Berths 177-178 Transit Shed Demolition Project

Draft Initial Study/Negative Declaration

APP No. 150716-083

Prepared by:

City of Los Angeles Harbor Department
Environmental Management Division
San Pedro, California 90731

March 2016

THE PORT OF LOS ANGELES

BERTHS 177-178 TRANSIT SHED DEMOLITION PROJECT

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City of Los Angeles Harbor Department
Environmental Management Division
425 S. Palos Verdes Street
San Pedro, CA 90731

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1.0 INTRODUCTION

The Los Angeles Harbor Department (LAHD) has prepared this Initial Study/Negative Declaration (IS/ND) to address the environmental effects of the proposed demolition of a transit shed that was damaged as a result of a fire at 802 South Fries Avenue, Wilmington in the Port of Los Angeles (hereafter "proposed Project"). LAHD is the lead agency for this proposed Project under the California Environmental Quality Act (CEQA).

The transit shed is part of a 40-acre cargo terminal comprised of Berths 174-181. The site is operated by Pasha Stevedoring and Terminals (PST), which had used the shed to store steel sheets, coils, rebar and other breakbulk cargo as part of their terminal operations since 1986. The objective of the proposed Project is to demolish and remove the damaged transit shed, which is approximately 135,000 square feet. Following the completion of the proposed Project, the property will be returned to PST per their lease agreement with LAHD. PST will then continue to use the property to store cargo in a manner consistent with the previously-existing use before the fire occurred.

1.1 CEQA PROCESS

This document has been prepared in accordance with CEQA, Public Resources Code Section 21000 *et seq*. and the State CEQA Guidelines, California Code of Regulations (CCR) Section 15000 *et seq*. One of the main objectives of CEQA is to disclose to the public and decision-makers the potential environmental effects of proposed activities. CEQA requires that the potential environmental effects of a project be evaluated prior to implementation. This IS/ND includes a discussion of the proposed Project's effects on the existing environment, including the identification of avoidance and minimization measures. This document is an IS/ND because there are no impacts associated with the proposed Project that must be mitigated in order to be below significance thresholds.

Under CEQA, the lead agency is the public agency with primary responsibility over approval of a proposed project. Pursuant to Section 15367, the CEQA lead agency for the proposed Project is the LAHD. LAHD has prepared an environmental document that complies with CEQA. LAHD will consider the information in this document when determining whether or not to approve the proposed Project, including whether to issue a Coastal Development Permit.

The preparation of initial studies is guided by Section 15063 of the State CEQA Guidelines, whereas Sections 15070–15075 guide the process for the preparation of a Negative or Mitigated Negative Declaration. Where appropriate and supportive to an understanding of the issues, reference will be made to the statute, the State CEQA Guidelines, or appropriate case law.

This IS/ND meets CEQA content requirements by including a project description; a description of the environmental setting; potential environmental impacts; discussion of consistency with plans and policies; and names of the document preparers.

In accordance with the CEQA statutes and Guidelines, the IS/ND is being circulated for a period of 30 days for public review and comment. The public review period for this IS/ND will begin on March 1, 2016 and will conclude on March 31, 2016. The IS/ND has specifically been distributed to interested or involved public agencies, organizations, and private individuals for review. The IS/ND has been made available for general public review at Los Angeles Harbor Department Environmental Management Division at 425 S. Palos Verdes Street, San Pedro; the Los Angeles City Library San Pedro Branch at 931 Gaffey Street, San Pedro; and at the Los Angeles City Library Wilmington Branch at 1300 North Avalon, Wilmington. In addition, the IS/ND is available online at http://www.portoflosangeles.org/environment/public_notices.asp.

During this 30-day public review period, the public has an opportunity to provide written comments on the information contained within this IS/ND. Any public comments on the IS/ND and responses to public comments will be included in the record and considered by LAHD during deliberation as to whether necessary approvals should be granted for the proposed Project. A project will only be approved when LAHD "finds that there is no substantial evidence that the project will have a significant effect on the environment and that the IS/ND reflects the lead agency's independent judgment and analysis."

