

Section 3.2

Greenhouse Gas Emissions and Climate Change

SECTION SUMMARY

This section describes greenhouse gas (GHG) emissions associated with operation of the Revised Project and mitigation measures.

Section 3.2, Greenhouse Gas Emissions, provides the following:

- a description of the existing setting as it relates to Port GHG emissions and climate change;
- a discussion on the methodology used to determine whether the Revised Project would result in a new or substantially more severe impact to GHG emissions and climate change;
- an impact analysis the continued operation of the Revised Project for future years through 2045;
- a description of the mitigation measures already implemented and the new mitigation measures proposed to reduce any potential impacts, as applicable;
- a description, for informational purposes, under the FEIR mitigated scenario, of the impacts of the period of partial compliance (2008 – 2014) and the additional period of non-compliance (2015 – 2023), when some mitigation measures imposed in the 2008 EIS/EIR continued to be wholly or partially not implemented, and impacts of future years if the full suite of 2008 measures were implemented); and
- a discussion of the magnitude of the potential impacts relative to the impacts that would have occurred if all adopted mitigation measures from the 2008 EIS/EIR had been implemented.

Key Points of Section 3.2:

The Draft RSEIR for the Revised Project is focused on evaluating impacts for the continued operations of the Berths 97-109 CS Container Terminal (Terminal) under a set of proposed revised mitigation measures. Since all construction and physical improvements to the Terminal have been completed and are in operation as approved based on the 2008 EIS/EIR, this Draft RSEIR focuses on the impacts of the operation of the Revised Project under the adopted mitigation measures as revised and new proposed mitigation measures, in accordance with the Writ.

The air quality operational mitigation measures identified in Section 3.1 would mitigate GHG emissions, and the effectiveness of these measures is quantified in the analysis in Section 3.2. The analysis also includes implementation of MM GHG-1: LED Lighting, from the 2019 SEIR. The Revised Project includes a new mitigation measure, MM GHG-2 GHG Reduction Offsets (described in Section 3.2.6.5), which replaces the former lease measure LM GHG-1 from the 2019 SEIR, to reduce residual GHG emissions after the implementation of these other measures.

The Revised Project would generate GHG emissions, either directly or indirectly, that would exceed the SCAQMD 10,000 mty CO₂e threshold in 2026, 2036 and 2045. After the full implementation of the

- 1 mitigation measures, GHG emissions and climate change impacts would be reduced to less than
2 significant.
- 3 LAHD has considered, for informational purposes only, whether the Revised Project would be consistent
4 with federal, state, or local plans, policies, or regulations adopted to implement a state-wide, regional or
5 local plan for reduction or mitigation of GHG emissions. LAHD has concluded that it would be consistent
6 with those state and local plans and policies.
- 7

3.2.1 Introduction

This section evaluates the GHG emissions and climate change issues associated with the Revised Project. Activities from operation of the Revised Project would affect GHG emissions. This section includes a description of the affected environment, including a discussion of the state of climate change science; the regulatory setting; predicted impacts of the Revised Project; and proposes revisions to lease measure LM GHG-1.

As described in Chapter 2, the Approved Project as analyzed in the 2008 EIS/EIR included a number of mitigation measures, some of which were not fully implemented between 2009 and 2023. The Revised Project consists of continued operation of the Berths 97-109 CS Container Terminal under the adopted mitigation measures of the 2008 EIS/EIR, as amended by the 2019 SEIR and further modified in this Draft RSEIR.

Due to improvements in procedures and assumptions used to calculate emissions, it is not possible to directly compare greenhouse gas impacts presented in the 2008 Final EIS/EIR for the Approved Project with impacts calculated for this Draft RSEIR for the Revised Project, nor is it possible to reproduce the now-outdated methods, models, and procedures used to analyze greenhouse gas impacts in the 2008 EIS/EIR. Therefore, this Draft RSEIR presents an evaluation of greenhouse gas impacts for the baseline, all past non-compliance periods, and future condition scenarios described in Section 1.1.2 using current, state-of-the-art emission estimation and air quality modeling.

This Draft RSEIR employs one baseline scenario: 2008 actual activity and actual compliance with 2008 EIS/EIR mitigations (the “2008 Actual Baseline”). This Draft RSEIR uses the 2008 Actual Baseline in determining the significance of incremental changes (impacts) of operational emissions and pollutant concentrations under the Approved Project.

Two future conditions (2026 to 2045) scenarios are analyzed in comparison to the 2008 Actual Baseline:

- 1) Revised Project Scenario: future conditions assuming increases in terminal throughput as shown in Table 2-2 of Chapter 2 and implementation of the modified mitigation measures under the Revised Project); and
- 2) FEIR Mitigated Scenario: future conditions assuming increases in terminal throughput as shown in Table 2-2 and timely implementation of the 2008 EIS/EIR mitigation measures (for informational purposes only).

In addition, in this Draft RSEIR analysis, two past conditions representing periods of non-compliance with the 2008 EIS/EIR mitigation measures are analyzed in four scenarios in comparison to the 2008 Actual Baseline:

- 1) First period of non-compliance (2008-2018), assuming actual activity levels and actual status of compliance with 2008 EIS/EIR mitigations, represented by interim years 2012 and 2014 (for informational purposes only).
- 2) First period of non-compliance, assuming actual activity levels but also assuming full implementation of all mitigation measures required by the 2008 EIS/EIR had occurred in a timely fashion during the period of 2008 to 2018 (for informational purposes only).
- 3) Additional period of non-compliance (2019 through 2023), assuming

1 actual activity levels and actual status of compliance (i.e., partial
2 compliance) with the 2008 EIS/EIR mitigation measures, analyzing each
3 year from 2019 to 2023 (for informational purposes only).

4 4) Additional period of non-compliance, assuming actual activity levels
5 and full implementation of all mitigation measures required by the 2008
6 EIS/EIR had occurred in a timely fashion during the period of 2019 to
7 2023 (for informational purposes only).

8 Per the requirements of the Writ, this Draft RSEIR restates the 2019 SEIR's
9 mitigation measures, re-evaluates feasible mitigation, and presents a new
10 mitigation measure to be included in the Revised Project.

11 3.2.2 Environmental Setting

12 The project site is located in the Harbor District of the City of Los Angeles in the
13 southwest coastal area of the South Coast Air Basin (SCAB). The SCAB consists of the
14 non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of
15 Orange County. The air basin covers an area of approximately 15,500 square kilometers
16 (6,000 square miles) and is bounded on the west by the Pacific Ocean; on the north and
17 east by the San Gabriel, San Bernardino, and San Jacinto mountains; and on the south by
18 the San Diego County line.

19 3.2.2.1 Greenhouse Gas Pollutants

20 Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs). The
21 term GHGs includes gases that contribute to the natural greenhouse effect, such as carbon
22 dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), as well as artificially derived
23 anthropogenic pollutants, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs),
24 and sulfur hexafluoride (SF₆). These last three families of gases, while not naturally
25 present in the atmosphere, have properties that also cause them to trap infrared radiation
26 when they are present in the atmosphere. Together, these six gases comprise the major
27 GHGs that are recognized by the Kyoto Accords (United Nations 1998).

28 The effect each of these gases has on global warming is a combination of the volume of
29 their emissions and their 100-year global warming potential (GWP). GWP is a unitless
30 quantity that measures how much a gas will contribute to global warming relative to the
31 same mass of CO₂. CH₄ and N₂O are substantially more potent than CO₂, with GWPs
32 (100-year horizon) of 29.8 and 273, respectively (IPCC, 2021). However, artificially
33 derived pollutants such as SF₆, HFCs, and CFCs, have been found to have substantially
34 larger GWP values. Sulfur hexafluoride has one of the largest GWP values at 23,900, and
35 CFCs and HFCs have GWPs as high as 16,200 and 14,600, respectively (IPCC 2021).
36 For consistency amongst pollutants, GHG emissions are typically reported in terms of
37 metric tons ("tonnes" or "MTon" equivalent to 1000 kilograms) of carbon dioxide
38 equivalents (CO₂e), which are calculated as the product of the mass emitted of a given
39 GHG and its specific GWP. In this document, the unit "metric tons" is used to report
40 GHG emissions.

41 Arguably, the most important GHG in human-induced global warming is CO₂. While
42 many gases have higher GWPs than the naturally occurring GHGs, CO₂ is emitted in
43 vastly higher quantities and accounts for 79 percent of the GWP of all GHGs emitted by
44 the United States (USEPA, 2022). Fossil fuel combustion, especially for the generation of
45 electricity and powering of motor vehicles, has led to substantial increases in CO₂

1 emissions and thus substantial increases in global atmospheric CO₂ concentrations over
2 the last century. In 2022, the atmospheric CO₂ concentration was around 417 parts per
3 million (ppm), exceeding the natural range over the last 800,000 years (NOAA 2022a).
4 The buildup of CO₂ in the atmosphere is a result of increased emissions and its relatively
5 long lifespan in the atmosphere of 50 to 200 years (NOAA 2022a).

6 Concentrations of the second most prominent GHG, CH₄, have also increased due to the
7 growing prevalence of anthropogenic sources such as rice production, degradation of
8 waste in landfills, cattle farming, and natural gas mining. In 2021, the atmospheric level
9 of CH₄ was 162% greater than pre-industrial level at 1,895 parts per billion (ppb) (NOAA
10 2022b). CH₄ has a relatively short atmospheric lifespan of 12 years but has a higher GWP
11 than CO₂.

12 Concentrations of nitrous oxide (N₂O) have increased from 270 parts per billion in pre-
13 industrial times to about 334 parts per billion in 2021 (NOAA 2022a). These elevated
14 concentrations are attributed to shifting agricultural practices (such as soil and manure
15 management), fossil-fuel combustion, and the production of acids such as adipic acid.
16 Nitrous oxide (N₂O) is a significant contributor to atmospheric warming as a result of its
17 long atmospheric lifespan (120 years) in conjunction with its relatively large GWP.

18 Lastly, sulfur hexafluoride (SF₆), chlorinated fluorocarbons (CFCs) and
19 hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs) are all artificially derived
20 pollutants that contribute to atmospheric warming. These gases are most commonly used
21 in electrical industries or as refrigerants. Though their presence in the atmosphere is
22 proportionally small, these gases' long atmospheric lifespans have categorized them as
23 significant contributors to global warming. Studies estimate that these gases can persist
24 within the atmosphere between 32,000 and 50,000 years.

25 GHGs differ from criteria pollutants in that GHG emissions do not cause direct adverse
26 human health effects. Rather, their indirect impacts to human health via global warming
27 is a cause for concern. Elevated atmospheric temperatures are likely to contribute to the
28 increased occurrence of extreme weather events such as heat waves and precipitation
29 events. Rising temperatures related to human activities likely contributed to Arctic sea-
30 ice loss, an increase in upper ocean temperature, and global sea level rise during the latter
31 half of the 20th century. As a result of continued growing concentrations of GHGs in the
32 atmosphere, the trends observed in the past century such as oceanic warming and
33 acidification, are expected to occur at a faster pace in the 21st century. (IPCC 2013; IPCC
34 2014; IPCC 2023).

35 Current predictions suggest that, in the next 25 years, California will experience longer
36 and more extreme heat waves, greater frequency of heat waves, and longer dry periods.
37 More specifically, California's Fourth Climate Change Assessment (OPR 2018) forecasts
38 that California could witness the following events:

- 39 • Temperature rises between 2.7-8.8°F by the 2070–2100 time period;
- 40 • 1.1–1.9 feet of sea level rise by 2050 and over 9 feet of rise by 2100;
- 41 • Reductions in snowpack to less than two-thirds of the historical average by 2050
42 and to less than half or even one third by 2100; and
- 43 • Increased fire risk resulting in estimated burned area increases of 77 percent to
44 178 percent by the end of the century and increases in extreme wildfire frequency
45 of 50 percent.

1 For the Port of Los Angeles specifically, data from the Cal-Adapt tool (CEC 2023)
2 indicate that the harbor area could experience the following changes:

- 3 • Temperature increases of 3.2 to 3.9°F by mid-century (2035-2064) and 4.2 to
4 7.0°F by end of the century (2070-2099);
- 5 • Increases in the annual number of extreme heat days (i.e., days above the
6 historical 98th percentile temperature of 93.7°F) of 3 to 4 days by mid-century
7 and 5 to 12 days by the end of the century; and
- 8 • Small increases in the maximum 1-day precipitation of approximately 0.15 to
9 0.23 inches by the end of the century relative to the historical baseline (1961-
10 1990) value of 1.63 inches.

11 The latest sea level rise scenarios from NOAA (Sweet et al. 2022) indicate that the
12 median sea level rise in Los Angeles could range from approximately 0.4 to 1.1 feet by
13 2050 and 0.6 to 6.3 feet by 2100 relative to a baseline year of 2000.

