Section 3.1

Air Quality and Meteorology

Summary of Section

This section of the Draft Subsequent Environmental Impact Report (Draft SEIR) assesses whether activities associated with the Proposed Project may impact air quality or expose individuals to unacceptable levels of health risk. This section includes the following:

- A description of the existing air quality and meteorology within the Port of Los Angeles (Port or POLA)
- A discussion of regulations and policies regarding air quality that are applicable to the Proposed Project
- A discussion of the analysis methodology
- A summary of 1996 Certified Environmental Impact Report (EIR) (1996 Certified EIR) findings;
- Potential impacts to air quality and human health risk associated with Proposed Project activities
- A description of mitigation measures proposed to reduce significant impacts, as applicable
- Residual impacts after mitigation and significance under the California Environmental Quality Act (CEQA)

Key Points

Proposed Project emissions and associated impacts on air quality and human health would be considerably lower than impacts identified in the 1996 Certified EIR.

Proposed Project emissions and associated impacts on air quality and human health would be less than South Coast Air Quality Management District (SCAQMD) CEQA thresholds for all pollutants.

Proposed Project emissions would be less than the CEQA Baseline.

Mitigation measures would not be required.

The Proposed Project would not result in new significant impact or more substantially severe impacts to air quality and health risk than previously analyzed.

The Proposed Project would not result in any new significant and unavoidable impacts to air quality and health risk.

3.1.1 INTRODUCTION

Chapter 2, Project Description, describes in detail activities associated with the Proposed Project. In summary, the Proposed Project seeks to amend Permit No. 750 to allow for an extension of the facility lease by up to 10 years, during which time Phase 1 - Continued Operation would continue without change to existing activities and throughput would remain at 1.2 million tons. At the end of the 10-year period, the facility would be decommissioned and restored during the Phase 2 - Non-operational Restoration Period. Phase 1 and Phase 2 activities are described in this section as they relate to air quality and health risk.

Emissions from Phase 1 and Phase 2 would affect air quality in the immediate Proposed Project area and the surrounding region. This section describes the existing environmental and regulatory setting for air quality, potential impacts of the Proposed Project, and mitigation measures that would reduce impacts, where feasible and appropriate.

3.1.2 ENVIRONMENTAL SETTING

The Proposed Project site is 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 Bernadino Counties and all of Orange County, and the adjacent offshore waters, shown in Figure 3.1-1. 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. This section describes existing air quality in the Proposed Project study area within the SCAB. Meteorological conditions have not changed appreciably since the time of the 1995 Draft and 1996 Certified EIR and can be found in Section 3.3.1.1 of the 1995 Draft EIR.

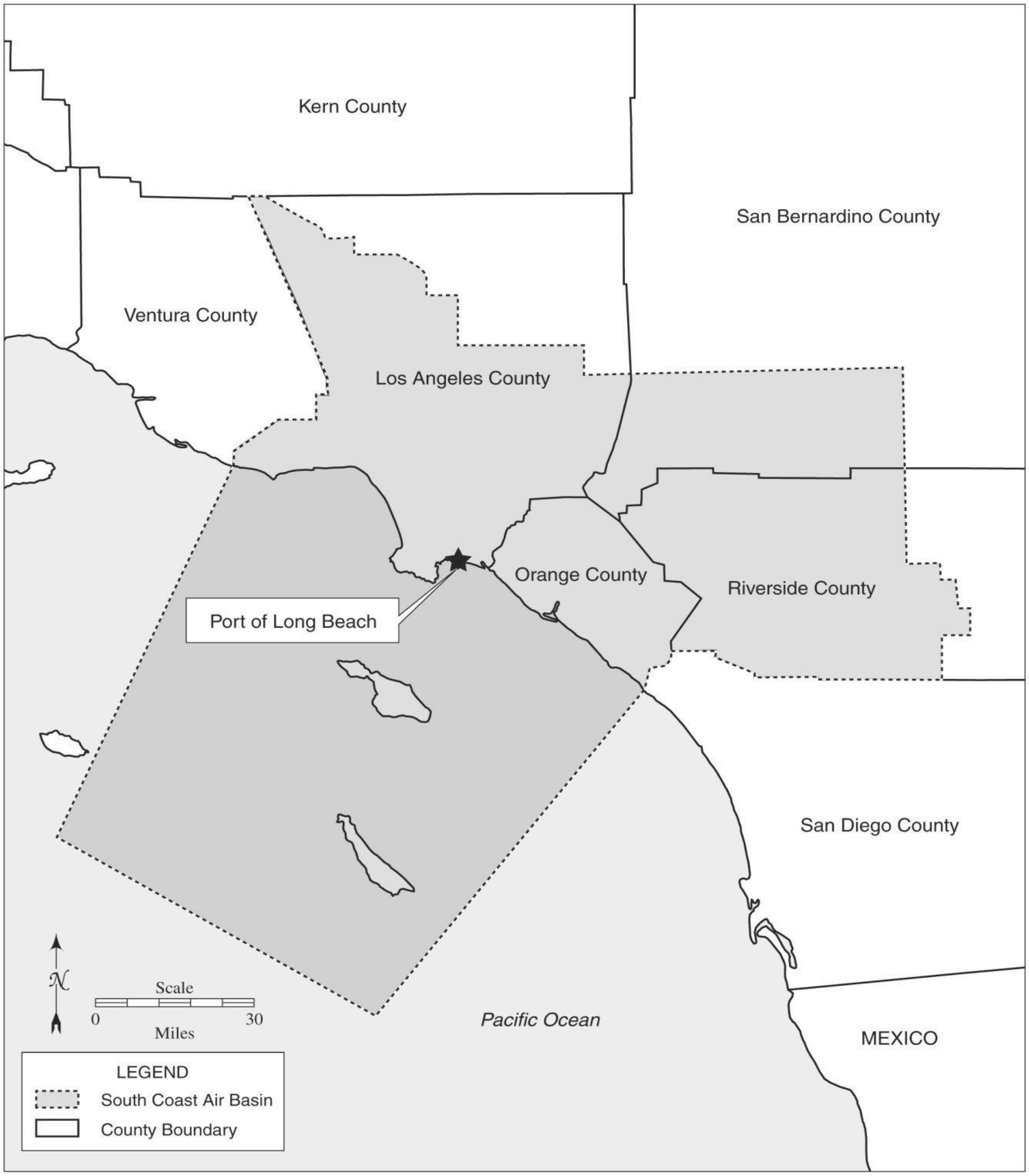

Figure 3.1-1. South Coast Air Basin

3.1.2.1 Criteria Pollutants

Criteria pollutants are pollutants for which the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have set health- and welfare-protective National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), respectively. These pollutants are ozone (O_3), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2).

Air quality at a given location can be described by the concentrations of criteria air pollutants in the atmosphere near ground level. The significance of a pollutant concentration is determined by comparing it to an appropriate NAAQS and/or CAAQS. These standards represent the allowable atmospheric concentrations at which the public health and welfare are protected and include a reasonable margin of safety to protect the more sensitive individuals in the population.

Regional Air Quality

Environmental Protection Agency (EPA), CARB, and local air districts classify an area as attainment, unclassified, or nonattainment depending on whether the monitored ambient air quality data show compliance, lack of data, or noncompliance with the ambient air quality standards. The NAAQS and CAAQS are provided in Table 3.1-1. Table 3.1-2 summarizes the federal and state attainment status of criteria pollutants in the SCAB based on the NAAQS and CAAQS.

Table 3.1-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	Health Effects
O3	1-hour	0.09 ppm	–	Breathing difficulties, lung tissue damage
	8-hour a	0.070 ppm	0.070 ppm	
PM10	24-hour	50 µg/m3	150 µg/m3	Increased respiratory disease, lung damage, cancer, premature death
	Annual	20 µg/m3	–	
PM2.5	24-hour b	–	35 µg/m3	Increased respiratory disease, lung damage, cancer, premature death
	Annual	12 µg/m3	12 µg/m3	
CO	1-hour	20 ppm	35 ppm	Chest pain in heart patients, headaches, reduced mental alertness
	8-hour	9.0 ppm	9 ppm	
NO2	1-hour	0.18 ppm	0.100 ppm c	Lung irritation and damage
	Annual	0.030 ppm	0.053 ppm	
SO2	1-hour	0.25 ppm	0.075 ppm c	Increases lung disease and breathing problems for asthmatics
	3-hour	–	0.5 ppm	
	24-hour	0.04 ppm	–	

Source: CARB 2020a.
Notes: O_3 = ozone; ppm = parts per million; "–" = no standards; PM_{10} = particulate matter less than 10 microns in diameter; µg/m^3 = micrograms per cubic meter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; CO = carbon monoxide; NO_2 = nitrogen dioxide.SO_2 = sulfur dioxide;

a The federal 8-hour O_3 standard is based on the annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years.

b The federal 24-hour $PM_{2.5}$ standard is based on the 3-year average of the 98th percentile of the daily values.

c The federal 1-hour NO_2 and SO_2 standards are based on the 3-year average of the 98th and 99th percentiles of the annual distribution of daily maximum values, respectively.

Table 3.1-2. SCAB Attainment Status

Pollutant	Attainment Status	
	Federal	*State*
O3	Extreme Nonattainment	Nonattainment
PM10	Maintenance	Nonattainment
PM2.5	Serious Nonattainment	Nonattainment
CO	Maintenance	Attainment
NO2	Maintenance	Attainment
SO2	Attainment	Attainment

Sources: EPA 2023; CARB 2020b.
Note: SCAB = South Coast Air Basin; O_3 = ozone; PM_{10} = particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; CO = carbon monoxide; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide.

Air quality within the SCAB has improved substantially since the inception of the SCAQMD air pollutant monitoring in 1976. This improvement is due primarily to the implementation of stationary source emission-reduction strategies by EPA, CARB, and SCAQMD and lower polluting on-road motor vehicles. This trend toward cleaner air has occurred despite continued population growth. For example, while the SCAB exceeded the 0.07 parts per million (ppm) national 8-hour O_3 standard on 233 days in 1977, the number of O_3 exceedance days was 130 in 2021 (CARB 2020a).

Of the six criteria pollutants with national and state standards, O_3 is unique because it is not directly emitted from project sources. Rather, O_3 is a secondary pollutant, formed from precursor pollutants volatile organic compounds (VOC) and nitrogen oxides (NO_x), which photochemically react to form O_3 in the presence of sunlight. As a result, unlike inert pollutants, O_3 levels usually peak several hours after the precursors are emitted and many miles downwind of the source.

Because of the complexity and uncertainty in predicting photochemical pollutant concentrations, O_3 impacts are indirectly addressed by comparing emissions of VOC and NO_x to daily emission thresholds set by SCAQMD, discussed in Section 3.1.5, Thresholds of Significance. Because many of the Proposed Project emission sources would be diesel-powered, diesel particulate matter (DPM) was also evaluated in this analysis. DPM is one of the components of ambient PM_{10} and $PM_{2.5}$; it is classified as a toxic air contaminant (TAC) by CARB. DPM is therefore evaluated both as a criteria pollutant (as a component of PM_{10} and $PM_{2.5}$) and as a TAC (for localized health impacts).

