Chapter 3
Modifications to the Recirculated DSEIR

3.1 Introduction

This chapter addresses modifications to the Recirculated DSEIR for the Berths 97-106 (China Shipping) Container Terminal Revised Project. It presents all revisions related to public comments, as determined necessary by the LAHD as lead agency under CEQA, for the following areas of the document:

- Executive Summary
- Chapter 1 Introduction
- Chapter 2 Project Description
- Section 3.1 Air Quality
- Section 3.2 Greenhouse Gas Emissions and Climate Change
- Section 3.3 Ground Transportation
- Chapter 4 Cumulative Analysis

Any revisions to supporting documentation are also presented. The numbering format from the Recirculated DSEIR is maintained in the sections presented here. Only sections that were revised are included, and only the material from those sections that was revised, is presented here. Readers are referred to the Recirculated DSEIR to view complete sections.

As provided in Section 15088(c) of the State CEQA Guidelines, responses to comments may take the form of a revision to a draft EIR or may be a separate section of the final EIR. In this Final SEIR, responses to comments are presented in Chapter 2 and necessary revisions to the text are presented in this chapter.

Under CEQA, recirculation of all or part of an EIR may be required if significant new information is added after public review and prior to certification. According to CEQA Guidelines section 15088.5(a), new information is not considered significant "unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement." More specifically, the Guidelines define significant new information as including:

- A new significant environmental impact resulting from the project or from a new mitigation measure;
- A substantial increase in the severity of an environmental impact that would not be reduced to insignificance by adopted mitigation measures;

- A feasible project alternative or mitigation measure considerably different from those analyzed in a draft EIR that would clearly lessen the environmental impacts of the project and which the project proponents decline to adopt; and
- A Draft EIR that is so fundamentally and basically inadequate and conclusory that meaningful public review and comment were precluded.

The text changes described below update, refine, clarify, and amplify the project information and analyses presented in the Recirculated DSEIR. No new significant impacts are identified, and no information is provided that would involve a substantial increase in severity of a significant impact that would not be mitigated by measures already identified. In addition, no new or considerably different mitigation measures have been identified. Finally, there are no changes or set of changes that would reflect fundamental inadequacies in the Recirculated DSEIR. Recirculation of any part of the SEIR therefore is not required.

3.2 Changes to the Recirculated DSEIR

The following changes to the text as presented below are incorporated into the Final SEIR. Changes are provided in revision-mode text, wherein deletions of the original text are shown in ~~strikethrough~~ and additions to the Final SEIR are shown in <u>underline</u>. Page numbers refer to page numbers in the Recirculated DSEIR, so that the reader can easily locate where changes have been made. As a global change to the Recirculated DSEIR, the state clearinghouse number was corrected to 2003061153.

3.2.1 Changes Made to the Executive Summary

Section ES.1.1 Page ES-1

Revised tenant's name as follows:

Among the LAHD's tenants is China Shipping <u>North America Holding Co., Ltd</u>, which leases premises at Berths 97-109 to operate a marine container terminal (the "CS Container Terminal").

Table ES-1 starting on Page ES-9

Revised the statement of MM AQ-10, MM AQ-17, MM TRANS-2, and MM TRANS-3, and added labels to MM AQ-20 and LM AQ-23 as follows:

MM AQ-10 Vessel Speed Reduction Program	Starting in 2009, all ships calling at Berths 97-109 shall comply with the expanded VSRP of 12 knots between 40 nm .	Starting on the effective date of a new lease amendment between the Tenant and the LAHD and annually thereafter, at least 95 percent of vessels calling at Berths 97-109 shall ~~either 1)~~ comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area. ~~or 2) comply with an alternative compliance plan approved by the LAHD for a specific vessel and type. Any alternative compliance plan shall be submitted to LAHD at least 90 days in advance for approval, and shall be supported by data that demonstrates the ability of the alternative compliance plan for the specific vessel and type to achieve emissions reductions comparable to or greater than those achievable by compliance with the VSRP.~~

		~~The alternative compliance plan shall be implemented once written notice of approval is granted by the LAHD.~~
MM AQ-17 Yard Equipment at Berth 97-106 Terminal	All RTGs to be electric-powered by 2009 and all diesel-powered CHE at the Berth 97-109 terminal shall meet Tier 4 engine standards by the end of 2014.	All yard equipment at the terminal except yard tractors shall implement the following requirements: **Forklifts** • By one year after the effective date of a new lease amendment between the Tenant and the LAHD, all 18-ton diesel forklifts of model years 2004 and older shall be replaced with units that meet or are lower than Tier 4 final off-road engine emission rates for PM and NO_x. • By two years after the effective date of a new lease amendment between the Tenant and the LAHD, all 18-ton diesel forklifts of model years 2005 and older shall be replaced with units that meet or ~~exceed~~ are lower than Tier 4 final off-road engine emission rates for PM and NO_x. • By two years after the effective date of a new lease amendment between the Tenant and the LAHD, all 5-ton forklifts of model years 2011 or older shall be replaced with zero-emission units. • By three years after the effective date of a new lease amendment between the Tenant and the LAHD, all 18-ton diesel forklifts of model years 2007 and older shall be replaced with units that meet or are lower than Tier 4 final off-road engine emission rates for PM and NO_x. **Top-picks** • By one year after the effective date of a new lease amendment between the Tenant and the LAHD, all diesel top-picks of model years 2006 and older shall be replaced with units that meet or are lower than Tier 4 final off-road engine emission rates for PM and NO_x. • By three years after the effective date of a new lease amendment between the Tenant and the LAHD, all diesel top-picks of model years 2007 and older shall be replaced with units that meet or are lower than Tier 4 final off-road engine emission rates for PM and NO_x. • By five years after the effective date of a new lease amendment between the Tenant and the LAHD, all diesel top-picks of model years 2014 and older shall be replaced with units that meet or are lower than Tier 4 final off-road engine emission rates for PM and NO_x. **Rubber-Tired Gantry Cranes (RTGs)** • By three years after the effective date of a new lease amendment between the Tenant and the LAHD, all diesel RTG cranes of model years 2003 and older shall be replaced with diesel-electric hybrid units with diesel engines that meet or are lower than Tier 4 final off-road engine standards for PM and NO_x. • By five years after the effective date of a new lease amendment between the Tenant and the LAHD, all diesel RTG cranes of model years 2004

		and older shall be replaced with diesel-electric hybrid units with diesel engines that meet or are lower than Tier 4 final off-road engine standards for PM and NO_x. • By seven years after the effective date of a new lease amendment between the Tenant and the LAHD, four RTG cranes of model years 2005 and older shall be replaced with all-electric units, and one diesel RTG crane of model year 2005 shall be replaced with a diesel-electric hybrid unit with a diesel engine that meets or is lower than Tier 4 final off-road engine standards for PM and NO_x. **Sweepers** • Sweeper(s) shall be alternative fuel or the cleanest available by six years after the effective date of a new lease amendment between the Tenant and the LAHD. **Shuttle Buses** Gasoline shuttle buses shall be zero emissions by seven years after the effective date of a new lease amendment between the Tenant and the LAHD.
MM AQ-20 LNG Trucks	Heavy-duty trucks entering the Berth 97-109 Terminal shall be LNG fueled in the following percentages: 50% in 2012 and 2013, 70% 2014 through 2017, 100% in 2018 and thereafter.	Not included in the Revised Project because there is no feasible substitute or replacement measure for requiring a terminal specific drayage truck fleet.
LM AQ-23 Throughput Tracking	If the Project exceeds project throughput assumptions/projections anticipated through the years 2010, 2015, 2030, or 2045, staff shall evaluate the effects of this on the emissions sources (ship calls, locomotive activity, backland development, and truck calls) relative to the EIS/EIR. If it is determined that these emission sources exceed EIS/EIR assumptions, staff would evaluate actual air emissions for comparison with the EIS/EIR and if the criteria pollutant emissions	MM AQ-23 is not included in the Revised Project. Periodic reviews of throughput are unnecessary. Lease Measure AQ-1, below, would ensure a regular check-in process and evaluation of the cleanest available technology when equipment is purchased or replaced by the tenant.
MM TRANS-2 Alameda and Anaheim Streets	Provide an additional eastbound through-lane on Anaheim Street. This measure shall be	Provide an additional eastbound through-lane on Anaheim Street. This mitigation measure shall be implemented at the same time as the City's planned improvement project at this location, ~~with~~

	implemented by 2015.	~~design/construction commencing in the first quarter of 2019,~~ subject to LADOT approval and in coordination with the Bureau of Engineering's construction schedule.
MM TRANS-3 John S. Gibson Boulevard and I-110 NB Ramps	Provide an additional southbound and westbound right-turn lane on John S. Gibson Boulevard and I-110 NB ramps. Reconfigure the eastbound approach to one eastbound through-left-turn lane, and one eastbound through-right-turn lane. Provide an additional westbound right-turn lane with westbound right-turn overlap phasing. This measure shall be implemented by 2015.	Provide an additional westbound right-turn lane with westbound right-turn overlap phasing and an additional southbound left-turn lane. LAHD shall monitor the intersection LOS annually beginning in 2019, and shall implement the mitigation within three years after the intersection LOS is measured as D or worse and the China Shipping terminal is found to contribute to the cumulative impact, with the concurrence of LADOT.

Section ES.4 Page ES-15

Based on the Initial Study in the NOP, the following issues have been determined to be potentially significant and are therefore evaluated in this Recirculated Draft SEIR:

- Air Quality and Meteorology
- Greenhouse Gas Emissions and Climate Change
- Ground Transportation

Section ES.3.2.1 Page ES-17

Revised the text of LM AQ-3 as follows:

LM AQ-3: Demonstration of Zero Emissions Equipment: ~~.~~ Tenant shall conduct a one-year zero emission demonstration project with at least ten units of zero-emission cargo handling equipment. Upon completion of the one-year demonstration, Tenant shall submit a report to LAHD that evaluates the feasibility of permanent use of the tested equipment. Tenant shall continue to test the zero-emission equipment and provide feasibility assessments and progress reports in 2020 and 2025 to evaluate the status of zero-emission ~~equipment~~ technologies and infrastructure as well as operational and financial considerations, with a goal of 100% zero-emission cargo handling equipment by 2030.

Section ES.3.2.1 Page ES-20

Revised the text of MM TRANS-2 as follows:

MM TRANS-2 Alameda & Anaheim Streets: Provide an additional eastbound through-lane on Anaheim Street. This mitigation measure shall be implemented at the same time as the City's planned improvement project at this location, ~~with~~

~~design/construction commencing in the first quarter of 2019,~~ subject to LADOT approval and in coordination with the Bureau of Engineering's construction schedule.

Table ES-2 starting on Page ES-24

Revised the table as follows:

Table ES-2: Summary of Potential Significant Impacts and Revised Project Mitigation

Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
3.1 Air Quality and Meteorology			
AQ-3: Would the Revised Project would result in operational emissions that exceed an SCAQMD threshold of significance in Table 3.1-6?	Significant for CO in 2012 to 2023, VOC in 2014 to 2045, and NOx in 2014 to 2036. ~~Impacts of CO, NO_X, and PM_{10} emissions would be significant in multiple analysis years.~~	**Revised:** **MM AQ-9: AMP** **MM AQ-10: VSRP** **MM AQ-15: Yard Tractors** **MM AQ-17: Cargo-Handling Equipment** **New:** **LM AQ-1: Cleanest Available Cargo Handling Equipment** **LM AQ-2: Priority Access for Drayage** **LM AQ-3: Demonstration of Zero Emissions Equipment**	Significant and unavoidable
AQ-4: Would Revised project operations result in off-site ambient air pollutant concentrations that exceeds a SCAQMD threshold of significance in Table 3.1-10?	Significant for NO_2 in 2014 and 2018 and PM_{10} in 2014 through 2045. ~~The impacts of NO_2 and PM_{10} emissions (24-hour and annual average) would be significant in multiple analysis years.~~		Significant and unavoidable.
AQ-7: Would the Revised Project expose receptors to significant levels of TACs?	Significant for residential, occupational, and sensitive individual cancer risk. ~~Operations would result in significant cancer risk impacts for residential, occupational, and sensitive receptors.~~		Significant and unavoidable.
AQ-8: Would the Revised Project conflict with or obstruct implementation of an applicable AQMP?	Less than significant	No mitigation is required.	Less than significant.
3.2 Greenhouse Gase Emissions and Climate Change			
GHG-1: Would the Revised Project generate GHG emissions, either directly or indirectly that would exceed the SCAQMD 10,000 mty CO2e threshold?	Significant in 2012 through 2045	**New:** **MM GHG-1: LED Lighting.** **LM GHG-1: GHG Credit Fund**	Significant and unavoidable.

Table ES-2: Summary of Potential Significant Impacts and Revised Project Mitigation

Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
3.3 Ground Transportation			
TRANS – 2: Would vehicular traffic associated with the Revised Project increase an intersection's V/C ratio in accordance with applicable guidelines?	The Revised Project would have a significant impact on the intersection of Alameda and Anaheim Streets.	**Revised:** **MM TRANS-2: Alameda & Anaheim Streets.**	Significant and unavoidable.
	The Revised Project would make cumulatively considerable contributions to significant cumulative impacts at the Alameda and Anaheim intersection and at the John S. Gibson/I-110 N/B Ramps intersection.	**Revised:** **MM TRANS-2: Alameda and Anaheim Streets.** **MM TRANS-3: John S. Gibson Boulevard and I-110 N/B Ramps.**	Significant and unavoidable at Alameda and Anaheim Streets. Less than significant at John S. Gibson/I-110 N/B Ramps.
TRANS – 4: Would the Revised Project result in an increase of 0.02 or more in the D/C ratio with a resulting LOS F at a CMP freeway monitoring station?	Less than significant	No mitigation is required.	Less than significant.
TRANS –5: Would the Revised Project cause delays in regional highway traffic due to an increase in rail activity?	Less than significant	No mitigation is required.	Less than significant.

3.2.2 Changes Made to Chapter 1 Introduction

Section 1.1.1 Page 1-1

Revised tenant's name as follows:

Among the LAHD's tenants is China Shipping North America Holding Co., Ltd, which leases premises at Berths 97-109 to operate a marine container terminal (the "CS Container Terminal").

Section 1.1.3 Page 1-2

Modified citation as follows:

Those impacts are identified in two documents: an Environmental Impact Statement/Environmental Impact Report (EIS/EIR) prepared by US Army Corps of Engineers (USACE) and the Los Angeles Harbor Department (LAHD) to examine the impacts of construction and operation of the terminal (~~USACE and LAHD~~ LAHD and USACE, 2008), and this Recirculated Draft SEIR.

Section 1.2.2 Page 1-7

Modified citation as follows:

The CS Container Terminal was constructed in several phases between 2004 and 2013, and began operation in 2005. It consists of two berths, ten wharf cranes for ship loading, and a container yard and gate complex. The terminal has access to an on-dock intermodal railyard at the adjacent Yang Ming Terminal (for a fuller description of the existing terminal see Section 2.5.1 and ~~USACE and LAHD~~ LAHD and USACE [2008]). The Revised Project does not include any physical alterations to the existing terminal, but instead consists of altered operating conditions from those examined in the 2008 EIS/EIR (~~USACE and LAHD~~ LAHD and USACE, 2008). The Revised Project would operate until 2045, the remaining term under LAHD Permit No. 999.

Section 1.9.7 Page 1-40

Modified citation as follows:

This Recirculated Draft SEIR incorporates the 2008 EIS/EIR for the Approved Project (~~USACE and LAHD~~ LAHD and USACE, 2008) by reference. The key findings of the 2008 EIS/EIR and its relationship to this document are summarized in Section 2.2 of this Recirculated Draft SEIR.

3.2.3 Changes Made to Chapter 2 Project Description

Section 2.2.3 Page 2-4

Revised Table 2-1 as follows:

MM AQ-15 Yard Tractors at Berth 97-109 Terminal	All yard tractors operated at the Berth 97-109 terminal shall run on alternative fuel (LPG) beginning September 30, 2004, until December 31, 2014 Beginning January 1 2015, all yard tractors operated at the Berths 97-109 terminal shall be the cleanest available NO_X alternative-fueled engine meeting 0.015 gm/hp-hr for PM (Tier 4 Final).	From 2004~~2008~~ through 2014, all yard tractors met requirement to run on LPG. As of December 31, 2017 all yard tractors are alternative-fueled LPG but they do not meet Tier 4 Final standard requirements.

Section 2.2.3 Page 2-7

Revised the statement of MM AQ-10 as follows:

MM AQ-10 is modified to require that starting on the effective date of a new lease amendment between the ~~t~~Tenant and the LAHD and annually thereafter, at least 95 percent of the vessels calling the CS Container Terminal shall comply with ~~either~~ the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area~~or an alternative compliance plan approved by the LAHD.~~

Section 2.5.2.1 Page 2-17

Revised the statement of MM AQ-10 as follows:

Starting on the effective date of a new lease amendment between the Tenant and the LAHD and annually thereafter, at least 95 percent of vessels calling at Berths 97-109

shall ~~either 1)~~ comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area ~~or 2) comply with an alternative compliance plan approved by the LAHD for a specific vessel and type. Any alternative compliance plan shall be submitted to LAHD at least 90 days in advance for approval, and shall be supported by data that demonstrates the ability of the alternative compliance plan for the specific vessel and type to achieve emissions reductions comparable to or greater than those achievable by compliance with the VSRP. The alternative compliance plan shall be implemented once written notice of approval is granted by the LAHD.~~

Section 2.5.2.1 Page 2-18

Revised the statement of MM AQ-15 as follows:

For the Revised Project, MM AQ-15 requires that:

- No later than one year after the effective date of a new lease amendment between the Tenant and the LAHD, all LPG yard tractors of model years 2007 or older shall be replaced with alternative-fuel units that meet or are lower than a NOx emission rate of 0.02 g/bhp-hr and Tier 4 final off-road emission rates for other criteria pollutants.
- No later than five years after the effective date of a new lease amendment between the Tenant and the LAHD, all LPG yard tractors of model years 2011 or older shall be replaced with alternative fuel units that meet or are lower than a NOx emission rate of 0.02 g/bhp-hr and Tier 4 final off-road engine emission rates for other criteria pollutants.

Section 2.5.2.1 Page 2-20

In the first paragraph, revised the citation as follows:

The replacement schedule for CHE incorporated the useful economic service life of the existing equipment and the high capital costs (e.g., $650,000 per unit for toppicks; LAHD 20164) but accelerated the replacement.

Section 2.5.2.1 Page 2-22

Added to the end of the paragraph at the top of the page:

equipment, emphasizing zero- and near-zero-emissions equipment. For the Revised Project, LM AQ-1 (see Section 2.5.2.2) requires the CS Terminal to participate in the CAAP's equipment procurement process. In addition, the original MM AQ-17's requirement for an electric yard tractor demonstration has been replaced by a more comprehensive requirement in LM AQ-3 that the CS Terminal conduct a demonstration program with at least ten units of zero-emission cargo handling equipment.

Section 2.5.2.2 Page 2-25

Revised the title of the section to:

Section 2.5.2.2 Revised Project New Lease Measures and New Mitigation Measure

Section 2.5.2.2 Page 2-26 and 2-27

Revised the statement of LM AQ-3 as follows:

Tenant shall conduct a one-year zero emission demonstration project with at least ten units of zero-emission cargo handling equipment. Upon completion, tenant shall submit a report to LAHD that evaluates the feasibility of permanent use of the tested equipment. Tenant shall continue to test the zero-emission equipment and provide feasibility assessments and progress reports in 2020 and 2025 to evaluate the status of zero-emission ~~equipment~~ technologies and infrastructure as well as operational and financial considerations, with a goal of 100% zero-emission cargo handling equipment by 2030.