14 **3.2.3 GHG Reduction Regulations, Plans and Policies**

15 Climate change has only recently been widely recognized as a threat to the global
16 climate, economy, and population. As a result, the climate change regulatory setting—
17 federal, state, and local—is complex and evolving. This section identifies key legislation,
18 executive orders, and seminal court cases related to climate change germane to the
19 Revised Project.

20 **3.2.3.1 Federal**

21 **Federal Action on Greenhouse Gas Emissions**

22 ***April 2007 Supreme Court Ruling***

23 In *Massachusetts et al. v. Environmental Protection Agency et al.* (2007) 549 U.S. 497,
24 the U.S. Supreme Court ruled that GHGs were air pollutants within the meaning of the
25 Clean Air Act and that the act authorizes the USEPA to regulate CO₂ emissions from new
26 motor vehicles, should those emissions endanger the public health or welfare. The Court
27 did not mandate that the USEPA enact regulations to reduce GHG emissions but found
28 that the only instances where the USEPA could avoid taking action were if it found that
29 GHGs do not contribute to climate change or if it offered a “reasonable explanation” for
30 not determining that GHGs contribute to climate change.

31 On December 7, 2009, the USEPA Administrator signed two distinct findings regarding
32 GHGs under Section 202(a) of the Clean Air Act.

- 33 • **Endangerment Finding:** the USEPA Administrator found that the current and
34 projected concentrations of the six key well-mixed GHGs - CO₂, CH₄, N₂O,
35 HFCs, PFCs, and SF₆- in the atmosphere threaten the public health and welfare
36 of current and future generations.
- 37 • **Cause or Contribute Finding:** the USEPA Administrator found that the combined
38 emissions of these well-mixed GHGs from new motor vehicles and new motor
39 vehicle engines contribute to the GHG pollution that threatens public health and
40 welfare.

1 The findings themselves did not impose any requirements on industry or other entities.
2 However, this action was a prerequisite to finalizing the USEPA’s proposed GHG
3 emissions standards for light-duty vehicles (USEPA, 2009).

4 ***Federal Vehicle Emissions Standards***

5 In 1975, Congress enacted the Energy Policy and Conservation Act, which established
6 the first fuel economy standards for on-road motor vehicles in the United States (i.e., the
7 corporate average fuel economy [CAFE] standards). Pursuant to the Act, the USEPA and
8 the National Highway Traffic Safety Administration (NHTSA) are responsible for
9 establishing additional vehicle standards. In August 2012, standards were adopted for
10 model years 2017 through 2025 for passenger cars and light-duty trucks. According to the
11 USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions than a
12 model year 2010 vehicle (USEPA 2012). The State of California harmonized its vehicle
13 efficiency standards through 2025 with the federal standards through the State’s
14 Advanced Clean Cars Program.

15 In 2019, the USEPA issued a final rule, known as the Safer Affordable Fuel-Efficient
16 Vehicle (SAFE) Rule that established new fuel economy standards for light-duty vehicle
17 fleets for the years 2021-2026, and rescinded the “California waiver” under the federal
18 Clean Air Act, which had historically allowed California to issue its own motor vehicle
19 emission standards for GHGs. The SAFE Rule was judicially challenged, and on March
20 9, 2022, the USEPA reinstated California’s authority under the Clean Air Act to
21 implement its own GHG emission standards and zero emission vehicle (ZEV) sales
22 mandate. (California v. EPA (D.C. Cir. 2019) 940 F.3d 1342; Union of Concerned
23 Scientists et al. v. NHTSA (D.C. Cir. 2019) Case No. 19-1230.)

24 **3.2.3.2 State**

25 California has enacted a variety of laws that relate to climate change, many of which set
26 aggressive goals for GHG reductions within the state, many of which are based on
27 executive orders issued by state governors. The discussion below provides a brief
28 overview of the CARB and Office of Planning and Research documents and of the
29 primary executive orders and legislation that relates to climate change and may affect the
30 GHG emissions associated with the Revised Project.

31 ***Assembly Bill 32 and Senate Bill 32***

32 The California Global Warming Solutions Act of 2006, widely known as Assembly Bill
33 (AB) 32, requires the California Air Resources Board (CARB) to develop and enforce
34 regulations for the reporting and verification of statewide GHG emissions. The California
35 Air Resources Board (CARB) was directed to set emissions limits to achieve 2000 levels
36 of GHGs by 2010 and 1990 levels by 2020. This bill codified the 2020 target set in
37 Executive Order (EO) S-3-05 (June 1, 2005), which included an additional goal of 80%
38 below 1990 levels by 2050. CARB reported that the 2020 goal was achieved in 2016,
39 four years ahead of schedule.

40 Senate Bill (SB) 32, enacted in 2016, codified the interim goal of 40% below 1990 levels
41 by 2030 set in EO B-30-15 (enacted in 2015). This interim target was established to
42 ensure the State meets the EO S-3-05 target of reducing greenhouse gas emissions to 80
43 percent below 1990 levels by 2050. To facilitate achievement of this goal, EO B-30-15
44 called for an update to CARB’s Climate Change Scoping Plan (see below).

CARB Climate Change Scoping Plan

A specific requirement of Assembly Bill (AB) 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020. CARB developed and approved the initial Scoping Plan in 2008, outlining the regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs that would be needed to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives (CARB 2009a, 2009b). CARB reported that this goal was achieved in 2016, four years ahead of the target of 2020.

In December 2017, CARB approved the 2017 Climate Change Scoping Plan Update (CARB 2017), which built upon the 2009 AB 32 scoping plan and provided guidance to meet the new statewide GHG reduction goal under SB 32 of 40 percent below 1990 emission levels by 2030.

In December 2022, CARB released the 2022 Scoping Plan Update (CARB 2022). The 2022 Scoping Plan Update assesses progress towards achieving the Senate Bill 32's 2030 target and lays out a path to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan Update outlines a sector-by-sector roadmap for California to achieve carbon neutrality by 2045 or earlier. It aims to reduce anthropogenic emissions to 85% below 1990 levels by 2045 using technically feasible and cost-effective solutions. The 2022 Scoping Plan Update focuses on electrification of transportation, homes and buildings, and phasing out fossil fuels. In hard-to-electrify sectors, new solutions such as renewable hydrogen and biomethane are leveraged to achieve emissions reductions.

CARB's 2022 Scoping Plan Update outlines a number of actions for the Scoping Plan Scenario in that document's Table 2-1. The list below represents the actions which are most relevant to the Revised Project:

- GHG Emissions Reductions Relative to the SB 32 Target: 40% below 1990 levels by 2030;
- Light-duty Vehicle (LDV) Zero Emission Vehicles (ZEVs): 100% of LDV sales are ZEV by 2035;
- Truck ZEVs: 100% of medium-duty (MDV)/HDV sales are ZEV by 2040 (AB 74 University of California Institute of Transportation Studies [ITS] report);
- Low Carbon Fuels for Transportation: Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen.

In addition to the previous focus areas, the 2022 Scoping Plan Update developed a table of priority GHG reduction strategies that can be utilized by local governments (Table 1 in Appendix D of the 2022 Scoping Plan Update).

Renewable Portfolio Standard, Senate Bill 100 & Executive Order B-55-18

California's Renewable Portfolio Standard (RPS) was first established in 2002 through Senate Bill (SB) 1078, as a regulation requiring electric utilities and retail electricity providers to provide customers with a stated minimum of share of electricity generated from renewable resources. The RPS was revised, and its goals accelerated through SB 350. The latest revisions affecting RPS were done through SB 100 (SB100) and Executive Order B-55-18.

On September 10, 2018, Governor Brown signed SB 100, which established that 100% of all electricity in California must be obtained from renewable and zero-carbon energy

1 resources by December 31, 2045. SB 100 also created new standards for the RPS goals
2 that were separately established by SB 350, increasing electricity from renewable sources
3 from 50% to 60% by 2030 with specific interim targets.

4 On the same day that SB 100 was signed, Governor Brown signed Executive Order (EO)
5 B-55-18 with a new state-wide goal to achieve carbon neutrality (zero-net GHG
6 emissions) by 2045. Specifically, it set a 2045 goal of powering all retail electricity sold
7 in California and state agency electricity needs with renewable and zero-carbon
8 resources, including those such as solar and wind energy that do not emit climate-altering
9 greenhouse gases.

10 ***Executive Order N-79-20***

11 Governor Newsom signed EO N-79-20 stating that “clean renewable fuels play a role as
12 California transitions to a decarbonized transportation sector.” EO N-79-20 directed that,
13 “to support the transition away from fossil fuels consistent with the goals established in
14 this Order and California’s goal to achieve carbon neutrality by no later than 2045, the
15 California Environmental Protection Agency and the California Natural Resources
16 Agency, in consultation with other state, local and federal agencies, shall expedite
17 regulatory processes to repurpose and transition upstream and downstream oil production
18 facilities...” EO N-79-20 also directed CARB to “develop and propose strategies to
19 continue the State’s current efforts to reduce the carbon intensity of fuels beyond 2030
20 with consideration of the full life cycle of carbon.”

21 ***Executive Order S-01-07: Low Carbon Fuel Standard***

22 Executive Order S-01-07 established a statewide goal to reduce the carbon intensity of
23 transportation fuels sold in California by at least ten percent from 2005 levels by 2020.
24 The Low Carbon Fuel Standard (LCFS), a discrete early action item in the original
25 Scoping Plan, was approved by CARB in 2009, with amendments implemented on
26 January 1, 2013. In September 2018, CARB extended the LCFS program to 2030,
27 making significant changes to the design and implementation of the program including
28 doubling the statewide carbon intensity reduction to 20 percent by 2030. The extension
29 also added new crediting opportunities to promote zero-emission vehicle adoption and
30 advanced technologies to achieve deep decarbonization in the transportation sector.
31 Compliance with the LCFS will be based on a combination of strategies involving lower
32 carbon fuels and more efficient, advanced-technology vehicles.

33 ***Ocean-Going Vessels At-Berth Regulation***

34 In December 2007, the original Ocean-Going Vessels At-Berth Regulation was approved
35 by CARB, which set control requirements for emissions from container, refrigerated
36 cargo (reefer), and cruise vessels while hoteling at berth. The At-Berth Regulation was
37 amended on December 30, 2020, increasing its requirements for already-covered vessel
38 types, and expanding its requirements to include auto carriers (roll-on/roll-off vessels)
39 and tanker ships to control hoteling emissions at-berth starting in 2025 for the Ports of
40 Los Angeles and Long Beach. Even though this regulation is meant to curtail local
41 criteria pollutant emissions, it may have some co-benefits for reducing GHGs if
42 controlled in conjunction with renewable-based electricity.

43 ***Assembly Bill 1493 (Mobile Source Reductions)***

44 AB 1493 (“the Pavley Standard”) required CARB to adopt regulations by
45 January 1, 2005, to reduce GHG emissions from non-commercial passenger vehicles and
46 light-duty trucks of model year 2009 through 2016. The bill also required the California
47 Climate Action Registry to develop and adopt protocols for the reporting and certification
48 of GHG emissions reductions from mobile sources for use by CARB in granting emission

1 reduction credits. The bill authorizes CARB to grant emission reduction credits for
2 reductions of GHG emissions prior to the date of enforcement of regulations, using model
3 year 2000 as the baseline for reduction.

4 In 2004, CARB applied to the EPA for a waiver under the federal Clean Air Act to
5 authorize implementation of these regulations. EPA initially denied the waiver request
6 but in 2009, following litigation, granted the waiver to California for its GHG emission
7 standards for motor vehicles. CARB's approach to passenger vehicles combines the
8 control of smog-causing pollutants and GHG emissions into a single coordinated package
9 of standards. The approach also includes efforts to support and accelerate the numbers of
10 plug-in hybrids and zero-emission vehicles in California.

11 **Other Pending CARB Rules**

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

- 15 • Advanced Clean Fleets (ACF) – Complete Withdrawal
- 16 • In-Use Locomotive Standards - Complete Withdrawal
- 17 • Commercial Harbor Craft – Partial Withdrawal
- 18 • Transport Refrigeration Unit (TRU) Engine Standards - Partial Withdrawal

19 The ACF, locomotive, and TRU rules contained provisions (see Section 3.1.3.3 for
20 descriptions of these rules) mandated conversion to zero-emission technologies by certain
21 dates, which would have resulted in substantial GHG emissions reductions. Accordingly,
22 emissions reduction credit implementation of these rules could not be included in the
23 Draft RSEIR analysis

24 **Senate Bill 97 (CEQA Guidelines)**

25 SB 97 required that the California Natural Resources Agency coordinate on the
26 preparation of amendments to the CEQA Guidelines regarding feasible mitigation of
27 GHG emissions or the effects of GHG emissions. Pursuant to SB 97, the agency adopted
28 CEQA Guidelines amendments and transmitted the Adopted Amendments and the entire
29 rulemaking file to the Office of Administrative Law in 2009. The amendments were
30 approved by the Office of Administrative Law and became effective on March 18, 2010.