Local Air Quality

The Port began an air monitoring program in 2005 and currently operates several air monitoring stations that collect ambient air pollutant concentrations and meteorological information within the Port and surrounding communities. The station closest to the Proposed Project is the Port Source Dominated Station, located approximately 1 mile southwest of the Project site. However, since operation of this station was suspended in May 2021, the San Pedro Station, located just under 2 miles southwest of the site, was considered as the most representative of the Project vicinity. The San Pedro Station is adjacent to the Promenade walkway along Harbor Drive, near the intersection of Harbor Boulevard and West 3rd Street. The station is representative of the air quality in the residential areas of San Pedro.

Table 3.1-3 shows the maximum pollutant concentrations measured at the San Pedro Station over the most recent 3-year period available (POLA 2021, 2022, 2023). The table shows that air quality at the monitoring station exceeded the state 1-hour O_3 standard in 1 year, the PM_{10} state 24-hour standard in 2 of the 3 years, and the PM_{10} state annual standard in all 3 years. All other national and state standards were met during this 3-year monitoring period.

In addition, the most recent Air Quality Monitoring Program Report shows that although container throughput increased at the Port, air quality improved over the 18-year monitoring record for particulates and over the 15-year record for gaseous pollutants (POLA 2023a). In particular, annual $PM_{2.5}$ concentrations decreased by 57% on average across the monitoring stations. PM_{10} concentrations decreased by 22% at the Wilmington Station (i.e., the only station that routinely monitored PM_{10}). Annual average NO_2 and SO_2 concentrations also decreased, although the report did not call out the percent reduction for these pollutants. CO concentrations have been historically low and have demonstrated no discernible trend over the monitoring period of record. Finally, O_3 concentrations showed year-to-year variability with some years showing elevated concentrations, which often coincide to years of high wildfire activity.

Table 3.1-3. Maximum Pollutant Concentrations Measured at the San Pedro Monitoring Station

Pollutant	Averaging Period	National Standard	State Standard	Concentration Compared to CAAQS / Concentration Compared to NAAQS [a]		
				May 2020–April 2021	*May 2021–April 2022*	*May 2022–April 2023*
O_3 (ppm)	1-hour	–	0.09	–/**0.101**	–/0.065	–/0.09
	8-hour	0.07	0.07	0.058/0.067	0.055/0.060	0.056/0.071
CO (ppm)	1-hour	35	20	1.7/1.7	6.9/6.9	2.7/2.7
	8-hour	9	9	1.4/1.4	1.3/1.3	2.2/2.2
NO_2 (ppm)	1-hour	0.100	0.180	0.065/0.073	0.059/0.059	0.054/0.061
	Annual	0.053	0.03	0.016/0.016	0.012/0.012	0.011/0.011
SO_2 (ppm)	1-hour	0.075	0.25	0.027/0.024	0.013/0.006	0.007/0.014
	3-hour	0.500	–	0.009/–	0.006/–	0.004/–
	24-hour	–	0.04	–/0.006	–/0.004	–/0.004
PM_{10} (μg/m^3) [b]	24-hour	150	50	70.6/**70.6**	44.6/44.6	60.8/**60.8**
	Annual	–	20	–/**27.2**	–/**24.7**	–/**22.5**
$PM_{2.5}$ (μg/m^3)	24-hour	35	–	21.8/–	18.4/–	17.7/–
	Annual	12	12	6.7/6.7	5.3/5.3	4.7/4.7

Sources: POLA 2021, 2022a, 2023.

Notes: CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards; O_3 = ozone; ppm = parts per million; "–" = no standards; CO = carbon monoxide; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter less than 10 microns in diameter; μg/m3 = micrograms per cubic meter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter.

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

b PM_{10} is not monitored at the San Pedro Station. The PM_{10} concentrations in the table are from the Wilmington Community Station.

3.1.2.2 Toxic Air Contaminants

TACs are pollutants that may lead to serious illness or increased mortality even when present at relatively low concentrations. They are airborne compounds that are known or suspected to cause adverse human health effects after long-term (i.e., chronic) and/or short-term (i.e., acute) exposure. Cancer risk is associated with chronic exposure to some TACs, and noncancer health effects can result from either chronic or acute exposure to various TACs. Examples of TAC sources in the SCAB include diesel- and gasoline-powered internal combustion engines in mobile sources; industrial processes and stationary sources, such as dry cleaners, gasoline stations, and paint and solvent operations; and stationary fossil fuel-burning combustion sources, such as power plants.

TAC effects in the SCAB are characterized by SCAQMD's Multiple Air Toxics Exposure Studies (MATES). SCAQMD prepared MATES I in 1986; the analysis was limited due to the technology available at the time. Prepared in 1998, MATES II was the first MATES iteration to include a comprehensive monitoring program, an air toxics emissions inventory, and a modeling component. MATES III was prepared in 2004–2006, with MATES IV following in 2015. MATES V, the most recent study prepared in 2021, was developed using measurements during 2018 and 2019 and a comprehensive modeling analysis and emissions inventory based on 2018 data (SCAQMD 2021).

Like previous MATES, MATES V identified the San Pedro Bay Ports area as having the highest cancer risk in the SCAB, primarily due to the prevalence of diesel-powered sources. MATES V also concluded that cancer risk has continued to decline due to federal, state, and local regulations. MATES V showed that cancer risk in the SCAB decreased by approximately 40% since the MATES IV study and by 84% since MATES II. Much of this reduction has occurred at the San Pedro Bay Ports, reflecting emission reductions from port sources. In the Proposed Project area, cancer risk decreased from 1,470 per million reported in MATES IV to 638 per million reported in MATES V (SCAQMD 2021). MATES VI is currently underway.

3.1.2.3 Secondary $PM_{2.5}$ Formation

Primary particles are emitted directly into the atmosphere by fossil fuel combustion sources and windblown soil and dust. Secondary $PM_{2.5}$ forms in the atmosphere by complex reactions of precursor emissions of gaseous pollutants, such as NO_x, sulfur oxides (SO_x), VOC, and ammonia. Secondary $PM_{2.5}$ includes sulfates, nitrates, and complex carbon compounds. NO_x, SO_x, and VOC emissions could contribute to secondary $PM_{2.5}$ formation some distance downwind of the emission sources. Because it is difficult to predict secondary $PM_{2.5}$ formation from an individual project, the air quality analysis in this document focuses on the effects of direct $PM_{2.5}$ emissions. This approach is consistent with the recommendations of SCAQMD (SCAQMD 2006).

3.1.2.4 Atmospheric Deposition

The fallout of air pollutants to the surface of the earth is known as atmospheric deposition. Atmospheric deposition occurs in both a wet and dry form. Wet deposition occurs in the form of precipitation and is associated with the conversion in the atmosphere of directly emitted pollutants into secondary pollutants such as acids. Dry deposition occurs in the form of directly emitted pollutants or the conversion of gaseous pollutants into secondary particulate matter (PM). Atmospheric deposition can produce watershed acidification, aquatic toxic pollutant loading, deforestation, damage to building materials, and respiratory problems.

3.1.2.5 Odors

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

3.1.2.6 Sensitive Receptors

Sensitive receptor groups include children and infants, pregnant women, older adults, and the acutely and chronically ill. According to SCAQMD guidance, sensitive receptor locations typically include schools, hospitals, convalescent homes, child-care centers, and other locations where children, chronically ill individuals, or other sensitive persons could be regularly exposed. Sensitive individuals could also be present at any residence. The nearest sensitive receptors to the Proposed Project are possible liveaboards in the East Basin marinas, located approximately 0.22 miles to the northeast, and residences in San Pedro, located approximately 0.75 miles to the north.

The nearest school is George De La Torre Junior Elementary School at 500 Island Avenue in Wilmington, approximately 1.3 miles west of the Proposed Project site. The nearest hospital is Kaiser Permanente at 25825 Vermont Avenue in Los Angeles, approximately 3.1 miles to the northwest. The nearest convalescent home is the Wilmington Gardens assisted living facility at 1311 West Anaheim Street in Wilmington, approximately 2 miles to the northwest. The nearest child-care center is the New Harbor Vista Child Development Center at 909 West D Street in Wilmington, approximately 1.4 miles to the northwest.

3.1.3 REGULATORY SETTING

Sources of air emissions in the SCAB are regulated by international bodies, EPA, CARB, and SCAQMD. In addition, regional and local jurisdictions play a role in air quality management. This section provides a summary of existing rules, regulations, and policies that apply to the Proposed Project but is not intended to present an all-inclusive listing of applicable requirements.

3.1.3.1 International Regulations

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

The International Maritime Organization (IMO) is an agency of the United Nations, formed to promote maritime safety. IMO’s vessel pollution standards are contained in the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI. Requirements inside the North American Emission Control Area (ECA), which extends to 200 nautical miles (nm) off the Coast of North America, include the following:

- NO_x emission standards for marine diesel engines with output of more than 130 kilowatts (kW): Tier I as of 2000, Tier II as of 2011, and Tier III as of 2016. Ocean Going Vessel (OGV, vessel, or ship) engines would be subject to the program requirements. However, because the program applies to ship construction, no specific action would be required on the part of the Proposed Project.
- Sulfur content of fuel limit of 0.1% as of 2015. The Proposed Project assumes full compliance with MARPOL Annex VI SO_x limit.

3.1.3.2 Federal Regulations

The Clean Air Act

The federal Clean Air Act (CAA) of 1963 and its subsequent amendments form the basis for the nation’s air pollution control effort. EPA is responsible for implementing most aspects of the CAA. Basic elements of the act include the NAAQS for major air pollutants, hazardous air pollutant standards, attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric O_3 protection, and enforcement provisions.

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

State Implementation Plan and Air Quality Management Plan

For areas that do not attain the NAAQS, the CAA requires the preparation of a State Implementation Plan (SIP), detailing how the state will attain the NAAQS within mandated timeframes. In response to this requirement, SCAQMD develops the Air Quality Management Plan (AQMP), which is incorporated into the SIP. The AQMP is updated every several years in response to NAAQS revisions, EPA SIP disapprovals, attainment demonstration changes, etc. Each AQMP builds on the prior AQMP. The AQMP is usually a collaborative effort between SCAQMD, CARB, and the Southern California Association of Governments (SCAG).

In October 2015, EPA strengthened the NAAQS for ground-level O_3, lowering the primary and secondary O_3 standard levels to 70 parts per billion (ppb). The SCAB is classified as an "extreme" nonattainment area for the 2015 O_3 NAAQS. SCAQMD adopted the 2022 AQMP in December 2022 to address the requirements for meeting this standard by 2037 (SCAQMD 2022). The 2022 AQMP strategies focus on NO_x reduction, a key pollutant in the formation of O_3, through the adoption of zero-emission technologies, low-NO_x technologies where zero-emission technologies are not available, federal actions, and incentive funding in environmental justice areas.

