned over from lower tiers to Tier 3 vessels in accordance with the Port's fleet forecast.

Harbor Craft (Tugboats): Assist tugboat activity would increase in proportion to the number of container ship visits. Tugboat emission factors would decline in compliance with CARB's Regulation to Reduce Emissions from Diesel Engines on Commercial Harbor Craft Operated within California Waters and 24 nm of the California Baseline.

CHE: CHE hours of operation would increase in proportion to terminal throughput projected for Alternative 2, which is lower than that of the Proposed Project scenario. Conversely, CHE emission factors would decline over time based on equipment turnover guided by CARB's Mobile CHE at Ports and Intermodal Rail Yards compliance schedule, by equipment expected useful life. Each CHE type (e.g. yard tractors, rubber-tired gantry cranes, top-picks, etc.) has unique turnover schedules related to useful life and regulatory requirements. Deterioration of off-road equipment would produce emission factors to increase between turnover years; however, virtually majority of the CHE would be zero-emissions by 2036 under the mitigated scenario.

Trucks: Drayage truck activity would increase as terminal throughput increases. In relation to throughput, daily and annual truck trips under the No Federal Action are projected to be lower from 2028 to 2062 under the No Federal Action than under the Proposed Project, as shown in Table 3.2-23. Truck emission factors in 2019 reflect the San Pedro Bay Ports' Clean Truck Program that required all drayage trucks to meet 2007 EPA emission standards starting January 2012. Emission factors are predicted to decline below 2019 levels in response to the CARB's Truck and Bus Regulation, CARB's Advanced Clean Trucks regulation, and the SPBP Clean Trucks Program.

1 **Rail Locomotives:** Line-haul and switcher locomotive activity would increase as
2 terminal throughput increases, particularly on-dock and off-dock throughput. Compared
3 to the Proposed Project, daily and annual train trips under the No Federal Action would
4 be lower due to the lack of expansion to the WBICTF railyard for 2028, 2036, 2050,
5 2055 and 2062. Line haul locomotive emission factors would decline as older
6 locomotives reach the end of their useful life and are replaced by newer, cleaner
7 locomotives that meet EPA tiered emission standards, such as the Tier 4 standards that
8 apply to new and remanufactured locomotives starting in 2014.

9 **CEQA Impact Determination**

10 Table 3.2-40 shows that peak daily operational emissions for Alternative 2 would exceed
11 the SCAQMD daily operational emission thresholds and would be significant under
12 CEQA for CO in all years, and VOC in 2055 and 2062. Therefore, emissions of VOC and
13 CO associated with the operation of Alternative 2 would be significant under CEQA
14 before mitigation.

15 **Mitigation Measures**

16 Table 3.2-40 presents the peak daily operational emissions of Alternative 2, after the
17 application of MM AQ-8, MM AQ-9, and MM AQ-10. These mitigation measures would
18 reduce criteria pollutant emissions associated with Alternative 2 operation.

19 **Residual Impacts**

20 Table 3.2-40 shows that emissions from operation of Alternative 2 would be reduced with
21 mitigation but would remain significant and unavoidable under CEQA for CO during
22 overlapping construction and operation.

23 **NEPA Impact Determination**

24 The No Federal Action Alternative would involve the same operational activities, at the
25 same activity levels, as would occur under the NEPA baseline. Therefore, there would be
26 no incremental difference between Alternative 2 and the NEPA baseline. As a
27 consequence, Alternative 2 would result in no incremental impact under NEPA.

28 **Mitigation Measures**

29 No mitigation is required.

30 **Residual Impacts**

31 No impacts would occur.

32 **Impact AQ-4: Would operation of Alternative 2 result in offsite ambient air**
33 **pollutant concentrations that exceed a SCAQMD threshold of significance**
34 **in Table 3.2-11?**

35 Dispersion modeling of on- and off-site No Federal Action Alternative 2 operational
36 emissions was performed to assess the impact of the Alternative on local ambient air
37 concentrations. A summary of the dispersion modeling results is presented here; the
38 complete dispersion modeling report is included in Appendix A2.

39 **CEQA Impact Determination**

40 Tables 3.2-41 and 3.2-42 present the maximum off-site ground level concentrations of
41 NO₂, CO, PM₁₀, and PM_{2.5} from operation of Alternative 2 with and without mitigation
42 and show that the maximum off-site incremental PM₁₀ (24-hr and annual average)
43 concentrations would exceed SCAQMD thresholds in 2062. Accordingly, impacts would
44 be significant before mitigation.

Table 3.2-41. Maximum Off-site Ambient NO2 and CO Concentrations (CEQA) — No Federal Action Alternative 2 Operation

Pollutant	Averaging Time	Analysis Years ^b	Background Concentration (µg/m ³) ^c	Maximum Unmitigated Modeled No Federal Action Concentration Increment (µg/m ³) ^d	Total Unmitigated Ground-Level Concentration (µg/m ³)	Maximum Mitigated Modeled No Federal Action Concentration Increment (µg/m ³) ^d	Total Mitigated Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
NO ₂	Federal 1-hour ^a	2027	97	30	127	30	127	188	No	No
		2028	97	27	124	26	123	188	No	No
		2036	97	-1	96	-2	95	188	No	No
		2050	97	-1	97	-1	96	188	No	No
		2055	97	0.4	98	-0.4	97	188	No	No
		2062	97	2	99	1	98	188	No	No
	State 1-hour	2027	113	35	148	35	148	339	No	No
		2028	113	31	144	30	143	339	No	No
		2036	113	-2	111	-1	112	339	No	No
		2050	113	-0.2	113	-1	112	339	No	No
		2055	113	1	114	-0.2	113	339	No	No
		2062	113	3	116	1	114	339	No	No
	Federal annual	2027	26	-0.01	26	-0.01	26	100	No	No
		2028	26	-0.01	26	-0.01	26	100	No	No
		2036	26	2	28	2	28	100	No	No
		2050	26	0.1	26	0.001	26	100	No	No
		2055	26	1	27	0.4	27	100	No	No
		2062	26	1	28	1	27	100	No	No
	State annual	2027	26	-0.01	26	-0.01	26	57	No	No
		2028	26	-0.01	26	-0.01	26	57	No	No
		2036	26	2	28	2	28	57	No	No
		2050	26	0.1	26	0.001	26	57	No	No

Table 3.2-41. Maximum Off-site Ambient NO2 and CO Concentrations (CEQA) — No Federal Action Alternative 2 Operation

Pollutant	Averaging Time	Analysis Years ^b	Background Concentration (µg/m ³) ^c	Maximum Unmitigated Modeled No Federal Action Concentration Increment (µg/m ³) ^d	Total Unmitigated Ground-Level Concentration (µg/m ³)	Maximum Mitigated Modeled No Federal Action Concentration Increment (µg/m ³) ^d	Total Mitigated Ground-Level Concentration (µg/m ³)	SCAQMD Threshold (µg/m ³)	Unmitigated Concentration above Threshold?	Mitigated Concentration above Threshold?
		2055	26	1	27	0.4	27	57	No	No
		2062	26	1	28	1	27	57	No	No
CO	1-hour	2027	8,821	929	9751	929	9751	23,000	No	No
		2028	8,821	943	9764	-2	8819	23,000	No	No
		2036	8,821	1,137	9958	-2	8818	23,000	No	No
		2050	8,821	2,199	11020	-2	8819	23,000	No	No
		2055	8,821	2,619	11440	-2	8819	23,000	No	No
		2062	8,821	3,286	12107	-2	8820	23,000	No	No
	8-hour	2027	2,749	588	3338	588	3338	10,000	No	No
		2028	2,749	596	3346	-1	2749	10,000	No	No
		2036	2,749	717	3467	-0.4	2749	10,000	No	No
		2050	2,749	1,398	4147	-1	2749	10,000	No	No
		2055	2,749	1,664	4413	-1	2749	10,000	No	No
		2062	2,749	2,088	4837	-0.4	2749	10,000	No	No

Notes:

^a The federal 1-hour NO₂ modeled concentration represents the 98th percentile of the daily maximum 1-hour averages.

^b Since the construction activities would overlap with operations in 2027, combined construction and operation NO₂ impacts were modeled for 2027. NO₂ modeling was not performed for operations only. The combined impacts also allow AERMOD to model all contemporaneous NO_x sources to predict the ambient NO_x/NO₂ ratio accurately using the Ambient Ratio Method for NO₂ modeling. Additionally, 2035 emissions from the construction activities required for the installation of electrical chargers, which will facilitate future all-electric cargo-handling equipment, have been modeled with the 2036 operational year emissions of the cargo-handling equipment

^c The background concentrations for NO₂, SO₂, and CO were obtained from the Wilmington Community Monitoring Station (Saints Peter and Paul School).

^d The maximum modeled concentration increment represents No Federal Action operations minus CEQA baseline terminal operations.