31 With respect to the significance assessment, CEQA Guidelines Section 15064.4,
32 subdivision (a), provides:

33 *The determination of the significance of greenhouse gas emissions calls for careful*
34 *judgment by the lead agency consistent with the provisions in section 15064. A lead*
35 *agency should make a good-faith effort, based to the extent possible on scientific and*
36 *factual data, to describe, calculate or estimate the amount of greenhouse gas emissions*
37 *resulting from a project. A lead agency shall have discretion to determine, in the context*
38 *of a particular project, whether to:*

39 (1) *Use a model or methodology to quantify greenhouse gas emissions resulting from a*
40 *project, and which model or methodology to use. The lead agency has discretion to*
41 *select the model or methodology it considers the most appropriate provided its*
42 *supports its decision with substantial evidence. The lead agency should explain the*
43 *limitations of the particular model or methodology selected for use; and/or*

44 (2) *Rely on a qualitative analysis or performance-based standards.*

1 Guidelines section 10564.4, subdivision (b), further indicates:

2 (b) A lead agency should consider the following factors, among others, when
3 assessing the significance of impacts from GHG emissions on the environment:

4 (1) The extent to which the project may increase or reduce GHG emissions as
5 compared to the existing environmental setting;

6 (2) Whether the project emissions exceed a threshold of significance that the
7 lead agency determines applies to the project;

8 (3) The extent to which the project complies with regulations or requirements
9 adopted to implement a statewide, regional, or local plan for the reduction or
10 mitigation of GHG emissions. Such requirements must be adopted by the
11 relevant public agency through a public review process and must reduce or
12 mitigate the project's incremental contribution of GHG emissions. If there is
13 substantial evidence that the possible effects of a particular project are still
14 cumulatively considerable notwithstanding compliance with the adopted
15 regulations or requirements, an EIR must be prepared for the project.

16 The amendments also provide that lead agencies should consider all feasible means of
17 mitigating GHG emissions that substantially reduce energy consumption or GHG
18 emissions. These potential mitigation measures may include carbon sequestration. If
19 offsite or carbon offset mitigation measure are proposed, they must be part of reasonable
20 plan of mitigation that the agency itself is committed to implementing. No threshold of
21 significance or any specific mitigation measures are indicated.

22 Among other things, the California Natural Resources Agency noted in its public notice
23 for these changes that impacts of GHG emissions should be considered in a cumulative
24 context, rather than as merely a project-specific impact. The public notice states:

25 While the Proposed Amendments do not foreclose the possibility that a single project
26 may result in greenhouse gas emissions with a direct impact on the environment, the
27 evidence before [CNRA] indicates that in most cases, the impact will be cumulative.
28 Therefore, the Proposed Amendments emphasize that the analysis of greenhouse gas
29 emissions should center on whether a project's incremental contribution of
30 greenhouse gas emissions is cumulatively considerable.

31 ***Executive Order S-13-08***

32 In 2008, Governor Arnold Schwarzenegger signed EO S-13-08, which called on state
33 agencies to develop a strategy for identification and preparation for expected climate
34 change impacts in California. The resulting 2009 California Climate Adaptation Strategy
35 report was developed by the California Natural Resources Agency in coordination with
36 CAT. The report presents best available science relevant to climate impacts in California
37 and proposes a set of recommendations for California decision makers to assess
38 vulnerability and promote resiliency in order to reduce California's vulnerability to
39 climate change. In addition to requiring the CAT to create a Climate Adaptation Strategy,
40 EO-S13-08 ordered the creation of a comprehensive Sea Level Rise Assessment Report,
41 which was completed by the National Academy of Science in 2012 (NAS, 2012).
42 Guidance regarding adaptation strategies is general in nature and emphasizes
43 incorporation of strategies into existing planning policies and processes.

44 EO-S-13-08 called for the California Ocean Protection Council to work with the other
45 CAT state agencies to develop interim guidance for assessing the potential impacts of
46 sea-level rise (SLR) due to climate change in California. In coordination with National

1 Academy of Science efforts, the council drafted interim guidance recommending that
2 state agencies consider a range of SLR scenarios for the years 2050 and 2100 in order to
3 assess project vulnerability, reduce expected risks, and increase resiliency to SLR. The
4 draft resolution and interim guidance document is consistent with the Ocean Protection
5 Act (Division 26.5 PRC Section 35615(a)(1)), which specifically directs the California
6 Ocean Protection Council to coordinate activities of state agencies to improve the
7 effectiveness of state efforts to protect ocean resources.

8 **3.2.3.3 Local**

9 **South Coast Air Quality Management District**

10 ***SCAQMD GHG CEQA Thresholds***

11 In 2008, the SCAQMD Governing Board adopted its staff proposal for an interim CEQA
12 GHG significance threshold for projects where the SCAQMD is the lead agency. To date,
13 the board has adopted a threshold of 10,000 metric tons per year (mt) CO₂e emissions
14 per year to industrial projects, and the threshold has been a part of the SCAQMD Air
15 Quality Thresholds since 2011 (SCAQMD 2011).

16 **City of Los Angeles Policies**

17 ***General Plan***

18 The Mobility Element of the General Plan (City of Los Angeles 2016) contains general
19 policies and objectives related to greenhouse gases. Specifically, one of the document's
20 overall policies calls for the City to target GHG reductions through more sustainable
21 transportation systems. One of the goals articulated in Chapter 5, Clean Environments
22 and Healthy Communities, is to meet a 19% per capita GHG reduction by 2035,
23 consistent with the SCAG RTP (i.e., Connect SoCal). The reductions in GHG emissions
24 from the cement industry to which lower-carbon construction binders would contribute
25 would forward those policies and goals.

26 ***Green New Deal Sustainable City pLAN***

27 In 2019, Mayor Eric Garcetti launched an update to the Sustainable City pLAN (City of
28 Los Angeles 2015), which was, in turn, a replacement for the Green LA plan (City of Los
29 Angeles 2007). The update, LA's Green New Deal Sustainable City pLAN, aims to model
30 local governments' consistency with the Paris Climate Agreement (Garcetti 2019).

31 Among its milestones and chapter goals related to goods movement are:

- 32 • Identify air quality hotspots in impacted communities from goods movement,
33 ports, and refineries by 2021;
- 34 • Develop an electric freight and commercial vehicle billing rate by 2035; and
- 35 • By 2050, reduce Port-related GHG emissions by 80% by:
 - 36 ○ Incorporating sustainable practices in tenant lease agreements at cargo
37 terminals by 2030;
 - 38 ○ Developing technology and pilot at-berth controls for liquid bulk vessels by
39 2028;
 - 40 ○ Deploying 50-100 zero emission trucks in a clean truck pilot by 2035; and,
 - 41 ○ Implementing an updated Clean Truck Program with prioritization on zero
42 emission trucks.

1 The specific measures for developing the Port-specific actions are included in the San
2 Pedro Bay Ports Clean Air Action Plan discussed below.

3 ***Los Angeles Department of Water and Power (LADWP) 2022 Power Strategic*** 4 ***Long-Term Resource Plan***

5 The Power Strategic Long-Term Resource Plan (LADWP 2022) describes the agency's
6 current facilities and programs that address GHG emissions reductions and outlines its
7 plans for achieving the GHG reduction goals of the Green New Deal Sustainable City
8 pLAn, SB100 (Renewable Portfolio Standard or RPS), and SB 32 while meeting the
9 City's projected electrical energy demands. In order to comply with state regulation,
10 LADWP has committed to transition to a 100% clean energy supply by 2035, which is 10
11 years earlier than the RPS mandate. Past and future actions include eliminating coal-fired
12 generation from its portfolio, building solar and other renewable generating facilities,
13 increasing generating efficiency, and promoting programs to increase electrification of
14 buildings.

15 **Port of Los Angeles Policies**

16 ***Port Climate Action Plan***

17 The 2007 Green LA Plan led to the Los Angeles Harbor Department (LAHD)'s
18 development of an individual Climate Action Plan, consistent with the goals of Green
19 LA, to examine opportunities to reduce GHG emissions from Port operations (such as
20 Port buildings and Port workforce operations).

21 In accordance with this directive, the Port's Climate Action Plan, developed in December
22 2007, covers GHG emissions related to the Port's municipal activities (such as Port
23 buildings and Port workforce operations). The Climate Action Plan outlines specific steps
24 that LAHD has taken and will take on global climate change. These steps include specific
25 actions that will be taken for energy audits, green building policies, onsite photovoltaic
26 solar energy, green energy procurement, tree planting, water conservation, alternative
27 fuel vehicles, increased recycling, and green procurement. The Climate Action Plan also
28 identifies San Pedro Bay Ports Clean Air Action Plan (CAAP) measures that have
29 significant GHG reduction co-benefits, such as the Vessel Speed Reduction Program
30 (VSRP) and Alternative Marine Power (AMP). GHG reduction needs from Port's tenant
31 activities are recognized in the Port Climate Action Plan, but are deferred to the CAAP,
32 which addresses tenant operations.

33 In addition, the June 2008 Port of Los Angeles Sustainability Assessment contains an
34 assessment of existing programs and policies against the eight goals that were identified
35 in Executive Directive No. 10 on Sustainability Practices in the City of Los Angeles.
36 LAHD has also completed annual GHG inventories of the Port's municipal activities and
37 reported these to third-party registries since 2006. LAHD's Annual Inventory of Air
38 Emissions has also included GHG estimates for transportation activities associated with
39 goods movement for ocean-going vessels (OGVs), harbor craft, trucks, locomotives, and
40 cargo handling equipment since 2006. LAHD expanded the GHG inventories to include
41 an expanded geographical delineation for OGVs, trucks, and locomotives. These annual
42 inventories and their methodology reports can be found on the Port's website (LAHD
43 2022).

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

45 The Ports of Los Angeles and Long Beach, with the participation and cooperation of the
46 USEPA, CARB, and SCAQMD staff, developed the San Pedro Bay Ports CAAP, a

1 planning and policy document that sets goals and implementation strategies to reduce air
2 emissions and health risks associated with port operations while allowing port
3 development to continue (POLA and POLB 2006; POLB and POLA 2010). Each
4 individual CAAP measure is a proposed strategy for achieving these emissions reduction
5 goals.

6 The CAAP was updated in 2010 and most recently in 2017. The 2017 CAAP Update
7 (POLA and POLB 2017) aligns with the California Sustainable Freight Action Plan,
8 supports the zero-emissions and freight efficiency targets set by the state and other
9 agencies, and contains a new focus on GHG reductions with a 2050 emissions reductions
10 target. The 2017 CAAP emission reduction targets include:

- 11 • Reduce population-weighted residential cancer risk of Port-related diesel
12 particulate matter (DPM) emissions by 85 percent by 2020, compared to 2005
13 conditions;
- 14 • Reduce Port-related emissions by 59 percent for NOx, 93 percent for SOx and 77
15 percent for DPM emissions by 2023, compared to 2005 conditions;
- 16 • Reduce GHGs from Port related sources to 40 percent below 1990 levels by
17 2030; and
- 18 • Reduce GHGs from Port related sources to 80 percent below 1990 levels by
19 2050.

20 In addition, the 2017 CAAP Update incorporates commitments by the mayors of Los
21 Angeles and Long Beach to move towards zero emissions at the Ports, including setting
22 goals of zero-emissions cargo-handling equipment by 2030 and zero-emissions drayage
23 trucks by 3035. Accordingly, the updated CAAP includes provisions for new investments
24 in clean technology, expanded use of at-berth emission reduction technologies, and a
25 zero-emissions drayage truck pilot program.

26 The 2017 CAAP Update strategies may result in GHG reductions as older technologies
27 are replaced with newer, more fuel-efficient ones.

28 ***City of Los Angeles Actions to Reduce Greenhouse Gas Emissions by 2050***

29 The “Actions to Reduce Greenhouse Gas Emissions by 2050 report (LAHD 2014)
30 outlines actions/strategies that are either being implemented or evaluated to continue the
31 reduction of GHG emissions and meet a target of 35 percent below 1990 levels by 2035
32 and 80 percent below 1990 levels by 2050. The creation of this report was a response to
33 Los Angeles City Council Motion No. 14-0907. The report lists GHG emissions
34 reduction strategies for Port operations as well as the applicable implementing programs.
35 The report does not identify new programs or measures. It lists existing initiatives and
36 reiterates the Port’s commitment to continued collaboration with the international
37 maritime community, as well as between all stakeholders and regulators.