SCAQMD adopted the 2016 AQMP in March 2017 (SCAQMD 2017). It incorporated scientific and technological information, planning assumptions, and updated emission inventory methodologies for various source categories. The 2016 AQMP includes the integrated strategies and measures needed to meet the NAAQS and demonstrates how and when the SCAB plans to achieve attainment of the 1–hour and 8-hour O_3 NAAQS as well as the 24-hour and annual $PM_{2.5}$ standards. The 2016 AQMP reported that although population in the SCAG region has increased by more than 20% since 1990, air quality has improved due to air quality control projects at the local, state, and federal levels. In particular, 8-hour O_3 levels have been reduced by more than 40%, 1-hour O_3 levels by close to 60%, and annual $PM_{2.5}$ levels by close to 55% since 1990 (SCAQMD 2017).

Previous AQMPs included the 2012 AQMP for the 24-hour $PM_{2.5}$ standard along with early action measures to meet the 8-hour O_3 standard.

EPA Emissions Standards for Marine Diesel Compression Ignition Engines—Category 1 and 2 Engines

Engine categories are identified on the basis of engine displacement per cylinder. Category 1 engines have engine displacements per cylinder of less than 5 liters, whereas Category 2 engines have engine displacements of between 5 and 30 liters. Category 1 and 2 engines are often the auxiliary engines on large vessels as well as auxiliary and propulsion engines on harbor craft. To reduce emissions from these marine diesel engines, EPA established 1999 emission standards for newly built engines, referred to as Tier 2 marine engine standards. These standards were based on the land-based standard for off-road engines. The Tier 2 standards were phased in for vessels built between 2004 and 2007, depending on the engine size.

In March 2008, EPA finalized a program to further reduce emissions from marine diesel Category 1 and 2 engines. The regulations introduced Tier 3 and Tier 4 standards, which apply to both new and remanufactured diesel engines. The phase-in of Tier 3 standards extended from 2009 to 2014 for new Category 1 engines and from 2013 to 2014 for new Category 2 engines. Tier 4 standards were phased in for new Category 1 and 2 engines above 600 kW from 2014 to 2017. For remanufactured engines, standards apply only to commercial marine diesel engines above 600 kW when the engines are remanufactured, and as soon as certified systems are available.

Vessel auxiliary engines and harbor craft propulsion/auxiliary engines would be subject to the program requirements. However, because the program applies to engine manufacturers, no specific action would be required on the part of the Proposed Project.

EPA Emission Standards for Large Marine Diesel Engines—Category 3 Engines

Category 3 engines have engine displacements per cylinder greater than 30 liters. Category 3 engines are propulsion engines on vessels. To reduce emissions from these engines, EPA established 2003 Tier 1 NO_x standards for marine diesel engines above 30 liters per cylinder, large Category 3 marine propulsion engines on U.S. flagged OGVs (40 CFR Parts 9 and 94; 68 FR 9745–9789). The standards went into effect for new engines built in 2004 and later. Tier 1 limits were achieved by engine-based controls, without the need for exhaust gas after-treatment.

In December 2009, EPA adopted Tier 2 and Tier 3 emissions standards for newly built Category 3 engines installed on U.S. flagged vessels, as well as marine fuel sulfur limits. The Tier 2 and 3 engines standards and fuel limits are equivalent to the amendments to MARPOL Annex VI. Tier 2 NO_x standards for newly built engines applied beginning in 2011 and require the use of engine-based controls, such as engine timing, engine cooling, and advanced electronic controls. Tier 3 standards applied beginning in 2016 in ECAs and would be met with the use of high efficiency emission control technology, such as selective catalytic reduction. The Tier 2 standards are anticipated to result in a 15% to 25% NO_x reduction below the Tier 1 levels; Tier 3 standards are expected to achieve NO_x reductions 80% below the Tier 1 levels (DieselNet 2022). In addition to the Tier 2 and Tier 3 NO_x standards, the final regulation established standards for hydrocarbon (HC) and CO.

Vessel propulsion engines would be subject to the program requirements. However, because the program applies to engine manufacturers, no specific action would be required on the part of the Proposed Project.

EPA Emission Standards for Off-Road Diesel Engines

EPA established a series of emission standards for new off-road diesel engines. Tier 1 standards were phased in from 1996 to 2000; Tier 2 standards were phased in from 2001 to 2006; Tier 3 standards were phased in from 2006 to 2008; and Tier 4 standards, which require add-on emission control equipment, were phased in from 2008 to 2015. For each Tier category, the phase-in schedule was driven by engine size (EPA 2016).

Off-road equipment would be subject to the program requirements. However, because the program applies to engine manufacturers, no specific action would be required on the part of the Proposed Project.

EPA Emission Standards for On-Road Trucks

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

To reduce PM, NO_x, and VOC from on-road heavy-duty diesel trucks, EPA established a series of progressively cleaner emission standards for new engines starting in 1988. These emission standards have been revised over time, with the latest major revision in December 2022, when EPA finalized new emission standards for heavy-duty engines, that will become effective in 2027. The standards are to some degree harmonized with the CARB low NO_x rule but are less stringent in terms of both emission limits and emission durability requirements. The NO_x limit is 0.035 grams per brake horsepower-hour (hp-hr), while the useful life period for heavy heavy-duty engines is 650,000 miles (DieselNet 2023a).

Vehicles, such as trucks used to transport products, would be subject to the program requirements. However, because the program applies to engine manufacturers, no specific action would be required on the part of the Proposed Project.

EPA Emission Standards for Cars and Light-Duty Trucks

To reduce emissions from on-road cars and light-duty trucks, EPA established a series of progressively cleaner emission standards for new engines starting in 1991. Tier 1 standards were phased in progressively between 1994 and 1997; Tier 2 standards were phased in between 2004 to 2009; and Tier 3 standards are being phased in between 2017 and 2025. During the phase-in period, manufacturers are required to certify an increasing percentage of their new vehicle fleet to the new standards, with the remaining vehicles still certified to the preceding tier of emission regulations (DieselNet 2023b).

Vehicles, such as worker vehicles, would be subject to the program requirements. However, because the program applies to engine manufacturers, no specific action would be required on the part of the Proposed Project.

EPA Emission Standards for Locomotives

To reduce emissions from locomotive engines, EPA established a series of progressively cleaner emission standards for new and remanufactured railway locomotives fueled by diesel and by other fuels (e.g., natural gas). Tier 0-2 standards became effective in 2000 and applied to locomotives manufactured prior to 1973. Tier 3 standards became effective in 2011. Tier 4 standards, which were originally intended to require exhaust gas aftertreatment technologies, became effective in 2015.

Locomotive engines used to transport rail cars loaded with product would be subject to the program requirements. However, because the program applies to locomotive manufacturers, no specific action would be required on the part of the Proposed Project.

3.1.3.3 State Regulations and Agreements

California Clean Air Act

In California, CARB is designated as the state agency responsible for all air quality regulations. CARB, which became part of the California EPA (CalEPA) in 1991, is responsible for implementing the requirements of the federal CAA, regulating emissions from motor vehicles and consumer products, and implementing the California Clean Air Act of 1988 (CCAA). The CCAA outlines a program to attain the CAAQS for criteria pollutants. Since the CAAQS are generally more stringent than the NAAQS, attainment of the CAAQS requires greater emission reductions than what is required to show attainment of the NAAQS. Similar to the federal system, state requirements and compliance dates are based on the severity of the ambient air quality standard violation within a region.

Community Air Protection Program and AB 617

In response to Assembly Bill (AB) 617 (C. Garcia, Chapter 136, Statutes of 2017), CARB established the Community Air Protection Program. The program's focus is to reduce exposure in communities most impacted by air pollution. The program includes community air monitoring and Community Emissions Reduction Programs (CERPs), early actions to address localized air pollution through incentive funding, and grants to support community participation. AB 617 also includes requirements for accelerated retrofit of pollution controls on industrial sources, increased penalty fees, and greater transparency and availability of air quality and emissions data, intended to help advance air pollution control efforts throughout the state (CARB 2018).

Although this is a state program and as such does not have project-specific requirements, it is included here to highlight the state's efforts to continue to enhance air quality planning efforts and better integrate community, regional, and state-level programs. In addition, SCAQMD adopts rules pursuant to the CERPs. One such development is SCAQMD Rule 1460, Control of Particulate Emissions from Metal Recycling and Shredding Operations, discussed in Section 3.1.3.4, Local Regulations and Agreements.

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 5 minutes or optionally meet a stringent NO_x idling emission standard (13 CCR 13 1956.8 and 2485).

Vehicles, such as trucks used to transport products during Phase 1 and trucks used during Phase 2, would be subject to these requirements.

CARB California Diesel Fuel Regulation

Under this rule, CARB requires that the sulfur content of diesel fuel be limited to 15 ppm in motor vehicles, harbor craft, and switch locomotives.

Diesel fuel used in trucks, harbor craft, and switch locomotives would be subject to these requirements. However, because the program applies to fuel producers, no specific action would be required on the part of the Proposed Project.

CARB In-Use Off-Road Diesel-Fueled Fleets Regulation

CARB has regulated in-use off-road diesel vehicles since 2008 through the In-Use Off-Road Diesel-Fueled Fleets Regulation. The regulation requires vehicle fleets to reduce their emissions by retiring older vehicles and replacing the retired vehicles with newer vehicles, repowering older engines, or installing verified diesel emission control strategies in older engines, and by restricting the addition of older vehicles to fleets. The regulation also limits equipment idling (CARB 2023).

The regulation was amended several times, most recently in 2010. In November 2022, CARB approved additional amendments to the regulation aimed at further reducing emissions from the off-road sector. The amendments would phase in starting in 2024 through 2036 and would include changes to enhance enforceability and encourage the adoption of zero-emission technologies. The amendments have not yet been submitted for review and approval to California's Office of Administrative Law (OAL) (CARB 2023) and are therefore not considered in analysis of the Proposed Project.

Off-road equipment, such as the kind used during Phase 2, would be subject to the program requirements.

CARB Measures to Reduce Emissions from Goods Movement Activities

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

Starting in 2009, this CARB regulation has gradually reduced the permitted sulfur content of OGV fuels used in ship main engines, auxiliary engines, and auxiliary boilers. As of 2014, marine engines operating in California waters must use marine diesel oil (MDO) or marine gas oil (MGO) with a maximum sulfur content of 0.1%.

The analysis assumes compliance with 0.1% sulfur content of fuel used in vessel engines.

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

In 2007, CARB adopted a regulation to reduce emissions from auxiliary diesel engines on OGVs while at berth for container, cruise, and refrigerated cargo OGVs (17 CCR 93118.3). The regulation requires that these types of vessels either shut down their auxiliary engines for a stipulated percent of fleet visits and connect to shore-side electricity or use control technology to reduce auxiliary engine emissions by an equivalent amount.