1
2

Table 3.2-42: Maximum Off-site Ambient PM₁₀ and PM_{2.5} Concentrations (CEQA) — No Federal Action Operation

Pollutant	Averaging Time	Analysis Years	Unmitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^{a,b}	Mitigated Ground-Level Concentration CEQA Increment (µg/m ³) ^b	SCAQMD Threshold (µg/m ³)	Unmitigated CEQA Concentration above Threshold?	Mitigated CEQA Concentration above Threshold?
PM ₁₀	24-hour	2027	0.1	0.1	2.5	No	No
		2028	0.2	0.1	2.5	No	No
		2036	0.7	4.2	2.5	No	Yes
		2050	1.9	1.0	2.5	No	No
		2055	2.5	1.4	2.5	No	No
		2062	3.5	2.1	2.5	Yes	No
	Annual	2027	0.1	0.1	1	No	No
		2028	0.1	0.1	1	No	No
		2036	0.2	0.1	1	No	No
		2050	0.7	0.3	1	No	No
		2055	0.9	0.5	1	No	No
		2062	1.2	0.7	1	Yes	No
PM _{2.5}	24-hour	2027	0.1	0.1	2.5	No	No
		2028	0.1	0.04	2.5	No	No
		2036	0.4	1.7	2.5	No	No
		2050	0.7	0.1	2.5	No	No
		2055	0.9	0.1	2.5	No	No
		2062	1.3	0.3	2.5	No	No

Notes:

^a Exceedances of the threshold are indicated in **bold**. The thresholds for PM₁₀ and PM_{2.5} are incremental thresholds; therefore, the incremental concentration without background is compared to the threshold.

^b The CEQA increment represents No Federal Action minus CEQA baseline.

^c 2035 emissions from the construction activities required for the installation of electrical chargers, which will facilitate future all-electric cargo-handling equipment, have been modeled with the 2036 operational year emissions of the cargo-handling equipment

1 **Mitigation Measures**

2 Application of mitigation measures MM AQ-8, MM AQ-9, and MM AQ-10, and of lease
3 measures LM AQ-1 and LM AQ-2 to operations under Alternative 2 would reduce
4 operational emissions and ultimately further reduce the Alternative 2 operational ambient
5 pollutant concentrations.

6 **Residual Impacts**

7 Table 3.2-42 shows that after mitigation the maximum off-site annual and 24-hr average
8 PM₁₀ concentration from operation would be reduced to less than significant.

9 **NEPA Impact Determination**

10 The No Federal Action Alternative would involve the same operational activities, at the
11 same activity levels, as would occur under the NEPA baseline. Therefore, there would be
12 no incremental difference between Alternative 2 and the NEPA baseline. As a
13 consequence, Alternative 2 would result in no incremental impact under NEPA.

14 **Mitigation Measures**

15 No mitigation is required.

16 **Residual Impacts**

17 No impacts would occur.

18 **Impact AQ-5: Would Alternative 2 create an objectional odor at the nearest**
19 **sensitive receptor?**

20 Similar to the Proposed Project, the mobile nature of the emission sources associated with
21 Alternative 2 would serve to disperse emissions. Additionally, the distance between
22 Alternative 2 emission sources and the nearest residents would be far enough to allow for
23 adequate dispersion of these emissions to below objectionable odor levels.

24 **CEQA Impact Determination**

25 Because the potential is low for the Alternative 2 to produce objectionable odors that
26 would affect a sensitive receptor, odor impacts under CEQA would be less than
27 significant.

28 **Mitigation Measures**

29 No mitigation is required.

30 **Residual Impacts**

31 Impacts would be less than significant.

32 **NEPA Impact Determination**

33 The No Federal Action Alternative would involve the same operational activities, at the
34 same activity levels, as would occur under the NEPA baseline. Therefore, there would be
35 no incremental difference between Alternative 2 and the NEPA baseline. As a
36 consequence, Alternative 2 would result in no incremental impact under NEPA.

37 **Mitigation Measures**

38 No mitigation is required.

39 **Residual Impacts**

40 No impacts would occur.

Impact AQ-6: Would Alternative 2 expose receptors to significant levels of TACs?

An HRA was conducted to address potential public health effects from TACs generated by Alternative 2. The results of the HRA are summarized below, with impacts shown relative to the CEQA baseline and floating future baseline (for cancer risk). The rationale for a CEQA analysis based on both the CEQA baseline and floating future baseline is discussed in detail in Section 3.2.3.1, Methodology. Details of the analysis, including TAC emissions, the dispersion modeling approach, and the risk calculation approach, are presented in Appendix A3.

CEQA Impact Determination

Table 3.2-43 presents the maximum predicted CEQA health impacts associated with Alternative 2 with and without mitigation. The table includes estimates of individual cancer risk, chronic noncancer hazard index, and acute noncancer hazard index at the maximally exposed residential, occupational, and sensitive receptors. Results are presented for Alternative 2 (before subtracting baseline), the two CEQA baselines, the CEQA increment (Alternative 2 minus CEQA baseline), and future CEQA increment (Alternative 2 minus floating future baseline). The table also presents the CEQA increment and future CEQA increment for the population cancer burden. Significance findings are made by comparing the increments to the significance thresholds. Table 3.2-43 shows that without mitigation, Alternative 2 would produce the following health risk impacts under CEQA:

Individual Cancer Risk

In relation to both the CEQA baseline and floating future baseline, the maximum incremental cancer risk is predicted to be less than the significance threshold for all receptor types. Therefore, Alternative 2 would result in a less-than-significant cancer risk impact. Moreover, the negative values for the CEQA and future CEQA increment indicate that the cancer risk from Alternative 2 would be less than the cancer risk from the CEQA baseline and future floating baseline at all residential receptors, due in large part to the beneficial effect of existing air quality rules and regulations on future emissions. In relation to the floating future baseline, the maximum incremental cancer risk is predicted to be less than the significance threshold for all receptor types. Therefore, Alternative 2 would result in a less-than-significant cancer risk impact.

Population Cancer Burden

In relation to the CEQA baseline, the cancer burden increment would be zero because the individual cancer risk associated with Alternative 2 would be less than the CEQA baseline at all modeled receptors. Therefore, Alternative 2 would result in a less-than-significant cancer burden impact. In relation to the floating future baseline, the cancer burden increment is predicted to be less than the significance threshold. Therefore, Alternative 2 would result in a less-than-significant cancer burden impact.

Chronic and Acute Hazard Indices

Because chronic and acute hazard indices are based on annual- and peak-hour emissions instead of multiple-year emissions like cancer risk, they are determined by comparing impacts only to the CEQA baseline, which is the baseline at the time of the NOP.

The maximum chronic hazard index increment is predicted to be less than the significance threshold for all receptor types. Therefore, Alternative 2 would result in a less-than-significant chronic noncancer impact.

Table 3.2-43. Maximum CEQA Health Impacts Estimated for Construction and Operation of No Federal Action

Health Impact	Receptor Type	Unmitigated CEQA Increment ^{a,b,c}	Mitigated CEQA Increment ^d	Unmitigated Future CEQA Increment ^{b,c,e}	Mitigated Future CEQA Increment ^d	Significance Threshold	Unmitigated Significant?	Mitigated Significant?
Cancer Risk ^f	Residential/Sensitive	<0 <0 in a million	n/a	<0 × 10 ⁻⁶ <0 in a million	n/a	10 × 10 ⁻⁶ 10 in a million	No	No
	Occupational	0.10 × 10 ⁻⁶ 0 in a million	n/a	0.056 × 10 ⁻⁶ 0 in a million	n/a		No	No
Chronic Hazard Index	Residential/Sensitive	0.042	n/a	n/a ^h	n/a	1.0	No	No
	Occupational	0.069	n/a	n/a ^h	n/a		No	No
Acute Hazard Index	Residential/Sensitive	<1 ^g	n/a	n/a ^h	n/a	1.0	No	No
	Occupational	<1 ^g	n/a	n/a ^h	n/a		No	No
Population Cancer Burden		<0	n/a	<0	n/a	0.5	No	No

Notes:

^aThe CEQA Increment column represents the maximum difference of No Federal Action minus the CEQA baseline.

^bA CEQA increment or a future CEQA increment less than zero means that the No Federal Action Alternative health values would be less than the CEQA baseline or the future CEQA baseline health values at all modeled receptors.

^cEach positive result shown in the table for cancer risk and chronic hazard index represents the modeled receptor location with the maximum increment. The increments at all other receptors would be less than the values in the table.

^dThe mitigated CEQA increments and the mitigated future CEQA increments were not calculated because mitigations would not be required for the No Federal Action Alternative.

^eThe Future CEQA Increment column represents the maximum difference of No Federal Action minus the floating future baseline.

^fValues displayed for individual cancer risk have been rounded to the nearest integer.

^gThe CEQA increments for acute HI were not calculated. They would be below the threshold because the absolute acute HIs for the No Federal Action Alternative are all below the threshold (see details in Appendix A3).