38 ***Additional Rules, Regulations and Policies***

39 In addition to the above, many rules, regulations and policies, discussed in Section 3.1,
40 Air Quality and Methodology, that reduce fuel consumption, would have the indirect
41 benefit of also reducing GHG emissions. These include USEPA/NHTSA fuel economy
42 standards and truck idling restrictions under AB2650 and CARB’s idling emission
43 reduction rule.

3.2.4 Impacts and Mitigation Measures

This section presents a discussion of the potential GHG impacts associated with operation of the Revised Project. Mitigation measures are provided, where feasible, for impacts found to be significant.

3.2.4.1 Methodology

Greenhouse Gas Emissions

GHG emissions were calculated for the 2008 Baseline, first non-compliance years 2012 and 2014, additional period of non-compliance years 2018 through 2023(actual data for years 2024 and 2025 was not available at the time of the analysis), and for future years 2026, 2036, and 2045 of the Revised Project and, for informational purposes, of the FEIR Mitigated Scenario. In addition, indirect GHG emissions from electricity consumption during operation of the Revised Project and FEIR Mitigated Scenario were included in the analysis.

The major sources contributing to GHG emissions during Revised Project operation consist of:

- container ships (transit, anchoring, and hoteling);
- tugboats assisting ships during harbor transit, turning, and docking;
- cargo-handling equipment (CHE) used for loading/unloading, stacking and moving containers in the terminal;
- switching and linehaul locomotives used to move containers to and from the on-dock and near-dock railyards; and
- drayage trucks used to pick up and drop off containers at various destinations throughout the South Coast region.
- On-terminal electricity use by electrical equipment, exterior lighting fixtures, and buildings;
- AMP electricity use during container ship hoteling; and
- Worker vehicles (light duty automobiles).

The activity data (ship calls, truck trips, etc.) used in the GHG emission calculations for baseline, and operation are the same activity data used and described in Section 3.1, Air Quality and Meteorology; therefore, the activity data descriptions are not repeated here. The equipment utilization and scheduling data needed to calculate emissions for the operational activities were obtained from WBCT, China Shipping and LAHD Engineering staff and are included in Appendix B-1.

GHG emission factors and emissions associated with all scenarios are presented in detail in Appendix B1 and summarized as follows:

- Container ship (OGV) emissions were based on emission factors identified in the Port Emissions Inventories.
- Harbor craft engine emissions were based on emission factors derived from the CARB 2021 Commercial Harbor Craft Model.
- Drayage truck emissions were based on the Port of Los Angeles fleet mix for the baseline, and the non-compliance years, EMFAC2021 model default POLA T7 drayage truck fleet mix for future years, and EMFAC2021 emission factors.

- Emissions from cargo handling equipment were based on emission factors derived from the CARB CHE Calculator and OFFROAD2021.
- CO₂e emissions from on-road and off-road equipment were based on emission factors derived from the CARB EMFAC2021, and OFFROAD2021 models.
- Switching and linehaul locomotive emissions were based on emission factors identified in the Port 2023 Emissions Inventory (LAHD 2024) and CARB rail emission inventory forecasts (CARB 2021).
- Drayage truck emissions were calculated to the first destination (e.g., warehouse, railyard, transload facility) in the form of average truck trip length, locomotive emissions to the California state boundary, and OGV emissions from the over-water California state boundary to the berth.

Indirect GHG emissions from electricity consumption on-site for the baseline were based on electrical consumption records for 2008, 2012, 2014, 2018 through 2023 obtained from WBCT. The electrical consumption in the future was projected based on the terminal's projected throughput and container ship activity. GHG emission factors for electrical consumption were based on emission factors for the Los Angeles Department of Water and Power (LADWP 2023). Because the emission factor is presented in CO₂e as a single measurement standard, individual emissions for the various greenhouse gases (i.e., CO₂, CH₄, or N₂O) are not estimated for electrical consumption.

Sea Level Rise

In addition to evaluating the CO₂e emissions from the Revised Project, the potential impact of SLR resulting from global climate change on the Revised Project was also considered. The most relevant studies of SLR are the updated guidance from the State of California (OPC 2018; a planned update was not yet released at this document's time of preparation) and the Port's adaptation study (LAHD 2018). Both studies recognize the uncertainty of SLR projections, particularly beyond approximately 2050, and offer multiple potential future scenarios of SLR under different assumptions of GHG emissions, ice cap melting, and other factors. The State's study recommends selecting a level of risk aversion (low, medium-high, extreme) in order to select an appropriate future SLR scenario. For the Revised Project, low risk aversion would be appropriate because the Revised Project would not involve critical infrastructure (e.g., power plants, water and wastewater treatment facilities, public safety facilities) or hazardous materials for which SLR impacts would be serious. The State's study uses a high-emissions assumption through 2050 to estimate SLR. The Port's SLR estimates, which are based on an earlier National Research Council study, do not include a consideration of risk aversion levels but do incorporate a high-emissions scenario. The Port's study considers horizon years of 2030, 2050, and 2100 and three scenarios of global warming (low, mid-range, high). The Port's study focuses on Port infrastructure by predicting inundation and flooding under various scenarios of SLR, high tides, and storm tides, whereas the State's study is a more general consideration of SLR alone along the California coast.

To evaluate the effects of SLR on a project, the State's study recommends considering project life when selecting horizon years and SLR scenarios. The Revised Project's service life is assumed to extend to 2045. Therefore, only 2050 SLR estimates are used in this analysis to estimate impacts from the Revised Project relative to SLR.

The State's study for the low-risk aversion level, high-emissions scenario (i.e., greatest SLR) at the Los Angeles tide gauge predicts SLR of approximately 12 inches (1.0 ft) higher than the 2000 level by 2050 (see OPC [2018] Appendix 3 Table 28). That prediction is based on the 66% probability for SLR, but a less likely outcome (the 1-in-

200 chance) predicts SLR in 2050 of 22 inches (1.8 feet). The Port’s study projects that under the high-emissions scenario, sea level at the Port could rise 24 inches above the 2000 level by 2050.

3.2.4.2 Geographic Boundaries

For the purpose of assessing GHG impacts under CEQA, Revised Project CO₂e emissions from all sources except OGVs were calculated to the California border. Emissions from Revised Project-related OGVs were calculated along the northern 170 nm shipping route. The analysis conservatively assumed that all container ships would follow this “northern” route because it represents the longest distance that ships would travel to and from the Port while within CARB’s California in-state boundary.

3.2.4.3 Baseline

This Draft RSEIR uses the 2008 Actual Baseline (see Section 2.6) in determining the significance of incremental changes to the mitigated impacts anticipated in the 2008 EIS/EIR due to changes to the project (i.e., proposed modifications to 2008 EIS/EIR Mitigation measures under the Revised Project) and changed circumstances/new information (i.e., incremental increase in terminal throughput as shown in Table 2-2, due to a revised assessment of terminal capacity presented in the 2019 SEIR). The methodology used to quantify baseline emissions is presented in Section 3.1.4.1, Methodology.

Table 3.2-1 presents the annual baseline GHG emissions in mty based on the baseline activity presented in Chapter 2 with application of all 2008 EIR/EIS mitigation measures.

Table 3.2-1. Annual Operational GHG Emissions—2008 Actual Baseline (mty)

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
OGV - Transit and Anchoring ¹	5,641	0.08	0.31	5,728
OGV – Hoteling	959	0.00	0.07	979
Harbor Craft	41	0.00	0.00	42
CHE	5,158	0.21	0.04	5,176
Rail On-Site	819	0.07	0.02	826
Rail Off-Site	12,201	1.00	0.32	12,319
On-Site Trucks	1,025	0.10	0.16	1,072
Off-Site Trucks	13,895	1.36	2.20	14,537
Employee On-Site Driving	37	0.00	0.00	37
Employee Off-Site Driving	755	0.04	0.04	768
Backlands Electricity Consumption				293
AMP Electricity Consumption				461
Total Operational Year 2008	40,531	2.86	3.18	42,238

Notes:

1) OGV - Transit and Anchoring also includes emissions from the SCAQMD Overwater Boundary to the Stateline

3.2.4.4 Thresholds of Significance

CEQA Significance Thresholds

CEQA Guidelines Appendix G suggests two criteria for determining the significance of impacts related to GHG:

- VII(a). Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- VII(b). Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The 2019 Initial Study (IS) in the NOP (Appendix A) eliminated VII(b) from further consideration. However, additional review on consistency with relevant plans and policies and regulations is included, for informational purposes, in Section 3.5.7 below. In terms of criteria VII(a), the Proposed Project or alternative would have a significant impact if it would:

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

State CEQA Guidelines Section 15064.4(a) affords a lead agency discretion to evaluate the significance of GHG emissions quantitatively -- and to select the model or methodology it considers appropriate for doing so -- or qualitatively. CEQA Guidelines section 15064.4 (b) sets forth the factors that should be considered by a lead agency when assessing the significance of impacts from GHG emissions on the environment. These factors include:

- the extent to which a project may increase or reduce GHG emissions compared with the existing environmental setting;
- whether project emissions exceed a threshold of significance that the lead agency determines applicable to a project; and
- the extent to which a project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions.

The Guidelines do not specify significance thresholds and allow the lead agencies discretion in how to address and evaluate significance based on these criteria. To provide guidance to local lead agencies regarding determining significance for GHG emissions in CEQA documents, SCAQMD convened the GHG CEQA Significance Threshold Working Group. Members of the working group included government agencies that implement CEQA and representatives from various stakeholder groups that provide input to SCAQMD staff members regarding developing the GHG CEQA significance thresholds.

On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal regarding an interim GHG significance threshold for projects where SCAQMD is lead agency. For industrial projects, a significance threshold of 10,000 mty of CO₂e emissions per year was established (construction GHG emissions are not relevant to the Revised Project because all construction activities have been completed). LAHD has determined that the SCAQMD-adopted 10,000 mty CO₂e threshold is suitable for LAHD projects for the following reasons:

- 1 • The SCAQMD industrial source threshold is appropriate for projects with future
2 operations continuing as far out as 2050. The SCAQMD threshold development
3 methodology used the EO S-3-05 emission reduction targets as the basis in
4 developing the threshold (SCAQMD 2008), with the AB 32 2020 reduction
5 requirements incorporated as a subset of EO S-3-05. EO S-3-05 sets an emission
6 reduction target of 80 percent below 1990 levels by 2050. AB 32 requires
7 California to reduce its GHG emissions to 1990 levels by 2020 (SCAQMD
8 2016a). AB 32 has the goal of achieving 1990 GHG levels by 2020.
- 9 • The SCAQMD industrial source threshold is appropriate for projects with both
10 stationary and mobile sources, both of which are typical components of LAHD
11 projects. The California Air Pollution Control Officers Association (CAPCOA)
12 guidance considers industrial projects to include substantial GHG emissions
13 associated with mobile sources (CAPCOA, 2008). SCAQMD, on industrial
14 projects for which it is the lead agency, uses the 10,000 mty threshold to
15 determine CEQA significance by combining a project’s stationary source and
16 mobile source emissions. Although the threshold was originally developed for
17 stationary sources, SCAQMD staff views the threshold as conservative for
18 projects with both stationary and mobile sources because it is applied to a larger
19 set of emissions and therefore captures a greater percentage of projects than
20 would be captured if the threshold was only used for stationary sources
21 (SCAQMD 2016a). For example, in one of its recent EIRs, the SCAQMD
22 applied the 10,000 mty threshold to a refinery project where the mobile source
23 emissions would increase and the stationary source emissions (combined direct
24 and indirect) would decrease relative to baseline (SCAQMD 2016b, SCAQMD
25 2017). The mobile source emissions included construction equipment, on-road
26 vehicles, and on- and off-site rail transport. Moreover, in the same EIR, the
27 SCAQMD applied the 10,000 mty threshold to its list of related cumulative
28 projects, two of which were LAHD projects (SCIG and ILWU Local 13 Dispatch
29 Hall) with dominant mobile source emissions. The SCAQMD also specifically
30 approved the use of the 10,000 mty threshold for the 2019 SEIR (SCAQMD
31 2015).
- 32 • The SCAQMD industrial source threshold is appropriate for projects with
33 sources that use primarily diesel fuel. Although most of the sources that were
34 considered by the SCAQMD in the development of the 10,000 mty threshold are
35 natural gas-fueled (SCAQMD 2008), both natural gas and diesel combustion
36 produce CO₂ as the dominant GHG (TCR 2016). Furthermore, the conversion of
37 all GHG species into a CO₂e ensures that the GHG emissions from any source,
38 regardless of fuel type, can be evaluated equitably.
- 39 • The SCAQMD industrial source threshold is conservative for LAHD projects.
40 Based on the 10,000 mty threshold, it would be exceeded by approximately 90-
41 percent of regulated, permitted industrial facilities subject to the SCAQMD’s
42 Annual Emission Reporting (AER) program (SCAQMD 2008). LAHD projects
43 subject to CEQA review usually far exceed this threshold because of their large
44 size and large number of mobile sources such as oceangoing vessels (OGVs),
45 harbor crafts, and trucks. A review of LAHD CEQA documents certified
46 between 2007 and 2018 (POLA 2023; GHG emissions were not quantified in
47 Port CEQA documents before 2007) shows that the 10,000 mty threshold would
48 have been exceeded by projects representing 98-percent of LAHD project CO₂e
49 emissions.