In 2020, the At-Berth Regulation was amended to increase requirements for OGVs previously subject to the regulation starting in 2023. The regulation was also expanded to include auto carriers (roll-on/roll-off vessels) and tanker ships. Requirements for the expanded OGV types would begin in 2025 at the Ports of Los Angeles and Long Beach (CARB 2020c). However, dry-bulk vessels such as those used to transport metal as part of the Proposed Project would not be subject to the regulation.

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. These 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 establishing fleet average emissions requirements for existing engines (13 CCR 2775).

Forklifts and other industrial engines would be subject to the program requirements. However, because the program applies to engine manufacturers, no specific action would be required on the part of the Proposed Project.

CARB California Drayage (Heavy Duty) Truck Regulation

CARB adopted the drayage truck regulation in 2007 to modernize the class 8 drayage truck fleet (trucks with GVWR greater than 33,000 pounds) in use at California's ports; subsequent amendments of the rule accelerated the compliance schedule and expanded the definition of drayage trucks. The regulation currently requires that all trucks operating at California ports comply with the 2007 and newer on-road heavy-duty engine standards.

For purposes of this analysis, this regulation affects the truck fleet mix projections for the Proposed Project, which is accounted for in CARB's Emission Factors Model (EMFAC) and is the basis of the regional diesel truck fleet emission factors used in the calculations.

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

In 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 Technology (BACT) or retrofitted to meet these levels.

Trucks with GVWR less than 26,000 pounds were required to replace engines with 2010 or newer engines, or equivalent, by January 2023. Trucks with GVWR greater than 26,000 pounds were required to 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., EPA 2010 and newer standards).

For purposes of this analysis, this regulation affects the truck fleet mix projections for the Proposed Project, which is accounted for in CARB's EMFAC model and is the basis of the regional diesel truck fleet emission factors used in the calculations.

CARB Advanced Clean Truck Program

CARB developed the Advanced Clean Truck (ACT) Program in 2021. The ACT is intended to increase the penetration of zero-emission heavy-duty trucks into the market. A key feature is a zero-emission vehicle (ZEV) truck sales mandate that would begin in 2024 and increase to up to 75% ZEV by 2035 depending on truck GVWR.

Vehicles, such as trucks used to transport products, would be subject to the program requirements. However, because the program applies to vehicle sales, no specific action would be required on the part of the Proposed Project.

CARB Advanced Clean Cars Program

CARB developed the Advanced Clean Cars II regulations in 2022, imposing the next level of low-emission and zero-emission vehicle standards for vehicle model years 2026–2035. The program aims to help meet federal ambient air quality ozone standards and California's carbon neutrality targets. A key feature is a ZEV passenger cars, trucks, and sport utility vehicle sales mandate that would ramp up to 100% ZEV sales by 2035.

Vehicles, such as worker vehicles, would be subject to the program requirements. However, because the program applies to vehicle sales, no specific action would be required on the part of the Proposed Project.

CARB In-Use California Harbor Craft Regulation

CARB has regulated in-use harbor craft since 2008 through the California Harbor Craft Regulation. The regulation was amended in 2010 and again in 2022 (CARB 2022). The 2010 regulation requires older harbor craft operators to reduce emissions by retiring or retrofitting older harbor craft and replacing the retired harbor craft with newer harbor craft. The 2022 amendments added and expanded requirements for emissions, reporting, fuel use, idling, and facility power. For example, starting in January 2024, all harbor craft are required to use renewable diesel and reduce idling to 15 minutes; tugboat engines are required to upgrade to Tier 4+diesel particulate filters starting in January 2025. Tugboats used to maneuver vessels would be subject to these requirements.

Although CARB's revised regulatory requirements for harbor craft operating at the Port began in 2023, this analysis conservatively does not take credit for associated emission reductions. This decision was made by the Los Angeles Harbor District (LAHD) to ensure that impacts are not underestimated if the regulation is contested or that CARB postpones compliance. Instead, the analysis assumed compliance with CARB's regulation as adopted in 2010, prior to its 2022 revision.

3.1.3.4 *Local Regulations and Agreements*

SCAQMD develops rules and regulations to regulate sources of air pollution in the SCAB. SCAQMD's regulatory authority applies primarily to stationary sources. The following list identifies notable SCAQMD rules that apply to the Proposed Project but is not intended to present an all-inclusive list of applicable requirements.

Rule 402, Nuisance

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

Rule 403, Fugitive Dust

This rule prohibits emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area that remains visible beyond the emission source property line. Requirements may include submitting a dust control plan, maintaining dust control records, and designating a SCAQMD-certified dust control supervisor.

During Phase 2 – Non-operational Restoration activities, best available control measures identified in the rule would be required to minimize fugitive dust emissions from proposed earth-moving and grading activities. These measures would include site watering as necessary to maintain sufficient soil moisture content. Additionally, the Proposed Project would not be considered a large operation under Rule 403 because the site size is less than 50 acres. The Proposed Project would therefore meet rule requirements by implementing applicable best available control measures listed in Rule 403 Table 1.

Rule 431.1, Sulfur Content of Gaseous Fuels

This rule prohibits the transfer, sale, or offer of sale of natural gas containing sulfur compounds in excess of 16 ppm by volume. Phase 1 – Continued Operation of the Proposed Project would continue to operate a natural gas-fired thermal oxidizer. Natural gas would continue to be supplied by the Los Angeles Department of Water and Power, which is subject to these sulfur compound limits. Therefore, no specific action would be required on the part of the Proposed Project.

Rule 1155, Particulate Matter Control Devices

This rule applies to permitted PM air pollution control (APC) devices venting process that have direct (non-combustion) PM emissions, such as baghouses, high efficiency particulate air systems, bin vents, or other dust collectors using high efficiency or other air filters, cyclones, electrostatic precipitators, and wet scrubbers. The Proposed Project would continue to operate several pieces of equipment subject to this rule, under existing SCAQMD permits.

Rule 1460, Control of Particulate Emissions from Metal Recycling

SCAQMD developed this rule pursuant to AB 617 and resultant CERP action to address fugitive emissions from metal recyclers and shredding facilities. The rule, adopted in 2022, is designed to reduce fugitive dust emissions from metal recycling and metal shredding operations. Requirements include registration, housekeeping, best management practices, signage, and recordkeeping. SA Recycling registered the facility with SCAQMD, per regulatory requirement in June 2023.

Normal operations at SA Recycling already include many of the housekeeping requirements, such as cleaning of traffic areas, and best management practices, such as watering and enclosed storage to minimize fugitive dust. The Proposed Project would be required to comply with requirements of Rule 1460.

3.1.3.5 LAHD Emission Reduction Programs

LAHD has developed several programs designed to reduce pollution from mobile sources associated with Port operations. Programs pertinent to the Proposed Project are listed below.

San Pedro Bay Ports Clean Air Action Plan

The Ports of Los Angeles and Long Beach, with the participation and cooperation of EPA, CARB, and SCAQMD staff, developed the San Pedro Bay Ports Clean Air Action Plan (CAAP), a planning and policy document that sets goals and implementation strategies to reduce air emissions and health risks associated with port operations while allowing for future port development (POLA 2006-2017).

The 2006 CAAP focused primarily on reducing DPM, a TAC associated with cancer risk, as well as NO_x and SO_x, criteria pollutants. The 2010 CAAP Update introduced the San Pedro Bay Standards, which established the following emission and health risk reduction goals, in comparison to 2005 emission levels:

- Health Risk Reduction Standard: 85% reduction in DPM by 2020
- By 2023, reduce emissions by 77% for DPM, 59% for NO_x, and 92% for SO_x

The CAAP's Project-Specific Standard requires that new projects fall below the 10 in 1 million excess residential cancer risk threshold. The CAAP also includes emission control measures, Source-Specific Performance Standards, which may be implemented through the environmental review process, or included in new leases or port-wide tariffs, Memorandum of Understandings (MOUs), voluntary action, grants, or incentive programs.

- CAAP Measure—SPBP-OGV1, Vessel Speed Reduction Program (VSRP). This is a voluntary program that incentivizes OGVs to reduce their speed to 12 knots or less within 40 nm of the Point Fermin Lighthouse. Speed reduction decreases the power demand of propulsion engines, leading to lower fuel consumption and, consequently, reduced emissions.

The 2017 CAAP Update re-affirmed the commitment of the Ports of Los Angeles and Long Beach to the goals and standards of previous CAAP versions and introduced new goals, standards, and programs. It also aligned with the commitments of the Cities of Los Angeles and Long Beach to move towards zero emissions at the Ports of Los Angeles and Long Beach, including setting goals of zero-emissions cargo-handling equipment by 2030 and zero-emissions heavy-duty trucks by 2035. Accordingly, the 2017 CAAP Update includes provisions for new investments in clean technology, expanded use of at-berth emission reduction technologies, and a zero-emissions heavy-duty truck pilot program. Finally, the 2017 CAAP Update also introduced new greenhouse gas (GHG) emission reduction targets, which are discussed in Section 3.3, Greenhouse Gas Emissions.

LAHD Sustainable Construction Guidelines

As part of LAHD's overall environmental goals and CAAP strategies, any construction at the Port must follow the Sustainable Construction Guidelines (SCG), adopted in February 2008 (LAHD 2009). The guidelines reinforce and require sustainability measures under construction contracts, addressing a variety of emission sources that typically operate at the Port during construction. Examples include ships and barges used to deliver construction-related materials, harbor craft, dredging equipment, haul and delivery trucks, and off-road construction equipment. In addition, the LAHD Construction Guidelines include best management practices based on CARB-verified BACT, designed to reduce air emissions from construction sources. The SCG are treated as project design features, and this analysis, accordingly, assumes compliance with the SCG.

3.1.4 METHODOLOGY

This section summarizes the methodology used to quantify air quality and health impacts from continued operation (Phase 1) and non-operational restoration (Phase 2) activities of the Proposed Project. Phase 1 and Phase 2 activities are described in detail in Chapter 2 (see Section 2.5.1). The analysis assumptions, source characteristics, activity, emission factors, and other supporting information are presented in a tabular format in Appendix B, Air Quality and GHG Calculation Tables.

Impacts were determined by subtracting the CEQA Baseline, which is discussed at the end of this section, from the Proposed Project's peak day emissions and comparing the resulting increment to SCAQMD significance thresholds, discussed in Section 3.1.5.

The emissions quantified in this analysis were calculated using the latest available data, assumptions, and emission factors at the time this document was prepared. The numerical results presented in the tables of the report were rounded, often to the nearest whole number, for presentation purposes. As a result, totals presented in the tables may not add exactly.

Summary of Phase 1 Activities and Analysis Methodology

The Proposed Project site is approximately 26.7 acres and is nearly 100% paved. Scrap metal is transported to the facility via heavy-duty trucks from nearby locations. A small portion of scrap metal also arrives via rail car from other SA Recycling facilities in the western United States. The Proposed Project would continue to operate the facility for up to 10 years under the proposed lease extension without throughput or activity changes; throughput would remain at 1.2 million tons.