^hThe future CEQA baseline and Future CEQA increment are applicable only to cancer risk because cancer risk has a uniquely long exposure period (30 years for residential and sensitive exposure, and 70 years for population cancer burden).

The maximum acute hazard index increment is predicted to be less than the significance threshold for all receptor types. Therefore, Alternative 2 would result in a less-than-significant acute noncancer impact.

Appendix A3 includes figures showing the locations of the maximally impacted receptors under CEQA. Residential cancer risk contours for this Alternative are not shown because, as stated in the previous paragraphs, the increments are predicted to be less than zero at all modeled residential receptors.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The No Federal Action Alternative would involve the same operational activities, at the same activity levels, as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no incremental impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact AQ-7: Would Alternative 2 conflict with or obstruct implementation of an applicable AQMP?

Similar to the Project, Alternative 2 No Federal Action would comply with SCAQMD rules and regulations and would be consistent with SCAG regional employment and population growth forecasts. Thus, this alternative would not conflict with or obstruct implementation of the AQMP.

LAHD regularly provides SCAG with its Port-wide cargo forecasts for development of the AQMP. Therefore, the attainment demonstrations included in each AQMP account for the emissions generated by projected future growth at the Port. Alternative 2 (No Federal Action) increases cargo throughput at the Port, and the emissions are included in the General Conformity budgets established in the Final 2022 AQMP (SCAQMD, 2022).

With regard to the Community Emissions Reduction Plan (CERP) for the communities nearest to the Project site, i.e., Wilmington, Carson, and West Long Beach (SCAQMD 2019), Alternative 2 would include the same operational mitigation measures and be subject to the same CARB rules and regulations as the Proposed Project. Accordingly, for the same reasons described for the Proposed Project, Alternative 2 would not conflict with the goals of the CERP.

Furthermore, LAHD, in conjunction with the Port of Long Beach, implements the 2017 CAAP Update, which sets goals and implementation strategies that reduce air emissions and health risks from Port operations. Mitigation measures, lease measures, and the operational activities associated with the Alternative 2 would comply with the source-specific performance standards identified in the 2017 CAAP Update, including feasibility demonstration of electric and other zero emission technologies, accelerating the use of the cleanest available technology for a number of sources, and improving the efficiency

of the terminal's operations. These measures are also consistent with the emission reduction goals of the SCAQMD's 2022 AQMP.

CEQA Impact Determination

Alternative 2 would not conflict with or obstruct implementation of the AQMP. Therefore, significant impacts under CEQA are not anticipated.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The No Federal Action Alternative would involve the same operational activities, at the same activity levels, as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no incremental impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

3.2.5.4 Discussion of Health Effects Related to Pollutant Impacts

This section includes a discussion of the potential health effects of air pollutant impacts. Potential health effects are described for the Proposed Project's significant operational emissions identified in Impact AQ-3 and significant ambient concentrations associated with Proposed Project operations identified in Impact AQ-4. This discussion is not a new impact assessment but rather provides supplemental information related to the significant impacts already identified in the DEIR. The discussion considers potential links between the Proposed Project's emissions of priority pollutants and human health effects. Information about health effects was acquired through a review of available literature published by the SCAQMD, CARB, and USEPA.

The discussion of health effects is also guided by the step-wise process depicted in Figure 3.1-4 that is used for assessing air quality impacts in the EIR. The first step, emissions analysis, is presented in Impact AQ-3 for Proposed Project operations and is indicative of *regional* air quality impacts because the analysis determines the quantity of pollutants released into the SCAB from Proposed Project-related sources operating throughout the South Coast Air Basin (SCAB). The second step, dispersion modeling, is presented in Impact AQ-4 for Proposed Project operations. The analysis is indicative of *local* impacts because the analysis estimates the ambient pollutant concentrations to which persons would be exposed, and the highest concentrations are predicted to occur in close proximity to the Project site. Therefore, the health effects discussion considered both regional health effects (i.e., effects that could be experienced throughout the SCAB) and local health effects (i.e., effects in the vicinity of the Phillips 66 Terminal) related to the Proposed Project operation.

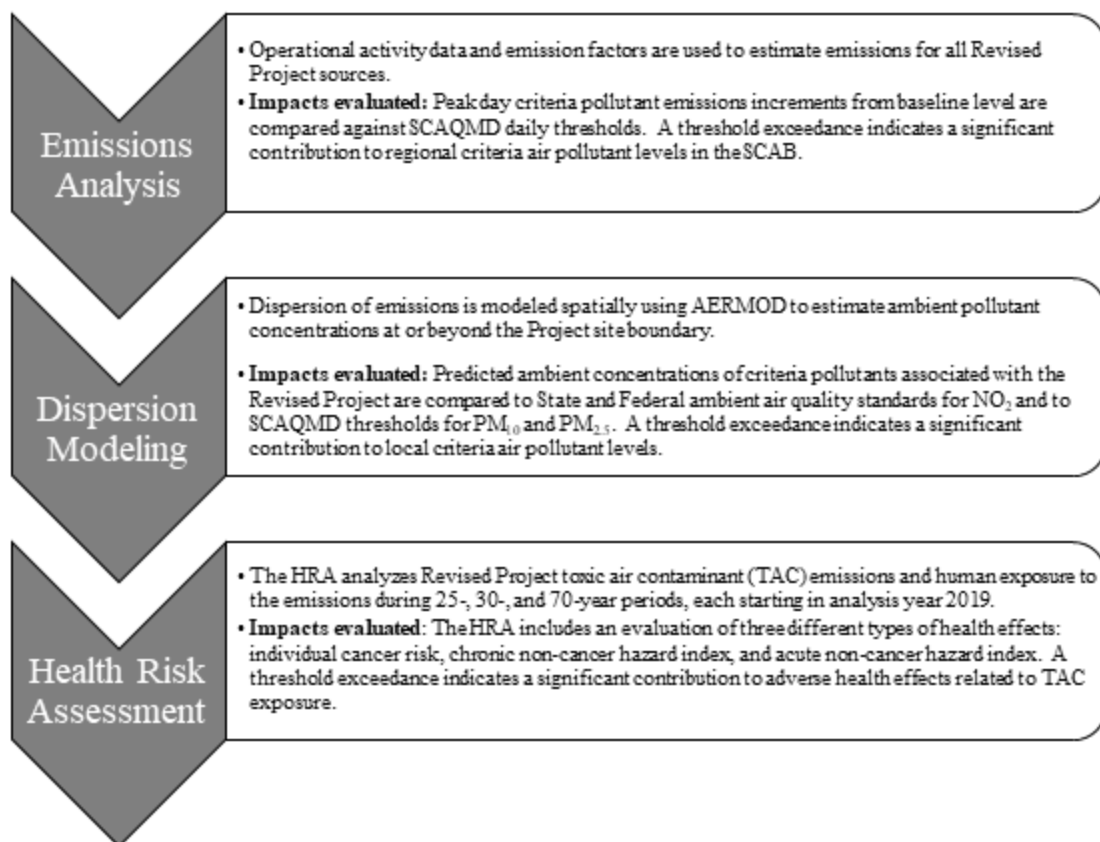
The third step, health risk assessment (HRA), is presented in Impact AQ-5. The results for individual cancer risk and population cancer burden (presented in Table 3.2-28) are already direct estimates of the health effects associated with exposure to the Proposed

Project’s toxic air contaminant (TAC) emissions. Therefore, no further discussion of health effects related to the Proposed Project’s TAC emissions is necessary for the HRA.

Regional Health Effects

This section discusses the relationship between the Proposed Project’s regional criteria pollutant emissions and the potential for adverse health effects to occur for persons exposed to the emitted pollutants. The Proposed Project would produce significant regional emissions of NO_x in 2028, of CO in 2028 through 2062, and of volatile organic compounds (VOCs) in 2036 through 2062, but emissions of the other pollutants of concern in the SCAB (i.e., respirable and fine particulate matter [PM₁₀ and PM_{2.5}], SO_x, and lead [Pb]) would not exceed significance thresholds. Accordingly, this discussion of regional health effects focuses on CO, NO_x, and ozone. NO_x is included because it is a primary component of NO₂, a criteria pollutant. Ozone is included because NO_x and VOCs are precursors of ozone, which is a criteria pollutant that is photochemically formed in the atmosphere in the presence of sunlight (USEPA 2020).

Figure 3.1-4. Air Quality Analysis Key Elements and Progression



In an *Amicus Curiae* brief submitted to the California Supreme Court in the *Sierra Club v. County of Fresno (“Friant Ranch”)* case, the SCAQMD explained that it did not know of a way to accurately quantify health impacts caused by emissions produced on a scale as small as individual projects (SCAQMD 2015). The SCAQMD’s observations on the infeasibility of linking project-specific emissions to specific health impacts were echoed by *amicus curiae* submitted by other air pollution control authorities (see attachments 1 through 4 in City of Los Angeles 2019).