1 After considering the CEQA Guidelines and LAHD-specific climate change impact
2 issues, LAHD has set the following threshold for use in this SEIR to determine the
3 significance of project-related GHG impacts. The Revised Project would create a
4 significant GHG impact if it:

- 5 • **GHG-1:** Generates GHG emissions that, either directly or indirectly, exceed
6 the SCAQMD 10,000 mty CO₂e threshold.

7 For the purpose of this Draft RSEIR, no construction emissions are amortized in
8 assessing impacts under GHG-1, as construction of the China Shipping Terminal has
9 already been completed and is not a component of the Revised Project analyzed in this
10 document.

11 As noted above, CEQA Guideline Section 15064.4(b)(3) provides that one factor to be
12 considered in assessing the significance of GHG emissions on the environment is “the
13 extent to which a project complies with regulations or requirements adopted to implement
14 a statewide, regional or local plan for the reduction or mitigation of GHG emissions.”

15 Several state, regional and local plans have been developed that set goals for the
16 reduction of GHG emissions over the next few years and decades. Some of these plans
17 and policies (notably, EO S-3-05 and AB 32) were taken into account by the SCAQMD
18 in developing the 10,000 mty CO₂e threshold. However, no regulations or requirements
19 have been adopted by relevant public agencies to implement those plans for specific
20 projects, within the meaning of CEQA Guidelines Section 15064.4(b)(3). Consequently,
21 no CEQA significance assessment based upon compliance with such regulations or
22 requirements can be made for the Revised Project. Nevertheless, for the purpose of
23 disclosure, LAHD has considered, for informational purposes only, whether the Revised
24 Project would be consistent with federal, state or local plans, policies or regulations for
25 the reduction of GHG emissions, as set forth below.

26 Finally, CEQA Guidelines Section 15126.2(a) identifies the need to evaluate potential
27 impacts of locating development in areas that are vulnerable to climate change effects.
28 The EIR “should evaluate any potentially significant impacts of locating development in
29 other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk
30 areas).” Because the Revised Project does not involve any physical alterations to the CS
31 Container Terminal, which has already been constructed, and because no significance
32 thresholds are defined for evaluating the potential impacts of climate change, no further
33 evaluation is required. However, a qualitative assessment of consistency with related
34 climate change policies and plans is provided for informational purposes only.

35 **3.2.4.5 Impact Determination**

36 **Impact GHG-1: Would the Revised Project generate GHG emissions,** 37 **either directly or indirectly, that would exceed the SCAQMD 10,000** 38 **mty CO₂e threshold?**

39 Continued operation of the Revised Project would generate operational GHG emissions
40 which have been evaluated for analysis years 2026, 2036 and 2045. Continued operation
41 of the Revised Project would occur with specific revisions made to two Air Quality
42 Mitigation Measures that have been described in Section 3.1 and that would affect GHG
43 emissions from the Revised Project. These are:

MM AQ-9: Alternative Maritime Power. China Shipping ships calling at Berths 97-109 shall use AMP while hoteling in the Port for 100-percent of ship calls.

Additionally, all ships retrofitted for or capable of using AMP calling at Berths 97-109 shall use AMP while hoteling in the Port for 100-percent compliance of ship calls.

The following exceptions apply to this measure:

- (1) When an AMP-capable berth is unavailable due to utilization by another AMP-capable ship.
- (2) During any portion of a vessel visit that qualifies as a “safety and emergency event” under California Code of Regulations, Title 17, section 93130.8, subdivision (a).
- (3) During any portion of a vessel visit that qualifies as “commissioning” under California Code of Regulations, Title 17, section 93130.8, subdivision (c).
- (4) During any portion of a vessel visit that occurs during either a vessel-side equipment failure or a terminal-side equipment failure.

MM AQ-10: Vessel Speed Reduction Program (VSRP). All ships calling at Berths 97-109 shall comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area.

All other 2008 EIR/EIS GHG mitigation measures and lease measures have either already been implemented, have been modified by the 2019 SEIR, have been determined to be infeasible or not applicable, or are not quantified for purposes of calculating GHG emissions under the Revised Project (see Table 1-1). Note that the electric yard tractor pilot project required by MM AQ-17 is not quantified in this analysis as its GHG benefits are unknown. The speculative nature of such a project in terms of the number and type of ZE equipment that might be employed in a pilot project means its emission benefits cannot be quantified in any meaningful way.

The Revised Project operational GHG emissions are summarized below in Table 3.2-2. The operational GHG emissions from the Revised Project are compared to the 2008 Actual Baseline for purposes of determining the impact from the Revised Project, over the SCAQMD 10,000 mty CO₂e threshold.

Table 3.2-2. Operational GHG Emissions– Revised Project (mty)

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
Year – 2012 Actual	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	6,630	0.12	0.34	6,726
OGV – Hoteling	2,145	0.02	0.13	2,180
Harbor Craft	48	0.00	0.00	49
CHE	12,291	0.55	0.11	12,337
Rail On-Site	941	0.08	0.02	950
Rail Off-Site	13,011	1.06	0.35	13,137
On-Site Trucks	1,831	0.65	0.30	1,931
Off-Site Trucks	22,547	2.07	3.57	23,584
Employee Driving On-Site	38	0.00	0.00	38

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
Employee Driving Off-Site	768	0.03	0.03	778
Backlands Electricity Consumption				597
AMP Electricity Consumption				138
Total Operational Year 2012	60,249	4.575	4.855	62,446
2012 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
Revised Project Minus 2008 Actual Baseline				20,208
Significance Threshold				10,000
Significant?				Yes
Year – 2014 Actual	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	17,840	0.30	1.10	18,150
OGV – Hoteling	5,093	0.02	0.36	5,193
Harbor Craft	134	0.00	0.01	136
CHE	21,443	0.96	0.19	21,524
Rail On-Site	1,046	0.08	0.03	1,057
Rail Off-Site	13,406	1.10	0.36	13,536
On-Site Trucks	7,997	1.67	1.28	8,396
Off-Site Trucks	48,483	3.53	7.69	50,689
Employee Driving On-Site	35	0.00	0.00	35
Employee Driving Off-Site	723	0.02	0.03	731
Backlands Electricity Consumption				1,276
AMP Electricity Consumption				987
Total Operational Year 2014	116,201	7.680	11.046	121,708
2014 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
Revised Project Minus 2008 Actual Baseline				79,470
Significance Threshold				10,000
Significant?				Yes
Year – 2018 Actual	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	28,166	0.78	2.14	28,774
OGV – Hoteling	1,071	0.01	0.06	1,088
Harbor Craft	125	0.01	0.00	126
CHE	9,552	0.43	0.09	9,588
Rail On-Site	163	0.01	0.00	165
Rail Off-Site	1,851	0.15	0.05	1,869
On-Site Trucks	2,827	0.30	0.45	2,958
Off-Site Trucks	54,844	3.15	8.71	57,315
Employee Driving On-Site	42	0.00	0.00	43
Employee Driving Off-Site	170	0.03	0.02	177

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
Backlands Electricity Consumption				1,245
AMP Electricity Consumption				1,143
Total Operational Year 2018	98,812	4.871	11.523	104,491
2018 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
Revised Project Minus 2008 Actual Baseline				62,253
Significance Threshold				10,000
Significant?				Yes
Year – 2019 Actual	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	35,604	0.87	2.20	36,232
OGV – Hoteling	1,817	0.01	0.10	1,846
Harbor Craft	127	0.01	0.00	128
CHE	9,411	0.42	0.08	9,446
Rail On-Site	141	0.01	0.00	142
Rail Off-Site	1,583	0.13	0.04	1,598
On-Site Trucks	2,982	0.33	0.47	3,121
Off-Site Trucks	56,708	3.38	9.01	59,269
Employee Driving On-Site	37	0.00	0.00	37
Employee Driving Off-Site	146	0.02	0.02	152
Backlands Electricity Consumption				1,190
AMP Electricity Consumption				1,451
Total Operational Year 2019	108,556	5.176	11.943	114,612
2019 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
Revised Project Minus 2008 Actual Baseline				72,374
Significance Threshold				10,000
Significant?				Yes
Year – 2020 Actual	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	31,642	0.77	2.18	32,261
OGV – Hoteling	1,965	0.01	0.11	1,996
Harbor Craft	134	0.01	0.00	135
CHE	13,596	0.60	0.12	13,646
Rail On-Site	355	0.03	0.01	358
Rail Off-Site	3,295	0.27	0.09	3,327
On-Site Trucks	4,000	0.54	0.64	4,191
Off-Site Trucks	85,190	6.16	13.58	89,081
Employee Driving On-Site	55	0.00	0.00	56
Employee Driving Off-Site	250	0.04	0.03	259
Backlands Electricity Consumption				1,532

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
AMP Electricity Consumption				1,563
Total Operations Year 2020	140,483	8.427	16.762	148,405
2020 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
Revised Project Minus 2008 Actual Baseline				106,167
Significance Threshold				10,000
Significant?				Yes
Year – 2021 Actual	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	60,805	1.02	3.66	61,835
OGV – Hoteling	6,752	0.05	0.38	6,858
Harbor Craft	179	0.01	0.00	180
CHE	21,310	0.93	0.19	21,389
Rail On-Site	613	0.05	0.02	619
Rail Off-Site	5,483	0.45	0.15	5,536
On-Site Trucks	12,428	1.75	1.98	13,021
Off-Site Trucks	136,892	10.50	21.84	143,166
Employee Driving On-Site	89	0.00	0.00	90
Employee Driving Off-Site	350	0.05	0.04	362
Backlands Electricity Consumption				1,894
AMP Electricity Consumption				2,206
Total Operations Year 2021	244,902	14.806	28.252	257,156
2021 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
Revised Project Minus 2008 Actual Baseline				214,918
Significance Threshold				10,000
Significant?				Yes
Year – 2022 Actual	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	26,124	0.70	1.92	26,669
OGV – Hoteling	1,497	0.01	0.08	1,520
Harbor Craft	123	0.01	0.00	123
CHE	22,138	0.97	0.19	22,219
Rail On-Site	840	0.07	0.02	848
Rail Off-Site	7,437	0.61	0.20	7,510
On-Site Trucks	14,093	2.23	2.25	14,773
Off-Site Trucks	148,734	12.70	23.76	155,598
Employee Driving On-Site	86	0.00	0.00	86
Employee Driving Off-Site	333	0.04	0.03	344
Backlands Electricity Consumption				2,125
AMP Electricity Consumption				2,528

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
Total Operations Year 2022	221,404	17.338	28.461	234,344
2022 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
Revised Project Minus 2008 Actual Baseline				192,106
Significance Threshold				10,000
Significant?				Yes
Year – 2023 Actual	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	40,803	1.18	2.99	41,655
OGV – Hoteling	1,493	0.01	0.08	1,517
Harbor Craft	192	0.01	0.00	193
CHE	21,259	0.93	0.19	21,338
Rail On-Site	443	0.04	0.01	448
Rail Off-Site	3,739	0.31	0.10	3,776
On-Site Trucks	8,808	1.62	1.41	9,240
Off-Site Trucks	113,347	14.16	18.12	118,715
Employee Driving On-Site	61	0.00	0.00	61
Employee Driving Off-Site	233	0.03	0.02	240
Backlands Electricity Consumption				1,874
AMP Electricity Consumption				2,255
Total Operations Year 2023	190,378	18.280	22.926	201,311
2023 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
Revised Project Minus 2008 Actual Baseline				159,073
Significance Threshold				10,000
Significant?				Yes
Year – 2026 Revised Project	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	27,862	0.73	1.95	28,416
OGV – Hoteling	1,062	0.01	0.06	1,078
Harbor Craft	123	0.01	0.00	124
CHE	20,654	5.14	0.30	20,890
Rail On-Site	586	0.05	0.02	591
Rail Off-Site	8,931	0.73	0.24	9,017
On-Site Trucks	6,347	1.31	1.02	6,665
Off-Site Trucks	46,713	1.83	7.43	48,797
Employee Driving On-Site	55	0.00	0.00	55
Employee Driving Off-Site	2,129	0.02	0.03	2,138
Backlands Electricity Consumption				2,414
AMP Electricity Consumption				1,122
Total Operations Year 2026	114,463	9.827	11.050	121,309