Corrected the designation of LM GHG-2 to LM GHG-1 and revised the statement of the measure as follows:

LM GHG-~~2~~1: GHG Credit Fund

~~LAHD shall establish a carbon offset fund, which may be accomplished through a Memorandum of Understanding with the California Air Resources Board or another appropriate entity. The fund shall be used for GHG-reducing projects and programs on Port of Los Angeles property. It shall be the responsibility of the Tenant to contribute to the fund. Tenant shall have the option to either: (i) make a one-time fund contribution of $250,000, payable upon execution of a new lease amendment, or (ii) make a payment in 2030, at the time the peak impact would occur, in an amount calculated based on the market value of carbon credits at that time, and actual GHG emissions that exceed whatever GHG threshold exists at that time as approved by the LAHD. If LAHD is unable to establish the fund within a reasonable period of time, the Tenant shall instead purchase credits from an approved GHG offset registry.~~ LAHD shall establish a Greenhouse Gas Fund, which LAHD shall have the option to accomplish through a Memorandum of Understanding (MOU) with the California Air Resources Board (CARB) or another appropriate entity. The fund shall be used for GHG-reducing projects and programs approved by the Port of Los Angeles, or through the purchase of emission reduction credits from a CARB approved offset registry. It shall be the responsibility of the Tenant to make contributions to the fund in the amount of $250,000 per year, for a total of eight years, for the funding of GHG reducing projects or the purchase of GHG emission reduction credits, commencing after the date that the SEIR is conclusively determined to be valid, either by operation of Public Resources Code Section 21167.2 or by final judgment or final adjudication ("Conclusive Determination of Validity Date"), as described below. The fund contribution amount is established as follows: (i) the peak year of GHG operational emissions (2030), after application of mitigation, that exceed the established threshold for the Revised Project, estimated in the SEIR to be 129,336 metric tons CO2e, multiplied by (ii) the current (2019) market value of carbon credits established by CARB at $15.62 per metric ton CO2e. The payment for the first year shall be due within ninety (90) days of the Conclusive Determination of Validity Date, and the payment for each successive year shall be due on the anniversary of the Conclusive Determination of Validity Date. If LAHD is unable to establish the fund through an MOU with CARB within one year prior to when any year's payment is due, the Tenant shall instead apply that year's payment, using the same methodology described in

parts (i) and (ii) above, to purchase emission reduction credits from a CARB approved GHG offset registry.

3.2.4 Changes Made to Chapter 3 Environmental Analysis

3.2.4.1 Changes Made to Section 3.1 Air Quality

Section Summary Page 3.1-1

Added text as follows:

Section 3.1, Air Quality and Meteorology, provides the following:

- a description of existing air quality and health effects in the Port area;
- a discussion on the methodology used to determine whether the Revised Project would result in a new or substantially more severe significant impact on air quality and health risk from air emissions;
- an impact analysis of the Revised Project;
- a description of mitigation measures proposed to reduce potential impacts, as applicable; and
- a comparison of those mitigation measures and residual impacts to the suite of original mitigation measures in the FEIR.

Section Summary Page 3.1-2

Revised text of MM AQ-10 as follows:

MM AQ-10: Vessel Speed Reduction Program (VSRP). Starting on the effective date of a new lease amendment between the Tenant and the LAHD and annually thereafter, at least 95 percent of vessels calling at Berths 97-109 shall ~~either 1)~~ comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin ~~and the Precautionary Area or 2) comply with an alternative compliance plan approved by the LAHD for a specific vessel and type. Any alternative compliance plan shall be submitted to LAHD at least 90 days in advance for approval, and shall be supported by data that demonstrates the ability of the alternative compliance plan for the specific vessel and type to achieve emissions reductions comparable to or greater than those achievable by compliance with the VSRP. The alternative compliance plan shall be implemented once written notice of approval is granted by the LAHD.~~

MM AQ-15: Yard Tractors.

1) No later than one year after the effective date of a new lease amendment between the Tenant and the LAHD, all LPG yard tractors of model years 2007 or older shall be replaced with alternative-fuel units that meet or are lower than a NOx emission rate of 0.02 g/bhp-hr and Tier 4 final off-road emission rates for other criteria pollutants.

2) No later than five years after the effective date of a new lease amendment between the Tenant and the LAHD, all LPG yard tractors of model years 2011 or older shall be replaced with alternative fuel units that meet or are lower than a NOx emission rate of 0.02 g/bhp-hr and Tier 4 final off-road engine emission rates for other criteria pollutants.

Section 3.1.2.3 Page 3.1-9

Revised Table 3.1-2 as follows

Table 3.1-2: Adverse Effects Associated with Criteria Pollutants

Pollutant[d]	Adverse Effects
Ozone (O_3) [e]	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals and (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage
Carbon Monoxide (CO)	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses
Nitrogen Dioxide (NO_2)[f]	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration
Sulfur Dioxide (SO_2)	(a) Broncho-constriction accompanied by symptoms that may include wheezing, shortness of breath, and chest tightness during exercise or physical activity in persons with asthma
Suspended Particulate Matter less than 10 Microns (PM_{10})[f]	(a) Excess deaths from short-term and long-term exposures; (b) excess seasonal declines in pulmonary function, especially in children; (c) asthma exacerbation and possibly induction; (d) adverse birth outcomes including low birth weight; (e) increased infant mortality; (f) increased respiratory symptoms in children such as cough and bronchitis; and (g) increased hospitalization for both cardiovascular and respiratory disease (including asthma) [a]
Suspended Particulate Matter less than 2.5 microns ($PM_{2.5}$)	(a) Excess deaths from short-term and long-term exposures; (b) excess seasonal declines in pulmonary function, especially in children; (c) asthma exacerbation and possibly induction; (d) adverse birth outcomes including low birth weight; (e) increased infant mortality; (f) increased respiratory symptoms in children such as cough and bronchitis; and (g) increased hospitalization for both cardiovascular and respiratory disease (including asthma)[a]
Lead [b]	(a) Increased body burden; (b) impairment of blood formation and nerve conduction, and neurotoxin.
Sulfates [c]	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardiopulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage

Source: (SCAQMD, 2007).
Notes:
[a] More detailed discussions on the health effects associated with exposure to suspended particulate matter can be found in the following documents: Office of Environmental Health Hazard Assessment's, Particulate Matter Health Effects and Standard Recommendations (OEHHA, 2002), and EPA's Air Quality Criteria for Particulate Matter, October 2004 (EPA, 2004a).
[b] Lead is not a pollutant of concern for the Revised Project.
[c] Sulfate is not a pollutant of concern for the Revised Project. SCAQMD has not established an emissions threshold for sulfates, nor does it require dispersion modeling against the localized significance thresholds.
[d] CAAQS have also been established for hydrogen sulfide, vinyl chloride, and visibility reducing particles. They are not shown in this table because they are not pollutants of concern for the Revised Project.
[e] A more detailed discussion of the adverse health effects associated with exposure to ozone is in Impact AQ-3 under "Links to Regional Health Effects".
[f] More detailed discussions of the adverse health effects associated with exposure to NO_2 and PM_{10} are in Impact AQ-4 under "Links to Local Health Effects".

Section 3.1.2.3 Page 3.1-10

Revised text as follows:

CARB currently designates the SCAB as a nonattainment area for ozone, PM_{10}, $PM_{2.5}$, ~~NO_2,~~ and lead. The air basin is in attainment of the CAAQS for CO, NO_2, SO_2, and sulfates, and is unclassified for hydrogen sulfide and visibility reducing particles (CARB, 2013).

Section 3.1.4.1 Page 3.1-29

Bulleted text was added:

The following types of impacts were analyzed:

- Air pollutant emissions of CO, VOC, NO_x, SO_x, PM_{10}, and $PM_{2.5}$ within the SCAB were estimated for operation of the Revised Project. To determine their significance, the Revised Project emissions minus the 2008 Actual Baseline (see Section 3.1.4.2) emissions were compared to Significance Criterion AQ-3 identified in Section 3.1.4.4. The criteria pollutant emission calculations and assumptions are presented in Appendix B1.
- Dispersion modeling of CO, NO_x, SO_x, PM_{10}, and $PM_{2.5}$ emissions was performed to estimate maximum offsite air pollutant concentrations from emission sources attributed to the Revised Project. The predicted ambient concentrations associated with operation of the Revised Project were compared to Significance Criterion AQ-4. A summary of the dispersion modeling methodology is presented in this section, while the complete dispersion modeling report is presented in Appendix B2.
- Assessments of the potential health effects of criteria pollutant emissions on both regional and local scales are presented for each pollutant that has a significant impact on the environment. The approach and methodology used in the assessments are presented in Section 3.1.4.5.

Section 3.1.4.1 Page 3.1-38

Revised citation as follows

The SCAQMD's localized significance threshold for a 24-hour $PM_{2.5}$ concentration is 2.5 µg/m^3 for operational impacts ~~(SCAQMD, 2011b)~~(SCAQMD, 2019a).

Section 3.1.4.3 Pages 3.1-43 to 3.1-45

Revised citation in p.43 as follows

The *L.A. CEQA Thresholds Guide* incorporates, by reference, the CEQA Air Quality Handbook and associated significance thresholds developed by the SCAQMD (SCAQMD, 1993; ~~SCAQMD, 2011b~~SCAQMD, 2019a).

Revised citation in Table 3.1-7 as follows

Source:
~~SCAQMD, 2015.~~ SCAQMD, 2019a

Revised citation in Table 3.1-8 as follows

Sources:
~~SCAQMD, 2015.~~ SCAQMD, 2019a; EPA, 2013

Section 3.1.4.4 Page 3.1-46

Revised statement of impact threshold as follows:

Impact AQ-3: Would the Revised Project result in operational emissions that exceed an SCAQMD threshold of significance in Table 3.1-~~6~~7?

Revised statement of MM AQ-10 as follows:

MM AQ-10: **Vessel Speed Reduction Program (VSRP).** Starting on the effective date of a new lease amendment between the Tenant and the LAHD and annually thereafter, at least 95 percent of vessels calling at Berths 97-109 shall ~~either 1)~~ comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area~~ or 2) comply with an alternative compliance plan approved by the LAHD for a specific vessel and type. Any alternative compliance plan shall be submitted to LAHD at least 90 days in advance for approval, and shall be supported by data that demonstrates the ability of the alternative compliance plan for the specific vessel and type to achieve emissions reductions comparable to or greater than those achievable by compliance with the VSRP. The alternative compliance plan shall be implemented once written notice of approval is granted by the LAHD.~~

Section 3.1.4.4 Page 3.1-49

Added text before Table 3.1-9 as follows:

Emissions for ocean going vessels in Table 3.1-9 have been updated in this Final SEIR for years 2023-2045, based on public comments, to facilitate informational comparison between the Revised Project and the FEIR Mitigated Scenarios of hotelling auxiliary engine emissions during the peak day. The Revised Project emissions shown in Table 3.1-9 have been modified in this Final SEIR to represent ships hotelling without shorepower (AMP) during the peak days of 2023-2045. Peak-day OGV emissions, and thus, total peak daily emissions, of the Revised Project as shown in the modified Table 3.1-9 are higher than those of the peak day of the FEIR Mitigated case (Table 3.1-10), which include reductions from AMP usage during hotelling. Peak day emissions for years 2012-2018 in the Revised Project reflect the actual compliance with 2008 EIR/EIS mitigations, hence, no updates to Table 3.1-9 were needed. Similarly, annual emissions in the Recirculated DSEIR for every analysis year of the Revised Project, summarized in Appendix B1, reflect the difference in AMP mitigation annual compliance and requirements between the Revised Project and the FEIR Mitigated Scenarios; thus, no updates were needed for annual emissions in this document. Despite the revisions to peak daily emissions of the Revised Project for 2023-2045, impact findings of significance have not changed between the Recirculated DSEIR and the Final SEIR, as shown in Table 3.1-10.

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Table 3.1-9 revised as follows:

Table 3.1-9. Peak Daily Operational Emissions—Revised Project (lbs/day)

	Peak Day Emissions (lb/day)					
Source Category	**VOC**	**CO**	**NOx**	**PM_{10}**	**$PM_{2.5}$**	**SOx**
2012 Actual						
Cargo Handling Equipment	113	1,781	641	17	16	0.6
Harbor Craft	3	16	27	1	1	0.0
Worker Vehicles Offsite	1	44	4	3	1	0.1
Trucks Offsite Driving	27	90	863	34	19	2.0
Ocean Going Vessels	69	125	1,006	31	29	155
Worker Vehicles Onsite Driving	0.1	1.7	0.1	0.3	0.1	0.0
Trucks Onsite Driving/Idling	0.8	5.4	0.6	0.3	0.1	0.0
Rail Offsite Operations	8	29	125	11	2	0.1
Rail On Dock Operations	5	22	96	3	3	0.1
Total	**253**	**2230**	**3310**	**119**	**88**	**158**
2008 Actual Baseline	259	1,549	3,907	218	174	1,156
Total 2012 Emissions Minus 2008 Actual Baseline	-6	680	-597	-99	-87	-998
Significance Threshold	55	550	55	150	55	150
Significant?	**No**	**Yes**	**No**	**No**	**No**	**No**
2014 Actual						
Cargo Handling Equipment	250	3,992	1,398	18	17	1.2
Harbor Craft	5	27	49	2	2	0.0
Worker Vehicles Offsite	1	35	3	3	1	0.1
Trucks Offsite Driving	45	128	1,778	58	24	4.5
Ocean Going Vessels	242	334	5,029	90	83	156
Worker Vehicles Onsite Driving	0.6	4.6	0.5	0.3	0.1	0.0
Trucks Onsite Driving/Idling	15	70	277	26	4	0.4
Rail Offsite Operations	24	125	553	16	15	0.5
Rail On Dock Operations	5	25	105	3	3	0.1
Total	**587**	**4740**	**9192**	**216**	**148**	**163**
2008 Actual Baseline	259	1,549	3,907	218	174	1,156
Total 2014 Emissions Minus 2008 Actual Baseline	328	3191	5284	-2	-26	-994
Significance Threshold	55	550	55	150	55	150
Significant?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**
2018 Revised Project*						
Cargo Handling Equipment	287	3,792	1,127	14	14	1.0
Harbor Craft	2	47	20	0	0	0.1
Worker Vehicles Offsite	1	37	3	5	1	0.1
Trucks Offsite Driving	52	162	1,745	63	31	4.2
Ocean Going Vessels	301	155	4,239	49	46	112
Worker Vehicles Onsite Driving	0.8	7.0	0.6	0.6	0.1	0.0
Trucks Onsite Driving/Idling	16	76	275	25	5	0.3

	Peak Day Emissions (lb/day)					
Source Category	**VOC**	**CO**	**NOx**	**PM_{10}**	**$PM_{2.5}$**	**SOx**
Rail Offsite Operations	26	152	679	17	16	0.6
Rail On Dock Operations	4	24	98	2	2	0.1
Total	**689**	**4451**	**8186**	**177**	**115**	**118**
2008 Actual Baseline	259	1,549	3,907	218	174	1,156
Total 2018 Emissions Minus 2008 Actual Baseline	430	2902	4278	-40	-59	-1038
Significance Threshold	55	550	55	150	55	150
Significant?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**
2023 Revised Project						
Cargo Handling Equipment	306	2,409	478	11	11	1.3
Harbor Craft	2	50	20	0	0	0.1
Worker Vehicles Offsite	0	28	2	6	1	0.1
Trucks Offsite Driving	12	55	892	57	21	4.7
Ocean Going Vessels	221~~193~~	412~~340~~	6,366~~5,623~~	93~~76~~	86~~71~~	195~~165~~
Worker Vehicles Onsite Driving	0.6	6.8	0.5	0.7	0.1	0.0
Trucks Onsite Driving/Idling	11	148	183	30	5	0.4
Rail Offsite Operations	28	220	789	18	17	0.9
Rail On Dock Operations	4	28	97	2	2	0.1
Total	**585~~557~~**	**3358~~3286~~**	**8827~~8084~~**	**218~~201~~**	**143~~127~~**	**203~~172~~**
2008 Actual Baseline	259	1,549	3,907	218	174	1,156
Total 2023 Emissions Minus 2008 Actual Baseline	326~~298~~	~~18081736~~	4920~~4177~~	1~~-16~~	-31~~-47~~	-954~~-984~~
Significance Threshold	55	550	55	150	55	150
Significant?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**
2030 Revised Project						
Cargo Handling Equipment	51	654	56	3	3	1.4
Harbor Craft	3	53	21	1	0	0.1
Worker Vehicles Offsite	0	23	1	6	2	0.1
Trucks Offsite Driving	8	59	780	62	22	4.3
Ocean Going Vessels	403~~372~~	797~~716~~	5,294~~4,594~~	134~~115~~	124~~106~~	204~~170~~
Worker Vehicles Onsite Driving	0.4	5.8	0.4	0.8	0.1	0.0
Trucks Onsite Driving/Idling	11	165	207	34	5	0.4
Rail Offsite Operations	20	233	581	12	11	0.9
Rail On Dock Operations	3	28	69	1	1	0.1
Total	**499~~468~~**	**2018~~1937~~**	**7010~~6310~~**	**253~~234~~**	**169~~151~~**	**211~~177~~**
2008 Actual Baseline	259	1,549	3,907	218	174	1,156
Total 2030 Emissions Minus 2008 Actual Baseline	240~~209~~	469~~388~~	3103~~2403~~	35~~16~~	-6~~-23~~	-945~~-979~~
Significance Threshold	55	550	55	150	55	150
Significant?	**Yes**	**No**	**Yes**	**No**	**No**	**No**
2036 Revised Project						
Cargo Handling Equipment	69	687	61	3	3	1.4

	Peak Day Emissions (lb/day)					
Source Category	**VOC**	**CO**	**NOx**	**PM_{10}**	**$PM_{2.5}$**	**SOx**
Harbor Craft	3	56	22	1	1	0.1
Worker Vehicles Offsite	0	21	1	6	1	0.1
Trucks Offsite Driving	6	60	720	63	22	3.7
Ocean Going Vessels	403~~372~~	797~~716~~	3,425~~2,992~~	134~~115~~	124~~106~~	204~~170~~
Worker Vehicles Onsite Driving	0.2	5.2	0.4	0.7	0.1	0.0
Trucks Onsite Driving/Idling	11	165	209	34	5	0.3
Rail Offsite Operations	13	222	379	7	7	0.9
Rail On Dock Operations	2	27	48	1	1	0.1
Total	**508~~477~~**	**2041~~1960~~**	**4865~~4432~~**	**249~~230~~**	**164~~146~~**	**211~~177~~**
2008 Actual Baseline	259	1,549	3,907	218	174	1,156
Total 2036 Emissions Minus 2008 Actual Baseline	249~~218~~	491~~410~~	958~~525~~	31~~12~~	-11~~-28~~	-946~~-980~~
Significance Threshold	55	550	55	150	55	150
Significant?	**Yes**	**No**	**Yes**	**No**	**No**	**No**
2045 Revised Project						
Cargo Handling Equipment	55	662	57	3	3	1.4
Harbor Craft	2	50	20	0	0	0.1
Worker Vehicles Offsite	0	21	1	6	2	0.1
Trucks Offsite Driving	6	68	790	61	21	3.2
Ocean Going Vessels	403~~372~~	797~~716~~	1,480~~1,288~~	134~~115~~	124~~106~~	204~~170~~
Worker Vehicles Onsite Driving	0.2	4.8	0.4	0.8	0.1	0.0
Trucks Onsite Driving/Idling	11	165	209	34	5	0.3
Rail Offsite Operations	8	206	209	3	3	0.8
Rail On Dock Operations	1	27	31	0	0	0.1
Total	**487~~455~~**	**2001~~1920~~**	**2797~~2606~~**	**243~~224~~**	**158~~141~~**	**210~~176~~**
2008 Actual Baseline	259	1,549	3,907	218	174	1,156
Total 2045 Emissions Minus 2008 Actual Baseline	227~~196~~	452~~371~~	-1110~~-1301~~	25~~6~~	-16~~-34~~	-946~~-980~~
Significance Threshold	55	550	55	150	55	150
Significant?	**Yes**	**No**	**No**	**No**	**No**	**No**

Note:

*2018 analysis year is based on projected activity and does not qualify as "Actual". However, in this analysis Revised Project mitigations do not begin until 2019, therefore 2018 reflects compliance with 2008 EIR/EIS mitigations at the time.

Rail Offsite Operations considered for the peak day include emissions occurring only within SCAB boundaries

OGV emissions for peak day include operations up to SCAB Overwater Boundary

Emissions for ocean going vessels (OGV) have been updated for years 2023-2045 in the FSEIR to represent no AMP usage during the peak day for the Revised Project in those years. OGV emissions for 2012-2018 already reflected no AMP usage during Revised Project peak day.

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Due to revisions to peak daily OGV, text was added after Table 3.1-10 and Table 3.1-11 was revised, as follows:

Table 3.1-11 summarizes the peak daily emission impacts for each scenario in each analysis year. The absolute difference between Revised Project daily emissions and the FEIR Mitigated Scenario emissions are also shown. By that comparison, Table 3.1-11 shows the incremental emissions that resulted from partial compliance with the 2008 EIR/EIS mitigation measures and from the difference in future mitigation requirements between the Revised Project and the FEIR Mitigated Scenario.