One existing tool can model changes in ozone or PM concentrations on a regional scale and use that data to calculate the number of the resulting air pollution-related deaths and illnesses (USEPA 2019a). The tool consists of USEPA's CMAQ (Community Multiscale Air Quality) and BenMAP (Benefits Mapping and Analysis Program) models used together. These models are designed to estimate health impacts over a large scale (e.g. city-wide, state-wide) and some of their data inputs are either not generally accessible or not relevant to project-level analyses (City of Los Angeles 2019). The expected changes in regional ozone concentrations associated with an individual project, such as the Proposed Project, would be so low that, as City of Los Angeles (2019) points out, BenMAP would likely produce estimates of health effects that are near zero and thus would not be informative for the public.

The City of Los Angeles (2019) evaluated 11 other tools and models used in air quality and public health assessments and found that they all, for various reasons, do not connect mass emissions or pollutant concentrations with specific health effects. Accordingly, at this time neither the SCAQMD, CARB, "nor any air district currently have methodologies that would provide Lead Agencies and CEQA practitioners with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions" (City of Los Angeles 2019).

As a result of expert agencies determining that any individual project's contribution to health effects will be so small that none of the existing models can provide helpful information and the lack of a reliable methodology for linking project-level pollutant concentrations attributable to an individual project to specific health effects in the regional population, the extent to which regional adverse health effects can be identified in this section is limited to (a) discussing the Proposed Project's potential impact on regional pollutant levels; and (b) generally describing the types of adverse health effects associated with exposure to the pollutants of concern.

The discussion below describes regional CO, NO₂, ozone, and PM₁₀ concentrations and standards, considers whether the Proposed Project's emissions would have a substantial impact on these regional pollutant concentrations, and discusses known human health effects of exposure to these pollutants.

Carbon Monoxide (CO)

Impact on Regional CO Concentrations. The SCAB is currently designated as "in attainment" of CO concentration standards. The most stringent state and federal CO standards are 20 ppm for a 1-hour average and 9 ppm for an 8-hour average.

The highest CO concentrations recorded anywhere in the SCAB over the last 3 available years (2021-2023) were 4.3 ppm for a 1-hour average and 3.7 ppm for an 8-hour average (SCAQMD 2025). These pollutant levels are 22 and 41 percent of the 1-hour and 8-hour standards, respectively. Both maximum values occurred at a monitoring station in Compton (SCAQMD 2025).

According to the SCAQMD's most recent Air Quality Management Plan (2022 AQMP), the total CO emissions within the SCAB in the AQMP's base year of 2018 were 1,658 tons/day (SCAQMD 2022, Table 3-2). By comparison, the highest CO emissions increment associated with Proposed Project operations was 4 tons/day, on the peak day in 2036-2062 (Table 3.2-22), which is 0.24 percent of the total SCAB emissions.

Potential Health Effects. In developing the CO standards, the USEPA (2010) prepared a comprehensive report on the possible health effects associated with CO exposure. The

SCAQMD also reviewed CO-related health effects in Appendix I of its 2022 AQMP (SCAQMD 2022). The main conclusions of these agencies are:

USEPA (2010) concluded that a causal relationship is likely to exist between relevant short-term CO exposures and cardiovascular morbidity, particularly in individuals with coronary artery disease. The evidence is suggestive of a causal relationship between short-term exposure to CO and respiratory morbidity as well as between short-term CO exposure and mortality. The evidence is also suggestive of a causal relationship for birth outcomes and developmental effects following long-term exposure to CO, and for central nervous system effects linked to short- and long-term exposure to CO. The evidence indicates that there is not likely to be a causal relationship between long-term exposure to CO and mortality. For respiratory morbidity following long-term exposure to CO, the evidence was inadequate to infer a causal relationship.

SCAQMD (2022) concluded that inhaled CO interferes with oxygen transport through the formation of carboxyhemoglobin, which reduces the amount of oxygen the blood can carry to the tissues. Effects of inadequate oxygen delivery to the body tissues include reduced duration of maximal exercise performance, earlier onset of electrocardiograph changes in subjects with coronary artery disease, earlier onset of chest pain, increase in the duration of chest pain, headache, confusion and drowsiness. Some epidemiological studies have found associations between short-term ambient CO levels and increased hospital admissions and emergency department visits for ischemic heart disease, including myocardial infarction (heart attack). CO can also modify electron transport in nerve cells, resulting in behavioral, neurological, and developmental toxicological consequences. Recent studies are also showing more respiratory effects from CO exposure, such as alleviated respiratory inflammation and exacerbation of asthma. Other studies have reported associations between CO exposure during pregnancy and increases in pre-term births and cardiac-related birth defects.

Nitrogen Dioxide (NO₂)

Impact on Regional NO₂ Concentrations. The SCAB is currently designated as “in attainment” of NO₂ concentration standards. The most stringent state and federal NO₂ standards are 0.18 ppm for a 1-hour average (state 1-hour standard), 0.100 ppm for a three-year average of the 98th percentile of the annual distributions of daily maximum 1-hour average concentrations (federal 1-hour standard), and 0.030 ppm for an annual average (state standard).

The highest NO₂ concentrations recorded anywhere in the SCAB over the last 3 available years (2021-2023) were 0.095 ppm for the state 1-hour average, 0.076 ppm for the federal 1-hour average, and 0.030 ppm for an annual average (SCAQMD 2025b). These pollutant levels are 53, 76, and 100 percent of the state 1-hour, federal 1-hour, and state annual standards, respectively. All the maximum values occurred at monitoring stations adjacent to the I-710 and CA-60 freeways (SCAQMD 2025b).

According to the 2022 AQMP, the total NO_x emissions within the SCAB in the AQMP’s base year of 2018 were 351 tons/day (SCAQMD 2022, Table 3-1A). By comparison, the highest NO_x emissions increment associated with the Proposed Project with combined construction was 2.5 tons/day on a peak day in 2028, which is 0.7 percent of the total SCAB emissions.

Potential Health Effects. In developing the NO₂ standards, the USEPA (2016) and CARB (2007) have prepared comprehensive reports on the possible health effects associated with NO₂ exposure. The main conclusions of these agencies are:

USEPA (2016) concluded that a causal relationship exists between short-term NO₂ exposure and respiratory effects such as asthma attacks. There is likely to be a causal relationship between long-term NO₂ exposure and respiratory effects based on the evidence for development of asthma. For short-term and/or long-term NO₂ exposure, evidence is suggestive of, but not sufficient to imply, a causal relationship with cardiovascular effects, diabetes, mortality, adverse birth outcomes, and cancer. People with asthma, children, and older adults are at increased risk for NO₂-related health effects.

CARB (2007) concluded that, in controlled human exposure studies, asthmatics appear to be especially sensitive to NO₂. Asthmatic volunteers have experienced short-term effects at NO₂ concentrations as low as 0.26 ppm. There is evidence that a subset of asthmatics may experience increased airway reactivity at concentrations of 0.2 to 0.3 ppm for 30 minutes to 2 hours. Generally, no clinical effects are reported in non-asthmatic volunteers in conditions below 1 ppm. Epidemiological studies have shown an association between NO₂ and both hospital admissions and emergency room visits for asthma at 24-hour average concentrations ranging from 0.018 to 0.036 ppm. Less robust evidence suggests associations with mortality, hospitalization for cardiovascular disease, and low birth weight.

Ozone

Impact on Regional Ozone Concentrations. The SCAB is currently designated as in “nonattainment” of ozone concentration standards. The most stringent state and federal ozone standards are 0.09 ppm for a 1-hour average (state), 0.070 ppm for the three-year average of the fourth-highest 8-hour concentration each year (known as the federal 8-hour standard), and 0.070 ppm for an 8-hour average (known as the state 8-hour standard).

The highest 1-hour ozone concentration recorded in the SCAB over the last three available years (2021-2023) is 0.155 ppm, which is 1.7 times the state standard. This concentration occurred at both the Northwest San Bernardino Valley and East San Gabriel Valley monitoring stations. The standard was exceeded somewhere in the SCAB on 23 percent of days during that same three-year period (SCAQMD 2025b).

The highest federal 8-hour ozone concentration recorded in the SCAB over the last three available years (2021-2023) is 0.112 ppm, which is 1.6 times greater than the standard (SCAQMD 2025b). This concentration occurred at the East San Bernardino Valley monitoring site. The threshold of 0.070 ppm was exceeded at one or more locations in the SCAB on 34 percent of days during that same three-year period.

The highest state 8-hour ozone concentration recorded in the SCAB over the last three available years (2021-2023) is 0.122 ppm, which is 1.7 times greater than the standard. This concentration occurred at the Central San Bernardino Mountains station. The standard was exceeded at one or more locations in the SCAB on 34 percent of days during that same three-year period (SCAQMD 2025b).