Scrap metal is processed based on the size and type of material. Heavier materials like demolition scrap (plate and structural beams) are sheared into smaller lengths using hydraulic shears. Busheling (brand-new manufacturing scrap) and heavy melting steel are stockpiled for future shipping. Flattened automobiles, appliances, and other lighter materials are sent to the electric shredder. Materials that are too big for the shredder (such as buses, containers, and trucks) are first sheared or cut via a mobile shear and then shredded. Most scrap vehicles arrive at the yard flattened and de-polluted (i.e., drained of fluids, and without batteries). A small number of whole (non-flat) buses and trucks that arrive at the yard are de-polluted on site prior to being sheared and then shredded.

Shredded material is separated into magnetic materials (ferrous steel) and non-magnetic materials (non-ferrous metals, copper, aluminum, and stainless steel). Drum magnets are used to recover magnetic materials. A non-ferrous Metal Recovery Plant (MRP) uses eddy-current magnetic sorting along with other technologies to recover non-magnetic metallic materials. Sorted materials are then moved to covered storage areas via conveyor belts or diesel-fueled mobile equipment where they are stockpiled for transport. Some material is temporarily stockpiled outside of covered areas.

The shredder is equipped with an APC system that filters particulates, oils, and moisture. The APC includes a natural gas-fired Regenerative Thermal Oxidizer (RTO) that destroys VOCs and chlorofluorocarbons (CFCs) and a chemical scrubber that neutralizes residual acid gases.

Processed ferrous metals are loaded onto bulk ships via dump trucks and a diesel-electric hybrid crane (primarily operated in electric mode) and transported via ships to ports primarily in Southeast Asia.

Non-ferrous metals are loaded into containers, which are transported via trucks to other Port terminals for loading onto container vessels.

Approximately 72% of the shredder feedstock is ferrous steel, and 6% is non-ferrous metals. The remaining 22% is Metal Shredder Residue (MSR), which consists of plastics, upholstery, foam, rubber, glass, etc. MSR is stabilized on site with a cement blend resulting in a mix that is transported to a landfill for use as alternative daily cover. Table 2-1 in Chapter 2 shows the general level of activity associated with Phase 1. Activity associated with each emissions source is discussed in detail in Appendix B and summarized in this section.

Phase 1 activities, discussed above, include sources of emissions from the transport of materials, as well as material handling and material processing. The following sources of emissions were considered in the analysis:

- Phase 1 Material Transport Sources:
    - **Dry-bulk vessels (engine exhaust).** The majority of processed ferrous metal would continue to be loaded onto 40,000 to 45,000 metric ton (MT) dry-bulk vessels that dock at Berths 210 and 211 and would then be transported to ports primarily in Southeast Asia. Twenty-eight vessels called at Berths 210 and 211 in 2021/2022 and would continue to do so during the proposed 10-year lease. Vessels would continue to spend approximately 3 days at berth during loading. Vessel activity is summarized in Appendix B, Table A-1.

      Emissions were calculated using the methodology detailed in the Port's Emission Inventory Methodology Document (POLA 2023b). Emissions were calculated at berth, at anchorage, and during transit in six transit zones summarized in Appendix B, Table A-11. Vessel emissions were calculated for propulsion engines used to propel the vessel, auxiliary engines that provide electricity during ship operations, and auxiliary boilers that produce hot water and steam for ship use. Vessel propulsion engine power and other engine characteristics were based on vessel call data provided by SA Recycling. Propulsion engine power is presented in Appendix B, Table A-8. Other propulsion engine characteristics, such engine tier and slide valve information are presented in Appendix B, Table A-1. Auxiliary engine and boiler power were based on information for typical vessels calling at the Port from the 2022 Port Emissions Inventory (POLA 2023c) and are presented in Appendix B, Table A-9. Vessel characteristics were assumed not to change in future years; this is a conservative assumption because vessels in future years may have cleaner engines.

      Emissions were calculated for a peak day (24-hour period) consisting of one vessel at the berth for a portion of the peak day, a second vessel en route to the berth, the first vessel completing its loading and departing, and the second vessel at berth for the remaining portion of the peak day. This scenario occurred several times in 2021/2022 and would reasonably occur during Phase 1.

      Propulsion engines operate during vessel transit but are typically turned off while at berth. Auxiliary engines operate both at berth and during transit. Auxiliary boilers typically operate at berth and during transit through two zones (i.e., inside the harbor and between the break-water and the precautionary zone). Because vessel transit uses propulsion engines, auxiliary engines, and boilers, it is more energy intensive and results in higher emissions than vessel hoteling, which uses only auxiliary engines and boilers. Therefore, to assess regional impacts, the analysis maximized vessel transit activities (i.e., approximately 6 hours for vessel transit through the SCAB over-water boundary); the remaining part of the 24-hour period was assumed to be spent hoteling at berth. Conversely, to assess localized impacts, the analysis maximized vessel hoteling and calculated emissions for a 24-hour period at berth.

Emissions were calculated as a function of vessel power demand, with energy expressed in kilowatt-hours (kW-hr), multiplied by an emission factor, expressed in terms of grams per kilowatt-hour (g/kWhr). Emission factors were adjusted for low propulsion engine loads. Engine characteristics (i.e., load factors, hoteling times, transit distance, emission factors, etc.) were obtained from vessel data provided by SA Recycling, the Port 2022 Emissions Inventory (POLA 2022b), and the 2023 San Pedro Bay Ports Emissions Inventory Methodology Report (POLA 2023b). Vessel characteristics are detailed in Appendix B, Tables A-7 through A-20.

- **Tugboats (engine exhaust).** Diesel tugboats have historically assisted vessels calling at Berths 210 and 211 in the harbor and during maneuvering at berth. Typically, two tugboats are needed to assist each vessel. Emissions were calculated for a peak day of vessel activity, discussed above.

  Emissions were calculated as a function of tugboat power demand in kW, activity in hours, and engine load factors multiplied by an emission factor expressed in terms of g/kWhr. Tugboat characteristics (i.e., engine size, load factors, emission factors, etc.) were obtained from the Port 2022 Emissions Inventory (POLA 2022b) and the 2023 San Pedro Bay Ports Emissions Inventory Methodology Report (POLA 2023b) and are detailed in Appendix B, Tables A-21 through A-26.

- **Trucks (exhaust, tire wear, brake wear, and road dust).** Table 2-1 in Chapter 2 shows average daily truck deliveries. However, more trucks visit the facility on a peak day than on an average day. On a peak-day basis, a total of 338 trucks called at the facility in 2021/2022. Of these, 319 were metal delivery trucks, 15 were vendor/other delivery trucks, and 4 were container trucks transporting non-ferrous metals from the facility. Truck activity and transit distances are presented in Appendix B, Table A-2. Exhaust emissions were calculated for idling, off-site transit, and on-site transit. Tire wear, brake wear, and entrained road dust emissions were calculated for off-site and on-site transit.

  All trucks were assumed to be diesel-fueled. Although the population of natural gas trucks may increase in future years and electric trucks are anticipated to increase, the population of these trucks is currently small, and diesel trucks still account for the majority of trucks. The use of all diesel trucks in the analysis is a conservative assumption because diesel fuel results in higher emissions for most pollutants and in particular for DPM.

  Emissions from exhaust, tire wear, and brake wear were calculated as a function of activity, represented by one-way trips, multiplied by the one-way transit distance, and then multiplied by an emission factor. Transit distances were provided by SA Recycling based on 2021/2022 operations. CARB's EMFAC 2021 (CARB 2021a), a computer-based mathematical model used by the state of California to calculate motor vehicle emissions, was used to obtain exhaust, tire wear, and brake wear emission factors for heavy-duty trucks. Emission factors are presented in Appendix B, Table A-30, and EMFAC Output is presented in Appendix B, Tables A-31 through A-35.

  Road dust emissions were quantified for both on-site and off-site transit using one-way transit distances and emission factors obtained from CARB's methodology for entrained road dust (CARB 2021b). CARB's methodology correlates emissions with silt loading, average weight of all vehicles on the roadway, and the fraction of transit along roadways defined in the methodology. Road dust emission factors are presented in Appendix B, Table A-36.

- **Worker vehicles (engine exhaust, tire wear, brake wear, and road dust).** Table 2-1 in Chapter 2 shows 280 average one-way employee trips; on a peak day, the number of workers at the facility would stay the same. Exhaust emissions were calculated for total exhaust off site, which includes idling and transit exhaust; worker vehicles would not transit any appreciable distance on site. Tire wear, brake wear, and entrained road dust emissions were calculated for off-site transit.

Worker vehicles reflect the California fleet of gasoline, electric, plug-in hybrid, and a very small percentage of diesel vehicles obtained from CARB's EMFAC. Emissions were calculated using a similar approach to truck emissions, except that the transit distance of 18.5 miles was obtained from the California Emissions Estimator Mode (CalEEMod), and emission factors appropriate to automobiles were obtained by running CARB's EMFAC (CAPCOA 2022; CARB 2021a). Appendix B, Table A-37, shows the transit distance, and Table A-38 presents emission factors used in the analysis.

- **Locomotives (engine exhaust).** Table 2-1 in Chapter 2 shows that three rail cars were delivered on a peak day in 2021/2022. This activity is not expected to change in future years. The three rail cars would continue to be pulled by a diesel-fueled Pacific Harbor Line (PHL) switch locomotive, which picks up and drops off railcars and transports them to nearby rail yards for incorporation into trains. Switch locomotive emissions were based on the horsepower-hours (hp-hr) of work calculated from the locomotive fuel use, reported in the Port 2022 Emission Inventory and emission factors, expressed in grams per horsepower-hours (g/hp-hr) from the 2023 San Pedro Bay Ports Emissions Inventory Methodology Report (POLA 2023b). The emission factors in g/hp-hr were converted to grams per hour (g/hr) by multiplying by the PHL fleet average in-use horsepower (hp) of 203. The g/hr emission factors were then multiplied by the locomotive use of 3 hours per visit, which is based on the distance to nearby PHL rail yards. Locomotive activity and emission factors are presented in Appendix B, Tables A-39 through A-42.