Table 3.1-11. Summary of Emission Impacts for Revised Project and FEIR Mitigated Scenario (informational only)

Pollutant	Year	Peak day emissions minus 2008 Actual Baseline (lbs/day)		Daily Threshold (lb/day)	Difference between scenarios
		Revised Project	FEIR Mitigated		
VOC	2012	-6	-37	55	31
	2014	328	299	55	29
	2018	430	174	55	256
	2023	326~~298~~	112	55	214~~187~~
	2030	240~~209~~	218	55	22~~-9~~
	2036	249~~218~~	270	55	-21~~-53~~
	2045	227~~196~~	273	55	-45~~-76~~
NOx	2012	-597	-1369	55	772
	2014	5284	4082	55	1203
	2018	4278	2918	55	1360
	2023	4920~~4177~~	3854	55	1066~~323~~
	2030	3103~~2403~~	2468	55	635~~-65~~
	2036	958~~525~~	602	55	356~~-77~~
	2045	-1110~~-1301~~	-1218	55	108~~-84~~
CO	2012	680	617	550	63
	2014	3191	3193	550	-3
	2018	2902	-652	550	3554
	2023	1808~~1736~~	-124	550	1932~~1860~~
	2030	469~~388~~	212	550	257~~176~~
	2036	491~~410~~	323	550	169~~88~~
	2045	452~~371~~	329	550	123~~42~~
PM_{10}	2012	-99	-119	150	20
	2014	-2	-22	150	20
	2018	-40	-59	150	19
	2023	1~~-16~~	-22	150	22~~5~~
	2030	35~~16~~	18	150	17~~-2~~
	2036	31~~12~~	15	150	16~~-3~~

Pollutant	Year	Peak day emissions minus 2008 Actual Baseline (lbs/day)		Daily Threshold	Difference between
	2045	25~~6~~	10	150	16~~-3~~
$PM_{2.5}$	2012	-87	-105	55	19
	2014	-26	-44	55	18
	2018	-59	-77	55	18
	2023	-31~~-47~~	-52	55	21~~5~~
	2030	-6~~-23~~	-22	55	16~~-1~~
	2036	-11~~-28~~	-26	55	15~~-3~~
	2045	-16~~-34~~	-31	55	15~~-3~~
SOx	2012	-998	-1071	150	73
	2014	-994	-1007	150	13
	2018	-1038	-1050	150	12
	2023	-954~~-984~~	-984	150	30~~0~~
	2030	-945~~-979~~	-979	150	34~~0~~
	2036	-946~~-980~~	-980	150	34~~0~~
	2045	-946~~-980~~	-980	150	34~~0~~

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Added text in Impact AQ-4 as follows:

Results in Tables 3.1-12 through 3.1-14 show that impacts of the Revised Project would exceed the significance thresholds for federal 1-hour NO_2 in 2014 and 2018, state 1-hour NO_2 in 2014, annual NO_2 in 2014 and 2018, 24-hour PM_{10} in 2014 through 2045, and annual PM_{10} in 2014 through 2045. Impacts of SO_2, CO, and $PM_{2.5}$ would be below the thresholds in all analysis years.

Updates related to fine grid dispersion modeling

Six fine-grid dispersion model runs that were not performed for the Recirculated DSEIR were modeled for the Final SEIR. As a result, several NO_2 concentrations have been revised to slightly higher values and their locations have moved slightly. The revised tables and figures are included in the Final SEIR. All of the concentrations to which revisions have been made would remain well below the significance thresholds. Therefore, this revision would not change any of the significance findings in the Recirculated DSEIR.

Updates related to Revised Project peak daily emissions

As described above, peak-day ship hotelling emissions in the years 2023 - 2045 increased relative to the emissions described in the Recirculated DSEIR. The effect of those increases on 24-hr, 8-hr, and 1-hr criteria pollutant concentrations was re-evaluated as follows:

- For 24-hr $PM_{2.5}$, the 2023 at-berth auxiliary engine hoteling emissions increased from 4.7 lb/day (modeled in the Recirculated DSEIR) to 20.4 lb/day (revised in the Final SEIR). Therefore, AERMOD was rerun for 2023 24-hr $PM_{2.5}$ to evaluate the effect of this source emissions increase in local ambient concentrations for $PM_{2.5}$. Revised modeling showed the 24-hour PM2.5

concentration increment for 2023 increased by 0.016 ug/m3 at the maximum receptor but remains unchanged in the table at 0.3 ug/m3 after rounding to the nearest 0.1 ug/m3. Therefore, no new impact would occur in 2023. Because the 2030-2045 $PM_{2.5}$ concentrations are even less than the 2023 concentration, no new impacts would occur for those analysis years either.

- The 24-hr PM_{10} concentrations were determined to be significant in the Recirculated SEIR, so an increase in PM_{10} emissions will not affect the significance findings. $PM_{2.5}$ results were used to estimate the percent increase in the PM_{10} concentrations. Due to the parallels between PM_{10} and $PM_{2.5}$, the LAHD expects that the revised PM_{10} concentrations would increase a similar amount as the $PM_{2.5}$ concentrations at the maximum receptor (i.e, small increase; see previous bullet). Therefore, the impact related to revised 24-hr PM_{10} concentrations would remain significant, but the increases would be relatively small.
- Because of the composite modeling approach for CO and SO_2 whereby maximum emissions from all analysis years were modeled for each source (see methodology in Appendix B2 for further details) and because the revised 8-hour CO and 24-hour SO_2 emissions are still less than what was modeled for the Recirculated DSEIR, therefore, the revision will have no effect on 8-hr CO or 24-hr SO_2. The maximum 8-hr CO and 24-hr SO_2 auxiliary engine emissions modeled for the Revised Project belonged to years 2014 and 2012, respectively, which have not been updated in this Final SEIR.
- None of the 1-hour emissions for the Revised Project have changed, as the Recirculated DSEIR had assumed the 1-hr peaks of 2023-2045 to be without shorepower, so no updates are needed for 1-hr NO_2, 1-hr SO_2, 1-hr CO concentrations, or the acute hazard index in AQ-7.

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Table 3.1-12 revised as follows:

Table 3.1-12. Maximum Off-Site Ambient NO_2 Concentrations – Revised Project

Pollutant	Averaging Period	Analysis Year	Background Concentration (ug/m³)[c]	Maximum Modeled Project Concentration Increment (ug/m³)[d,f]	Total Concentration (ug/m³)[a,e]	Significance Threshold (ug/m³)	Significant?
NO_2[b]	Federal 1-hour	2012	139	40.3	179	188	No
		2014	127	158.9	**286**	188	**Yes**
		2018	123	108.7	**232**	188	**Yes**
		2023	123	17.8~~15.6~~	141~~139~~	188	No
		2030	123	11.6	135	188	No
		2036	123	4.3	127	188	No
		2045	123	0.7~~< 0~~	124~~123~~	188	No
	State 1-hour	2012	185	44.4	229	339	No
		2014	173	169.6	**343**	339	**Yes**
		2018	164	119.2	283	339	No
		2023	164	19.9	184	339	No
		2030	164	13.0	177	339	No
		2036	164	5.1	169	339	No
		2045	164	2.1~~1.2~~	166~~165~~	339	No
	Annual	2012	40	11.6	52	57	No
		2014	34	31.7	**66**	57	**Yes**
		2018	32	25.2	**57**	57	**Yes**
		2023	32	8.7	41	57	No
		2030	32	1.6	34	57	No
		2036	32	0.6	33	57	No
		2045	32	0.7	33	57	No

[a] Exceedances of the thresholds are indicated in bold.
[b] The federal 1-hour NO_2 modeled concentration represents the 98th percentile of the daily maximum 1-hour average concentrations. The state 1-hour NO_2 modeled concentration represents the maximum concentration.
[c] The background concentrations were obtained from the Wilmington Community Monitoring Station (Saints Peter and Paul School).
[d] The Modeled Project Concentration Increment represents the modeled concentration of the Project minus the modeled concentration of the 2008 Actual Baseline.
[e] The Total Concentration equals the Background Concentration plus the Maximum Modeled Project Concentration Increment.
~~[f] A Maximum Modeled Project Concentration Increment less than zero means that the Project concentration would be less than the Baseline concentration at every modeled receptor.~~

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Revised Table 3.1-15 as follows:

Table 3.1-15. Maximum Off-Site Ambient NO_2 Concentrations – FEIR Mitigated Scenario (informational only)

Pollutant	Averaging Period	Analysis Year	Background Concentration (ug/m³)[c]	Maximum Modeled Project Concentration Increment (ug/m³)[a,d,f]	Total Concentration (ug/m³)[e]	Significance Threshold (ug/m³)	Significant?
NO_2[b]	Federal 1-hour	2012	139	9.6	149	188	No
		2014	127	53.5	180	188	No
		2018	123	9.1	132	188	No
		2023	123	11.1	134	188	No
		2030	123	11.6	135	188	No
		2036	123	4.3	127	188	No
		2045	123	0.7~~< 0~~	124~~123~~	188	No
	State 1-hour	2012	185	16.9	202	339	No
		2014	173	61.7	235	339	No
		2018	164	10.8	175	339	No
		2023	164	14.6	179	339	No
		2030	164	13.0	177	339	No
		2036	164	5.1	169	339	No
		2045	164	2.1~~1.3~~	166~~165~~	339	No
	Annual	2012	40	5.2	45	57	No
		2014	34	16.7	51	57	No
		2018	32	7.0~~6.4~~	39~~38~~	57	No
		2023	32	3.3	35	57	No
		2030	32	2.8	35	57	No
		2036	32	1.9	34	57	No
		2045	32	1.8	34	57	No

[a] Exceedances of the thresholds are indicated in bold.
[b] The federal 1-hour NO_2 modeled concentration represents the 98th percentile of the daily maximum 1-hour average concentrations. The state 1-hour NO_2 modeled concentration represents the maximum concentration.
[c] The background concentrations were obtained from the Wilmington Community Monitoring Station (Saints Peter and Paul School).
[d] The Modeled Project Concentration Increment represents the modeled concentration of the ~~Project~~FEIR Mitigated Scenario minus the modeled concentration of the 2008 Actual Baseline.
[e] The Total Concentration equals the Background Concentration plus the Maximum Modeled Project Concentration Increment.
[f] ~~A Maximum Modeled Project Concentration Increment less than zero means that the Project concentration would be less than the Baseline concentration at every modeled receptor.~~

Section 3.1.4.4 Page 3.1-69

Added text immediately before Table 3.1-18 as follows:

Updates related to Revised Project peak daily emissions

Peak daily emissions related to ship (i.e. OGVs) hotelling for years 2023-2045 of the Revised Project have increased in the Final SEIR, as detailed in the discussion of Impact AQ-3. However, annual and 1-hour ship hoteling emissions of 2023-2045 for the Revised Project have not changed, as the RDSEIR had assumed the 1-hr peaks of 2023-2045 to be without shorepower. Similarly, annual emissions in the RDSEIR for every analysis year of the Revised Project reflect the difference in AMP mitigation annual compliance and requirements between the Revised Project and FEIR Mitigated scenarios, with the result that no updates were needed for annual emissions in this document. Therefore, because the health risk analysis only uses annual and 1-hr emissions of PM and VOC to evaluate individual cancer risk, chronic hazard index and acute hazard index, the changes in peak daily emissions would not have an effect on Impact AQ-7.

Section 3.1.4. Page 3.1-75

Added a new Section 3.1.4.5 after Table 3.1-22.

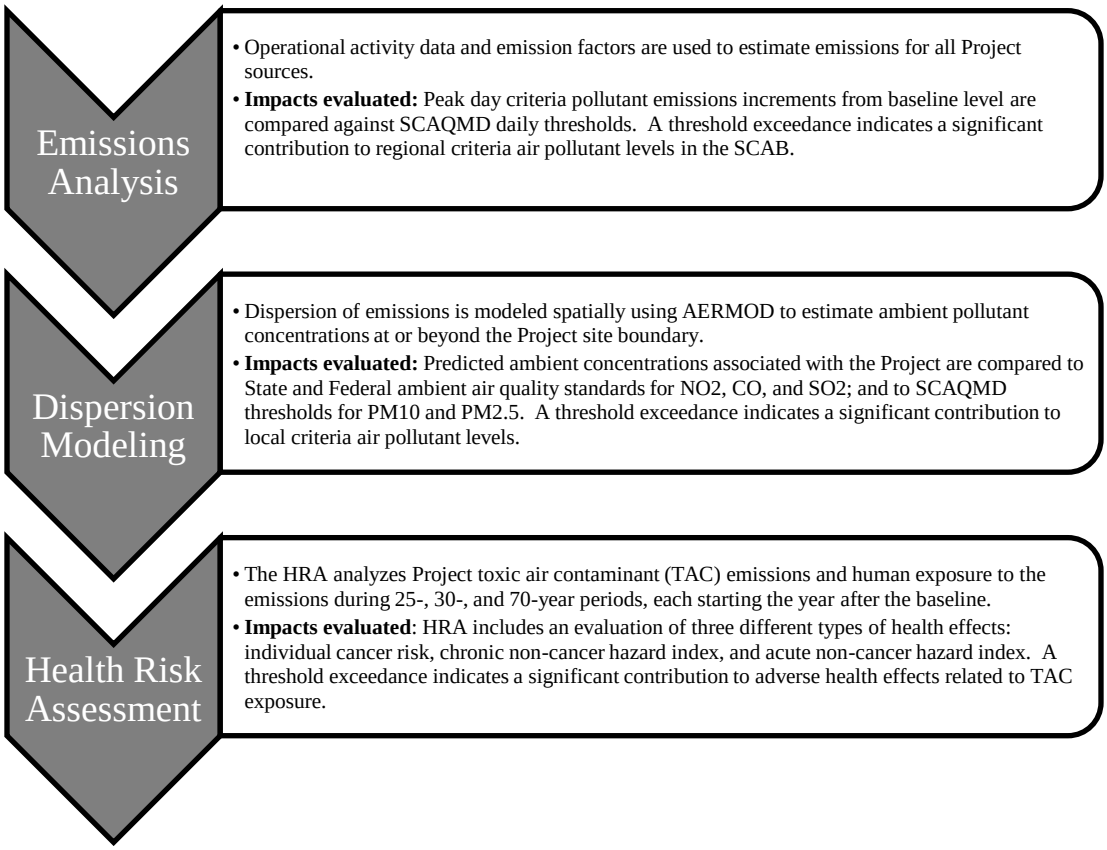
Section 3.1.4.5 Discussion of Health Effects Related to Criteria Pollutant Impacts

This section includes a discussion of the potential health effects of criteria air pollutant impacts in accordance with the findings of the legal case *Sierra Club v. County of Fresno* (2018), commonly called "Friant Ranch." Potential health effects are described for the Revised Project's significant emissions identified in Impact AQ-3 and significant ambient concentrations identified in Impact AQ-4. This discussion is not a new impact assessment but rather provides supplemental information related to the significant impacts already identified in the Recirculated DSEIR. The discussion links the Revised Project's impacts to potential health effects in response to the Friant Ranch court decision which was filed in between the time of the Recirculated DSEIR and Final SEIR. The information and graphics presented in this discussion that are related to the Revised Project's impacts were developed from the same data used to prepare the Recirculated DSEIR. Health effects information was acquired through a review of available literature published by the SCAQMD, CARB, and EPA.

The discussion of health effects is guided by the step-wise process depicted in Figure 3.1-3 that is used for assessing air quality impacts in the Recirculated DSEIR. The first step, emissions analysis, is presented in Impact AQ-3 and is indicative of *regional* air quality impacts because the analysis determines the quantity of pollutants released into the SCAB from Revised Project-related sources operating throughout the SCAB. The second step, dispersion modeling, is presented in Impact AQ-4 and is indicative of *local* impacts because the analysis estimates the ambient pollutant concentrations to which persons would be exposed, and the highest concentrations are predicted to occur in close proximity to the Project site. Therefore, the health effects discussion considered both regional health effects (i.e., effects that could be experienced throughout the SCAB) and local health effects (i.e., effects in the vicinity of the CS Terminal). The third step, health risk assessment (HRA), is presented in Impact AQ-7 of the Recirculated DSEIR. The results for individual cancer risk and population cancer burden in Tables 3.1-18 and 3.1-19 are already direct estimates of the health effects associated with exposure to the

Revised Project's toxic air contaminant (TAC) emissions. Therefore, no further health effects discussion is necessary for the HRA.

Figure 3.1-3. Air Quality Analysis Key Elements and Progression



Regional Health Effects

This section discusses the relationship between the Revised Project's regional criteria pollutant emissions and the potential for adverse health effects to occur for persons exposed to the emitted pollutants. The Revised Project would produce significant regional emissions of VOC in analysis years 2014 to 2045, CO in 2012 to 2023, and NO_x in 2014 to 2036. The primary component of NO_x is NO_2, a criteria pollutant. In addition, VOC and NO_x are precursors of ozone, a criteria pollutant that is photochemically formed from the precursors in the atmosphere in the presence of sunlight (EPA, 2018). Therefore, the criteria pollutants evaluated for regional health effects are CO, NO_2, and ozone.

There is currently no methodology available that can accurately quantify regional health effects from CO, NO_2, or ozone exposure associated with an individual project's VOC, CO, or NO_x emissions. The SCAQMD reached a similar conclusion in its *Amicus Curiae* brief filed with the California Supreme Court in the case of *Sierra Club v. County of Fresno*, when, speaking about ozone, the SCAQMD stated that it does not know of a way to accurately quantify health impacts caused by emissions produced on a scale as small as individual projects (SCAQMD, 2015b). One existing tool, EPA's BenMAP, calculates the number and economic value of air pollution-related deaths and illnesses resulting from changes in ozone and $PM_{2.5}$ concentrations (EPA, 2019). However, the expected changes in regional ozone concentrations associated with the Revised Project would be so

low that BenMAP would likely produce estimates of health effects that are near zero. Therefore, the extent to which regional adverse health effects can be identified in this section is limited to (a) discussing the Revised Project's potential impact on regional pollutant levels; and (b) generally describing the types of adverse health effects associated with exposure to the pollutants of concern.

Carbon Monoxide (CO)

Impact on Regional CO Concentrations. The SCAB is currently designated attainment of the CAAQS and NAAQS for CO. The CAAQS were established to protect public health, including the most sensitive groups (CARB, 2019). The NAAQS were established to protect public health with an adequate margin of safety (U.S.C, 2013). The most stringent CAAQS or NAAQS (also referred to as state or federal standards) for CO are 20 ppm for a 1-hour average and 9.0 ppm for an 8-hour average.

The highest CO concentrations recorded anywhere in the SCAB over the last 3 available years (2015-2017) are 8.4 ppm for a 1-hour average and 4.6 ppm for an 8-hour average (SCAQMD, 2019b). These pollutant levels are 42 and 51 percent of the 1-hour and 8-hour standards, respectively.

According to the most recent EPA-approved SCAB emissions inventory, the total CO emissions within the SCAB in 2012 were 2,123 tons/day (SCAQMD, 2017b). By comparison, the highest CO emissions increment associated with the Revised Project was 3,191 lb/day (1.6 tons/day), which is 0.08 percent as large as the total SCAB emissions. Given that the current CO concentrations in the county are no greater than 51 percent of the CAAQS or NAAQS, it is very unlikely that a 0.08 percent emissions contribution from the Revised Project would lead to a violation of the CAAQS or NAAQS anywhere in the SCAB.

Potential Health Effects. In developing the CO standards, EPA (2010b) has prepared a comprehensive report on the possible health effects associated with CO exposure. EPA's findings are summarized by the SCAQMD in its *Final 2016 Air Quality Management Plan* (SCAQMD, 2017b). The main conclusions are:

- Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of worsening oxygen supply delivery to the heart. Inhaled CO has no known direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport, by competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, people with conditions requiring an increased oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include patients with diseases involving heart and blood vessels, fetuses, and patients with chronic hypoxemia (oxygen deficiency), such as is seen at high altitudes. Reductions in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels, including preterm births and heart abnormalities.

Nitrogen Dioxide (NO_2)

Impact on Regional NO_2 Concentrations. The SCAB is currently designated attainment of the NO_2 concentration standards. The most stringent state and federal NO_2 standards are 0.18 ppm for a 1-hour average (state 1-hour standard), 0.100 ppm for a three-year

average of the 98th percentile of the annual distributions of daily maximum 1-hour average concenrations (federal 1-hour standard), and 0.030 ppm for an annual average.