As noted above, NO_x and VOC are ozone precursors. Because ozone is generally formed some time later and some distance downwind from its precursor emission source, ozone behaves as a regional pollutant rather than a local pollutant. For example, the highest ozone concentrations are not found in urban areas close to the concentrated sources of its precursors, but rather in suburban and rural areas downwind of these sources (USEPA 2020). The feasibility of considering potential health effects associated with ozone exposure was addressed above.

According to the 2022 AQMP, the total VOC emissions within the SCAB in 2018 were 406 tons/day (SCAQMD 2022). By comparison, the highest VOC emissions increment associated with the Proposed Project is estimated to be 0.12 tons/day, which comprises 0.05 percent of the total SCAB emissions. As discussed above for NO₂, the Proposed Project's anticipated NO_x emissions increment makes up 0.7 percent of the total SCAB emissions.

Potential Health Effects. In developing the ozone standards, USEPA (2020) has prepared comprehensive reports on the possible health effects associated with ozone exposure. The main conclusions of the agencies' reports are:

USEPA (2020) concluded that a causal relationship exists between short-term ozone exposure and respiratory effects. A causal relationship is likely to exist between short-term ozone exposure and cardiovascular effects and mortality. Evidence is suggestive of a causal relationship between short-term ozone exposure and central nervous system effects. A causal relationship is likely to exist between long-term ozone exposure and respiratory effects. Evidence is suggestive of a causal relationship between long-term ozone exposure and cardiovascular effects, reproductive and developmental effects, central nervous system effects, and mortality. There is little evidence for a relationship between long-term ozone exposure and increased risk of lung cancer. The populations and life stages that have adequate evidence for increased ozone-related health effects are individuals with certain genotypes, individuals with asthma, younger and older age groups, individuals with reduced intake of Vitamins E and C, and outdoor workers.

In summary, the Proposed Project would produce emissions of CO, NO_x, and VOC that exceed SCAQMD's project significance threshold. However, these emissions would make relatively small contributions to regional levels of CO, NO₂, and ozone. There is currently no methodology available that can accurately quantify regional health effects from exposure to these pollutants or ozone associated with an individual project's emissions. Local concentration impacts of CO would be below the thresholds in all analysis years. Therefore, the above discussion is limited to identifying the Proposed Project's potential contribution to regional pollutant levels and generally describing the types of adverse health effects associated with exposure to those pollutants.

Local Health Effects

This section discusses the relationship between the Proposed Project's local criteria pollutant emissions and the potential for adverse health effects to occur for persons exposed to those emissions in the Proposed Project vicinity. The dispersion modeling results in Tables 3.2-24 and 3.2-25 show significant local concentration impacts for PM₁₀. These consist of exceedances of the state 24-hour and annual standards for in 2036 through 2062, exceedances of the federal 24-hour standard in 2036 through 2055, and exceedances of the federal annual standard in 2050 and 2055. Concentrations of NO₂ would exceed the federal 1-hour significance threshold in 2050 through 2062. Therefore, the criteria pollutants evaluated for local health effects are NO₂ and PM₁₀.

There is currently no methodology available that can accurately quantify local health effects from ambient NO₂ or PM₁₀ concentrations associated with an individual project. Therefore, the extent to which local adverse health effects can be identified in this section is limited to generally describing the types of adverse health effects associated with exposure to NO₂ and PM₁₀.

NO₂ is also an ozone precursor. However, because ozone is generally formed some time later and downwind from its precursor emission source, ozone behaves as a regional

pollutant rather than a local pollutant. For example, the highest ozone concentrations are not found in urban areas close to the concentrated sources of its precursors, but rather in suburban and rural areas downwind of these sources (USEPA 2013). Therefore, the potential health effects associated with ozone exposure were addressed under Regional Health Effects.

Nitrogen Dioxide (NO₂)

The SCAB is currently designated attainment of the NO₂ concentration standards. Locally, Table 3.1-2 shows that the Wilmington Community Station, approximately one mile north of the Project site, did not exceed the federal and state NO₂ standards in any of the three most recent years (May 2021-April 2024) for which monitoring data are available.

Magnitude of Local Impact. The maximum NO₂ concentrations to which individuals in the local area would be exposed are shown in Tables 3.2-24 (state standards) and 3.2-26 (federal standards). In two of those cases – the federal 1-hour and state annual in 2027 – predicted concentrations exceed the significance thresholds. The area over which the federal 1-hour NO₂ significance threshold would be expected to be exceeded is shown in Appendix A2, Figure A2-10 (see Volume II). This area is limited to the Project site boundary. Dispersion modeling results show that the exceedance locations for 1-hour federal and state significance thresholds and annual significance threshold in Appendix A2.

Potential Health Effects. The potential health effects associated with NO₂ exposure are described above under Regional Health Effects above.

Particulate Matter Less than 10 Microns (PM₁₀)

The SCAB is currently classified as nonattainment for the state 24-hour and annual PM₁₀ standards. Locally, Table 3.2-2 shows that the Wilmington Community Station, approximately one mile northeast of the Project site, exceeded the state 24-hour standard on one or more days in two of the last three years with available data (i.e., May 2022-April 2023 and May 2023-April 2024). The highest observed concentration of 67.6 ug/m³ is 1.4 times the state standard of 50 ug/m³. The Wilmington Community Station also exceeded the state annual PM₁₀ standard in all three years. The highest observed concentration of 24.7 ug/m³ is 1.2 times the annual standard of 20 ug/m³. The Wilmington Community Station did not exceed the federal 24-hour PM₁₀ standard during the last three years of available data.

Magnitude of Local Impact. Because of the region's nonattainment status, the Proposed Project's PM₁₀ concentration increments are compared to SCAQMD significance thresholds instead of the ambient air quality standards; an exceedance of a significance threshold is regarded as a significant localized impact in an area that already exceeds the standard. The maximum PM₁₀ concentration increments to which individuals in the local area would be exposed during Proposed Project operation were predicted through dispersion modeling and are shown in Table 3.2-25. Concentrations would exceed state 24-hour and annual significance thresholds in all future years starting in 2036. The maximum 24-hour concentration of 5.7 µg/m³ for unmitigated emissions would be 2.3 times the threshold, and the maximum annual concentration of 2.0 µg/m³ would be 1.5 times the threshold.

As shown in Appendix A2, Figure A2-10 (see Volume II), these maximum values would be experienced at the property line of the Proposed Project and the area over which the

significance thresholds are exceeded would be limited to immediately adjacent industrial land use areas; locations farther from the Project site would experience lower concentrations.

Potential Health Effects. In developing the PM₁₀ standards, USEPA (2019b) has prepared comprehensive reports on the possible health effects associated with PM₁₀ exposure. The SCAQMD also reviewed PM₁₀-related health effects in Appendix I of its *Final 2022 Air Quality Management Plan* (SCAQMD 2022). Most of the health effects findings made by these agencies focus on PM_{2.5}, which is a subset of PM₁₀. Although the local PM_{2.5} impacts from the Proposed Project would be less than significant, the PM_{2.5}-related health effects are included in the following bullets as part of the overall health effects from PM₁₀. The main conclusions of the agencies and their reports are:

USEPA (2019b) concluded that a causal relationship exists between PM_{2.5} exposure (both short- and long-term) and cardiovascular effects and mortality. A causal relationship is likely to exist between PM_{2.5} exposure (both short- and long-term) and respiratory effects. Evidence is suggestive of a causal relationship between long-term PM_{2.5} exposure and reproductive and developmental effects, cancer, mutagenicity, and genotoxicity. For the portion of PM₁₀ greater than 2.5 microns (PM_{10-2.5}), USEPA concluded that evidence is suggestive of a causal relationship between short-term PM_{10-2.5} exposure and cardiovascular effects, respiratory effects, and mortality. Older adults have heightened responses for cardiovascular morbidity with PM exposure. Children are at an increased risk of PM-related respiratory effects. Individuals with underlying cardiovascular disease or asthma may be at an increased risk for adverse effects.

SCAQMD (2022) concluded that there is a causal relationship between PM_{2.5} exposure and cardiovascular effects and mortality. Specific cardiovascular effects include cardiovascular deaths, hospital admissions for ischemic heart disease and congestive heart failure, changes in heart rate variability and markers of oxidative stress, and markers of atherosclerosis. A causal relationship is likely to exist between PM_{2.5} exposure and respiratory effects, such as hospital admissions for chronic obstructive pulmonary disease (COPD) or respiratory infections, asthma development, asthma or allergy exacerbation, lung cancer, impacts on lung function, lung inflammation, oxidative stress, and airway hyperresponsiveness. Both short-term and long-term PM exposures are linked to health effects in humans. Young children, older adults, and people with pre-existing respiratory or cardiovascular health conditions are among those who may be more susceptible to the adverse effects of PM. SCAQMD's *Multiple Air Toxics Exposure Study V* (MATES V) (SCAQMD 2021) found that the DPM portion of PM₁₀ is a significant contributor to the cancer risk associated with toxic air contaminants in the SCAB. For example, the average lifetime risk for excess cancer cases in the SCAB from all sources is estimated to be 455 per million and that DPM is responsible for about 50 percent of the risk.