- **Phase 1 On-Site Sources Subject to Annual Emissions Reporting (AER) (engine exhaust and fugitives).** Annual emissions from stationary material handling and material processing sources were quantified by SA Recycling and reported to SCAQMD as part of SCAQMD's AER program. Annual emissions reported in the AER were divided by 312 annual operating days to calculate peak day emissions. Although the facility is open 7 days per week, operations typically occur Monday through Friday, occasionally on Saturdays, and on Sundays only when a vessel is at the berth. The use of 312 days per year results in a conservative estimate of daily emissions. Emissions reported in the AER are provided in Appendix B, Table A-47 and include the following:
  - External combustion equipment such as the natural-gas RTO used as part of the shredder air quality control to destroy VOCs and CFCs, a propane-fueled heater, and a propane-fueled boiler
  - Internal combustion engines such as a stationary diesel-fueled emergency generator, a portable diesel-fueled engine, a portable gasoline-fueled engine, and a propane-fueled engine
  - Spray booth for metal coating
  - Aerosol degreaser
  - One diesel and one gasoline storage tank
  - Cement silos that store a cement blend used to stabilize non-ferrous MSR waste for subsequent transport to a landfill for use as alternative daily cover
  - Electric shredder stack and fugitive particulate emissions
  - Particulate emissions from metal shearing, non-ferrous material loading, MRP, welding, and storage pile management
- **Phase 1 On-Site Sources not Subject to AER Reporting (engine exhaust and fugitives).** Emissions from mobile equipment and loading/unloading activities, not subject to AER reporting, were calculated based on SA Recycling's 2021/2022 inventory of equipment, equipment size, equipment tier, and activity. Future activity is not expected to change from 2021/2022, although some equipment may be replaced with cleaner equipment due to regulatory requirements and the turnover of aging equipment. This analysis conservatively

assumed no turnover in future years beyond 2023. Equipment activity, size, engine tier, and activity provided by SA Recycling are presented in Appendix B, Table A-49.

Emissions were calculated for engine exhaust, road dust generated as equipment travels over paved facility areas, and fugitive dust emissions from material loading and handling. Exhaust emissions were calculated as the product of annual equipment activity in hours per year (hr/yr), engine size in horsepower, engine load factors, and emission factors. Peak day emissions were calculated by dividing annual emissions not related to vessel-loading by 312 days. Annual emissions, related to ship-loading, were divided by 89 days, which is the number of days a vessel was at Berths 210 and 211 in 2021/2022. As noted above, annual equipment activity and engine size were provided by SA Recycling. Engine load factors and emission factors were obtained from CalEEMod's Appendix G (CAPCOA 2022) and are presented in Appendix B, Table A-49.

Road dust emissions were calculated as the product of miles traveled by mobile equipment on site and emission factors developed by CARB for entrained road dust (CARB 2021b). Miles traveled were estimated by SA Recycling and are presented in Appendix B, Table A-49. Road dust emission factors are presented in Table A-36.

Fugitive dust emissions from material loading and handling activities are a function of the amount of material processed. Annual tons of material processed for specific activities were multiplied by emission factors. Peak day emissions were calculated by dividing annual emissions not related to vessel-loading by 312 days and those related to ship-loading by 89 days, as noted above. Emission factors for loading activities (i.e., truck loading, bucket crane loading) and material handling activities (i.e., handling of all materials except plates/structural steel and other non-shredded material as this material is too large to result in fugitive dust) were obtained from EPA's AP 42 Compilation of Emission Factors, Chapter 12.5 (EPA 1986). These emission factors are conservative because they reflect material sizes that are much smaller than material being loaded at SA Recycling. Emission factors for fugitive dust associated with operation of the mobile metal shear were assumed to be the same as those reported for the stationary metal shear process in the AER.

Loading and material handling activities utilize water spray, and facility roads are routinely swept to control fugitive dust. Control efficiencies of 90% for water spray and 16% for sweeping, obtained from the 2006 Western Regional Air Partnership Handbook (WRAP 2006), were used in the analysis.

Emissions were calculated for the following:

- Material handling equipment such as diesel-fueled bulldozers, backhoes, excavators, forklifts, trucks, loaders, manlifts, grapplers, shears, other material handlers, mobile cranes, a rail pusher, skid-steer loaders, sweepers, water trucks, and propane-fueled and electric forklifts
- Material handling activities such as loading/unloading of trucks and bucket crane

Summary of Phase 2 Activities and Analysis Methodology

Chapter 2 identifies that Phase 2 – Non-operational Restoration Period activities could take up to 5 years to complete. For the purposes of this analysis, it assumed that all required Phase 2 activities would occur over a 37-month period. This is a conservative assumption because it concentrates activities into fewer years and results in higher peak day emissions. During Phase 2, the facility would be decommissioned, buildings would be demolished, metal structures would be dismantled, and the metal would be sheared, loaded onto a dry-bulk vessel, and shipped out. The concrete slab that covers nearly the entire property and concrete structural foundations would be broken, stockpiled, crushed using a mobile concrete crusher, and trucked off site. Soil would be tested; contaminated soil would be transferred to a hazardous waste landfill, whereas non-contaminated soil would either be reused on site or transferred to a non-hazardous landfill. Clean replacement soil would be trucked to the facility, and the site would be compacted and re-graded. Finally, ground cover (i.e., gravel, crushed aggregate base, etc.) would be trucked to and spread over the site. Table 2-1 in Chapter 2 shows the general level of activity associated with Phase 2.

Phase 2 activities, summarized above, would include sources of emissions from off-road equipment operating on site, material handling, and material transport. The following sources of emissions were considered in the analysis:

- **One dry-bulk vessel (engine exhaust) to transport metal from dismantled structures.** One vessel would be needed for 1 day to load and transport approximately 5,500 tons of processed metal from dismantled on-site structures. Vessel emissions were calculated using the same methodology discussed in Phase 1 for dry-bulk vessels. Since only 1 day would be needed to load and transport all the metal, peak regional and localized emissions were calculated for one vessel in transit for a portion of a 24-hour period (i.e., approximately 6 hours, the time it takes to transit through California's SCAB-boundary) and the same vessel at berth for the remainder of the same 24-hour period.
- **Tugboats (engine exhaust).** Two tugboats would be used to assist the vessel. The same methodology described in Phase 1 was used in the analysis of Phase 2 tugboats.
- **Diesel off-road equipment (engine exhaust).** Off-road equipment would be used to demolish and process metal structures, concrete, and soil. Emissions were quantified using the California Air Pollution Control Officers Association's CalEEMod model, described below.
- **Diesel trucks (engine exhaust, tire wear, brake wear, and road dust).** Trucks would be used to transport concrete and soil. Emissions were quantified using CalEEMod.
- **Worker vehicles (engine exhaust, tire wear, brake wear).** Emissions were quantified using CalEEMod.
- **Material handling dust from on-site activities.** Emissions were quantified using CalEEMod.

CalEEMod version 2022.1.1.13 was used to quantify emissions from Phase 2 non-vessel activities (CAPCOA 2022). The CalEEMod model is approved by SCAQMD and is well suited to many land development projects. The model uses emission factors for off-road equipment and on-road vehicles from the CARB emissions inventory and calculates emissions associated with each activity task; overlapping tasks, if any, are added to calculate maximum day emissions for each pollutant.

The activity schedule and equipment utilization, developed and provided by SA Recycling, were used as CalEEMod input and are included in Appendix B, Table A-55, CalEEMod Output. CalEEMod default values were used in instances where equipment utilization was unavailable from the project proponent or LAHD. The analysis assumed EPA Tier 4 off-road engines, which are required by LAHD's SCG as part of the Proposed Project. The actual schedule may differ slightly from the one used in the analysis, but any delay of activities would likely result in lower emissions than what was analyzed due to stricter regulatory standards and the turnover to cleaner engines in future years as compared to the analysis.

CEQA Baseline

The CEQA Baseline is discussed in detail in Section 2.4.7 in Chapter 2, Project Description. In summary, the CEQA Baseline for the Proposed Project is existing operation in Fiscal Year 2021/2022. CEQA Baseline emissions were calculated using the methodology discussed above and are presented in Table 3.1-4 below.

Table 3.1-4. Baseline, Peak Day Emissions (pounds per day)

Source Category	PM_{10}	$PM_{2.5}$	NO_x	SO_x	CO	VOC
Vessels - At Berth	5	5	276	13	25	10
Vessels – Transit	9	8	1,164	25	72	16
Vessels – Anchorage	0	0	0	0	0	0
Tugboats	2	1	54	0	37	3
Trucks	11	4	186	1	33	4
Rail	0	0	6	0	2	0
On-Site Equipment	29	5	87	0	268	6
Worker Vehicles	1	0	1	0	17	1
2021/2022 CEQA Baseline	**57**	**24**	**1,774**	**40**	**454**	**40**

3.1.5 THRESHOLDS OF SIGNIFICANCE

CEQA Guidelines Appendix G (14 CCR 15000–15387) recommends that significance criteria established by the applicable air quality management district or air pollution control district be relied upon to make determinations of significance and recommends consideration of the following in assessing impacts. Would the project:

(a) Conflict with or obstruct implementation of the applicable air quality plan?
(b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
(c) Expose sensitive receptors to substantial pollutant concentrations?
(d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The Initial Study/Notice of Preparation (IS/NOP) (Appendix A) eliminated CEQA Checklist items (a) and (d) from further consideration. The IS concluded that the Proposed Project would be required to comply with all applicable existing and developing air quality regulations ensuring that the Project's activities would not obstruct implementation of the AQMP or the CAAP. Subsequently, LAHD decided to reconsider item (a) in the SEIR analysis when the Phase 2 Non-operational Restoration activities were added to the Project description. As such, this criterion is discussed in this analysis.

The IS also concluded that odors from operation of the Proposed Project (item d) would be similar to odors produced from the surrounding uses as well as the distance from the nearest sensitive receptors would allow adequate dispersion of emission to below objectionable odor levels; however, a comment letter was received during the 30-day NOP scoping period expressing concern about odors from continued operations; therefore, this criterion is discussed further in this SEIR analysis.

The following criteria for determining the significance of impacts on air quality are based on the above considerations. Cumulative impacts are considered in Chapter 4. The significance thresholds were developed by SCAQMD (SCAQMD 2023). The Proposed Project would have a significant impact related to air quality if it would result in the following:

- **AQ-1**: Result in new emissions that exceed SCAQMD thresholds of significance in Table 3.1-5.

Table 3.1-5. SCAQMD Regional Thresholds, Peak Day Emissions (pounds/day)

Air Pollutant	Threshold
NOX	55
VOC	55
PM10	150
PM2.5	55
SOX	150
CO	550
Lead	3

Source: SCAQMD 2023 for operational thresholds.
Note: SCAQMD = South Coast Air Quality Management District; NO_x = nitrogen oxides; VOC = volatile organic compound; PM_{10} = particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; SO_x = sulfur oxides; CO = carbon monoxide.

- **AQ-2:** Result in new ambient air pollutant concentrations that exceed NAAQS or CAAQS.

SCAQMD developed the Localized Significance Thresholds (LST) methodology to assist CEQA lead agencies in analyzing localized air quality impacts from proposed projects (SCAQMD 2009). The LST methodology is a screening methodology that allows users to determine, in lieu of conducting a dispersion modeling analysis, if a project would cause or contribute to an exceedance of the NAAQS or CAAQS. The LST methodology is based on maximum day on-site (i.e., local) emissions, the area over which emissions occur, the ambient air quality in the source receptor area (SRA), and the distance to the nearest exposed individual. The LST is set up as a series of look-up tables for emissions of NO_x, CO, PM_{10}, and $PM_{2.5}$. If proposed on-site emissions are below the LST look-up table emission levels, then the proposed activity is considered not to violate or substantially contribute to an existing or projected air quality standard. SCAQMD's LST methodology was used in this analysis to evaluate ambient air quality impacts from the Proposed Project's on-site activities. The CEQA Baseline was subtracted from Proposed Project emissions, and the incremental on-site emissions, per SCAQMD policy, were compared to the LST thresholds appropriate to the SRA, site acreage, and distance to the nearest receptor (SCAQMD 2009).