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
2026 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
Revised Project Minus 2008 Actual Baseline				79,071
Significance Threshold				10,000
Significant?				Yes
Year – 2036 Revised Project	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	63,062	1.33	3.08	63,942
OGV – Hoteling	1,374	0.01	0.08	1,396
Harbor Craft	185	0.01	0.00	186
CHE	13,015	6.15	0.27	13,273
Rail On-Site	660	0.05	0.02	666
Rail Off-Site	8,747	0.71	0.23	8,831
On-Site Trucks	8,513	1.30	1.37	8,926
Off-Site Trucks	62,392	1.25	9.93	65,140
Employee Driving On-Site	66	0.00	0.00	66
Employee Driving Off-Site	1,250	0.01	0.02	1,255
Backlands Electricity Consumption				3,318
AMP Electricity Consumption				1,379
Total Operations Year 2036	159,263	10.829	15.003	168,379
2036 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
Revised Project Minus 2008 Actual Baseline				126,141
Significance Threshold				10,000
Significant?				Yes
Year – 2045 Revised Project	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	63,062	1.33	3.08	63,942
OGV – Hoteling	1,374	0.01	0.08	1,396
Harbor Craft	185	0.01	0.00	186
CHE	11,372	5.38	0.24	11,597
Rail On-Site	661	0.05	0.02	667
Rail Off-Site	12,324	1.01	0.33	12,444
On-Site Trucks	7,976	1.23	1.29	8,364
Off-Site Trucks	54,093	1.33	8.62	56,486
Employee Driving On-Site	63	0.00	0.00	64
Employee Driving Off-Site	1,224	0.01	0.02	1,229
Backlands Electricity Consumption				3,318
AMP Electricity Consumption				1,379
Total Operations Year 2045	152,333	10.355	13.669	161,070
2045 Emissions Impacts				

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
2008 Actual Baseline	40,531	3	3	42,238
Revised Project Minus 2008 Actual Baseline				118,832
Significance Threshold				10,000
Significant?				Yes

Notes:

1) OGV - Transit and Anchoring also includes emissions from the SCAQMD Overwater Boundary to the Stateline

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Impact Determination

Table 3.2-2 shows that the Revised Project’s GHG emissions minus the 2008 Actual Baseline would exceed the GHG threshold of 10,000 mty in all of the study years for the Revised Project. Accordingly, GHG emissions impacts of the Revised Project would be significant.

Mitigation Measures

The 2019 SEIR included MM GHG-1: LED Lighting, which has already been implemented. The effects of converting high mast light poles to LED on electricity consumption GHG emissions is quantified as part of the Revised Project; the effects of converting interior lighting to LED is not quantified. The 2019 SEIR concluded that, with implementation of MM GHG-1, the residual impacts would remain for years 2023, 2030, 2036 and 2045, and, thus, the 2019 SEIR concluded that there was a significant and unavoidable impact on GHG emissions after application of MM GHG-1.

The 2019 SEIR also included a lease measure, LM GHG-1, that required a one-time payment to compensate for the Revised Project’s GHG emissions impacts. In accordance with the Writ, LAHD has re-evaluated LM GHG-1 in this Draft RSEIR, and has developed a mitigation measure that, if implemented, would mitigate for the Revised Project’s residual GHG emissions impacts (after implementing MM GHG-1) in excess of the SCAQMD significance threshold of 10,000 mty.

MM GHG-2. GHG Reduction Offsets. The Tenant shall be required to purchase and retire carbon offsets related to activities that reduce, avoid, destroy, or sequester an amount of GHG emissions in an off-site location to offset the equivalent amount of GHG emissions generated by the Project in excess of the City’s significance threshold of 10,000 metric tons. From the first year of the Permit amendment, in 2026, through the end of the term of the Permit in 2045, the Tenant shall purchase and retire carbon offsets each year in an amount that would be the equivalent of the Project’s estimated residual GHG emissions. The estimated residual emissions for each calendar year shall be based upon the calculations in Appendix C of the Final Revised SEIR prepared for the Revised Project except as adjusted in accordance with paragraph a) or b), below.

The LAHD is in the process of developing a Greenhouse Gas Program. The Program shall be used for GHG-reducing projects and programs approved by the Port of Los Angeles. If that Program is established during the term of the Permit, the Tenant shall have the option to offset the required amount of GHG emissions through a funding contribution to the Greenhouse Gas Program rather than towards purchasing carbon offsets from a CARB-recognized registry.

While the LAHD Greenhouse Gas Program is currently under development, the Tenant shall purchase and retire carbon offsets from a CARB-recognized offset registry as follows:

1 **Carbon offsets:** The Tenant shall purchase and retire carbon offsets from a
2 CARB-recognized registry to ensure that offsets will result in real, permanent,
3 additional, quantifiable, verifiable, and enforceable reductions. The carbon offsets
4 shall be verifiable by the City and enforceable in accordance with the registry's
5 applicable standards, practices, or protocols.

6 The order of priority for purchasing (any one or more) carbon offsets shall be
7 considered as follows:

- 8 i. Originating within the local area;
- 9 ii. Originating within the South Coast Air Basin;
- 10 iii. Originating within the state of California; or
- 11 iv. If sufficient local and in-state offsets are not available, the Tenant shall
12 purchase conforming national offsets registered with a CARB-recognized
13 registry.

14 **Adjustment of Tenant's Required Offsets through Other Verified GHG Emission**
15 **Reductions:** The Tenant may pursue the following modifications to the Project's total
16 estimated GHG emissions identified in this measure. These modifications may be
17 pursued in conjunction with or independent of each other on an up to annual basis.

18 *a) Adjustment in GHG Emissions*

19 In the event of changes in activities, efficiency, reduced operations, regulations or for any
20 other purpose, the Tenant may request an adjustment of the required carbon offsets based
21 on an evaluation of actual GHG emissions rather than future projected GHG emission
22 calculations in this RSEIR. If the actual GHG emissions, minus the 2008 Actual Baseline,
23 do not exceed the significance threshold of 10,000 mty, no carbon offsets shall be
24 required. To adjust the Tenant's required number of carbon offsets for purchase, the
25 Tenant shall make a request in writing to the LAHD for review and approval for the
26 calendar year under consideration and shall submit a report within 60 days that quantifies
27 the actual greenhouse gas emissions by an expert or an independent, qualified third-party.
28 The evaluation of actual greenhouse gas emissions must be performed using acceptable
29 industry standards and protocols for all sources that were included in the Project's GHG
30 emissions calculations under Impact GHG-1. LAHD review shall occur within 30 days of
31 receipt of the submitted report. Any expenses incurred by LAHD in processing the
32 Tenant's request, including retaining an independent third-party verifier to peer review
33 the report, shall be borne by the Tenant.

34 or

35 *b) Implementation of Additional GHG Reduction Methods*

36 In addition, the Tenant may request a reevaluation of required carbon offsets to be
37 purchased according to this paragraph. The Tenant may implement different and
38 additional GHG reduction methods if new technology and/or other feasible measures
39 become available during the term of the Permit. To adjust the Tenant's required number
40 of carbon offsets for purchase, the Tenant shall identify such additional GHG reduction
41 actions and must quantify the GHG emission reductions from these GHG reduction
42 actions by an independent, qualified third-party verifier. Once the GHG reduction actions
43 are found to be feasible and are reviewed and approved by LAHD staff, the Tenant may
44 request that LAHD reduce its required purchase of carbon offsets by the equivalent
45 amount of demonstrated reduction. Any expenses incurred by LAHD in processing the
46 Tenant's request, including retaining a third-party verifier, shall be borne by the Tenant.

Residual Impacts

With full implementation of MM GHG-2, impacts would be less than significant.

Comparison of Impacts to FEIR Mitigated Scenario (informational only)

The same methodology described above to analyze the GHG impacts from the Revised Project was used to analyze, for informational purposes only, the impacts from the FEIR Mitigated Scenario that is defined in Section 3.1.1. of this Draft RSEIR. As with the Revised Project, the forecasted GHG emissions if all 2008 EIR/EIS mitigation measures had been applied are compared to the 2008 Actual Baseline to provide a direct comparison to the impact analysis in Table 3.2-2. The results are shown in Table 3.2-3.

Table 3.2-3. Operational GHG Emissions–FEIR Mitigated Scenario (mty)

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
Year – 2012 FEIR Mitigated	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	6,377	0.11	0.33	6,469
OGV – Hoteling	1,020	0.00	0.08	1,042
Harbor Craft	48	0.00	0.00	49
CHE	11,064	0.50	0.10	11,107
Rail On-Site	941	0.08	0.02	950
Rail Off-Site	13,011	1.06	0.35	13,137
On-Site Trucks	1,830	2.96	0.33	2,009
Off-Site Trucks	20,361	22.12	3.63	22,012
Employee Driving On-Site	38	0.00	0.00	38
Employee Driving Off-Site	768	0.03	0.03	778
Backlands Electricity Consumption				597
AMP Electricity Consumption				1,318
Total Operational Year 2012	55,458	26.870	4.876	59,505
2012 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
Revised Project Minus 2008 Actual Baseline				17,267
Significance Threshold				10,000
Significant?				Yes
Year – 2014 FEIR Mitigated	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	17,813	0.30	1.10	18,122
OGV – Hoteling	4,143	0.01	0.32	4,232
Harbor Craft	134	0.00	0.01	136
CHE	19,051	0.86	0.17	19,123
Rail On-Site	1,046	0.08	0.03	1,057
Rail Off-Site	13,406	1.10	0.36	13,536
On-Site Trucks	6,637	13.31	1.24	7,371
Off-Site Trucks	42,803	53.05	8.04	46,578
Employee Driving On-Site	35	0.00	0.00	35
Employee Driving Off-Site	723	0.02	0.03	731

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
Backlands Electricity Consumption				1,276
AMP Electricity Consumption				1,212
Total Operational Year 2014	105,791	68.732	11.289	113,409
2014 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
FEIR Mitigated Project Minus 2008 Actual Baseline				71,171
Significance Threshold				10,000
Significant?				Yes
Year – 2018 FEIR Mitigated	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	30,500	0.85	2.32	31,157
OGV – Hoteling	885	0.01	0.05	899
Harbor Craft	125	0.01	0.00	126
CHE	6,795	4.81	0.19	6,990
Rail On-Site	163	0.01	0.00	165
Rail Off-Site	1,851	0.15	0.05	1,869
On-Site Trucks	2,220	6.98	0.45	2,552
Off-Site Trucks	46,167	79.94	9.41	51,119
Employee Driving On-Site	42	0.00	0.00	43
Employee Driving Off-Site	170	0.03	0.02	177
Backlands Electricity Consumption				1,245
AMP Electricity Consumption				2,242
Total Operational Year 2018	88,918	92.786	12.501	98,583
2018 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
FEIR Mitigated Project Minus 2008 Actual Baseline				56,345
Significance Threshold				10,000
Significant?				Yes
Year – 2019 FEIR Mitigated	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	38,622	0.94	2.39	39,302
OGV – Hoteling	1,633	0.01	0.09	1,658
Harbor Craft	127	0.01	0.00	128
CHE	6,907	4.39	0.18	7,087
Rail On-Site	141	0.01	0.00	142
Rail Off-Site	1,583	0.13	0.04	1,598
On-Site Trucks	2,329	7.32	0.47	2,677
Off-Site Trucks	47,513	82.73	9.69	52,623
Employee Driving On-Site	37	0.00	0.00	37
Employee Driving Off-Site	146	0.02	0.02	152
Backlands Electricity Consumption				1,190

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
AMP Electricity Consumption				2,384
Total Operational Year 2019	99,038	95.563	12.888	108,978
2019 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
FEIR Mitigated Project Minus 2008 Actual Baseline				66,740
Significance Threshold				10,000
Significant?				Yes
Year – 2020 FEIR Mitigated	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	34,092	0.83	2.35	34,759
OGV – Hoteling	1,254	0.01	0.07	1,274
Harbor Craft	134	0.01	0.00	135
CHE	11,225	0.54	0.09	11,267
Rail On-Site	355	0.03	0.01	358
Rail Off-Site	3,295	0.27	0.09	3,327
On-Site Trucks	3,294	10.29	0.67	3,784
Off-Site Trucks	71,573	124.75	14.59	79,273
Employee Driving On-Site	55	0.00	0.00	56
Employee Driving Off-Site	250	0.04	0.03	259
Backlands Electricity Consumption				1,532
AMP Electricity Consumption				2,760
Total Operations Year 2020	125,526	136.760	17.909	138,783
2020 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
FEIR Mitigated Project Minus 2008 Actual Baseline				96,545
Significance Threshold				10,000
Significant?				Yes
Year – 2021 FEIR Mitigated	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	63,677	1.09	3.84	64,758
OGV – Hoteling	1,572	0.01	0.09	1,597
Harbor Craft	179	0.01	0.00	180
CHE	15,454	8.16	0.35	15,794
Rail On-Site	613	0.05	0.02	619
Rail Off-Site	5,483	0.45	0.15	5,536
On-Site Trucks	9,445	30.94	1.93	10,893
Off-Site Trucks	115,168	201.96	23.48	127,596
Employee Driving On-Site	89	0.00	0.00	90
Employee Driving Off-Site	350	0.05	0.04	362
Backlands Electricity Consumption				1,894
AMP Electricity Consumption				4,650