In summary, the construction of the Proposed Project would produce significant local concentration impacts for CO, and operation of the Proposed Project would produce significant local concentration impacts for 24-hour and annual PM₁₀ and federal 1-hour NO₂. The Proposed Project's significant impact areas would extend over industrial land uses near the B121-131 Terminal as described above. There is currently no methodology available that can accurately quantify local health effects from ambient NO₂ or PM₁₀ concentrations associated with an individual project. Therefore, the above discussion is limited to defining the geographical area of significant local impacts, presenting the magnitude of significant local impacts and generally describing the types of adverse

health effects associated with exposure to NO₂ and PM₁₀. As guidance from the City of Los Angeles (2019) concludes:

“For local plans or projects that exceed any identified SCAQMD air quality threshold, City EIR documents typically identify and disclose generalized health effects of certain air pollutants but are currently unable to establish a reliable connection between any local plan or project and a particular health effect. ... A number of factors contribute to this uncertainty, including the regional scope of air quality monitoring and planning, technological limitations for modeling at a local plan- or project-level, and the intrinsically complex nature between air pollutants and health effects in conjunction with local environmental variables.”

3.2.5.5 Summary of Impact Determinations

Table 3.2-44 summarizes the CEQA and NEPA impact determinations of the Proposed Project and alternatives related to Air Quality and Meteorology. This table is meant to allow easy comparison of the potential impacts of the Proposed Project and alternatives with respect to air quality. Identified potential impacts may be based on Federal, State, or City of Los Angeles significance criteria, LAHD criteria, and the scientific judgment of the report preparers.

For each type of potential impact, the table describes the impact, notes the CEQA and NEPA impact determinations, describes any applicable mitigation measures, and notes the residual impacts (i.e., the impact remaining after mitigation). All impacts, whether significant or not, are included in this table.

Table 3.2-44. Summary Matrix of Potential Impacts and Mitigation Measures for Air Quality Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
Proposed Project	AQ-1: The Proposed Project would result in construction-related emissions that exceed an SCAQMD threshold of significance in Table 3.2-8.	CEQA: Impacts of construction would be significant for NO _x . Impacts of combined construction and operational emissions would be significant for CO.	MM AQ-1: Harbor Craft Used During Construction. MM AQ-2: On-Road Trucks Used during Construction. MM AQ-3: Non-Road Construction Equipment. MM AQ-4: Cargo Ships Used During Construction. MM AQ-5: Dredging Non-Road Equipment. MM AQ-6: General Construction Mitigation MM AQ-7: Renewable Diesel Fuel MM AQ-8: VSRP MM AQ-9: Yard Tractor Emissions Standards. MM AQ-10: Cargo-Handling Equipment Emissions Standards	Impacts of construction would be significant and unavoidable for NO _x . Impacts of combined construction and operations would be significant and unavoidable for CO.
		NEPA: Impacts of construction would be significant for NO _x . Impacts of combined construction and operational NO _x emissions would be less than significant.	MM AQ-1 through MM AQ-10	Impacts of construction would be significant and unavoidable for NO _x i.
	AQ-2: Proposed Project construction would result in off-site ambient air pollutant concentrations that exceed a SCAQMD threshold of significance in Table 3.2-9.	CEQA: Maximum off-site ambient air pollutant concentrations would be significant for PM ₁₀ (24-hour and annual average) and PM _{2.5} (24-hour). Combined construction and operations would be significant for NO ₂ (annual average and federal and state 1-	MM AQ-1 through MM AQ-10	Impacts of combined construction and operations would be significant and unavoidable for NO ₂ (federal 1-hour average) .

Table 3.2-44. Summary Matrix of Potential Impacts and Mitigation Measures for Air Quality Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
Proposed Project		hour average), PM ₁₀ (24-hour and annual average), and PM _{2.5} (24-hour).		
		NEPA: Maximum off-site ambient air pollutant concentrations would be significant for PM ₁₀ (24-hour and annual average) and PM _{2.5} (24-hour). Combined construction and operations would be significant for NO ₂ (annual average and federal and state 1-hour average), PM ₁₀ (24-hour and annual average), and PM _{2.5} (24-hour).	MM AQ-1 through MM AQ-10	Impacts of combined construction and operations would be significant and unavoidable for NO ₂ (federal 1-hour average) .
	AQ-3: The Proposed Project would result in operational emissions that exceed an SCAQMD threshold of significance in Table 3.2-10.	CEQA: Impacts would be significant for NO _x in 2028, for CO in all operational years and for VOC in 2036 through 2062.	MM AQ-8, MM AQ-9, MM AQ-10 LM AQ-1, LM AQ-2: Cleanest Available Cargo-Handling Equipment LM AQ-2: Priority Access for Drayage	Impacts would be significant and unavoidable for NO _x in 2028.
		NEPA: Impacts would be significant for VOC in 2036 and 2050; for CO in all operational years; and for NO _x in 2028 through 2055.	MM AQ-8 through MM AQ-10 LM AQ-1 and LM AQ-2	Impacts would be significant and unavoidable for NO _x in 2028 through 2050.
	AQ-4: Proposed Project operations would result in off-site ambient air pollutant concentrations that exceed a SCAQMD threshold of significance in	CEQA: Impacts would be significant for PM ₁₀ (24-hour and annual average).	MM AQ-8 through MM AQ-10; LM AQ-1 and LM AQ-2	Impacts would be significant and unavoidable for PM ₁₀ (24-hour and annual average)
		NEPA: Impacts would be significant for NO ₂ (federal 1-hour	MM AQ-8 through MM AQ-10; LM AQ-1 and LM AQ-2	Impacts would be significant and unavoidable for PM ₁₀ (24-

Table 3.2-44. Summary Matrix of Potential Impacts and Mitigation Measures for Air Quality Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
Proposed Project	Table 3.2-11.	average) and PM ₁₀ (24-hour and annual average.		hour average).
	AQ-5: The proposed Project would not create an objectionable odor at the nearest sensitive receptor.	CEQA: Less than significant	No mitigation is required	Less than significant
		NEPA: Less than significant	No mitigation is required	Less than significant
	AQ-6: The proposed Project would expose receptors to significant levels of TACs.	CEQA: Less than significant.	No mitigation is required but MM AQ-1 through MM AQ-10 and LM AQ-1 and LM AQ-2 would further reduce health impacts	Less than significant.
		NEPA: Less than significant.	No mitigation is required but MM AQ-1 through MM AQ-10 and LM AQ-1 and LM AQ-2 would further reduce health impacts	Less than significant.
	AQ-7: The Proposed Project would not conflict with or obstruct implementation of an applicable AQMP.	CEQA: Less than significant	No mitigation is required	Less than significant.
		NEPA: Less than significant	No mitigation is required	Less than significant
Alternative 1 – No Project	AQ-1: Alternative 1 would not result in construction-related emissions that exceed an SCAQMD threshold of significance in Table 3.2-8.	CEQA: No impact	No mitigation is required	No impact
		NEPA: Not applicable	Mitigation is not applicable	Not applicable
	AQ-2: Alternative 1 construction would not result in off-site ambient air pollutant	CEQA: No impact	No mitigation is required	No impact
		NEPA: Not applicable	Mitigation is not applicable	Not applicable

Table 3.2-44. Summary Matrix of Potential Impacts and Mitigation Measures for Air Quality Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
	concentrations that exceed a SCAQMD threshold of significance in Table 3.2-9			
	AQ-3: Alternative 1 would result in operational emissions that exceed an SCAQMD threshold of significance in Table 3.2-10.	CEQA: Impacts would be significant for VOCs in 2055 and 2062 and for CO in all years of operations. NEPA: Not applicable	Mitigation is not applicable Mitigation is not applicable	Impacts would be significant and unavoidable. Not applicable
	AQ-4: Alternative 1 operations would result in off-site ambient air pollutant concentrations that exceed a SCAQMD threshold of significance in Table 3.2-11.	CEQA: Impacts of concentrations of PM ₁₀ (24-hr and annual) would be significant in 2055 and 2062. NEPA: Not applicable	Mitigation is not applicable Mitigation is not applicable	Impacts would be significant and unavoidable Not applicable
	AQ-5: Alternative 1 would not create an objectionable odor at the nearest sensitive receptor.	CEQA: Less than significant NEPA: Not applicable	No mitigation is required Mitigation is not applicable	Less than significant Not applicable
	AQ-6: Alternative 1 would not expose receptors to significant levels of TACs.	CEQA: Less than significant NEPA: Not applicable	No mitigation is required Mitigation is not applicable	Less than significant Not applicable
	AQ-7: Alternative 1 would not conflict with or obstruct implementation of an applicable AQMP.	CEQA: Less than significant NEPA: Not applicable	No mitigation is required Mitigation is not applicable	Less than significant Not applicable
Alternative 2 – No Federal Action	AQ-1: Alternative 2 would not result in construction-related emissions that exceed an SCAQMD	CEQA: Less than significant for construction only. Combined construction and operational emissions would be	MM AQ-2, MM AQ-3, MM AQ-6, MM AQ-7, MM AQ-8; LM AQ-1 and LM AQ-2	Impacts of combined construction and operational emissions would be significant and unavoidable for CO.