The LST analysis was based on a 5-acre area, with the closest residential receptor located 200 meters away, and the closest off-site worker receptor located 50 meters away. LST thresholds are presented in Table 3.1-6.

Table 3.1-6. SCAQMD Localized Significance Thresholds, Peak Day Emissions (pounds/day)

Air Pollutant		
	Residential Receptor	*Off-Site Worker Receptor*
PM10	22	N/A
PM2.5	10	N/A
NO2	141	118
CO	4,184	1,982

Notes: SCAQMD = South Coast Air Quality Management District; PM_{10} = particulate matter less than 10 microns in diameter; N /A = not applicable; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; NO_2 = nitrogen dioxide; CO =S carbon monoxide; LST = Localized Significance Threshold.
SCAQMD LST operational thresholds are based on: 5-acre site

200-meter separation distance to the closest residential/sensitive receptor. This results in a conservative threshold because the actual distance from the facility boundary to the closest receptor at the marina in East Basin is 250 meters and the distance from the stack and truck racks is over 500 meters.
50-meter separation distance to the closest off-site worker receptor.
Source Receptor Area: 4.

- **AQ-3:** Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

  Per SCAQMD's CEQA thresholds (SCAQMD 2023), a project would be considered significant if it would create an odor nuisance pursuant to SCAQMD Rule 402.

- **AQ-4:** Expose receptors to significant levels of TACs per the following SCAQMD thresholds.
  - Maximum Incremental Cancer Risk (MICR) greater than or equal to 10 in 1 million
  - Noncancer-chronic Hazard Index (HIc) greater than or equal to 1.0
  - Noncancer-acute Hazard Index (HIa) greater than or equal to 1.0
  - Cancer Burden greater than 0.5 excess cancer cases in areas where the maximum incremental cancer risk for residential receptors is greater than 1 in 1 million
- **AQ-5:** Conflict with or obstruct implementation of an applicable air quality plan.

3.1.6 IMPACT DETERMINATION

3.1.6.1 Impact AQ-1: Would the Proposed Project result in new emissions that exceed an SCAQMD threshold of significance in Table 3.1-5?

Discussion of 1996 Certified EIR Findings

The 1996 Certified EIR calculated emissions based on a throughput of 1.3 million tons and determined that operational activities would exceed thresholds of significance for NO_x, CO, and VOC (1996 Final EIR; 1995 Draft EIR, Section 3.3.4.3). The 1996 Certified EIR concluded that although mitigation measures would reduce emissions, impacts would remain significant and unavoidable for NO_x, CO, and VOC and less than significant for PM_{10} and SO_x. The 1996 Certified EIR did not quantify or make a determination regarding $PM_{2.5}$ because at the time of preparation, SCAQMD had not yet developed a significance threshold for $PM_{2.5}$.

Impacts of the Proposed Project without Mitigation

Phase 1 - Continued Operation

Phase 1 activities would result in criteria pollutant emissions from engine exhaust and fugitive dust, DPM emissions from engine exhaust, and TAC emissions from on-site metal processing. Table 3.1-7 summarizes regional peak day criteria pollutant emissions by source category and shows that the CEQA increment (Proposed Project emissions minus the CEQA Baseline) for all pollutants would be below SCAQMD significance thresholds and that Phase 1 emissions would be less than the CEQA Baseline.

The table shows that truck and worker vehicle emissions would be reduced, in comparison to the CEQA Baseline, as older equipment is replaced with cleaner equipment, per existing regulatory requirements. Although it is anticipated that future tugboat engines would also turnover due to anticipated regulatory action, the analysis conservatively did not take credit for potential reductions. This conservative approach is discussed in Section 3.1.3.3, State Regulations and Agreements, under the discussion of CARB In-Use California Harbor Craft Regulations.

It should also be noted that the analysis calculated emissions for the first year of activity under the proposed 10-year lease and did not take credit for anticipated emission reductions in future years, due to existing regulatory requirements; future emissions were assumed to remain unchanged after the first year of the proposed 10-year lease. This is a conservative approach, as emissions would be reasonably expected to decrease in future years due to more stringent regulatory requirements.

In addition, emissions in Table 3.1-7 are substantially less than emissions calculated in the 1996 Certified EIR. Although the Proposed Project throughput would be 1.2 million tons, which is 92% of the 1.3 million tons assessed in the 1996 Certified EIR, Proposed Project emissions would be substantially less. Proposed Project emissions of PM_{10}, NO_x, SO_x, CO, and VOC would be 12%, 47%, 3%, 20%, and 4% of the 1996 Certified EIR emissions, respectively. The decrease in emissions compared to the 1996 Certified EIR, although due in part to the lower throughput, is primarily attributed to stricter regulatory requirements promoting the use of cleaner engines and sulfur content limits in diesel fuel. Appendix B, Table A-56, presents this comparison.

Phase 2 - Non-operational Restoration

Phase 2 activities would result in criteria pollutant emissions from engine exhaust and fugitive dust, and in DPM emissions from engine exhaust. Table 3.1-7 summarizes regional peak day criteria pollutant emissions by source category and shows that the CEQA increment (Proposed Project emissions minus the CEQA Baseline) for all pollutants would be below SCAQMD significance thresholds and that Phase 2 emissions would be less than the CEQA Baseline.

As discussed in Section 3.1.4, Methodology, Phase 2 non-vessel emissions were calculated, using CalEEMod, for each year of activity. Vessel emissions were calculated using the same methodology used to calculate emissions during Phase 1 activities. Peak day emissions for all pollutants, except PM_{10} in 2035, would occur when one vessel would transit in, hotel at the berth, and be loaded. The vessel would make only one transit in a 24-hour period and would be maneuvered to/from the berth by tugboats. In addition, on-site equipment would be used to transfer metal to the berth and load it to the bucket crane resulting in engine exhaust and dust emissions. Peak day PM_{10} emissions would occur in 2035 as a result of fugitive dust during concrete slab demolition.

Table 3.1-7. Proposed Project Peak Day Emissions (pounds/day)

Source Category	PM_{10}	$PM_{2.5}$	NO_x	SO_x	CO	VOC
2021/2022 Baseline						
Vessels - At Berth	5	5	276	13	25	10
Vessels – Transit	9	8	1,164	25	72	16
Vessels – Anchorage	0	0	0	0	0	0
Tugboats	2	1	54	0	37	3
Trucks	11	4	186	1	33	4
Rail	0	0	6	0	2	0
On-Site Equipment	29	5	87	0	268	6
Worker Vehicles	1	0	1	0	17	1
2021/2022 CEQA Baseline	**57**	**24**	**1,774**	**40**	**454**	**40**
Proposed Project - Phase 1						
Vessels - At Berth	5	5	276	13	25	10
Vessels – Transit	9	8	1,164	25	72	16
Vessels – Anchorage	0	0	0	0	0	0

Table 3.1-7. Proposed Project Peak Day Emissions (pounds/day)

Source Category	PM_{10}	$PM_{2.5}$	NO_x	SO_x	CO	VOC
Tugboats	2	1	54	0	37	3
Trucks	10	3	89	1	12	1
Rail	0	0	6	0	2	0
On-Site Equipment	29	5	87	0	268	6
Worker Vehicles	1	0	1	0	15	1
Proposed Project - Phase 1	**56**	**24**	**1,677**	**40**	**432**	**36**
CEQA Impacts - Phase 1						
CEQA Threshold	*150*	*55*	*55*	*150*	*550*	*55*
CEQA Increment	*-1*	*0*	*-98*	*0*	*-22*	*-3*
CEQA Significant Impact?	*No*	*No*	*No*	*No*	*No*	*No*
Proposed Project - Phase 2						
2034 Equipment Exhaust, Vehicle Exhaust, Dust	0.6	0.2	2.4	0.0	25.3	0.6
2035 Equipment Exhaust, Vehicle Exhaust, Dust	15.6	2.5	8.6	0.1	30.7	0.6
2035 Shipping Emissions						
Vessels - At Berth	5	5	276	13	25	10
Vessels – Transit	6	5	738	16	46	10
Vessels – Anchorage	0	0	0	0	0	0
Tugboats	1	1	33	0	23	2
Equipment Exhaust, Vehicle Exhaust, Dust - During Shipping	0	0	3	0	27	1
2036 Equipment Exhaust, Vehicle Exhaust, Dust	3	1	8	0	11	0
2037 Equipment Exhaust, Vehicle Exhaust, Dust	4	1	8	0	11	0
Proposed Project - Phase 2 (maximum of all years)	**16**	**11**	**1,050**	**29**	**120**	**22**
CEQA Impacts - Phase 2						
CEQA Threshold	*150*	*55*	*55*	*150*	*550*	*55*
CEQA Increment	*-41*	*-13*	*-725*	*-11*	*-334*	*-18*
CEQA Significant Impact?	*No*	*No*	*No*	*No*	*No*	*No*

Notes: PM_{10} = particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; NO_x = nitrogen oxides; SO_x = sulfur oxides; CO = carbon monoxide; VOC = volatile organic compound; CEQA = California Environmental Quality Act; SCAQMD = South Coast Air Quality Management District.
Emissions may not add exactly due to rounding.
CEQA thresholds reflect SCAQMD's operational thresholds.

Mitigation Measures Applicable to the Proposed Project

No mitigation measures are needed.

Significance After Mitigation

The Proposed Project would not result in any new significant impacts or in a substantial increase in the severity of previously identified impacts under Impact AQ-1.

3.1.6.2 Impact AQ-2: Would the Proposed Project result in new ambient air pollutant concentrations that exceed NAAQS or CAAQS or exceed an SCAQMD LST emissions threshold in Table 3.1-6?

Discussion of 1996 Certified EIR Findings

The 1996 Certified EIR qualitatively evaluated impacts to ambient air quality by observing that the Project, as part of Port expansion plans, was included in the emissions inventory forecasts that were used to develop the 1991 AQMP, the most recent AQMP at the time. The 1996 Certified EIR concluded that the Project would be consistent with the 1991 AQMP and would therefore not interfere with the attainment of ambient air quality standards.

Impacts of the Proposed Project without Mitigation

Phase 1 - Continued Operation

Methodology used to assess ambient air quality in the SCAB has changed since the time of the 1996 Certified EIR. SCAQMD recommends that projects quantitively evaluate potential impacts to ambient air quality by either conducting dispersion modeling or using SCAQMD's screening LST methodology described in Section 3.1.5.