The highest NO_2 concentrations recorded anywhere in the SCAB over the last 3 available years (2015-2017) are 0.1155 ppm for the state 1-hour average, 0.078 ppm for the federal 1-hour average, and 0.0356 ppm for an annual average (SCAQMD, 2019b). These pollutant levels are 64, 78, and 119 percent of the state 1-hour, federal 1-hour, and annual standards, respectively.

The exceedance of the state annual standard of 0.030 ppm occurred in all three years at a single monitoring station adjacent to Route 60 in Ontario. This station is one of four near-road sites in the SCAB purposely placed by the SCAQMD to capture impacts from heavily traveled roadways (SCAQMD, 2019c). In November 2018, CARB proposed to separate the area surrounding this monitor from the remainder of the SCAB and reclassify the area as nonattainment. CARB is currently working with the SCAQMD to define the specific boundary of the nonattainment area. The remainder of the SCAB will remain classified as attainment (CARB, 2018b).

According to the most recent EPA-approved SCAB emissions inventory, the total NO_x emissions within the SCAB in 2012 were 540 tons/day (SCAQMD, 2017b). By comparison, the highest NO_x emissions increment associated with the Revised Project was 5,284 lb/day (2.6 tons/day), which is 0.5 percent as large as the total SCAB emissions. Therefore, the Revised Project's contribution to regional NO_2 levels would be relatively small.

Potential Health Effects. In developing the NO_2 standards, the EPA (2016) and CARB (2007b) have prepared comprehensive reports on the possible health effects associated with NO_2 exposure. The main conclusions of these agencies are:

- EPA (2016) concluded that a causal relationship exists between short-term NO_2 exposure and respiratory effects such as asthma attacks. There is likely to be a causal relationship between long-term NO_2 exposure and respiratory effects based on the evidence for development of asthma. For short-term and/or long-term NO_2 exposure, evidence is suggestive of, but not sufficient to imply, a causal relationship with cardiovascular effects, diabetes, mortality, birth outcomes, and cancer. People with asthma, children, and older adults are at increased risk for NO_2-related health effects.
- CARB (2007b) concluded that, in controlled human exposure studies, asthmatics appear to be especially sensitive to NO_2. Asthmatic volunteers have experienced short-term effects at concentrations as low as 0.26 ppm. There is evidence that a subset of asthmatics may experience increased airway reactivity at concentrations of 0.2 to 0.3 ppm for 30 minutes to 2 hours. Generally, no clinical effects are reported in non-asthmatic volunteers in conditions below 1 ppm. Epidemiological studies have shown an association between NO_2 and both hospital admissions and emergency room visits for asthma at 24-hour average concentrations ranging from 0.018 to 0.036 ppm. Less robust evidence suggests associations with mortality, hospitalization for cardiovascular disease, and low birth weight.

Ozone

Impact on Regional Ozone Concentrations. The SCAB is currently designated nonattainment of the ozone concentration standards. The most stringent state and federal ozone standards are 0.09 ppm for a 1-hour average, 0.070 ppm for the three-year average

of the fourth-highest 8-hour concentration each year (known as the federal 8-hour standard), and 0.07 ppm for an 8-hour average (known as the state 8-hour standard).

The highest 1-hour ozone concentration recorded in the SCAB over the last three available years (2015-2017) is 0.163 ppm, which is 1.8 times the standard. This concentration occurred in 2016 at the Crestline station in the central San Bernardino Mountains. The standard was exceeded somewhere in the SCAB on 24 percent of days during the three-year period.

The highest federal 8-hour ozone concentration recorded in the SCAB over the last three available years (2015-2017) is 0.112 ppm, which is 1.6 times the standard. This concentration also occurred at the Crestline station. The threshold of 0.070 ppm was exceeded somewhere in the SCAB on 36 percent of days during the three-year period.

The highest state 8-hour ozone concentration recorded in the SCAB over the last three available years (2015-2017) is 0.136 ppm, which is 1.9 times the standard. This concentration occurred in 2017 at the San Bernardino station. The standard was exceeded somewhere in the SCAB on 36 percent of days during the three-year period (SCAQMD, 2019b).

According to the most recent EPA-approved SCAB emissions inventory, the total VOC emissions within the SCAB in 2012 were 470 tons/day (SCAQMD, 2017b). By comparison, the highest VOC emissions increment associated with the Revised Project was 430 lb/day (0.2 tons/day), which is 0.04 percent as large as the total SCAB emissions. As discussed above for NO_2, the Revised Project's NO_x emissions increment is 0.5 percent as large as the total SCAB emissions. Therefore, the Revised Project's contribution to regional ozone levels would be relatively small.

Potential Health Effects. In developing the ozone standards, EPA (2013b) and CARB (2005c) have prepared comprehensive reports on the possible health effects associated with ozone exposure. The main conclusions of the agencies are:

- EPA (2013b) concluded that a causal relationship exists between short-term ozone exposure and respiratory effects. A causal relationship is likely to exist between short-term ozone exposure and cardiovascular effects and mortality. Evidence is suggestive of a causal relationship between short-term ozone exposure and central nervous system effects. A causal relationship is likely to exist between long-term ozone exposure and respiratory effects. Evidence is suggestive of a causal relationship between long-term ozone exposure and cardiovascular effects, reproductive and developmental effects, central nervous system effects, and mortality. There is little evidence for a relationship between long-term ozone exposure and increased risk of lung cancer. The populations and lifestages that have adequate evidence for increased ozone-related health effects are individuals with certain genotypes, individuals with asthma, younger and older age groups, individuals with reduced intake of Vitamins E and C, and outdoor workers.
- CARB (2005c) concluded that ozone exposure can result in reduced lung function, increased respiratory symptoms, increased airway hyperreactivity and increased airway inflammation, increased mortality, hospitalization for cardiopulmonary causes, emergency room visits for asthma, and restrictions in activity. In controlled human exposure studies, exercising individuals exposed for one hour to an ozone concentration as low as 0.12 ppm or for 6.6 hours to a concentration as low as 0.08 ppm experienced lung function decrements and symptoms of respiratory irritation such as cough, wheeze, and pain upon deep

inhalation. The lowest ozone concentrations at which airway hyperreactivity (an increase in the tendency of the airways to constrict in reaction to exposure to irritants) has been reported are 0.18 ppm ozone following 2-hour exposure in exercising subjects, 0.40 ppm following 2-hour exposure in resting subjects, and 0.08 ppm ozone in subjects exercising for 6.6 hours. Airway inflammation has been reported following 2-hour exposures to 0.20 ppm ozone and following 6.6-hour exposure to 0.08 ppm ozone. Children may be more affected by ozone than the general population due to effects on the developing lung and to relatively higher exposure than adults. Also, asthmatics may represent a sensitive sub-population for ozone.

In summary, the Revised Project would produce significant regional emissions of VOC, CO, and NO_x. These emissions would make relatively small contributions to regional levels of CO, NO_2, and ozone. There is currently no methodology available that can accurately quantify regional health effects from CO, NO_2, or ozone exposure associated with an individual project's VOC, CO, or NO_x emissions. Therefore, the above discussion is limited to identifying the Revised Project's potential contribution to regional pollutant levels, and generally describing the types of adverse health effects associated with exposure to those pollutants.

Local Health Effects

This section discusses the relationship between the Revised Project's local criteria pollutant impacts and the potential for adverse health effects to occur for persons exposed to those impacts. The dispersion modeling results in Tables 3.1-12 through 3.1-14 show significant local concentration impacts for NO_2 in 2014 and 2018 and PM_{10} in 2014, 2018, 2023, 2030, 2036, and 2045. Therefore, the criteria pollutants evaluated for local health effects are NO_2 and PM_{10}.

There is currently no methodology available that can accurately quantify local health effects from ambient NO_2 or PM_{10} concentrations associated with an individual project. (As discussed in Section 3.1.4.1, in the RDSEIR, LAHD has established a health effects quantification methodology for significant concentrations of $PM_{2.5}$, which is a subset of PM_{10}; however, the Revised Project's local $PM_{2.5}$ concentrations would be less than significant). Therefore, the extent to which local adverse health effects can be identified in this section is limited to (a) defining the geographical area of significant local impacts; (b) presenting the frequency of significant local impacts; (c) presenting the magnitude of the significant local impacts; and (d) generally describing the types of adverse health effects associated with exposure to NO_2 and PM_{10}.

NO_2 is also an ozone precursor. However, because ozone is formed some time later and downwind from its precursor emission source (EPA, 1998), ozone behaves as a regional pollutant rather than a local pollutant. For example, the highest ozone concentrations are not found in urban areas close to the concentrated sources of its precursors, but rather in suburban and rural areas downwind of these sources (EPA, 2013b). Therefore, the potential health effects associated with ozone exposure were addressed under Regional Health Effects.

Nitrogen Dioxide (NO_2)

Area of Local Impact. Figures 3.1-4 and 3.1-5 show the areas where the modeled NO_2 concentrations associated with the Revised Project plus background would exceed the federal 1-hour standard in 2014 and 2018. Figure 3.1-6 shows the area where the modeled NO_2 concentrations would exceed the state 1-hour standard in 2014. Figures

3.1-7 and 3.1-8 show the areas where the modeled NO_2 concentrations would exceed the state annual standard in 2014 and 2018. These are the areas where the Revised Project would produce significant local NO_2 concentration impacts. The largest impact areas extend north to the industrial area occupied by the Yang Ming container terminal, west to commercial and recreational uses along Pacific Avenue, Front Street, and Harbor Boulevard, and south to the cruise operations, visitor-serving, and open space use areas of the Catalina Express terminal, Cruise Ship Promenade, and World Cruise Center. None of the significant impact areas would extend over existing residences. No significant local NO_2 concentration impacts would occur in 2023 through 2045.

Frequency of Local Impact. Figures 3.1-4, 3.1-5, and 3.1-6 also show the model-predicted frequencies of exceedance of the federal and state 1-hour NO_2 standards associated with the Revised Project plus background at selected off-terminal locations throughout the significant impact areas. The model-predicted numbers of exceedances are likely overestimated because the analysis conservatively assumes the background NO_2 concentration, which is added to the modeled Revised Project concentration, remains at its highest level for all modeled hours. In actuality, the background concentration fluxuates from hour-to-hour and day-to-day. There are no frequency-of-exceedance figures for annual concentrations shown in Figures 3.1-6 and 3.1-7 because there is only one annual average concentration per year at each receptor location.

Specifically, Figures 3.1-3 and 3.1-4 show the number of days per year during which at least one hourly NO_2 concentration is predicted to exceed the federal 1-hour threshold of 188 ug/m^3 during operation of the Revised Project in 2014 and 2018. By definition, the federal 1-hour standard is exceeded when the 1-hour threshold is exceeded on at least 8 days per year (i.e., the 98^{th} percentile of the maximum daily 1-hour concentrations). The figures show that the maximum number of exceedance days of the federal 1-hour threshold is 243 days in 2014 and 117 days in 2018. The maximum number of exceedances would occur directly on the southern terminal boundary. As shown in the figures, the numbers of exceedances decline rapidly with distance from the maximum impact point.

Figure 3.1-6 shows the number of hours per year that the NO_2 concentration is predicted to exceed the state 1-hour threshold of 339 ug/m^3 during operation of the Revised Project in 2014. By definition, the state 1-hour standard is exceeded when at least one 1-hour concentration exceeds the threshold. The figure shows that, with the Revised Project, the state 1-hour threshold would be exceeded only 3 hours per year in 2014, directly on the southern terminal boundary.

Magnitude of Local Impact. In terms of the magnitude of NO_2 concentrations, Table 3.1-12 shows that the federal 1-hour NO_2 concentration (Revised Project plus background) reaches a maximum off-terminal value of 286 ug/m^3 in 2014 and 232 ug/m^3 in 2018. Therefore, the federal 1-hour concentrations above the standard within the Revised Project's significant impact areas range from 188 to 286 ug/m^3 (0.10 to 0.15 ppm), depending on the analysis year and location within the exceedance area. The table also shows that the state 1-hour NO_2 concentration reaches a maximum off-terminal value of 343 ug/m^3 in 2014. Therefore, the state 1-hour concentrations above the standard within the Revised Project's significant impact area range from 339 to 343 ug/m^3 (0.180 to 0.182 ppm), depending on the location within the exceedance area. Finally, the table shows that the annual NO_2 concentration reaches a maximum off-terminal value of 66 ug/m^3 in 2014 and 57 ug/m^3 in 2018. Therefore, the annual concentrations above the standard within the Revised Project's significant impact area range from 57 to 66 ug/m^3 (0.030 to 0.035 ppm), depending on the analysis year and

location within the exceedance area. The low end of each range represents the most stringent state or federal ambient air quality standard, and the high end represents the highest predicted concentration anywhere within the exceedance area.

Potential Health Effects. The potential health effects associated with NO_2 exposure are described above under Regional Health Effects.

Figure 3.1-4. Area of Threshold Exceedance for the Revised Project; 2014 Federal 1-Hour NO_2 Concentrations

Figure 3.1-5. Area of Threshold Exceedance for the Revised Project; 2018 Federal 1-Hour NO_2 Concentrations

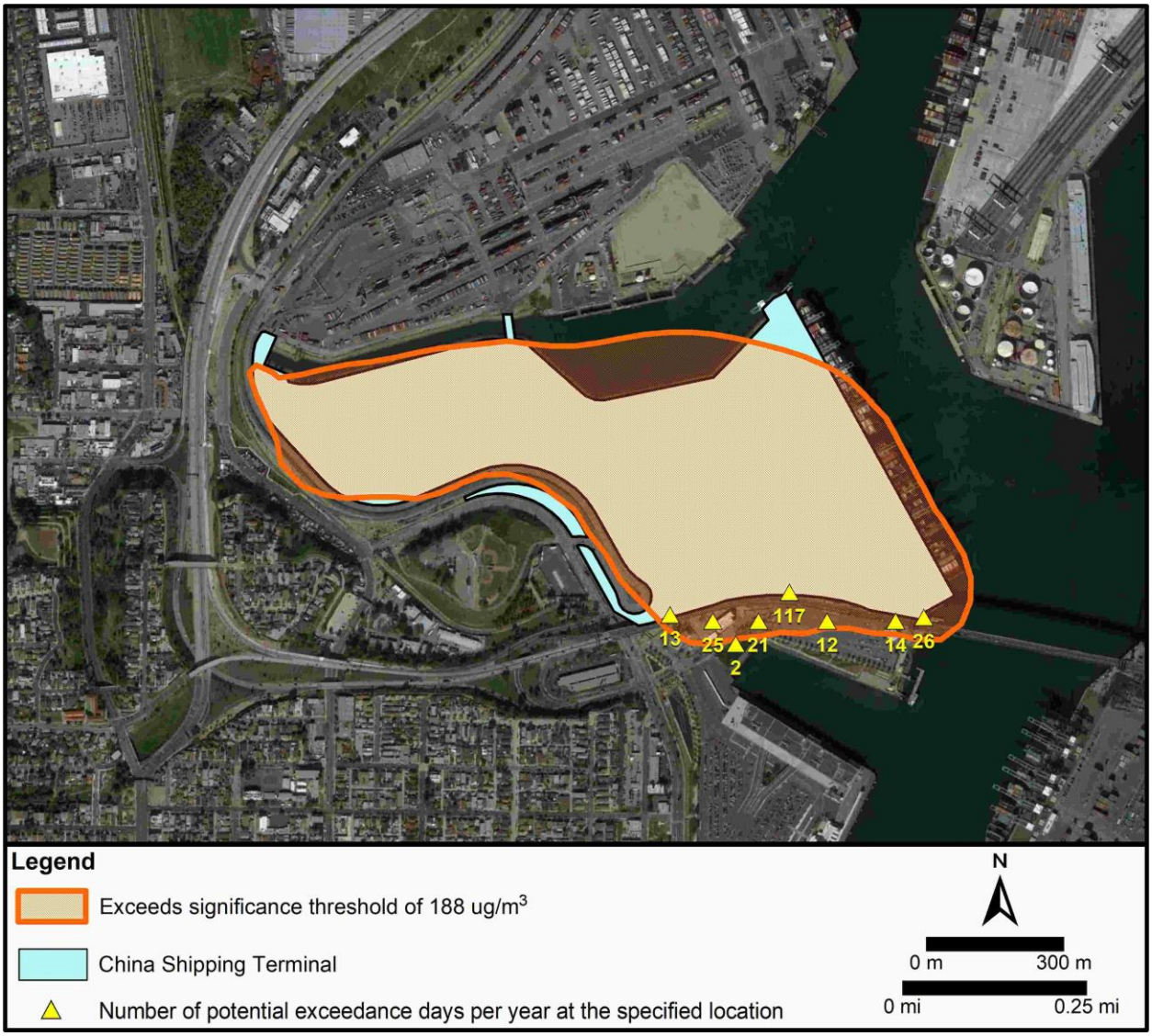


Figure 3.1-6. Area of Threshold Exceedance for the Revised Project; 2014 State 1-Hour NO_2 Concentrations

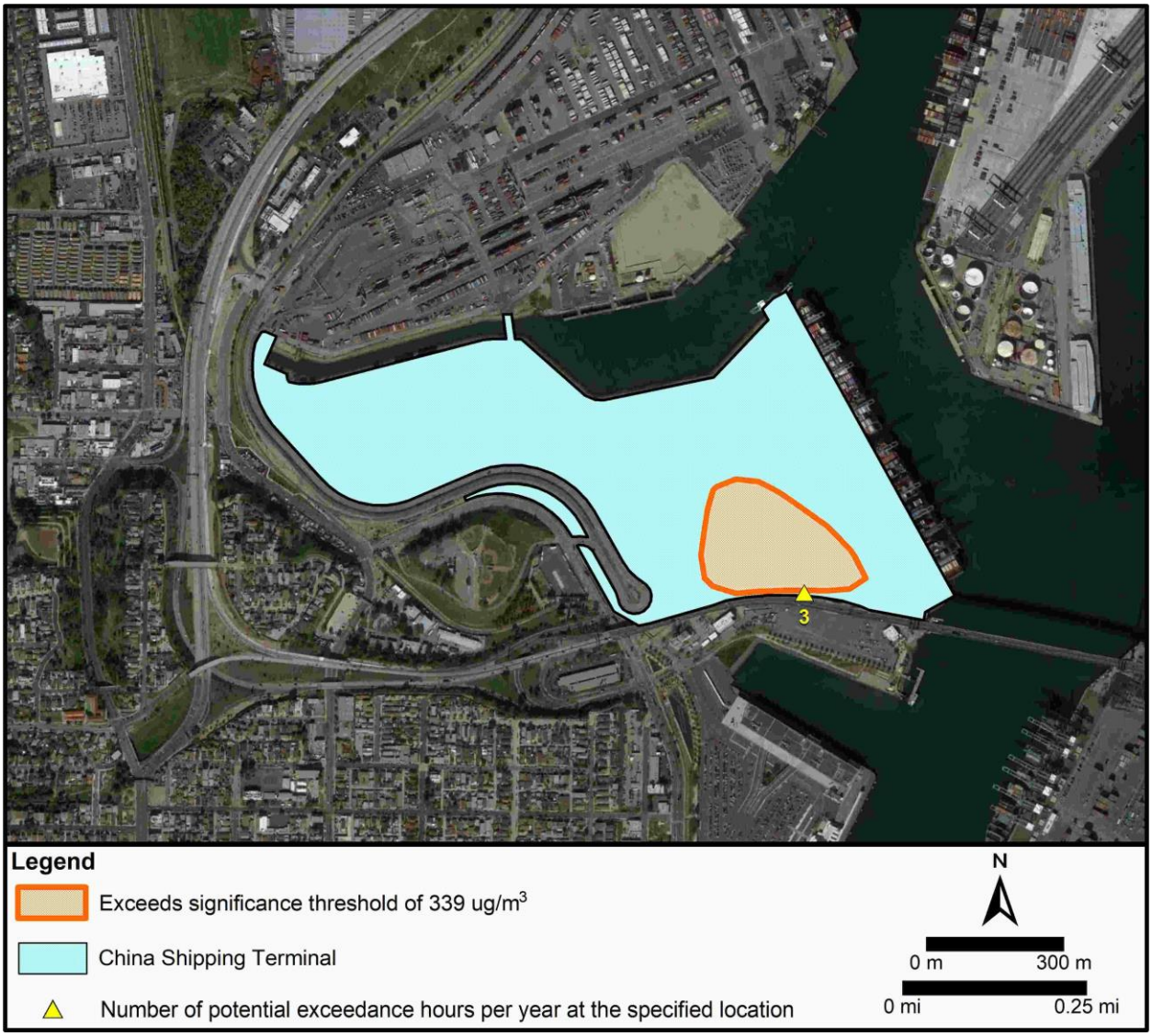


Figure 3.1-7. Area of Threshold Exceedance for the Revised Project; 2014 Annual NO_2 Concentrations