Table 3.2-44. Summary Matrix of Potential Impacts and Mitigation Measures for Air Quality Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
	threshold of significance in Table 3.2-8.	significant for CO. NEPA: No impact	No mitigation is required	No impact
	AQ-2: Alternative 2 construction would result in off-site ambient air pollutant concentrations that exceed a SCAQMD threshold of significance in Table 3.2-9.	CEQA: Less than significant NEPA: No Impact	No mitigation is required	Less than significant No Impact
	AQ-3: Alternative 2 would result in operational emissions that exceed an SCAQMD threshold of significance in Table 3.2-10.	CEQA: Impacts would be significant for VOCs in 2055 and 2062, and for CO in all operational years. NEPA: No Impact	MM AQ-8 through MM AQ-10 LM AQ-1 and LM AQ-2 No mitigation is required	Impacts would be significant and unavoidable for CO during overlapping construction and operation. No Impact
	AQ-4: Alternative 2 operations would result in off-site ambient air pollutant concentrations that exceed a SCAQMD threshold of significance in Table 3.2-11.	CEQA: Impacts would be significant for PM ₁₀ (annual and 24-hr averages) in 2062. NEPA: No Impact	MM AQ-8 through MM AQ-10 LM AQ-1 and LM AQ-2 No mitigation is required	Less than significant No Impact
	AQ-5: Alternative 2 would not create an objectionable odor at the nearest sensitive receptor.	CEQA: Less than significant NEPA: No Impact	No mitigation is required	Less than significant No Impact
	AQ-6: Alternative 2 would	CEQA: Less than significant	No mitigation is required	Less than significant

Table 3.2-44. Summary Matrix of Potential Impacts and Mitigation Measures for Air Quality Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
	not expose receptors to significant levels of TACs.	NEPA: No Impact	No mitigation is required	No Impact
	AQ-7: Alternative 2 would not conflict with or obstruct implementation of an applicable AQMP.	CEQA: Less than significant	No mitigation is required	Less than significant
		NEPA: No impact	No mitigation is required	No impact

3.2.6 Mitigation Monitoring

The mitigation monitoring program below is applicable to the modified mitigation measures in the Proposed Project and Alternative 2. Mitigation monitoring is not applicable to Alternative 1 because mitigation cannot be applied to the No Project Alternative.

Mitigation Measure	MM AQ-1. Harbor Craft Used During Construction. Tug assist boats used during construction must be equipped with U.S. Environmental Protection Agency (EPA) Tier 3 engine standards or cleaner at all times during construction.
Timing	During specified construction phases.
Methodology	LAHD will include MM AQ-1 in the contract specifications for construction. LAHD will monitor implementation of mitigation measures during construction.
Responsible Parties	LAHD
Mitigation Measure	<p>MM AQ-2. On-Road Trucks Used During Construction. On-road trucks shall comply with the following USEPA standards according to their utility:</p> <ol style="list-style-type: none"> 1. Trucks hauling materials such as debris or fill shall be fully covered while operating off Port property. 2. Idling shall be restricted to a maximum of 5 minutes when not in use. 3. Tier Specifications for all on-road trucks except Import Haulers and Earth Movers: <ul style="list-style-type: none"> • Until December 31, 2026: All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used on site or to transport materials to and from the site shall comply with 2012 emission standards, or newer, where available. • Post January 1, 2027: All on-road heavy duty diesel trucks used on site or to transport materials to and from the site shall comply with 2015 emission standards, or newer, where available. 4. Import hauler trucks that are on-road heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used to move dirt to and from the construction site via public roadways at the Port of Los Angeles will comply with EPA 2004 on-road emission standards for PM₁₀ and NO_x (0.10 g/bhp-hr and 2.0 g/bhp-hr, respectively). 5. Earth mover trucks, that are heavy-duty diesel trucks with a GVWR of 19,500 pounds or greater used to move dirt within the construction site at the Port of Los Angeles will comply with EPA 2004 on-road emission standards for PM₁₀ and NO_x (0.10 g/bhp-hr and 2.0 g/bhp-hr, respectively). <p>A copy of each unit's certified U.S. Environmental Protection Agency (USEPA) rating, Best Available Control Technology (BACT) documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.</p>
Timing	During specified construction phases.
Methodology	LAHD will include MM AQ-2 in the contract specifications for construction. LAHD will monitor implementation of mitigation measures during construction.
Responsible Parties	LAHD
Mitigation Measure	MM AQ-3. Non-Road Construction Equipment. (except vessels, harbor craft, on-road trucks, and dredging equipment). All non-road construction equipment greater than 50 hp must meet EPA Tier 4 emission standards, unless the contractor can reasonably demonstrate that such equipment is unavailable to the satisfaction of LAHD.
Timing	During specified construction phases.
Methodology	LAHD will include MM AQ-3 in the contract specifications for construction. LAHD will monitor implementation of mitigation measures during construction.

Responsible Parties	LAHD
Mitigation Measure	<p>MM AQ-4. Cargo Ships Used During Construction. All ships and barges used primarily to deliver construction-related materials or cranes shall comply with the expanded Vessel Speed Reduction Program (VSRP) of 12 knots between 40 nautical miles (nm) from Point Fermin and the Precautionary Area. Vessel speed is confirmed by the Marine Exchange. Vessels experiencing a maritime emergency [1] that prevents compliance with the expanded VSRP may be exempt from this measure.</p> <p>[1] Maritime emergencies may include, but are not limited to, suspicious activity, drone/plane activity, security breaches or attempts, United States Coast Guard safety/security/protection zone violations, crimes on land and water, navigation rule violations, vessels in distress, rescues, and fires and emergencies, as defined by the Port of Los Angeles Mariners Guide.</p>
Timing	During specified construction phases.
Methodology	LAHD will include MM AQ-4 in the contract specifications for construction. LAHD will monitor implementation of mitigation measures during construction.
Responsible Parties	LAHD
Mitigation Measure	<p>MM AQ-5. Dredging Non-Road Equipment. The dredger must be electric. This mitigation does not include barges, support vessels, trucks, or land-based construction equipment.</p>
Timing	During specified construction phases.
Methodology	LAHD will include MM AQ-5 in the contract specifications for construction. LAHD will monitor implementation of mitigation measures during construction.
Responsible Parties	LAHD
Mitigation Measure	<p>MM AQ-6. General Construction Mitigation Measure. For MM AQ-1 through MM AQ-5, if a CARB-certified technology becomes available that is as good as or better than the existing measure in terms of emissions performance, the technology could replace the existing technology if approved by LAHD.</p>
Timing	During specified construction phases.
Methodology	LAHD will include MM AQ-6 in the contract specifications for construction. LAHD will monitor implementation of mitigation measures during construction.
Responsible Parties	LAHD
Mitigation Measure	<p>MM AQ-7. Renewable Diesel Fuel for Construction Equipment and On-Road Trucks. Diesel-powered construction equipment and on-road trucks shall be fueled with renewable diesel fuel during construction. The renewable diesel product that is used shall comply with American Society for Testing and Materials (ASTM) fuel standards.</p> <p>In the event of renewable diesel supply challenges or disruptions, ultra-low sulfur diesel (ULSD) shall be used as a secondary fuel provided the contractor can demonstrate to the LAHD substantial evidence of a supply disruption or event in a timely manner.</p>
Timing	During specified construction phases.
Methodology	LAHD will include MM AQ-6 in the contract specifications for construction. LAHD will monitor implementation of mitigation measures during construction.
Responsible Parties	LAHD