Source Category	CO₂	CH₄	N₂O	CO₂e
Total Operations Year 2021	212,031	242.721	29.888	233,968
2021 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
FEIR Mitigated Project Minus 2008 Actual Baseline				191,730
Significance Threshold				10,000
Significant?				Yes
Year – 2022 FEIR Mitigated	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	28,266	0.76	2.07	28,854
OGV – Hoteling	1,175	0.01	0.07	1,193
Harbor Craft	123	0.01	0.00	123
CHE	16,237	8.28	0.36	16,583
Rail On-Site	840	0.07	0.02	848
Rail Off-Site	7,437	0.61	0.20	7,510
On-Site Trucks	10,957	36.13	2.23	12,643
Off-Site Trucks	124,917	223.53	25.47	138,530
Employee Driving On-Site	86	0.00	0.00	86
Employee Driving Off-Site	333	0.04	0.03	344
Backlands Electricity Consumption				2,125
AMP Electricity Consumption				3,691
Total Operations Year 2022	190,371	269.439	30.458	212,531
2022 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
FEIR Mitigated Project Minus 2008 Actual Baseline				170,293
Significance Threshold				10,000
Significant?				Yes
Year – 2023 FEIR Mitigated	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	44,247	1.29	3.24	45,171
OGV – Hoteling	1,203	0.01	0.07	1,221
Harbor Craft	192	0.01	0.00	193
CHE	16,168	8.12	0.35	16,507
Rail On-Site	443	0.04	0.01	448
Rail Off-Site	3,739	0.31	0.10	3,776
On-Site Trucks	6,994	25.21	1.43	8,134
Off-Site Trucks	95,435	239.85	19.45	107,894
Employee Driving On-Site	61	0.00	0.00	61
Employee Driving Off-Site	233	0.03	0.02	240
Backlands Electricity Consumption				1,874
AMP Electricity Consumption				2,563
Total Operations Year 2023	168,714	274.850	24.686	188,081

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
2023 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
FEIR Mitigated Project Minus 2008 Actual Baseline				145,843
Significance Threshold				10,000
Significant?				Yes
Year – 2026 FEIR Mitigated	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	10,063	0.26	0.74	10,274
OGV – Hoteling	821	0.01	0.05	834
Harbor Craft	123	0.01	0.00	124
CHE	16,882	8.65	0.38	17,242
Rail On-Site	586	0.05	0.02	591
Rail Off-Site	8,931	0.73	0.24	9,017
On-Site Trucks	5,454	15.08	1.11	6,206
Off-Site Trucks	35,615	41.17	7.26	38,824
Employee Driving On-Site	55	0.00	0.00	55
Employee Driving Off-Site	2,129	0.02	0.03	2,138
Backlands Electricity Consumption				2,414
AMP Electricity Consumption				1,182
Total Operations Year 2026	80,657	65.979	9.827	88,902
2026 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
FEIR Mitigated Project Minus 2008 Actual Baseline				46,664
Significance Threshold				10,000
Significant?				Yes
Year – 2036 FEIR Mitigated	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	21,651	0.59	1.04	21,953
OGV – Hoteling	1,067	0.01	0.06	1,083
Harbor Craft	185	0.01	0.00	186
CHE	11,917	6.11	0.27	12,171
Rail On-Site	660	0.05	0.02	666
Rail Off-Site	8,747	0.71	0.23	8,831
On-Site Trucks	7,736	14.26	1.58	8,591
Off-Site Trucks	49,002	28.06	9.99	52,565
Employee Driving On-Site	66	0.00	0.00	66
Employee Driving Off-Site	1,250	0.01	0.02	1,255
Backlands Electricity Consumption				3,318
AMP Electricity Consumption				1,452
Total Operations Year 2036	102,279	49.811	13.203	112,138
2036 Emissions Impacts				

Source Category	CO ₂	CH ₄	N ₂ O	CO ₂ e
2008 Actual Baseline	40,531	3	3	42,238
FEIR Mitigated Project Minus 2008 Actual Baseline				69,900
Significance Threshold				10,000
Significant?				Yes
Year – 2045 FEIR Mitigated	Emissions in metric tons per year			
OGV - Transit and Anchoring ¹	21,651	0.59	1.04	21,953
OGV – Hoteling	1,067	0.01	0.06	1,083
Harbor Craft	185	0.01	0.00	186
CHE	10,412	5.34	0.23	10,634
Rail On-Site	661	0.05	0.02	667
Rail Off-Site	12,324	1.01	0.33	12,444
On-Site Trucks	7,579	13.37	1.54	8,399
Off-Site Trucks	48,570	29.88	9.90	52,164
Employee Driving On-Site	63	0.00	0.00	64
Employee Driving Off-Site	1,224	0.01	0.02	1,229
Backlands Electricity Consumption				3,318
AMP Electricity Consumption				1,452
Total Operations Year 2045	103,736	50.264	13.144	113,592
2045 Emissions Impacts				
2008 Actual Baseline	40,531	3	3	42,238
FEIR Mitigated Project Minus 2008 Actual Baseline				71,354
Significance Threshold				10,000
Significant?				Yes

Notes:

1) OGV - Transit and Anchoring also includes emissions from the SCAQMD Overwater Boundary to the Stateline

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Table 3.2-3 shows that with application of all FEIR mitigation measures, the FEIR Mitigated Scenario operational GHG emissions would still exceed the threshold of significance for all analysis years. However, the increment between the FEIR Mitigated Scenario and the 2008 Actual Baseline would be lower than for the Revised Project.

Informational Assessment: The Revised Project would be consistent with certain statewide, regional, and local plans and policies.

The State of California, the City of Los Angeles, and LAHD have adopted plans and policies to reduce GHG emissions. None of these plans or policies constitute regulations or requirements adopted to implement a statewide, regional or local plan for reduction or mitigation of greenhouse gas emissions. (See *Center for Biological Diversity v. Cal. Dept. of Fish and Wildlife (Newhall Ranch)* (2015) 62 Cal.4th 204, 223.) Therefore, a significance determination cannot be made using these factors. Nevertheless, for informational purposes only, this document provides a discussion of consistency with adopted statewide, regional and local plans and policies to reduce GHG emissions.

1 A description of the various State of California, City of Los Angeles, and Port of Los
 2 Angeles programs related to GHG reductions is provided in the 2019 SEIR, which is
 3 incorporated by reference. Table 3.2-4 summarizes the Revised Project’s compliance
 4 with key plans and policies adopted for the purpose of reducing GHG emissions.

5 **Table 3.2-4. Consideration of Key State and Local GHG-Reducing Plans, and Policies**

Plan or Policy	Plan/Policy Measure	Discussion
<p>EO S-3-05 (2005) established the following GHG emissions-reduction targets for California State agencies: (1) Year 2000 levels by 2010; (2) year 1990 levels by 2020; and (3) 80 percent below 1990 levels by 2050.</p>	<p>Established State-wide goals that are not directly binding on local agencies conducting project-level analysis.</p>	<p>EO S-3-05 established State targets and directed State legislature to develop legislation to address those targets.</p> <p>The Revised Project analysis has quantified GHG impacts for 2026 through 2045 and has identified feasible mitigation measures.</p> <p>EO S-3-05 did not identify project-level measures. The Revised Project would comply with existing regulations, applicable to project activities, and would, by law, comply with future regulatory requirements, applicable to project activities. Although the Revised Project would exceed the SCAQMD significance threshold under GHG-1, mitigation in the form of MM GHG-2 would reduce the impact to less than significant. Accordingly, it was determined that the Revised Project would be consistent with the State’s compliance with GHG reduction goals established under EO S-3-05.</p>
<p>AB 32– California Global Warming Solutions Act (2006) codified the following statewide targets under S-3-05: (1) Year 2000 levels by 2010; and (2) Year 1990 levels by 2020.</p>	<p>Established State-wide goals that are not directly binding on local agencies conducting project-level analysis.</p>	<p>AB 32 codified EO S-3-05 targets through 2020 and directed State regulatory agencies to develop rules and regulations to meet the 2020 State targets. To date, no such rules and regulations have been promulgated that would be binding on the Revised Project.</p> <p>The Revised Project analysis has quantified GHG impacts for 2026 through 2045 and has identified feasible mitigation measures.</p> <p>AB 32 did not identify project-level measures. The Revised Project would comply with existing regulations, applicable to project activities, and would, by law, comply with future regulatory requirements, applicable to project activities.</p> <p>Although the Revised Project would exceed the SCAQMD significance threshold under GHG-1, mitigation in the form of carbon offset purchases under MM GHG-2 would reduce the impact to less than significant. Accordingly, it was determined that the Revised Project would be consistent with the State’s compliance with AB 32.</p>

Plan or Policy	Plan/Policy Measure	Discussion
<p>ARB's AB 32 Scoping Plan (2008) set a Statewide roadmap for achieving the following AB 32 State targets: (1) Year 2000 levels by 2010; and (2) Year 1990 levels by 2020.</p>	<p>The Scoping Plan includes general recommendations to reduce GHG emissions from various sources. The most relevant to the proposed Project are the Goods Movement Recommendations, which are generally suited to the proposed Project, although they are not legally binding on local agencies conducting project-level analysis.</p>	<p>AB 32 Scoping Plan describes the State's approach to achieve the GHG emissions reduction goal to 1990 levels by 2020. The Scoping Plan's GHG reduction actions include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 program implementation fee regulation to fund the program. The Scoping Plan's reduction actions do not identify specific project-level measures.</p> <p>The Scoping Plan identified a discrete early action, regulation for port operations. This action resulted in the promulgation of regulation for electrification of ship auxiliary engines while at berth. The Revised Project complies with this requirement and goes beyond in requiring a higher percentage of vessel calls (quantified at 97% in this analysis) to use shoreside power than the regulation requires.</p> <p>The Revised Project analysis has quantified GHG impacts and has identified feasible mitigation measures. The Revised Project would comply with existing regulations, applicable to project activities, and would, by law, comply with future regulatory requirements, applicable to project activities, developed as part of the Scoping Plan. Although the Revised Project GHG emissions are expected to exceed 10,000 MT per year for every study year, mitigation in the form of carbon offset purchases under MM GHG-1 would reduce the impact to less than significant. Accordingly, it was determined that the Revised Project would be consistent with the State's GHG reduction goals under AB 32 and would therefore be consistent with the AB 32 Scoping Plan (2008).</p>

Plan or Policy	Plan/Policy Measure	Discussion
<p>AB 32 Climate Change Scoping Plan Update (2022) outlines a sector-by-sector roadmap for California to achieve carbon neutrality by 2045 or earlier. It aims to reduce anthropogenic emissions to 85% below 1990 levels by 2045.</p>	<p>The Scoping Plan includes general recommendations to reduce GHG emissions from various sources, some of which are relevant to the Revised Project.</p>	<p>The Scoping Plan Update includes specific recommended actions for lead agencies, identifies possible regulatory actions for vehicles and fuels, and introduces the need for a sustainable freight initiative. The Scoping Plan Update identifies key technology-specific objectives for the freight/transportation sector but does not identify specific direct project-level measures.</p> <p>The Revised Project analysis has quantified GHG impacts and has identified feasible mitigation measures that would reduce the impact to less than significant. The Revised Project would help to implement the objective in the Scoping Plan Update of reducing GHGs and criteria pollutants from ocean-going vessels.</p> <p>The Revised Project would comply with existing regulations, applicable to project activities, and would, by law, comply with future regulatory requirements, applicable to project activities, developed as part of the Scoping Plan Update. Accordingly, the Revised Project would be consistent with the State’s implementation of the AB 32 Scoping Plan Update.</p>
<p>Sustainable Freight Action Plan EO B-32-15 (2015)</p>	<p>The objectives laid out in the Governor’s Executive Order to reduce emissions in the freight sector and improve efficiency and reduce pollution of the freight transport system to meet 2030 targets.</p>	<p>The California Freight Action Plan was developed in conjunction with several state agencies and includes the following recommendations:</p> <ul style="list-style-type: none"> • A long-term 2050 Vision and Guiding Principles for California’s future freight transport system. • Targets for 2030 to guide the State toward meeting the Vision to improve freight efficiency, transition to zero emission technologies, and increase the competitiveness of California’s freight transport system. • Opportunities to leverage State freight transport system investments. • Actions to initiate over the next five years to make progress towards the Targets and the Vision. • Pilot projects to achieve on-the-ground progress in the near-term. • Additional concepts for further exploration and development, if viable. <p>There is no finding of consistency appropriate for the Revised Project because these are targets and future goals for State agencies to measure and report progress on. The targets are not mandates, but rather aspirational measures of progress, and the Revised Project includes mitigation and lease measures for the transition to zero emissions equipment under 2019 SEIR MM AQ-17, LM AQ-1. and LM AQ-3.</p>