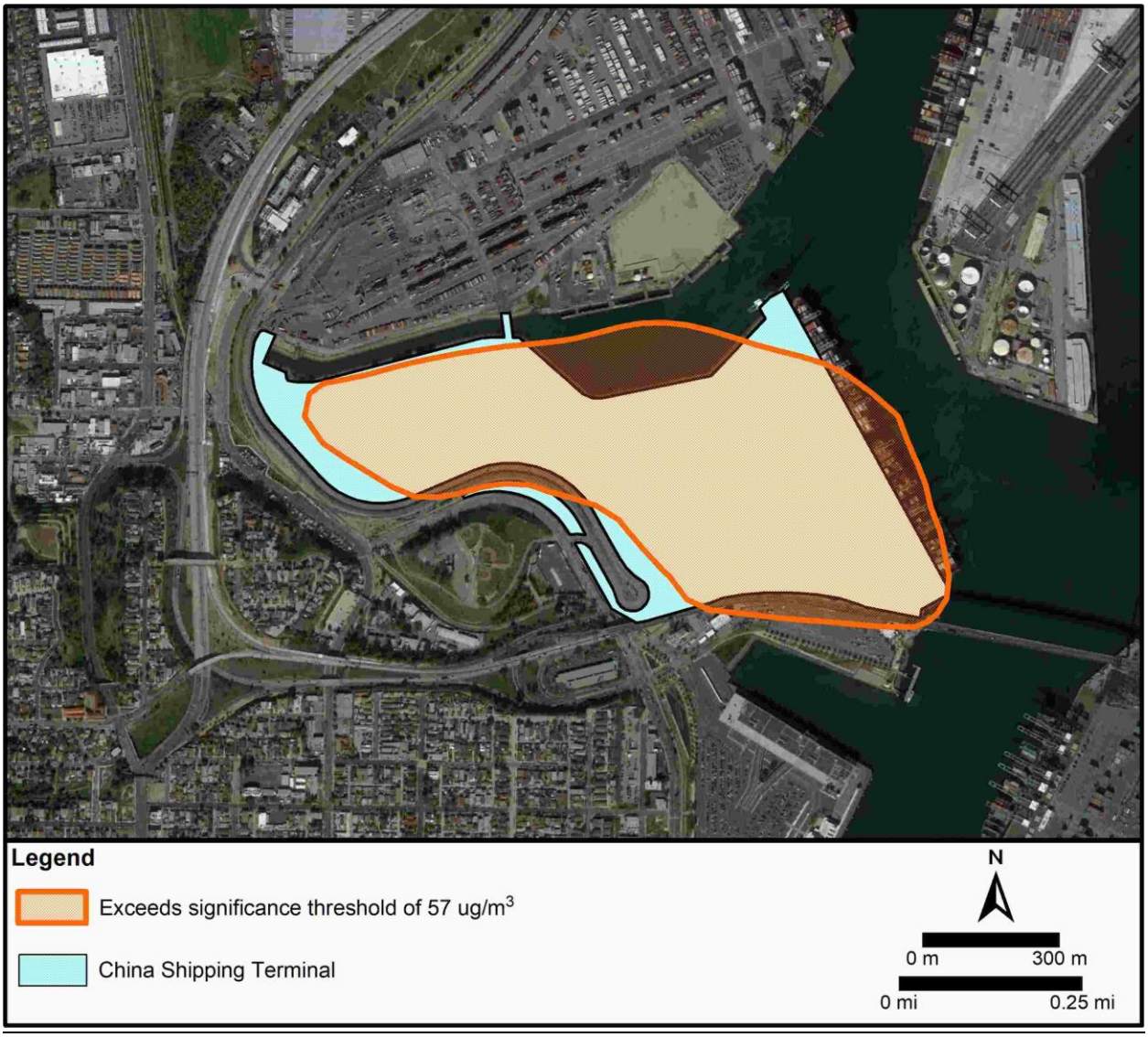
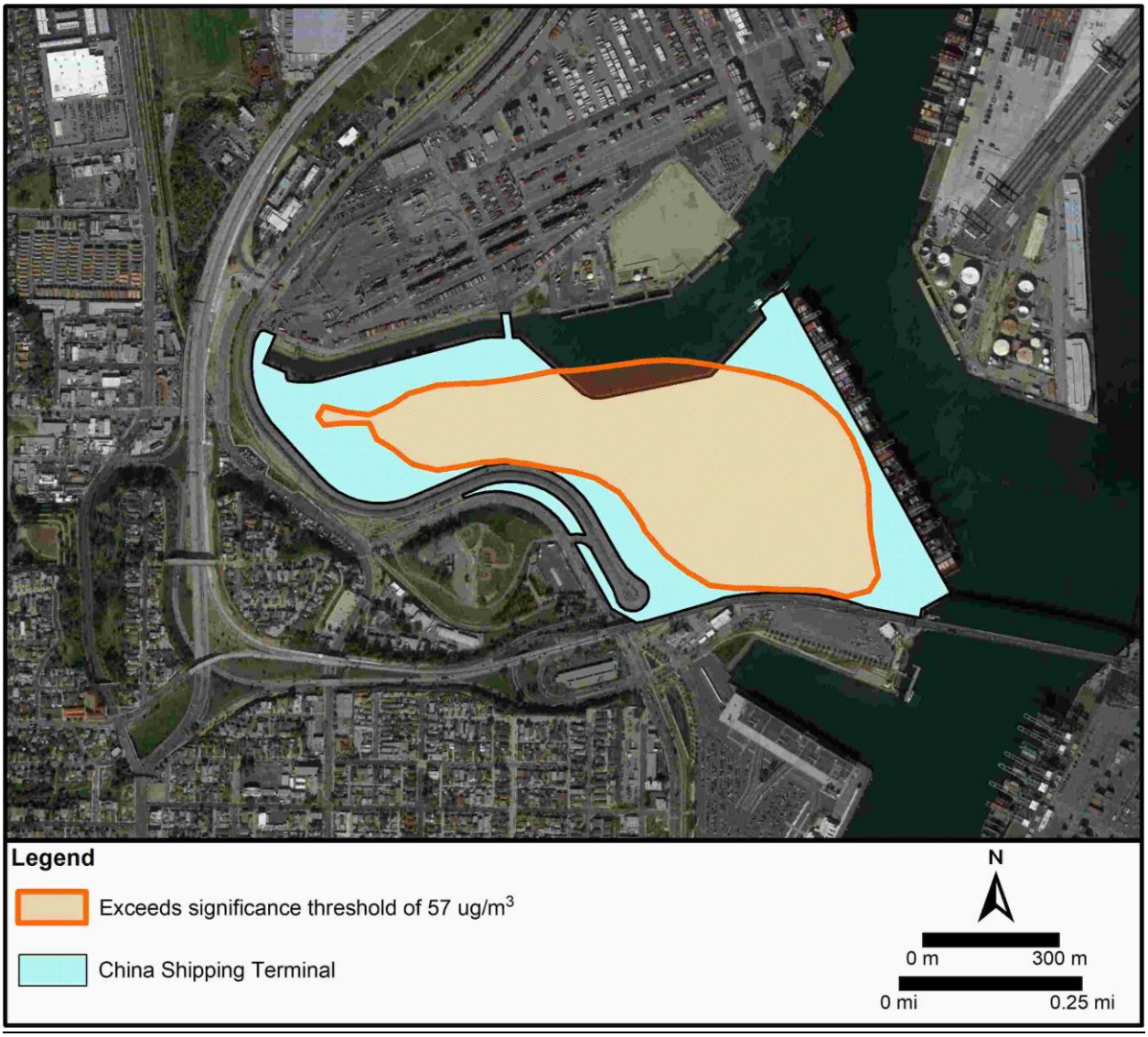


Figure 3.1-8. Area of Threshold Exceedance for the Revised Project; 2018 Annual NO_2 Concentrations



Particulate Matter Less than 10 Microns (PM_{10})

The SCAB is currently classified as nonattainment for the state 24-hour and annual PM_{10} standards. Locally, Table 3.1-3 shows that the Wilmingon Community Station, about 1.6 miles north of the China Shipping terminal, exceeded the 24-hour standard in two of the last three available years (2015-2017). There was one exceedance day in 2015 and two exceedance days in 2017. The highest observed concentration of 69.9 ug/m^3 is 40 percent higher than the standard of 50 ug/m^3. The Wilmington Community Station exceeded the annual PM_{10} standard in all three years (2015-2017). The highest observed concentration of 25.5 ug/m^3 is 28 percent higher than the standard of 20 ug/m^3.

Area of Local Impact. Figures 3.1-9 through 3.1-14 show the areas where the modeled PM_{10} concentration increments associated with the Revised Project would exceed the SCAQMD's 24-hour significance threshold of 2.5 ug/m^3 in 2014 through 2045. Figures 3.1-15 through 3.1-20 show the areas where the modeled PM_{10} concentration increments

would exceed the SCAQMD's annual significance threshold of 1.0 ug/m^3 in 2014 through 2045. These are the areas where the Revised Project would produce significant local PM_{10} concentration increments. The project increments would be in addition to the existing PM_{10} concentrations that already occur in the Revised Project impact areas. The existing concentrations may already exceed the state standards, given the nonattainment status of the region and the readings at the Wilmington Community Station. The largest Revised Project significant impact areas extend north into the industrial use area of the Yang Ming container terminal, west to commercial and recreational uses along Front Street, and south to the cruise operations, visitor-serving, and open space uses of the Catalina Express terminal and Cruise Ship Promenade. None of the Revised Project's significant impact areas would extend over existing residences.

Frequency of Local Impact. Figures 3.1-9 through 3.1-14 also show the model-predicted frequencies of exceedance of the SCAQMD's 24-hour threshold at selected off-terminal locations throughout the Revised Project's significant impact areas. There are no frequency-of-exceedance figures for annual concentrations because there is only one annual average concentration per year at each receptor location. The figures show the number of days per year that the Revised Project's concentration increment is predicted to exceed the SCAQMD's 24-hour significance threshold of 2.5 ug/m^3. The figures show that the maximum number of threshold exceedance days is 58 days per year in 2014. The maximum number of exceedances would occur directly on the southern terminal boundary. As shown in the figures, the numbers of exceedances decline rapidly with distance from the maximum impact point. The figures also show a substantial reduction in the number of exceedances after analysis year 2023 (from a maximum of 33 days per year in 2023 to 9 days per year in 2030).

Magnitude of Local Impact. To estimate the magnitude of PM_{10} concentrations to which individuals in the exceedance areas would be exposed, it was necessary to add the Revised Project concentration increments from Table 3.1-12 to background PM_{10} concentrations measured at the Wilmington Community Station. Derived from the most recent three-year observation period leading up to the analysis years, the 24-hour PM_{10} background concentrations were determined to be 86.8 ug/m^3 for 2014 and 69.9 ug/m^3 for 2018 and beyond. The annual PM_{10} background concentrations were determined to be 28.3 ug/m^3 for 2014 and 25.5 ug/m^3 for 2018 and beyond.

Summing the Revised Project concentration increments and background concentrations results in maximum off-terminal 24-hour PM_{10} concentrations of 93 ug/m^3 in 2014, 75 ug/m^3 in 2018 and 2023, and 74 ug/m^3 in 2030, 2036, and 2045. The maximum off-terminal annual PM_{10} concentrations are 30 ug/m^3 in 2014 and 27 ug/m^3 in 2018, 2023, 2030, 2036, and 2045. Therefore, the total PM_{10} concentrations above the standard within the Revised Project's significant impact areas range from 50 to 93 ug/m^3 for 24-hour concentrations and 20 to 30 ug/m^3 for annual concentrations, depending on the analysis year and location within the exceedance area. The low end of each range represents the ambient air quality standard, and the high end represents the highest predicted concentration anywhere within the exceedance area.

Potential Health Effects. In developing the PM_{10} standards, EPA (2009) and CARB (2002) have prepared comprehensive reports on the possible health effects associated with PM_{10} exposure. The SCAQMD also reviewed PM_{10}-related health effects in Appendix I of its *Final 2016 Air Quality Management Plan* (SCAQMD, 2017b). Most of the health effects findings made by these agencies focus on $PM_{2.5}$, which is a subset of PM_{10}. Although the local $PM_{2.5}$ impacts from the Revised Project would be less than

significant, the $PM_{2.5}$-related health effects are included in the following bullets as part of the overall health effects from PM_{10}. The main conclusions of the agencies are:

- EPA (2016) concluded that a causal relationship exists between $PM_{2.5}$ exposure (both short- and long-term) and cardiovascular effects and mortality. A causal relationship is likely to exist between $PM_{2.5}$ exposure (both short- and long-term) and respiratory effects. Evidence is suggestive of a causal relationship between long-term $PM_{2.5}$ exposure and reproductive and developmental effects, cancer, mutagenicity, and genotoxicity. For the portion of PM_{10} greater than 2.5 microns ($PM_{10-2.5}$), EPA concluded that evidence is suggestive of a causal relationship between short-term $PM_{10-2.5}$ exposure and cardiovascular effects, respiratory effects, and mortality. Older adults have heightened responses for cardiovascular morbidity with PM exposure. Children are at an increased risk of PM-related respiratory effects. Individuals with underlying cardiovascular disease or asthma may be at an increased risk for adverse effects.
- CARB (2007b) concluded that the potential health effects associated with PM exposure include mortality, increased hospital admissions for cardiopulmonary causes, acute and chronic bronchitis, asthma attacks and emergency room visits, respiratory symptoms, and days with some restriction in activity. These adverse health effects have been reported primarily in infants, children, the elderly, and those with preexisting cardiopulmonary disease. CARB also classifies the portion of PM_{10} produced by diesel engine exhaust (diesel particulate matter, or DPM) as a toxic air contaminant exhibiting carcinogenic effects. A quantitative health risk assessment of the Revised Project's emissions of DPM and other toxic air contaminants is presented in Impact AQ-7.
- SCAQMD (2017) concluded that there is a causal relationship between $PM_{2.5}$ exposure and cardiovascular effects and mortality. Specific cardiovascular effects include cardiovascular deaths, hospital admissions for ischemic heart disease and congestive heart failure, changes in heart rate variability and markers of oxidative stress, and markers of atherosclerosis. A causal relationship is likely to exist between $PM_{2.5}$ exposure and respiratory effects, such as hospital admissions for COPD or respiratory infections, asthma development, asthma or allergy exacerbation, lung cancer, impacts on lung function, lung inflammation, oxidative stress, and airway hyperresponsiveness. Both short-term and long-term PM exposures are linked to health effects in humans. Young children, older adults, and people with pre-existing respiratory or cardiovascular health conditions are among those who may be more susceptible to the adverse effects of PM. The SCAQMD also found that the DPM portion of PM_{10} is a significant contributor to the cancer risk associated with toxic air contaminants in the SCAB. For example, the average lifetime risk for excess cancer cases in the SCAB from all sources is estimated to be 367 per million. SCAQMD's *Multiple Air Toxics Exposure Study IV* (MATES IV) determined that DPM is responsible for about 68 percent of the risk (SCAQMD, 2015a).

In summary, the Revised Project would produce significant local concentration impacts of NO_2 and PM_{10}. The Revised Project's significant impact areas would extend over industrial, commercial, and recreational land uses near the China Shipping terminal. There is currently no methodology available that can accurately quantify local health effects from ambient NO_2 or PM_{10} concentrations associated with an individual project. Therefore, the above discussion is limited to defining the geographical area of significant local impacts, presenting the frequency and magnitude of significant local impacts, and

generally describing the types of adverse health effects associated with exposure to NO_2 and PM_{10}.

Figure 3.1-9. Area of Threshold Exceedance for the Revised Project; 2014 24-Hour PM_{10} Concentration Increments

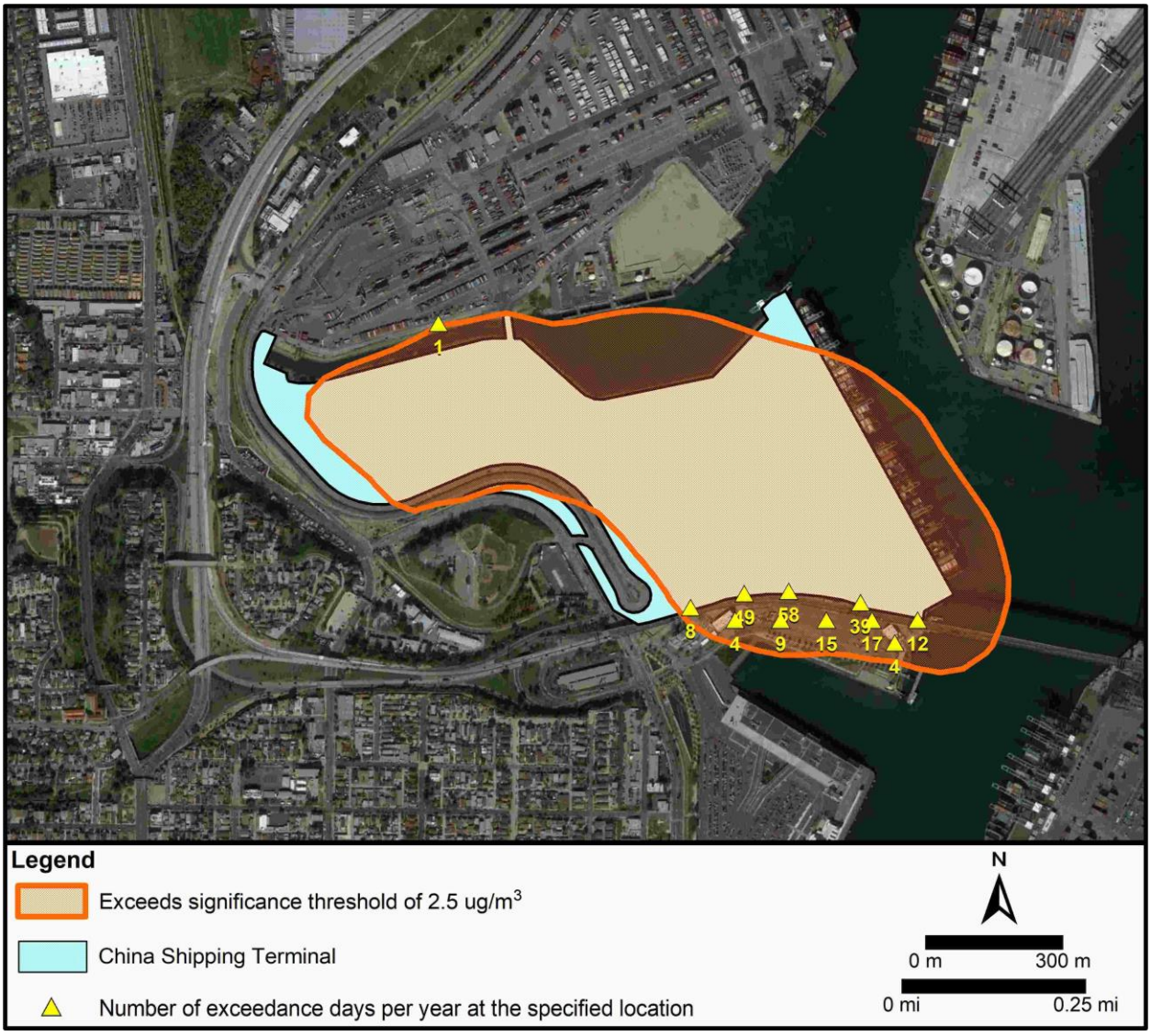


Figure 3.1-10. Area of Threshold Exceedance for the Revised Project; 2018 24-Hour PM_{10} Concentration Increments