Table 3.1-8 summarizes on-site Phase 1 peak day criteria pollutant emissions by source category and shows that the CEQA increment (Proposed Project emissions minus the CEQA Baseline) for all pollutants would be below SCAQMD's LST thresholds and that Phase 1 emissions would be either equal to or less than the CEQA Baseline.

Phase 2 - Non-operational Restoration

Table 3.1-8 summarizes on-site Phase 2 peak day criteria pollutant emissions by source category and shows that the CEQA increment (Proposed Project emissions minus the CEQA Baseline) for all pollutants would be below SCAQMD's LST thresholds and that Phase 2 emissions would be less than the CEQA Baseline.

Table 3.1-8. Proposed Project On-Site Peak Day Emissions (pounds/day)

Year	Peak Day Emissions – Residential				Peak Day Emissions - Occupational	
	PM_{10}	*$PM_{2.5}$*	*NO_2*	*CO*	*NO_2*	*CO*
2021/2022 Baseline						
Vessels at Berth	7	6	371	34	371	34
Tugboats at Berth	0	0	12	8	12	8
Trucks	1	0	7	0	7	0
Rail	0	0	2	1	2	1
On-Site Equipment	29	5	87	268	87	268
2021/2022 Baseline	**37**	**12**	**478**	**311**	**478**	**311**
Proposed Project - Phase 1						
Vessels at Berth	7	6	371	34	371	34
Tugboats at Berth	0	0	12	8	12	8
Trucks	1	0	5	0	5	0

Table 3.1-8. Proposed Project On-Site Peak Day Emissions (pounds/day)

Year	Peak Day Emissions – Residential				Peak Day Emissions - Occupational	
	PM_{10}	*$PM_{2.5}$*	*NO_2*	*CO*	*NO_2*	*CO*
Rail	0	0	2	1	2	1
On-Site Equipment	29	5	87	268	87	268
Proposed Project - Phase 1	**37**	**12**	**476**	**311**	**476**	**311**
CEQA Impacts - Phase 1						
LST Threshold	*22*	*10*	*141*	*4,184*	*118*	*1,982*
CEQA Increment	0	0	-2	0	-2	0
CEQA Significant Impact?	*No*	*No*	*No*	*No*	*No*	*No*
Proposed Project - Phase 2						
2034 Equipment Exhaust, Vehicle Exhaust, Dust	0	0	2	23	2	23
2035 Equipment Exhaust, Vehicle Exhaust, Dust	16	2	3	30	3	30
2035 Shipping Activities						
Vessels - At Berth	5	5	276	25	276	25
Tugboats - At Berth	0	0	12	8	12	8
Equipment Exhaust, Vehicle Exhaust, Dust	0	0	3	26	3	26
2036 Equipment Exhaust, Vehicle Exhaust, Dust	2	1	1	10	1	10
2037 Equipment Exhaust, Vehicle Exhaust, Dust	2	1	1	10	1	10
Proposed Project - Phase 2	**16**	**5**	**291**	**60**	**291**	**60**
CEQA Impacts - Phase 2						
LST Threshold	*22*	*10*	*141*	4,184	*118*	*1,982*
CEQA Increment	*-22*	*-7*	*-188*	*-251*	*-188*	*-251*
CEQA Significant Impact?	*No*	*No*	*No*	*No*	*No*	*No*

Notes: PM_{10} = particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; NO_2 = nitrogen dioxide; CO = carbon monoxide; CEQA = California Environmental Quality Act; LST = Localized Significance Threshold; SCAQMD = South Coast Air Quality Management District
SCAQMD LST thresholds are based on:
5-acre site.
200-meter separation distance to the closest residential/sensitive receptor. This results in a conservative threshold because the actual distance from the facility boundary to the closest receptor at the marina in East Basin is 250 meters and the distance from the stack and truck racks is over 500 meters.
50-meter separation distance to the closest off-site worker receptor.
Source Receptor Area: 4.
PM_{10} and $PM_{2.5}$ LST thresholds are relevant to sensitive receptors reasonably likely to be present for 24 hours or more. Since off-site worker receptors are not expected to be present for this duration, significance for particulates has been omitted for off-site worker receptors.

Mitigation Measures Applicable to the Proposed Project

No mitigation measures are needed.

Significance After Mitigation

The Proposed Project would not result in any new significant impacts or in a substantial increase in previously identified impacts under Impact AQ-2.

3.1.6.3 Impact AQ-3: Would the Proposed Project result in other emissions (such as those leading to odors) that adversely affect a substantial number of people?

Discussion of 1996 Certified EIR Findings

The 1996 Certified EIR concluded that any potential odors would be intermittent, typical of a highly industrialized area, and that impacts would be less than significant.

Impacts of the Proposed Project without Mitigation

Projects that use diesel and gasoline fuels may have the potential to generate odors. Some individuals may sense that diesel and gasoline emissions are objectionable. The Proposed Project would be considered significant if it would result in odors that would adversely affect a substantial number of people by creating a nuisance under SCAQMD Rule 402.

The existing industrial setting of the Proposed Project represents an already complex odor environment. Odors from Phase 1 and Phase 2 activities of the Proposed Project would be similar to odors produced from existing industrial activities and would be primarily associated with vessels berthed at the terminal and on-site mobile equipment exhaust. Within this context, the Proposed Project would not likely result in changes to the overall odor environment in the vicinity. The distances between Proposed Project emission sources and the nearest sensitive receptors, possible residents at the marina in the East Basin are far enough away to allow for adequate dispersion of these emissions to below objectionable odor levels.

Mitigation Measures Applicable to the Proposed Project

No mitigation measures are needed.

Significance After Mitigation

The Proposed Project would not result in any new significant impacts or in a substantial increase than previously analyzed under Impact AQ-3.

3.1.6.4 Impact AQ-4: Would the Proposed Project expose receptors to significant levels of TACs per SCAQMD thresholds?

Discussion of 1996 Certified EIR Findings

The 1996 Certified EIR determined that activities would result in less-than-significant impacts for cancer risk, non-cancer chronic effects, and non-cancer acute effects at both sensitive and off-site worker receptors. Table 3.8-6 of the 1995 Draft EIR presents this information.

Impacts of the Proposed Project without Mitigation

Phase 1 – Continued Operation

Phase 1 activities would result in emissions from engine exhaust in the form of DPM and TAC emissions from on-site metal processing/handling. Phase 1 throughput and source activity would not change from the CEQA Baseline. Corresponding TAC emissions would also not change compared to the CEQA Baseline or in the case of DPM be lower than the CEQA Baseline as equipment engines turnover to cleaner engines or are electrified due to stricter regulatory requirements.

Phase 2 – Non-operational Restoration

Phase 2 activities would result in DPM emissions from engine exhaust. The greatest source of these emissions on site would be non-vessel activities, such as the dismantling of metal structures, concrete slab and foundation demolition, export of debris and soil, and import of clean cover. These emissions would be substantially less than Phase 1 non-vessel emissions. In addition, Phase 2 would require the use of only 1 vessel over the course of 1 day, compared to 28 annual vessels associated with Phase 1 and the CEQA Baseline. Therefore, Phase 2 activities would be considerably less intensive and result in substantially lower DPM emissions than both Phase 1 activities and the CEQA Baseline.

Mitigation Measures Applicable to the Proposed Project

No mitigation measures are needed.

Significance After Mitigation

The Proposed Project would not result in any new significant impacts or in a substantial increase in previously identified impacts under Impact AQ-4.

3.1.6.5 Impact AQ-5: Would the Proposed Project conflict with or obstruct implementation of an applicable air quality plan?

Discussion of 1996 Certified EIR Findings

The 1996 Certified EIR determined that the Project, as part of Port expansion plans, was included in the emissions inventory forecasts that were used to develop the 1991 AQMP, the most recent AQMP at the time. The 1996 Certified EIR concluded that the Project would be consistent with the 1991 AQMP.

Impacts of the Proposed Project without Mitigation

Phase 1 and Phase 2 activities would result in emissions of nonattainment criteria pollutants, primarily from diesel combustion exhaust in vessels, tugboats, trucks, and on-site equipment. SCAQMD periodically updates the AQMP; the most recent update was adopted in December 2022 (SCAQMD 2022). The 2022 AQMP and prior iterations include emission reduction measures that are designed to bring the SCAB into attainment of the state and national ambient air quality standards. The 2022 AQMP contains attainment strategies that include mobile source control measures and clean fuel projects that are enforced at the state and federal levels on engine manufacturers and petroleum refiners and retailers. Phase 1 and Phase 2 activities would comply with these control measures. 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. Compliance with these requirements would further ensure that the Phase 1 and Phase 2 activities would not obstruct implementation of the AQMP.

Mitigation Measures Applicable to the Proposed Project

No mitigation measures are needed.

Significance After Mitigation

The Proposed Project would not result in any new significant impacts or in a substantial increase in previously identified impacts under Impact AQ-5.

3.1.6.7 Summary of Impact Determinations

Table 3.1-9 summarizes the impact determinations of the Proposed Project related to air quality and meteorology. This table is meant to allow for an easy comparison of the potential impacts of the Proposed Project with respect to this resource. 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 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 3.1-9. Summary Matrix of Potential Impacts and Mitigation Measures for Air Quality Associated with the Proposed Project

Environmental Impacts	Impact Determination	Mitigation Measures	Impacts After Mitigation
Impact AQ-1: Would the Proposed Project result in new emissions that exceed an SCAQMD threshold of significance in Table 3.1-5?	No new or substantially more severe significant impacts would occur	No mitigation is required.	No new or substantially more severe significant impacts would occur
Impact AQ-2: Would the Proposed Project result in new ambient air pollutant concentrations that exceed NAAQS or CAAQS or exceed an SCAQMD LST emissions threshold in Table 3.1-6?	No new or substantially more severe significant impacts would occur	No mitigation is required.	No new or substantially more severe significant impacts would occur
Impact AQ-3: Would the Proposed Project result in other emissions (such as those leading to odors) that adversely affect a substantial number of people?	No new or substantially more severe significant impacts would occur	No mitigation is required.	No new or substantially more severe significant impacts would occur
Impact AQ-4: Would the Proposed Project expose receptors to significant levels of TACs per SCAQMD thresholds?	No new or substantially more severe significant impacts would occur	No mitigation is required.	No new or substantially more severe significant impacts would occur
Impact AQ-5: Would the Proposed Project conflict with or obstruct implementation of an applicable air quality plan?	No new or substantially more severe significant impacts would occur	No mitigation is required.	No new or substantially more severe significant impacts would occur

Impacts were found to be significant in the 1996 Certified EIR, and based on this analysis presented here, there would be no new or more substantial impacts than what was previously found in the 1996 Certified EIR.

3.1.7 SIGNIFICANT UNAVOIDABLE IMPACTS

3.1.7.1 Phase 1 - Continued Operation

There would be no new significant and unavoidable impacts or a substantial increase in the severity of previously identified effects.

3.1.7.2 Phase 2 - Non-operational Restoration)

There would be no new significant and unavoidable impacts or a substantial increase in the severity of previously identified effects.

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