Plan or Policy	Plan/Policy Measure	Discussion
<p>EO B-30-15 established a Statewide GHG emissions-reduction target of 40 percent below 1990 levels by 2030.</p>	<p>Established State-wide goals that are not directly binding on local agencies conducting project-level analysis.</p>	<p>EO B-30-15 established a State target of 40 percent below 1990 levels by 2030 and directed State legislature to develop legislation to address that State target. This target was established in order to ensure the State meets the EO S-3-05 target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050.</p> <p>The Revised Project analysis has quantified GHG impacts and projects that GHG emissions for all study years would exceed the 10,000 mty per year threshold. However, the analysis has identified feasible mitigation measures in the form of carbon offset purchases under MM GHG-1 that would reduce the impact to less than significant.</p> <p>Similar to EO S-3-05, EO B-30-15 did not identify project-level measures. The Revised Project would comply with existing regulations, applicable to project activities, and would, by law, comply with future regulatory requirements, applicable to project activities. However, as the Revised Project's impacts would be less than significant after mitigation, it was determined that the Revised Project would be consistent with the State's compliance with the GHG reduction goals established under EO B-30-15.</p>
<p>SB 32 (2016) codified the EO B-30-15 target: 40 percent reduction below 1990 levels by 2030.</p>	<p>Established State-wide goals that are not directly binding on local agencies conducting project-level analysis.</p>	<p>SB 32 codified EO B-30-15 target through 2030 and directed State regulatory agencies to develop rules and regulations to meet the 2030 State target but did not identify project-level measures. The Revised Project analysis has quantified GHG impacts for 2030 and has identified feasible mitigation measures in the form of carbon offset purchases under MM GHG-1 that would reduce the impact to less than significant.</p> <p>Accordingly, the Revised Project would be consistent with the State's GHG reduction goals under EO B-30-15 and would therefore be consistent with SB 32 which codifies EO B-30-15.</p>
<p>Green New Deal Sustainable City pLAN (2019)</p>	<p>Not directly applicable to project-level analysis, but certain elements of the Revised Project serve to forward the goals.</p>	<p>The pLAN contains strategies to address current and future climate change impacts and reduce air quality emissions. The pLAN sets aspirations for 14 target areas. Of these, the following are applicable to port activities: energy-efficient buildings, carbon and climate leadership, reduction of Port GHG emissions by 80% by 20250, implementing ZE drayage trucks in the Clean Truck Program.</p> <p>The Revised Project will continue to further these goals and aspirations, but because these are future targets that are not defined clearly, it is not possible to demonstrate consistency at this time.</p>

Plan or Policy	Plan/Policy Measure	Discussion
<p><i>San Pedro Bay Ports Clean Air Action Plan (2007) and Updates (2010, 2017)</i></p>	<p>GHG reductions are considered as co-benefits of CAAP measures.</p>	<p>Although the CAAP and Update are primarily designed to reduce criteria pollutants and air toxics, the following strategies also reduce GHG emissions:</p> <p>OGV1: Vessel Speed Reduction (VSR) Program OGV2: Reduction of At-Berth OGV Emissions HC1: Performance Standards for Harbor Craft.</p> <p>Of these measures, OGV1 is applicable to the Revised Project through mitigation measure MM AQ-10. Mitigation measure MM AQ-9 addresses CAAP measure OGV2; CAAP measure HC1 is a port-wide measure. In addition, the CAAP 2017 Update established a goal of implementing zero-emissions technology in Port terminals by 2035. The Revised Project is therefore consistent with the CAAP and CAAP Updates.</p>
<p><i>Port of Los Angeles “Actions to Reduce Greenhouse Gas Emissions by 2050” (Submitted to City of Los Angeles, 2014)</i></p>	<p>Not applicable on project-level analysis, but certain elements of the Revised Project serve to forward the goals.</p>	<p>The document outlines actions/strategies that are either being implemented or evaluated to continue the reduction of GHG emissions and meet a target of 35 percent below 1990 levels by 2035 and 80 percent below 1990 levels by 2050. Table 3 of the document lists GHG emissions reduction strategies for Port operations as well as the applicable implementing programs. The document does not identify new programs or measures; it lists existing initiatives and reiterates the Port’s commitment to continued collaboration with the international maritime community, as well as between all stakeholders and regulators.</p> <p>The Revised Project would continue to further these goals and aspirations through feasible mitigation measures in the form of carbon offset purchases under MM GHG-2 that would reduce GHG impacts to less than significant. These GHG reductions are analyzed at the project-level but nevertheless will help support future targets that are analyzed through the Port’s annual Emissions Inventories.</p>

Notes:

- a. SB 375 – Sustainable Communities and Climate Protection Act of 2008 set regional targets for GHG emissions reductions from passenger vehicle use for 2020 and 2035 for each region covered by one of the State’s metropolitan planning organizations (MPO). SB 375 further required that SCAG include an SCS in the RTP that reduces GHG emissions from passenger vehicles.

1 **3.2.4.1 Sea Level Rise**

2 Under the 24-inch estimate of SLR for 2050, the Port’s study concludes that SLR alone
 3 would not cause permanent inundation or shoreline overtopping at Berths 97-109, even
 4 allowing for a 2.6-foot 100-year storm tide. Accordingly, SLR alone would not threaten
 5 the facilities at the Berths 97-1098 facility during its projected service life, and no
 6 compensatory structural revisions are needed. Vessel operational procedures could, at
 7 some point in the future, need to be revised to accommodate higher mean water levels at
 8 the berth, but that is speculative at this time.

1 The Terminal does not include quantities of hazardous materials that could be released by
2 the rupture of storage tanks or other containers. Accordingly, even if overtopping were to
3 occur as a result of SLR, damage to facilities would not adversely affect nearby facilities
4 or communities.

5 **3.2.4.2 Summary of Impact Determinations**

6 Table 3.2-6 provides a summary of the impact determinations of the Revised Project
7 related to GHGs.

8 For each type of potential impact, the table provides a description of the impact, the
9 impact determination, any applicable mitigation measures, and residual impacts (i.e., the
10 impact remaining after mitigation). All impacts, whether significant or not, are included
11 in this table.

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1 **Table 3.2-6. Summary Matrix of Impacts and Mitigation Measures for GHG Associated with**
 2 **the Revised Project**

Environmental Impacts	Impact Determination	Mitigation and Lease Measures	Impacts after Mitigation
Impact GHG-1: The Revised Project would generate GHG emissions, either directly or indirectly that would exceed the SCAQMD 10,000 mty CO ₂ e threshold.	Significant	2019 SEIR MM GHG-1: LED Lighting MM GHG-2: GHG Reduction Offsets	Less than Significant

3 **3.2.4.3 Mitigation Monitoring**

4 The mitigation measures detailed below would be implemented for the Revised Project.

IMPACT GHG-1: The Revised Project would generate GHG emissions, either directly or indirectly, that would exceed the SCAQMD 10,000 mty CO₂e threshold.	
Mitigation Measure	MM GHG-1: LED Lighting. All lighting within the interior of buildings on the premises and outdoor high mast terminal lighting will be replaced with LED lighting or a technology with similar energy-saving capabilities by 2023.
Timing	Tenant must complete replacement of lighting by December 31, 2023.
Methodology	This mitigation measure was adopted in the 2024 amendment to Permit No. 999. Tenant shall implement MM GHG-1 through its own construction contractor. LAHD shall monitor implementation of mitigation measure during operation through the tenant lease.
Responsible Parties	LAHD for lease compliance. Tenant through its own construction contractor in conjunction with LAHD.
Residual Impacts	Significant.

<p>Mitigation Measure</p>	<p>MM GHG-2: GHG Reduction Offsets. The Tenant shall be required to purchase and retire carbon offsets related to activities that reduce, avoid, destroy, or sequester an amount of GHG emissions in an off-site location to offset the equivalent amount of GHG emissions generated by the Project in excess of the City’s significance threshold of 10,000 metric tons. From the first year of the Permit amendment, in 2026, through the end of the term of the Permit in 2045, the Tenant shall purchase and retire carbon offsets each year in an amount that would be the equivalent of the Project’s estimated residual GHG emissions. The estimated residual emissions for each calendar year shall be based upon the calculations in the Final Revised SEIR prepared for the Revised Project except as adjusted in accordance with paragraph a) or b), below..</p> <p>The LAHD is in the process of developing a Greenhouse Gas Program. The Program shall be used for GHG-reducing projects and programs approved by the Port of Los Angeles. If that Program is established during the term of the Permit, the Tenant shall have the option to offset the required amount of GHG emissions through a funding contribution to the Greenhouse Gas Program rather than towards purchasing carbon offsets from a CARB-recognized registry.</p> <p>While the LAHD Greenhouse Gas Program is currently under development, the Tenant shall purchase and retire carbon offsets from a CARB-recognized offset registry as follows:</p> <p>Carbon offsets: The Tenant shall purchase and retire carbon offsets from a CARB-recognized registry to ensure that offsets will result in real, permanent, additional, quantifiable, verifiable, and enforceable reductions. The carbon offsets shall be verifiable by the City and enforceable in accordance with the registry’s applicable standards, practices, or protocols. The order of priority for purchasing (any one or more) carbon offsets shall be considered as follows:</p> <ul style="list-style-type: none"> i. Originating within the local area; ii. Originating within the South Coast Air Basin; iii. Originating within the state of California; or iv. If sufficient local and in-state offsets are not available, the Tenant shall purchase conforming national offsets registered with a CARB-recognized registry. <p>Adjustment of Tenant’s Required Offsets through Other Verified GHG Emission Reductions: The Tenant may pursue the following modifications to the Project’s total estimated GHG emissions identified in this measure. These modifications may be pursued in conjunction with or independent of each other on an up to annual basis.</p> <p><i>(a) Adjustment in GHG Emissions</i></p> <p>In the event of changes in activities, efficiency, reduced operations, regulations, or for any other purpose, the Tenant may request an adjustment of the required carbon offsets based on an evaluation of actual GHG emissions rather than future projected GHG emission calculations. If the actual GHG emissions do not exceed the GHG threshold, no carbon offsets will be required. To adjust the Tenant’s required number of carbon offsets for purchase, the Tenant shall make a request in writing to the LAHD for review and approval for the calendar year under consideration and shall submit a report within 60 days that quantifies the actual greenhouse gas emissions by an expert or an independent, qualified third-party. The evaluation of actual greenhouse gas emissions must be performed using acceptable industry standards and protocols for all sources that were included in the Project’s</p>
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	<p>GHG emissions calculations under Impact GHG-1. LAHD review shall occur within 30 days of receipt of the submitted report. Any expenses incurred by LAHD in processing the Tenant’s request, including retaining an independent third-party verifier to peer review the report, shall be borne by the Tenant.</p> <p>or</p> <p><i>(b) Implementation of Additional GHG Reduction Methods</i></p> <p>In addition, the Tenant may request a reevaluation of required carbon offsets to be purchased according to this paragraph. The Tenant may implement different and additional GHG reduction methods that are equally or more effective if new technology and/or other feasible measures become available during the term of the Permit. To adjust the Tenant’s required number of carbon offsets for purchase, the Tenant shall identify such additional GHG reduction actions and must quantify the GHG emission reductions from these GHG reduction actions by an independent, qualified third-party verifier. Once the GHG reduction actions are found to be feasible and are reviewed and approved by LAHD staff, the Tenant may request that LAHD reduce its required purchase of carbon offsets by the equivalent amount of demonstrated reduction. Any expenses incurred by LAHD in processing the Tenant’s request, including retaining a third-party verifier, shall be borne by the Tenant.</p>
Timing	During operations.
Methodology	LAHD shall include MM GHG-2 in the Permit amendment with tenant. LAHD shall monitor implementation of mitigation measure during operation through the tenant lease.
Responsible Parties	LAHD, Tenant
Residual Impacts	Less than significant with full implementation of MM GHG-2

1 **3.2.5 Significant Unavoidable Impacts**

2 With full implementation of mitigation measures MM GHG-1 and MM GHG-2, there
 3 would be no significant and unavoidable impacts.