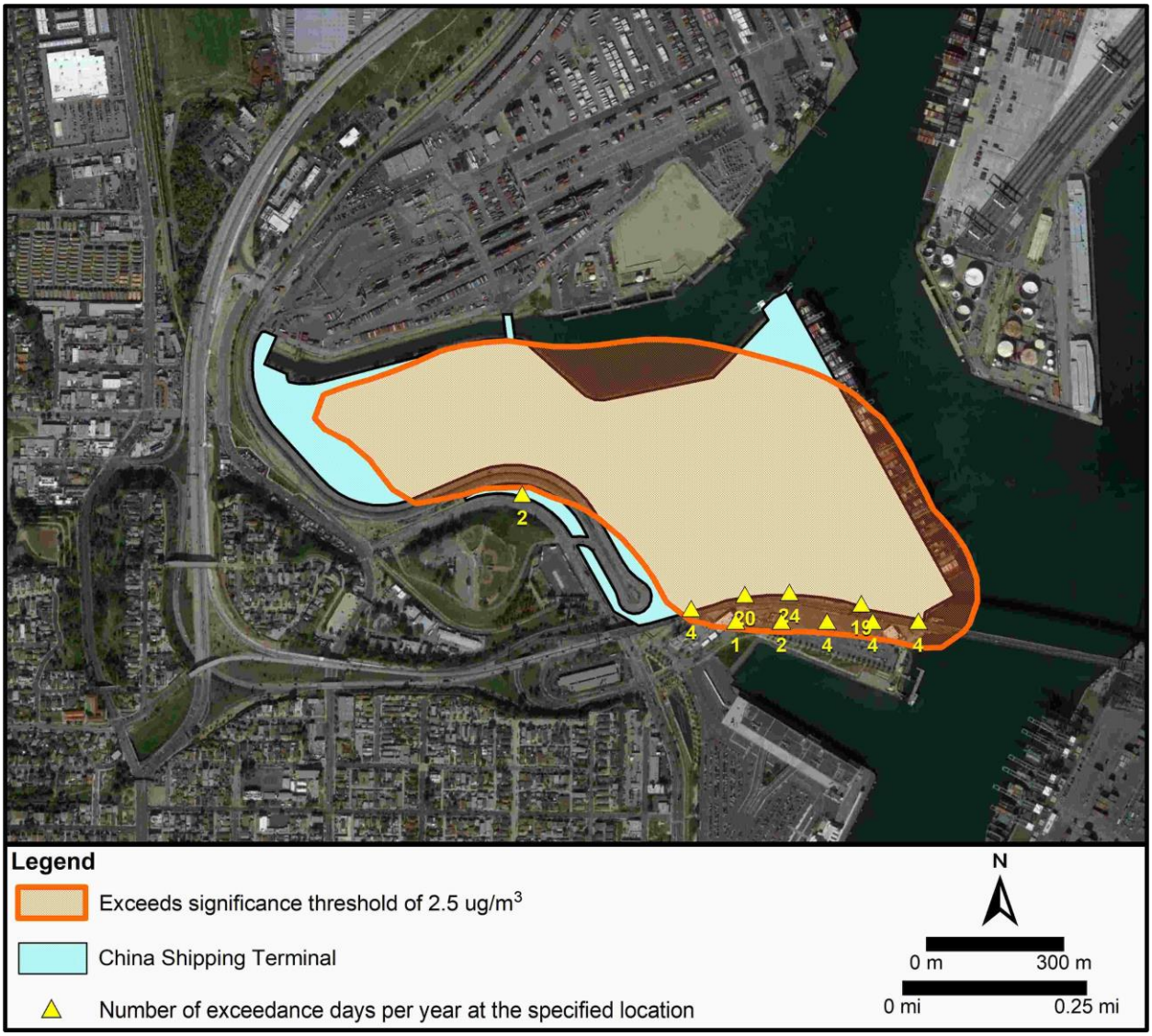


Figure 3.1-11. Area of Threshold Exceedance for the Revised Project; 2023 24-Hour PM_{10} Concentration Increments

Figure 3.1-12. Area of Threshold Exceedance for the Revised Project; 2030 24-Hour PM_{10} Concentration Increments

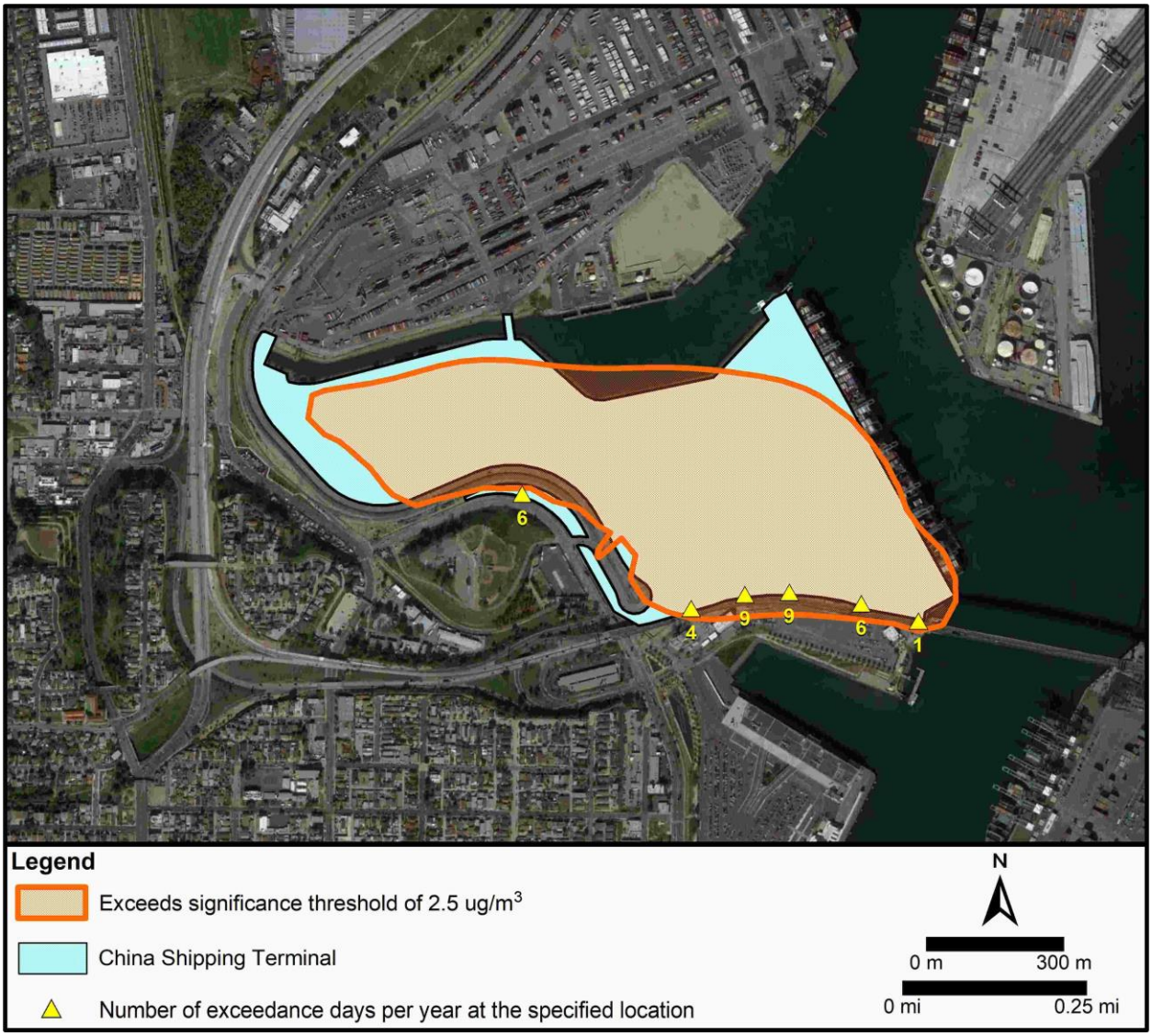


Figure 3.1-13. Area of Threshold Exceedance for the Revised Project; 2036 24-Hour PM_{10} Concentration Increments

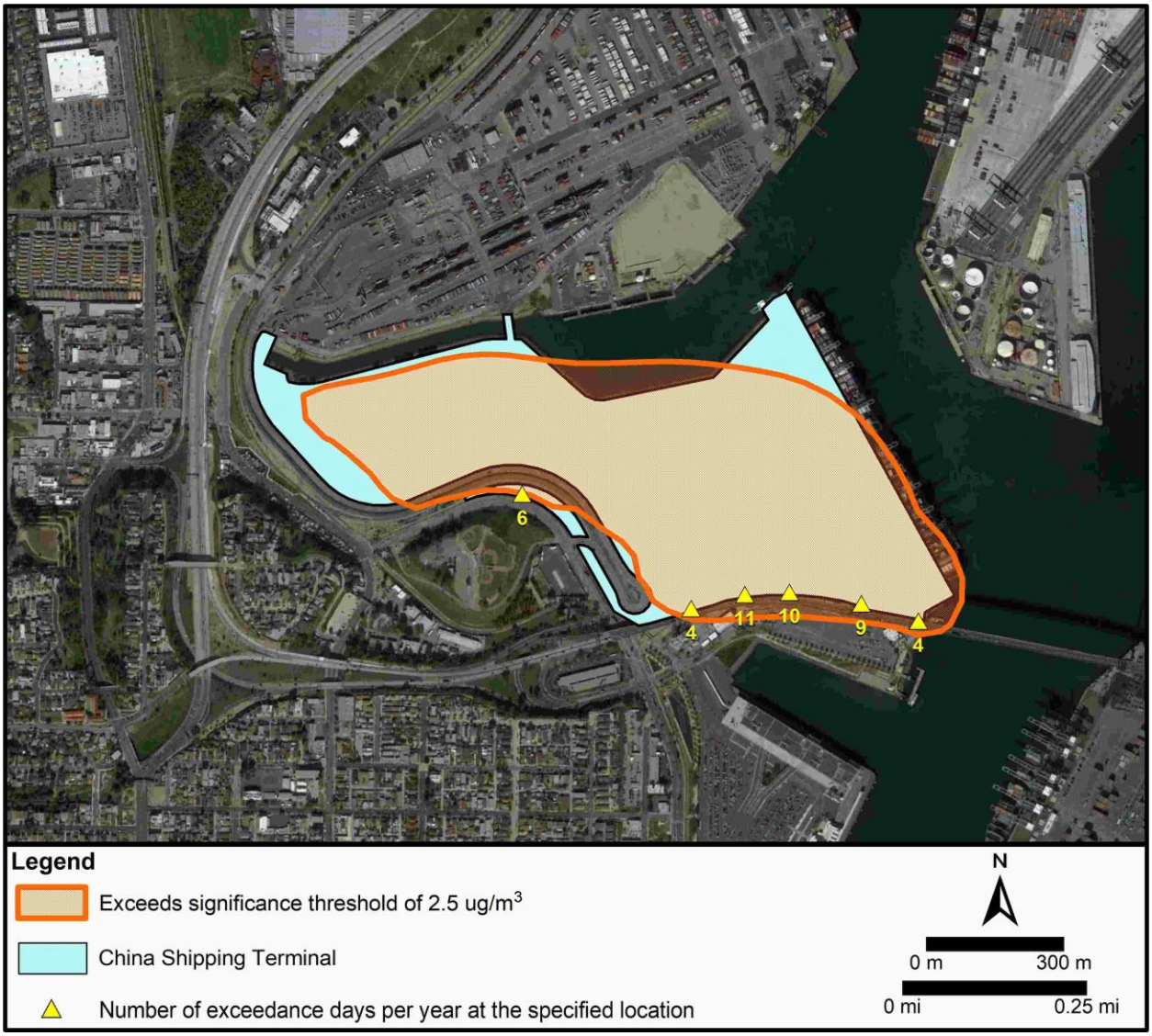


Figure 3.1-14. Area of Threshold Exceedance for the Revised Project; 2045 24-Hour PM_{10} Concentration Increments

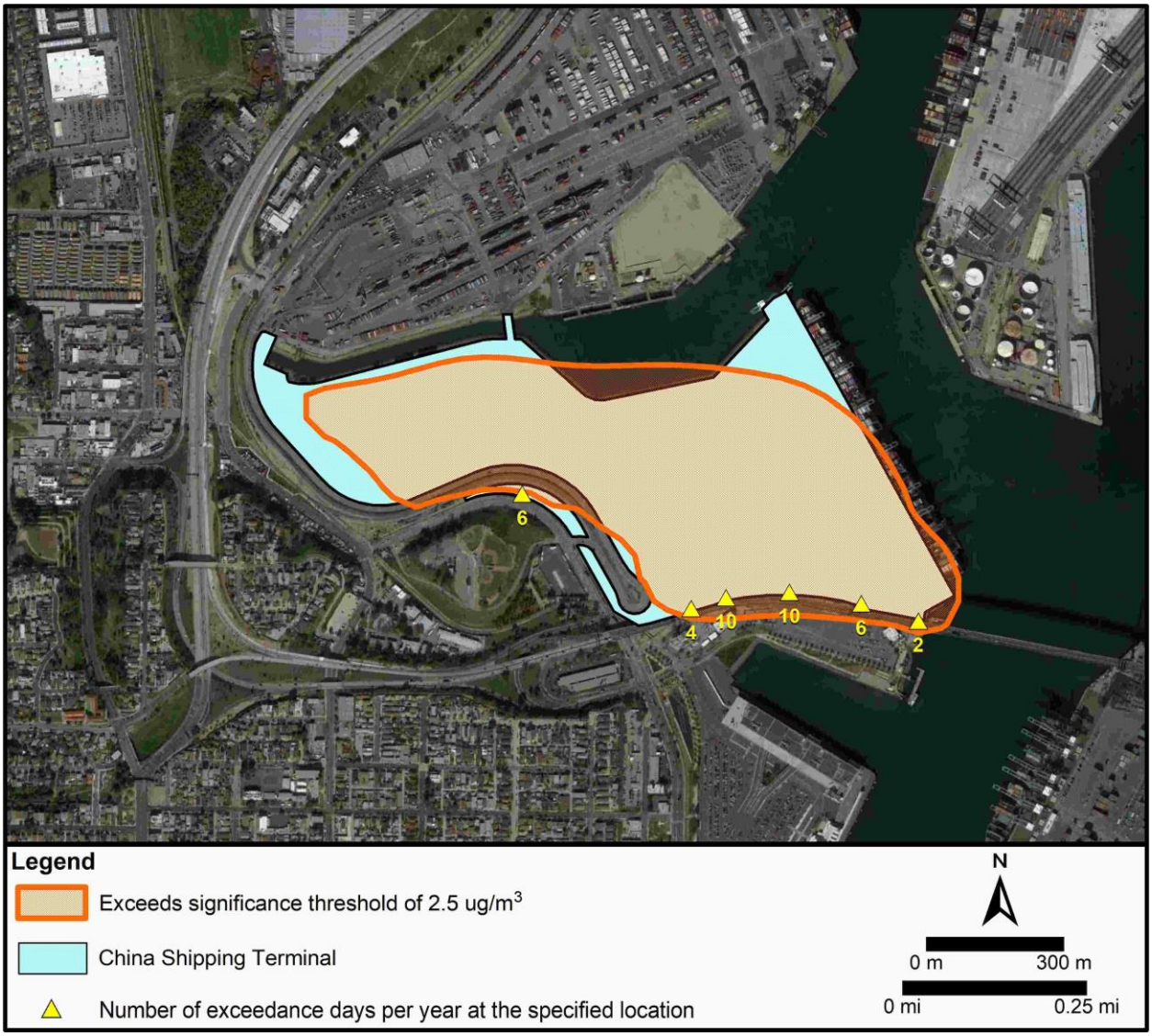


Figure 3.1-15. Area of Threshold Exceedance for the Revised Project; 2014 Annual PM_{10} Concentration Increments

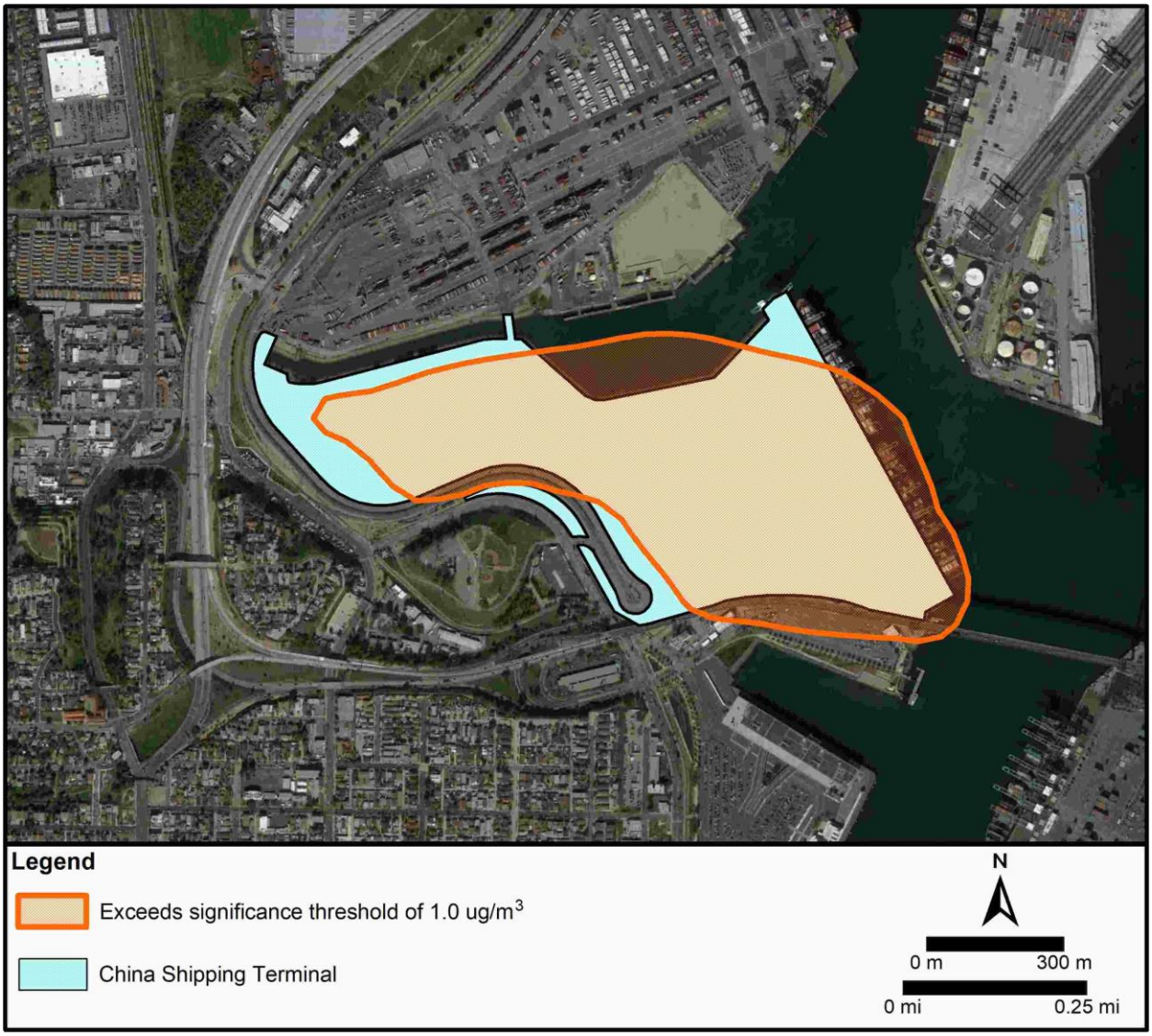


Figure 3.1-16. Area of Threshold Exceedance for the Revised Project; 2018 Annual PM_{10} Concentration Increments