Mitigation Measure	<p>MM AQ-8. Vessel Speed Reduction Program (VSRP). During operations, 100 percent of vessels calling at Berths 121-131 shall comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area. Vessel speed is confirmed by the Marine Exchange. Vessels experiencing a maritime emergency [1] that prevents compliance with the expanded VSRP may be exempt from this measure.</p>
Timing	<p>[1] Maritime emergencies may include, but are not limited to, suspicious activity, drone/plane activity, security breaches or attempts, United States Coast Guard safety/security/protection zone violations, crimes on land and water, navigation rule violations, vessels in distress, rescues, and fires and emergencies, as defined by the Port of Los Angeles Mariners Guide. Beginning the first year of construction and throughout operation thereafter.</p>
Methodology	<p>LAHD will include this mitigation measure in lease agreement with tenant.</p>
Responsible Parties	<p>Tenant, LAHD.</p>
Mitigation Measure	<p>MM AQ-9. Yard Tractor Emission Standards.</p> <ol style="list-style-type: none"> 1) No later than one year after the effective date of the permit, all yard tractors shall be alternative-fuel units that are equivalent to or cleaner than a NOx emission rate of 0.02 g/bhp-hr and Tier 4 final off-road emission rates for other criteria pollutants. 2) By no later than 2035, all yard tractors shall be zero-emission units.
Timing	<p>During operation, as specified in the mitigation measure.</p>
Methodology	<p>LAHD will include this mitigation measure in lease agreement with tenant.</p>
Responsible Parties	<p>Tenant, LAHD.</p>
Mitigation Measure	<p>MM AQ-10. Cargo-Handling Equipment Emission Standards. All cargo handling equipment at the terminal, except for yard tractors, shall implement the following requirements:</p>
	<p><u>Forklifts</u></p>
	<ol style="list-style-type: none"> 1) No later than one year after the effective date of the permit, all heavy-duty (18-ton) forklifts shall be equivalent to or cleaner than Tier 4 final off-road engine emission rates for PM and NOx. 2) No later than one year after the effective date of the permit, all 5-ton forklifts shall be zero-emission units. 3) By no later than 2035, all heavy-duty (18-ton) forklifts shall be zero-emission units.
	<p><u>Top-picks</u></p>
	<ol style="list-style-type: none"> 1) No later than one year after the effective date of the permit, all diesel top-picks shall be equivalent to or cleaner than Tier 4 final off-road engine emission rates for PM and NOx. All diesel top-picks will be required to use renewable diesel fuel. 2) By no later than 2035, all top-picks shall be zero-emission units.
	<p><u>Rubber-Tired Gantry (RTG) Cranes</u></p>
	<ol style="list-style-type: none"> 1) No later than one year after the effective date of the permit, all diesel RTG cranes shall be diesel-electric hybrid units with diesel engines that are equivalent to or cleaner than Tier 4 final off-road engine emission rates for PM and NOx. All diesel-hybrid RTGs will be required to use renewable diesel fuel.
	<p><u>Sweepers</u></p>
	<ol style="list-style-type: none"> 1) No later than one year after the effective date of the permit, sweeper(s) shall be alternative fuel or the cleanest available technology.
	<p><u>Shuttle Buses</u></p>
	<ol style="list-style-type: none"> 1) By no later than 2030, shuttle buses shall be zero emissions.
Timing	<p>During operation, as specified in the mitigation measure.</p>
Methodology	<p>LAHD will include this mitigation measure in lease agreement with tenant.</p>
Responsible Parties	<p>Tenant, LAHD.</p>

Mitigation Measure

LM AQ-1. Zero-Emission Cargo-Handling Equipment (CHE) Transition.

1) Annual Equipment Procurement Planning. Prior to the effective date of the new Permit, Tenant shall submit to the Port an inventory of all existing terminal cargo handling equipment covered by the Clean Air Action Plan (“CAAP”) Feasibility Assessment (“Cargo Handling Equipment”), including equipment on-site, off-site equipment that is relocated for on-site use, and ordered equipment, including its useful life, as defined by i) the Original Equipment Manufacturer specifications or ii) Applicable Law, if an Applicable Law comes into effect that supersedes useful life defined by OEM. For avoidance of doubt, Tenant shall be entitled to continue using Cargo Handling Equipment listed in the inventory for its useful life, notwithstanding any new feasibility assessment, except that if a piece of Cargo Handling Equipment has not yet reached the end of its useful life as defined by OEM and an Applicable Law comes into effect that requires that same piece of Cargo Handling Equipment to be replaced by zero-emission equipment, the Applicable Law would govern, and Tenant shall replace the Cargo Handling Equipment prior to the end of the OEM’s useful life.

Within one (1) year following the effective date of the Permit, and updated annually thereafter, Tenant shall develop a replacement plan, for all existing Cargo Handling Equipment, including the planned replacement year for each piece of equipment based on the expected useful life of existing terminal equipment. If there is any deviation from the equipment replacement plan for a given year that involves non-zero emissions equipment, Tenant agrees to notify the Executive Director prior to the purchase of any new or replacement terminal Cargo Handling Equipment that deviates from the equipment replacement plan. Tenant agrees to meet and confer with the Executive Director or his/her designee, upon request, regarding such deviation concerns within fourteen (14) days of Tenant’s original notice of the proposed deviation, unless the parties agree to extend the time period. Tenant shall identify any Cargo Handling Equipment that is not required to be replaced pursuant to current cargo handling equipment regulations in accordance with Applicable Law.

Notwithstanding the foregoing, Tenant shall be required to purchase cleanest feasible available technology as defined, by Applicable Law.

2) Zero Emission Equipment and Infrastructure Plan. Within one (1) year following the effective date of the Permit, Tenant shall develop a plan to transition terminal Cargo Handling Equipment to zero emissions that will achieve the following goal:

- Before January 1, 2030, terminal Cargo Handling Equipment must begin transitioning to zero emissions, if feasible.

For equipment covered by the Clean Air Action Plan (CAAP) Feasibility Assessment, the most recent CAAP Feasibility Assessment shall determine whether zero emissions Cargo Handling Equipment is feasible from a financial, technical, and operational perspective, and if not, the cleanest feasible alternative Cargo Handling Equipment. In the event the Tenant performs its own feasibility assessment which differs from the CAAP Feasibility Assessment, the Tenant may request a re-evaluation in writing to the Executive Director or his/her designee and provide a written report detailing the evidence and supporting documentation concerning feasibility and other relevant factors. The re-evaluation and feasibility determination shall be subject to mutual agreement between the Board of Harbor Commissioners and Tenant, which shall not be unreasonably withheld by Tenant. Tenant is responsible for furnishing its own evidence and agrees to pay for any reasonable and actual expenses incurred by the City in processing the Tenant’s request for a re-evaluation, including retaining an independent third-party verifier to peer review the Tenant’s report. Parties shall split the costs of an independent third-party verifier on a 50/50 basis, subject to the following conditions: i) Tenant participated by submitting written comments on the then-most recent CAAP Feasibility Assessment; ii) new data has arisen since the time of the most-recent CAAP feasibility analysis to support Tenant’s assertion that zero-emissions Cargo Handling Equipment is not feasible from a financial, technical, and operational perspective; and iii) the City’s portion of the expenditure may not exceed \$150,000, in aggregate, over the term of the Agreement. The parties shall appoint the independent third-party verifier within ninety (90) days of Tenant’s request for the reevaluation; if the parties cannot agree on the independent third party within that timeframe, the Board shall make the appointment.

For all other terminal equipment not covered by the CAAP Feasibility Assessment, the cleanest feasible equipment includes, but is not limited to, equipment that is determined in writing by the Executive Director and Tenant, to be feasible from a financial, technical, and

	operational perspective. Tenant agrees to provide any updates to its plan to the Executive Director or his/her designee consistent with the requirements of this measure. Tenant shall submit an Application for Port Permit (APP) to the Executive Director prior to implementing the plan and installing any necessary charging and/or fueling equipment to support the operation of zero emission equipment, which shall be subject to all necessary environmental review in accordance with the California Environmental Quality Act and/or the National Environmental Policy Act and agency permitting and approvals.
Timing	During operation.
Methodology	LAHD will include this lease measure in lease agreement with tenant.
Responsible Parties	Tenant, LAHD.
Mitigation Measure	LM AQ-2. Priority Access for Drayage. A priority access system shall be implemented at the B121-131 Terminal to provide preferential access to zero- and near-zero-emission trucks.
Timing	During operation.
Methodology	LAHD will include this lease measure in lease agreement with tenant.
Responsible Parties	Tenant, LAHD

3.2.7 Significant Unavoidable Impacts

3.2.7.1 Construction Impacts

After mitigation, the Proposed Project would have significant and unavoidable impacts from mass emissions of NO_x and from off-site ambient concentrations of NO₂ under both CEQA and NEPA.

The No Federal Action Alternative would have significant and unavoidable impacts from mass emissions of CO and NO_x under CEQA and no impacts under NEPA

The No Project Alternative would have no significant and unavoidable impacts related to construction.

3.2.7.2 Operational Impacts

The Proposed Project would have significant and unavoidable operational impacts as a result of mass emissions of NO_x and VOCs under both CEQA and NEPA. Impacts of off-site ambient concentrations of PM₁₀ would be significant and unavoidable under both CEQA and NEPA.

The No Federal Action Alternative would have significant and unavoidable operational impacts under CEQA from mass emissions of CO and NO_x and no impacts under NEPA.

The No Project Alternative would have significant and unavoidable impacts under CEQA related to mass emissions of NO_x in 2026 and of CO in all operational years.

3.2.7.3 Health Impacts

The Proposed Project and both alternatives would have no significant and unavoidable health impacts for any of the analyzed health factors (i.e., individual residential and occupational cancer risk, chronic hazard impacts, acute hazard impacts, population cancer burden) under CEQA and NEPA.