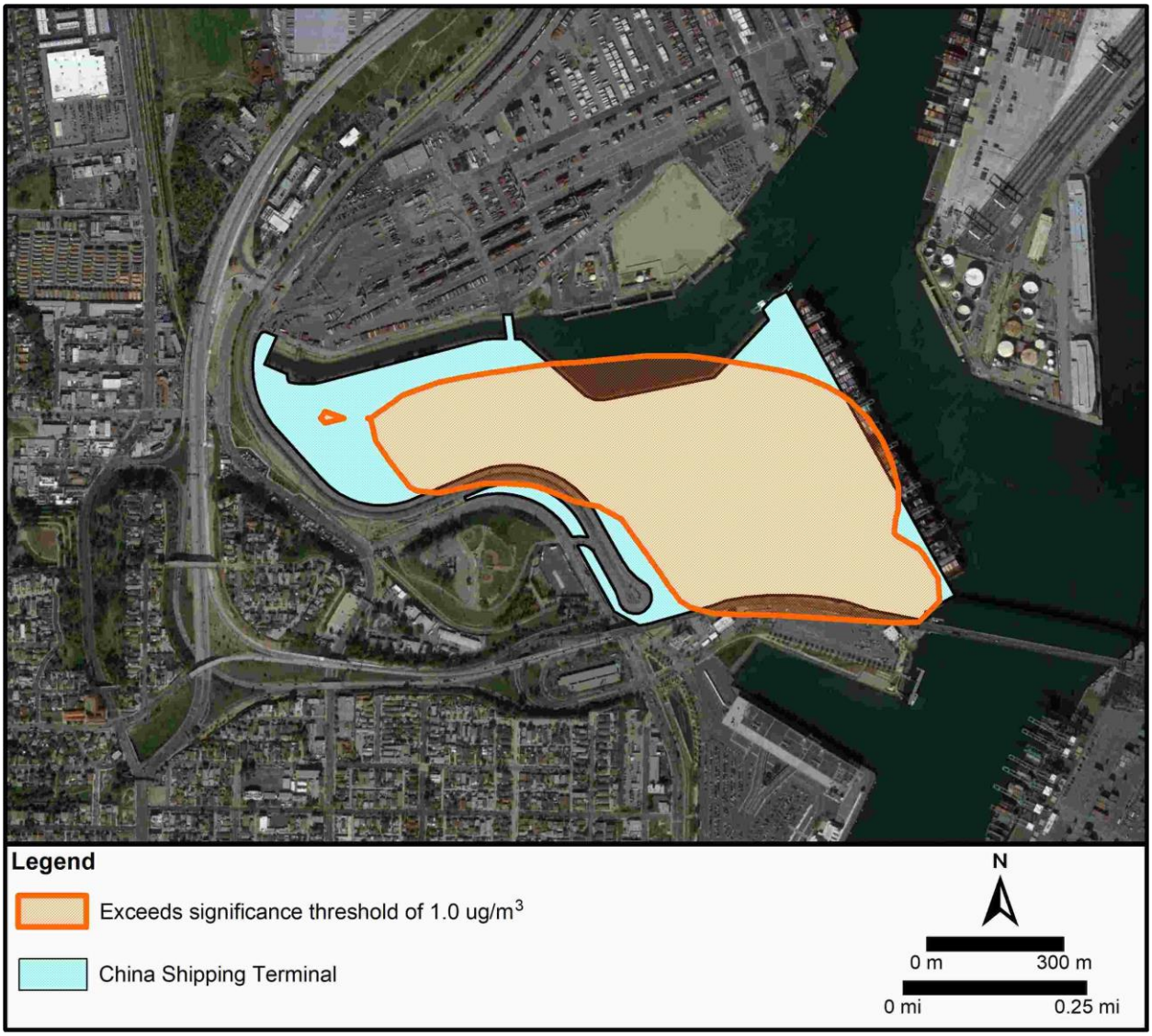


Figure 3.1-17. Area of Threshold Exceedance for the Revised Project; 2023 Annual PM_{10} Concentration Increments

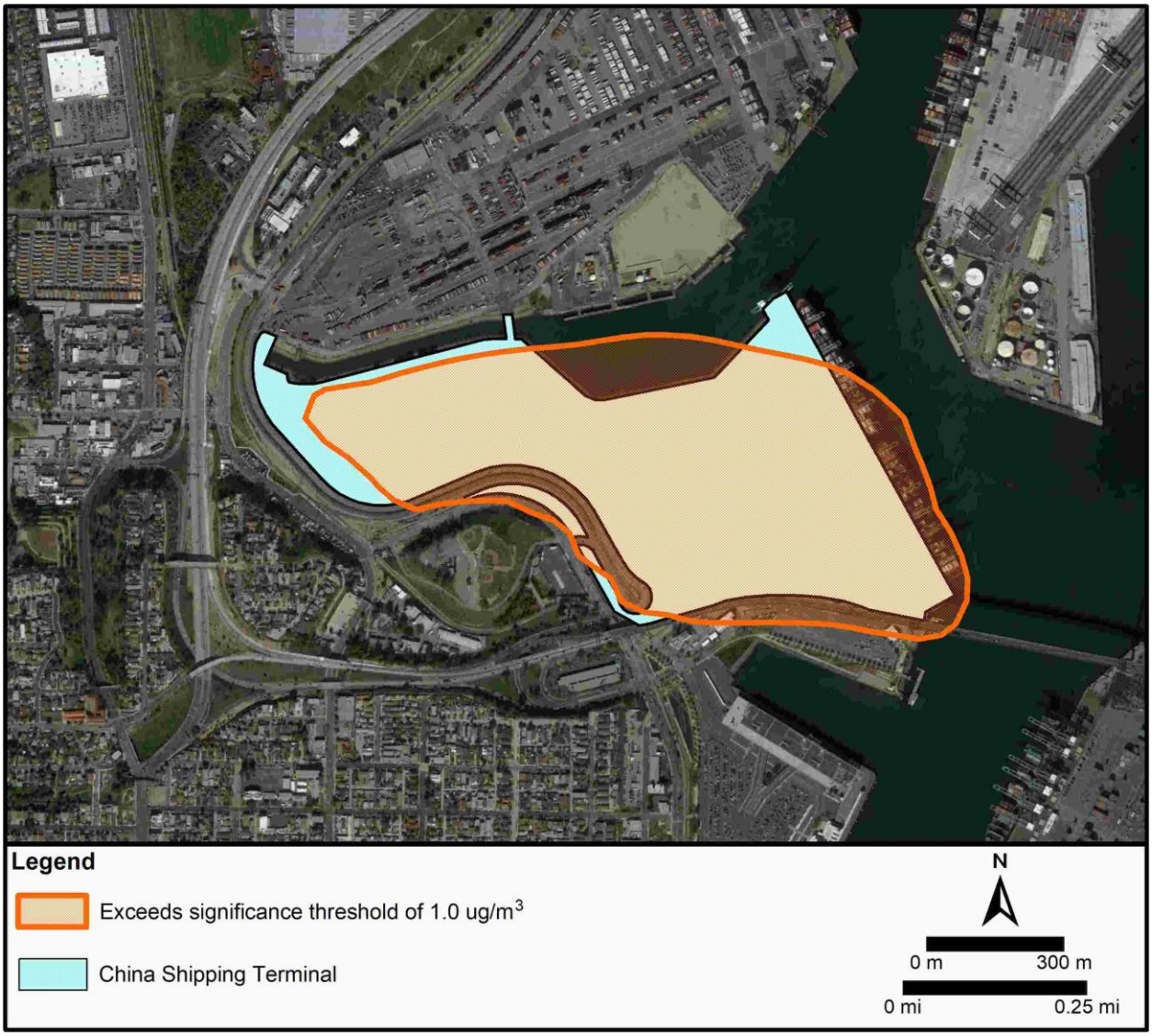


Figure 3.1-18. Area of Threshold Exceedance for the Revised Project; 2030 Annual PM_{10} Concentration Increments

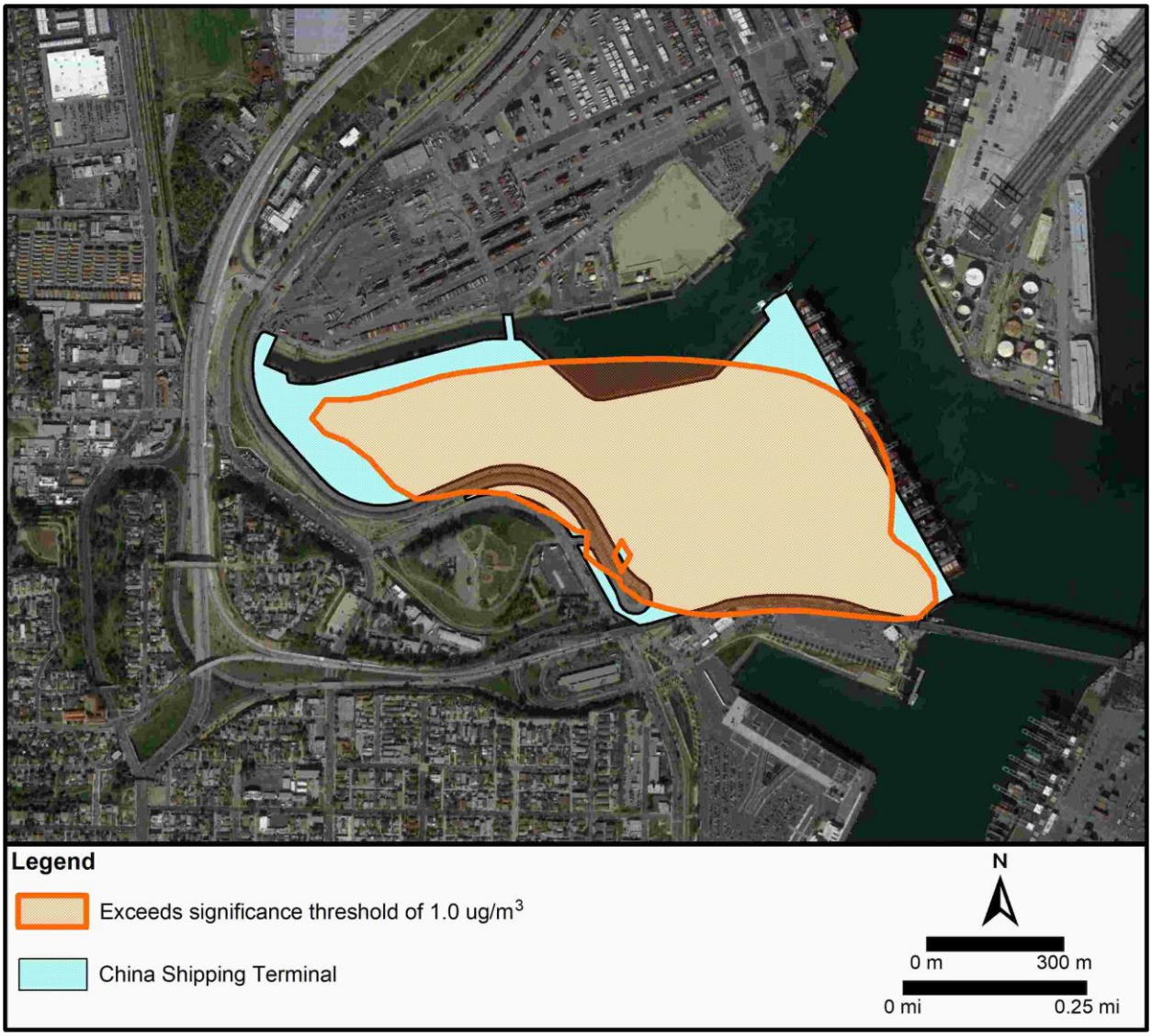


Figure 3.1-19. Area of Threshold Exceedance for the Revised Project; 2036 Annual PM_{10} Concentration Increments

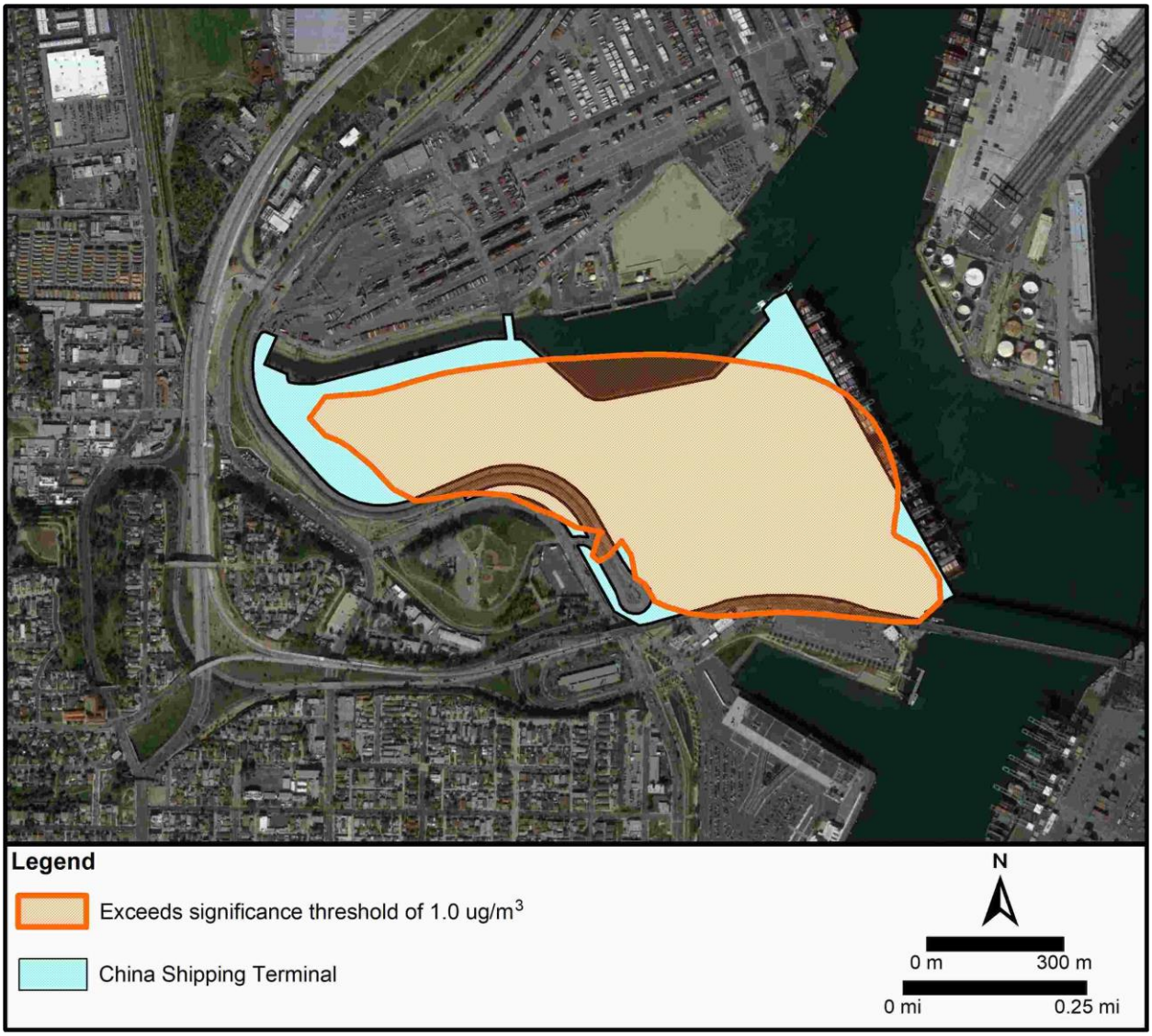
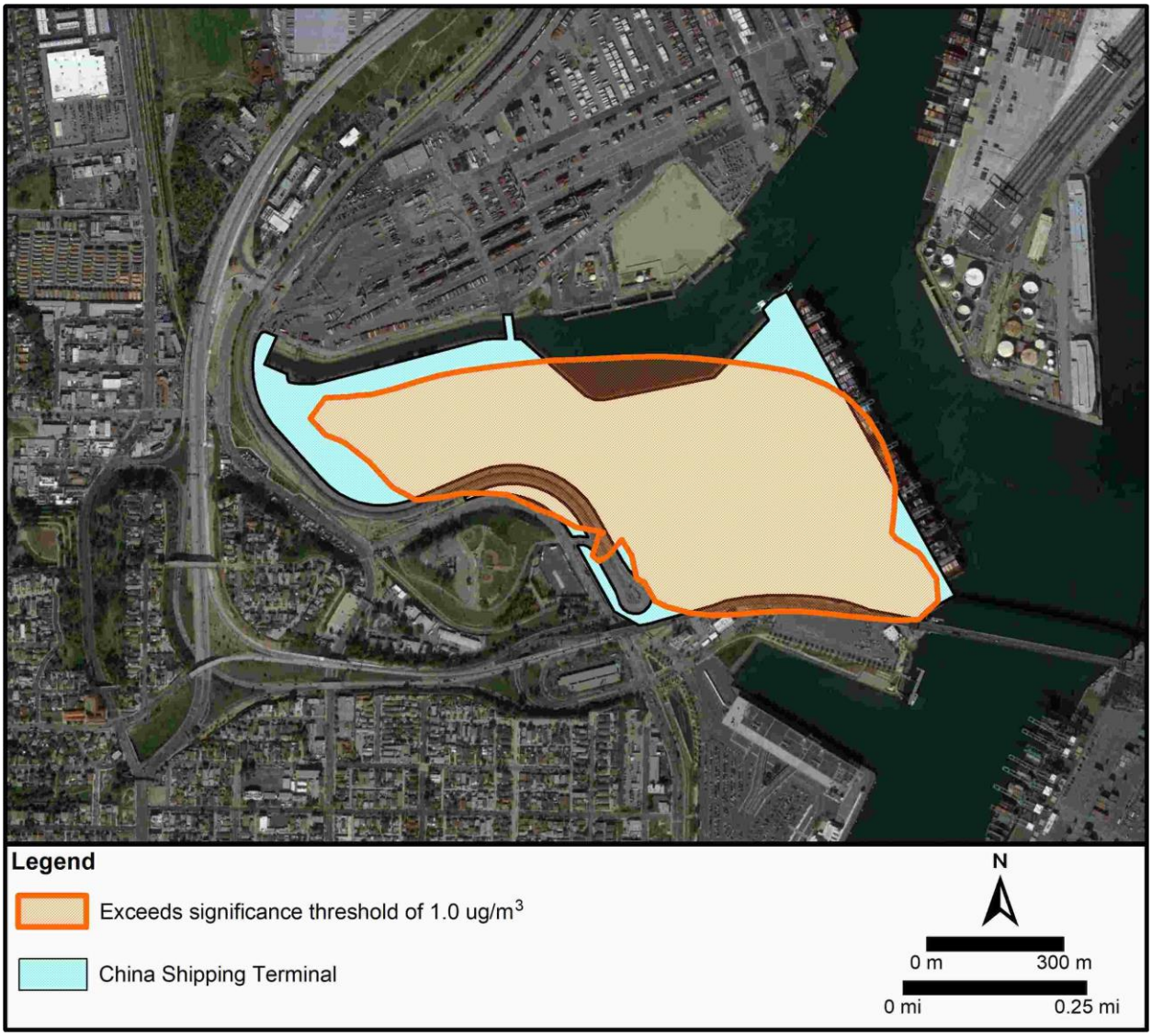


Figure 3.1-20. Area of Threshold Exceedance for the Revised Project; 2045 Annual PM_{10} Concentration Increments



Section 3.1.5 Page 3.1-76

Revised the mitigation monitoring program as follows:

AQ-3: The Revised Project would result in operational-related emissions that exceed an SCAQMD threshold of significance. **AQ-4: The Revised Project operation would result in offsite ambient air pollutant concentrations that exceed a SCAQMD threshold of significance.** **AQ-7: The Revised Project operation would expose sensitive receptors to significant levels of TACs.**	
Mitigation Measure	**MM AQ-10. Vessel Speed Reduction Program (VSRP).** Starting on the effective date of a new lease amendment between the Tenant and the LAHD and annually thereafter, at least 95 percent of vessels calling at Berths 97-109 shall ~~either 1)~~ comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area~~or 2) comply with an alternative compliance plan approved by the LAHD for a specific vessel and type. Any alternative compliance plan shall be submitted to LAHD at least 90 days in advance for approval, and shall be supported by data that demonstrates the ability of the alternative compliance plan for the specific vessel and type to achieve emissions reductions comparable to or greater than those achievable by compliance with the VSRP. The alternative compliance plan shall be implemented once written notice of approval is granted by the LAHD.~~
Timing	Starting on the effective date of a new lease amendment between the Tenant and the LAHD and annually thereafter.
Methodology	LAHD will include this mitigation measure in new lease amendment with tenant.
Responsible Parties	Tenant, LAHD.
Residual Impacts	Significant and unavoidable

3.2.4.2 Changes Made to Section 3.2 Greenhouse Gas Emissions and Climate Change

Section Summary Page 3.2-2

Revised text of MM AQ-10 as follows:

MM AQ-10: Vessel Speed Reduction Program (VSRP). Starting on the effective date of a new lease amendment between the Tenant and the LAHD and annually thereafter, at least 95 percent of vessels calling at Berths 97-109 shall ~~either 1)~~ comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area.~~or 2) comply with an alternative compliance plan approved by the LAHD for a specific vessel and type. Any alternative compliance plan shall be submitted to LAHD at least 90 days in advance for approval, and shall be supported by data that demonstrates the ability of the alternative compliance plan for the specific vessel and type to achieve emissions reductions comparable to or greater than those achievable by compliance with the VSRP. The alternative compliance plan shall be implemented once written notice of approval is granted by the LAHD.~~

Section 3.2.4.4 Page 3.2-22

Revised reference as follows:

- The SCAQMD industrial source threshold is appropriate for projects with future operations continuing as far out as 2050. The SCAQMD threshold development

methodology used the EO S-3-05 emission reduction targets as the basis in developing the threshold (SCAQMD, 2008), with the AB 32 2020 reduction requirements incorporated as a subset of EO S-3-05. EO S-3-05 sets an emission reduction target of 80 percent below 1990 levels by 2050. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020 ~~(SCAQMD, 2016a)~~ (CARB, 2017). AB 32 has the goal of achieving 1990 GHG levels by 2020.

Section 3.2.4.5 Page 3.2-24

Revised text of MM AQ-10 as follows:

MM AQ-10: Vessel Speed Reduction Program (VSRP). Starting on the effective date of a new lease amendment between the Tenant and the LAHD and annually thereafter, at least 95 percent of vessels calling at Berths 97-109 shall ~~either 1)~~ comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area ~~or 2) comply with an alternative compliance plan approved by the LAHD for a specific vessel and type. Any alternative compliance plan shall be submitted to LAHD at least 90 days in advance for approval, and shall be supported by data that demonstrates the ability of the alternative compliance plan for the specific vessel and type to achieve emissions reductions comparable to or greater than those achievable by compliance with the VSRP. The alternative compliance plan shall be implemented once written notice of approval is granted by the LAHD.~~

Section 3.2.4.5 Page 3.2-29

Revised text as follows:

Table 3.2-3 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. No other feasible mitigation for GHG impacts beyond the measures discussed in Section 3.1.4.4 for air quality impacts is available.

Section 3.2.4.5 Page 3.2-30

Revised text of LM GHG-1 as follows:

LM GHG-1 GHG Credit Fund: ~~LAHD shall establish a carbon offset fund, which may be accomplished through a Memorandum of Understanding with the California Air Resources Board or another appropriate entity. The fund shall be used for GHG-reducing projects and programs on Port of Los Angeles property. It shall be the responsibility of the Tenant to contribute to the fund. Tenant shall have the option to either: (i) make a one-time fund contribution of $250,000, payable upon execution of a new lease amendment, or (ii) make a payment in 2030, at the time the peak impact would occur, in an amount calculated based on the market value of carbon credits at that time, and actual GHG emissions that exceed whatever GHG threshold exists at that time as approved by the LAHD. If LAHD is unable to establish the fund within a reasonable period of time, Tenant shall instead purchase credits from an approved GHG offset registry.~~ LAHD shall establish a Greenhouse Gas Fund, which LAHD shall have the option to accomplish through a Memorandum of Understanding (MOU) with the California Air Resources Board (CARB) or another appropriate entity. The fund shall be used for GHG-reducing projects and programs approved by the Port of Los Angeles, or through the purchase of emission reduction credits from a CARB approved offset registry. It shall be the responsibility of the Tenant to make contributions to the fund in the amount of $250,000 per year, for a total of eight years, for the funding of GHG reducing projects or the

purchase of GHG emission reduction credits, commencing after the date that the SEIR is conclusively determined to be valid, either by operation of Public Resources Code Section 21167.2 or by final judgment or final adjudication ("Conclusive Determination of Validity Date"), as described below. The fund contribution amount is established as follows: (i) the peak year of GHG operational emissions (2030), after application of mitigation, that exceed the established threshold for the Revised Project, estimated in the SEIR to be 129,336 metric tons CO2e, multiplied by (ii) the current (2019) market value of carbon credits established by CARB at $15.62 per metric ton CO2e. The payment for the first year shall be due within ninety (90) days of the Conclusive Determination of Validity Date, and the payment for each successive year shall be due on the anniversary of the Conclusive Determination of Validity Date. If LAHD is unable to establish the fund through an MOU with CARB within one year prior to when any year's payment is due, the Tenant shall instead apply that year's payment, using the same methodology described in parts (i) and (ii) above, to purchase emission reduction credits from a CARB approved GHG offset registry.

Section 3.2.4.7 Page 3.2-57

Revised text of mitigation monitoring table as follows:

IMPACT GHG-1: The Revised Project would generate GHG emissions, either directly or indirectly, that would exceed the SCAQMD 10,000 mty CO_2e 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 within two years after the effective date of the new lease amendment between the Tenant and the LAHD or by no later than 2023.
Timing	Within two years after the effective start date of a new lease amendment between the Tenant and the LAHD or by December 31, 2023~~Tenant must complete replacement of lighting by December 31, 2023~~.
Methodology	LAHD shall include MM GHG-1 in the lease agreement with tenant. Tenant shall implement MM GHG-1 through its own construction contractor. All construction work shall obtain a Harbor Engineers Permit. All work shall comply with Harbor Engineer Permit conditions throughout the construction project. ~~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 and unavoidable.

IMPACT GHG-1: The Revised Project would generate GHG emissions, either directly or indirectly, that would exceed the SCAQMD 10,000 mty CO_2e threshold.	
Mitigation Measure	**LM GHG-1: GHG Credit Fund.** ~~LAHD shall establish a carbon offset fund, which may be accomplished through a Memorandum of Understanding with the California Air Resources Board or another appropriate entity. The fund shall be used for GHG-reducing projects and programs on Port of Los Angeles property. It shall be the responsibility of the Tenant to contribute to the fund. Tenant shall have the option to either: (i) make a one-time fund contribution of $250,000, payable upon execution of a new lease amendment, or (ii) make a payment in 2030, at the time the peak impact would occur, in an amount calculated based on the market value of carbon credits at that time, and actual GHG emissions that exceed whatever GHG threshold exists at that time as approved by the LAHD. If LAHD is unable to establish the fund within a reasonable period of time, Tenant shall instead purchase credits from an approved GHG offset registry.~~ LAHD shall establish a Greenhouse Gas Fund, which LAHD shall have the option to accomplish through a Memorandum of Understanding (MOU) with the California Air Resources Board (CARB) or another appropriate entity. The fund shall be used for GHG-reducing projects and programs approved by the Port of Los Angeles, or through the purchase of emission reduction credits from a CARB approved offset registry. It shall be the responsibility of the Tenant to make contributions to the fund in the amount of $250,000 per year, for a total of eight years, for the funding of GHG reducing projects or the purchase of GHG emission reduction credits, commencing after the date that the SEIR is conclusively determined to be valid, either by operation of Public Resources Code Section 21167.2 or by final judgment or final adjudication ("Conclusive Determination of Validity Date"), as described below. The fund contribution amount is established as follows: (i) the peak year of GHG operational emissions (2030), after application of mitigation, that exceed the established threshold for the Revised Project, estimated in the SEIR to be 129,336 metric tons CO2e, multiplied by (ii) the current (2019) market value of carbon credits established by CARB at $15.62 per metric ton CO2e. The payment for the first year shall be due within ninety (90) days of the Conclusive Determination of Validity Date, and the payment for each successive year shall be due on the anniversary of the Conclusive Determination of Validity Date. If LAHD is unable to establish the fund through an MOU with CARB within one year prior to when any year's payment is due, the Tenant shall instead apply that year's payment, using the same methodology described in parts (i) and (ii) above, to purchase emission reduction credits from a CARB approved GHG offset registry.
Timing	~~During operations.~~ Upon execution of a new lease amendment between the Tenant and the LAHD and within ninety days of the Conclusive Determination of Validity Date as specified in the measure.
Methodology	~~LAHD shall include LM GHG-1 in the lease agreement with tenant.~~ LAHD shall monitor implementation of lease measure during operation through the tenant lease. LAHD will include this measure in the new lease amendment with tenant. LAHD shall verify that an appropriate fund has been established by the Conclusive Determination of Validity Date, and tenant shall make the first installment of the monetary contribution within ninety (90) days of the Conclusive Determination of Validity Date, and successive installments on the anniversary of that date. If LAHD is unable to establish a GHG fund within one year prior to payment, tenant shall instead apply that year's payment to purchase emission reduction credits from a CARB-approved GHG offset registry. Enforcement shall include oversight by the Real Estate Division.
Responsible Parties	Tenant and LAHD~~, Tenant~~
Residual Impacts	Significant and unavoidable.

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3.2.4.3 Changes Made to Section 3.3 Ground Transportation

Section Summary, Page 3.3-2

Revised MM TRANS-2 because the City of Los Angeles Bureau of Engineering has delayed this project. While it was originally scheduled to complete design and begin construction in 2019, the project is still in the design phase and the current schedule predicts construction from the 4th quarter of 2020 through the 3rd quarter of 2021. Since the schedule may continue to change, the LAHD will continue to coordinate with the Bureau and if LADOT approves the project, will construct the necessary improvements at the same time as the Bureau's project. Revised measure is:

> **MM TRANS-2 Alameda & Anaheim Streets:** Provide an additional eastbound through-lane on Anaheim Street. This mitigation measure shall be implemented at the same time as the City's planned improvement project at this location, ~~with design/construction commencing in the first quarter of 2019,~~ subject to LADOT approval and in coordination with the Bureau of Engineering's construction schedule.

Section 3.3.2.2 Page 3.3-5

Revised text as follows:

This intersection is being considered for improvements, however. A project under design by LADOT and the City of Los Angeles Department of Public Works, in a funding partnership with LAHD, would widen the west side of Alameda Street near the Anaheim Street intersection to provide three southbound lanes. The project would also reconstruct Alameda Street and may include re-striping Alameda Street and adjacent street intersection approaches. LAHD's funding participation in the project is estimated at $8.6 million. The project, designated SCAG FTIP ID LAF7205 in the 2017 SCAG Federal Transportation Improvement Program, is still in the design phase and the current schedule predicts construction from the 4th quarter of 2020 through the 3rd quarter of 2021~~estimated to start construction by the end of 2019~~. However, it is not assumed in the 2014 Mitigated Baseline that is used to identify the impacts of the Revised Project's proposed elimination of Mitigation Measure TRANS-2 because it was neither completed by the time of preparation nor had a final design.

Section 3.3.4.4 Page 3.3-22

Revised statement of MM TRANS-2 as follows:

MM TRANS-2 Alameda & Anaheim Streets: Provide an additional eastbound through-lane on Anaheim Street. This mitigation measure shall be implemented at the same time as the City's planned improvement project at this location, ~~with design/construction commencing in the first quarter of 2019,~~ subject to LADOT approval and in coordination with the Bureau of Engineering's construction schedule.

Section 3.3.4.6 Page 3.3-32

Revised the Mitigation Monitoring table as follows:

TRANS-2: Long-term vehicular traffic associated with the Revised Project would significantly impact volume/capacity ratios or level of service.	
Mitigation Measure	**MM TRANS-2. Alameda & Anaheim Streets**: Provide an additional eastbound through-lane on Anaheim Street. This mitigation measure shall be implemented at the same time as the City's planned improvement project at this location, ~~with design/construction commencing in the first quarter of 2019,~~subject to LADOT approval and in coordination with the Bureau of Engineering's construction schedule.
Timing	During the City's planned improvement project, in coordination with the Bureau of Engineering's construction schedule~~Design/construction commencing in the first quarter of 2019.~~
Methodology	LAHD Engineering and Goods Movement Divisions will coordinate with the City of Los Angeles' Alameda Street Improvement Project which is being managed by the City's Bureau of Engineering. The project is also subject to LADOT approval; if LADOT approval is not obtained, then this mitigation measure would not be implemented.~~LAHD will coordinate with the City of Los Angeles' Alameda Street Improvement Project.~~
Responsible Parties	LAHD
Residual Impacts	Significant and unavoidable

3.2.5 Changes Made to Chapter 4 Cumulative Analysis

Section Summary Page 4-1

Revised MM TRANS-2 as follows:

MM TRANS-2 Alameda & Anaheim Streets: Provide an additional eastbound through-lane on Anaheim Street. This mitigation measure shall be implemented at the same time as the City's planned improvement project at this location, ~~with design/construction commencing in the first quarter of 2019,~~ subject to LADOT approval and in coordination with the Bureau of Engineering's construction schedule.

Section 4.2.1.2 Page 4-16

The text of Section 4.1.1.2 has been supplemented as follows:

The contribution of the Revised Project to cumulative impacts was assessed using SCAQMD's guidance (SCAQMD, 2003), which states that projects that exceed SCAQMD's project-level significance thresholds are considered by SCAQMD to have cumulatively considerable impacts. Conversely, projects that do not exceed the project-level thresholds are generally not considered to have cumulatively considerable impacts. Significance thresholds are presented in Section 3.1.4.3. SCAQMD guidance does not distinguish between attainment and nonattainment pollutants, and this analysis assumes that exceedance of any project-level threshold would also constitute a cumulatively considerable impact. For a discussion of the health effects of the Revised Project's significant impacts with respect to criteria pollutants, please see Section 3.1.4.5.

Section 4.2.1.3 Page 4-17

The text of Section 4.2.1.3 of the Recirculated DSEIR has been revised as follows. These revisions do not represent the identification of any new or substantially more severe impact of the Revised Project, compared to those impacts identified in the Recirculated DSEIR

Contribution of the Revised Project (Prior to Mitigation)

Revised Project operational emissions would exceed SCAQMD significance thresholds for CO in analysis years 2012, 2014, 2018, and 2023, for NO_X in 2014, 2018, 2023, 2030, and 2036, and for VOC in all analysis years except 2012; emissions of the remaining criteria pollutants would be below SCAQMD significance thresholds (Table 3.1-9). These impacts, combined with impacts from concurrent related projects, would be cumulatively significant. As a result, operational emissions would make a cumulatively considerable contribution to an existing significant cumulative impact for CO, NO_X, and VOC.

Mitigation Measures and Residual Cumulative Impacts

As described in Section 3.1.4.4, no feasible mitigation beyond the measures included in the Revised Project is available to reduce operational emissions. Accordingly, operational emissions of CO, NO_X, and VOC would continue to exceed SCAQMD significance thresholds in 2023, 2030, 2036, and 2045. These impacts, when combined with impacts from concurrent related projects, would be cumulatively significant. Therefore, the Revised Project would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact.

Section 4.2.1.4 Page 4-18

Contribution of the Revised Project (Prior to Mitigation)

Operation of the Revised Project would result in NO_2 concentrations that would exceed the federal one-hour threshold in 2014 and 2018, the state annual one-hour threshold in 2014, and the state annual threshold in 2014 and 2018. Concentrations of PM_{10} would exceed the state 24-hour and annual thresholds in all analysis years except 2012 . These impacts, when combined with impacts from concurrent related projects, would be cumulatively significant. As a result, without mitigation, impacts from project operations would make a cumulatively considerable contribution to an existing significant cumulative impact related to ambient NO_2 and PM_{10} levels.

Mitigation Measures and Residual Cumulative Impacts

As described in Section 3.1.4.4., no feasible mitigation beyond the measures included in the Revised Project is available to reduce operational emissions. Accordingly, operational emissions of the Revised Project would continue to exceed significance thresholds for the federal annual PM_{10} ambient air threshold. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. Therefore the Revised Project would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_2 and PM_{10}.

Section 4.2.3.3 Page 4-36

Revised statement of MM TRANS-2 as follows:

MM TRANS-2 Alameda and Anaheim Streets: Provide an additional eastbound through-lane on Anaheim Street. This mitigation measure shall be implemented at the same time as the City's planned improvement project at the location, ~~with design/construction commencing in the first quarter of 2019,~~subject to LADOT approval and in coordination with the Bureau of Engineering's construction schedule.

Section 4.3 Page 4-69

Revised the Mitigation Monitoring table as follows:

TRANS-3: Vehicular traffic associated with the Revised Project's operations would result in a cumulatively considerable contribution to a significant cumulative impact in study intersection volume/ capacity ratios or level of service.	
Mitigation Measure	**MM TRANS-2: Alameda & Anaheim Streets**: Provide an additional eastbound through-lane on Anaheim Street. This mitigation measure shall be implemented at the same time as the City's planned improvement project at this location, ~~with design/construction commencing in the first quarter of 2019, subject~~ to LADOT approval and in coordination with the Bureau of Engineering's construction schedule.
Timing	During the City's planned improvement project, in coordination with the Bureau of Engineering's construction schedule~~Design/construction commencing in the first quarter of 2019~~.
Methodology	LAHD Engineering and Goods Movement Divisions will coordinate with the City of Los Angeles' Alameda Street Improvement Project which is being managed by the City's Bureau of Engineering. The project is also subject to LADOT approval; if LADOT approval is not obtained, then this mitigation measure would not be implemented~~LAHD will coordinate with the City of Los Angeles' Alameda Street Improvement Project.~~
Responsible Parties	LAHD
Residual Impacts	Significant and unavoidable (unless LADOT approves the measure).
Mitigation Measure	**MM TRANS-3: John S. Gibson Boulevard and I-110 N/B Ramps**: Provide an additional westbound right-turn lane with westbound right-turn overlap phasing and an additional southbound left-turn lane. LAHD shall monitor the intersection LOS annually beginning in 2019 and LAHD shall implement the mitigation within three years after the intersection LOS is measured as D or worse, and the China Shipping terminal is found to contribute to the cumulative impact, with the concurrence of LADOT.
Timing	Within three years after the intersection LOS is measured as D or worse (measurements to begin in 2019 on an annual basis)
Methodology	LAHD will conduct annual measurements of the intersection LOS beginning in 2019 on an annual basis.
Responsible Parties	LAHD with the concurrence of LADOT
Residual Impacts	Less than significant

3.2.6 Changes Made to References

Modified References Chapter as follows:

Section 2.0 Project Description

Added reference as follows:

LAHD, 2016. Cost Scenarios for Expenditure on Cargo-Handling Equipment. Internal LAHD data. July, 2016.

Section 3.1 Air Quality and Meteorology

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CARB, 2002. *Staff Report: Public Hearing to Consider Amendments to the Ambient Air Quality Standards for Particulate Matter and Sulfates*. May 3, 2002. https://www.arb.ca.gov/carbis/research/aaqs/std-rs/pm-final/PMfinal.pdf?bay.

CARB, 2005c. *Review of the California Ambient Air Quality Standard for Ozone*. October 2005 Revision. Revised Staff Report: Initial Statement of Reasons for Ozone Standard. https://ww3.arb.ca.gov/research/aaqs/ozone-rs/rev-staff/rev-staff.htm#Summary. October 27, 2005.

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SCAQMD, 2019a. SCAQMD Air Quality Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf

SCAQMD, 2019b. Historical Data by Year. 2015, 2016, and 2017 Air Quality Data Tables. https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year. Website accessed March 5, 2019.

SCAQMD, 2019c. *Annual Air Quality Monitoring Network Plan.* July. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-monitoring-network-plan/annual-air-quality-monitoring-network-plan-v2.pdf?sfvrsn=46

U.S. EPA, 2009. Integrated Science Assessment (ISA) for Particulate Matter (Final Report, Dec 2009). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-08/139F, 2009. https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=216546.

U.S. EPA, 2010b. Integrated Science Assessment for Carbon Monoxide. EPA/600/R-09/019F. January.

U.S. EPA, 2013b. *Integrated Science Assessment (ISA) of Ozone and Related Photochemical Oxidants* (Final Report, Feb 2013). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-10/076F, 2013. https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=247492

U.S. EPA, 2016. *Integrated Science Assessment (ISA) for Oxides of Nitrogen – Health Criteria* (Final Report, 2016). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-15/068, 2016. https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=310879.

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U.S. EPA, 2019. Environmental Benefits Mapping and Analysis Program - Community Edition (BenMAP-CE). https://www.epa.gov/benmap. Website accessed March 18, 2019.

3.2.7 Changes Made to Appendices

3.2.7.1 Appendix B1 Air Emissions

Specific tables in Appendix B1 were updated based on revisions discussed in Section 3.2.4.1 of this chapter to peak-day ship (OGV) hotelling emissions for years 2023 through 2045 of the Revised Project. The updated tables in Appendix B1 are B1-136, 154, 156, 158, 160, 671, 672, 673, 674.

3.2.7.2 Appendix B2 Air Dispersion Modeling

Added text in Section 1, page B2-2

Updates related to fine grid dispersion modeling

Six fine-grid dispersion model runs that were not performed for the Recirculated DSEIR were modeled for the Final SEIR. As a result, several NO2 concentrations have been revised to slightly higher values and their locations have moved slightly. The revised tables and figures are included in the Final SEIR. All of the concentrations to which revisions have been made would remain well below the significance thresholds. Therefore, this revision would not change any of the significance findings in the Recirculated DSEIR.

Tables and Figures updated:

Due to the updates to dispersion modeling results explained above, the following tables in Appendix B2 were updated: Tables B2-7, B2-11.

Due to the updates to dispersion modeling results explained above, the following figures in Appendix B2 were updated: Figures B2-4, B2-5, B2-6, B2-7, B2-25, B2-26.