In reviewing the IS/ND, affected public agencies and interested members of the public should focus on the sufficiency of the document in identifying and analyzing potential project impacts on the environment. Comments on the IS/ND should be submitted in writing prior to the end of the 30-day public review period and must be postmarked by March 31, 2016. Please submit written comments to:

Christopher Cannon, Director
Environmental Management Division
Los Angeles Harbor Department
425 S. Palos Verdes St.
San Pedro, California 90731

Written comments may also be sent via email to ceqacomments@portla.org. Comments sent via email should include the project title in the subject line and a valid mailing address in the email.

For additional information, please contact the LAHD Environmental Management Division at (310) 732-3675.

1.2 DOCUMENT FORMAT

This IS/ND contains eight sections.

Section 1. **Introduction.** This section provides an overview of the proposed Project and the CEQA environmental documentation process.

Section 2. Project Description. This section provides a detailed description of the proposed Project objectives and components.

Section 3. Initial Study Checklist. This section presents the CEQA checklist for all impact areas and mandatory findings of significance.

Section 4. Potential Impacts and Mitigation Measures. This section presents the environmental analysis for each issue area identified on the environmental checklist form. If the proposed Project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected.

Section 5. Proposed Finding. This section presents the proposed finding regarding environmental impacts.

Section 6. References. This section provides a list of reference materials used during the preparation of the IS/ND.

Section 7. Preparers and Contributors. This section provides a list of key personnel involved in the preparation of the IS/ND.

Section 8. Acronyms and Abbreviations. This section provides a list of acronyms and abbreviations used throughout the IS/ND.

The environmental analyses included in Section 4 are consistent with the CEQA IS/ND format presented in Section 3. Impacts are separated into the following categories:

Potentially Significant Impact. This category is only applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. Given that this is an IS/ND, no impacts were identified that fall into this category.

***Less than Significant After Mitigation Incorporated*.** This category applies where the incorporation of mitigation measures would reduce an effect from a "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measure(s), and briefly explain how they would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced). Given that this is an IS/ND, no impacts were identified that fall into this category.

Less than Significant Impact. This category is identified when the proposed Project would result in impacts below the threshold of significance, and no mitigation measures are required.

No Impact. This category applies when a proposed project would not create an impact in the specific environmental issue area. "No Impact" answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the proposed project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2.0 PROJECT DESCRIPTION

This IS/ND is being prepared to evaluate the potential environmental impacts that may result from the proposed Project. The proposed Project consists of the demolition of a cargo transit shed, and was deemed necessary due to damage from a fire that occurred in September 2014. Both the building and the underlying wharf at Berths 177-178 sustained significant damage from the fire and the transit shed has since been deemed unusable. After inspection, LAHD determined that the most cost-effective option for the damaged building is demolition. Following demolition, the property will be returned to PST per their lease agreement with LAHD. PST will then continue to use the site for the handling and storage of breakbulk cargo in a manner consistent with the previously-existing use of the property before the 2014 fire occurred.

The building proposed for demolition under the proposed Project is the transit shed previously used by Pasha Stevedoring and Terminals located at 802 S. Fries Avenue, Wilmington, CA 90744 (Berths 177-178). The building is approximately 135,000 square feet. The shed has been found to contain both lead-based paints and asbestos-containing materials, and abatement procedures will be implemented prior to commencement of demolition. Asbestos-containing materials will be removed by a California licensed asbestos abatement contractor, and lead-based paints will be removed or stabilized to prevent environmental contamination. Demolition would include the removal of the entire structure including approximately 88 interior steel columns. Demolition is anticipated to begin in May 2016 and will take approximately 53 working days. This chapter discusses the location, description, background, and objectives of the proposed Project.

2.1 PROJECT LOCATION

2.1.1 Regional Setting

The Port of Los Angeles (hereafter "POLA" or "Port") is located at the southernmost portion of the City of Los Angeles and encompasses 7,500 acres of land and water along 43 miles of waterfront, with approximately 270 commercial berths and 24 passenger and cargo terminals. The Port is approximately 23 miles south of downtown Los Angeles and is surrounded by the community of San Pedro to the west, the Wilmington community to the north, the Port of Long Beach to the east, and the Pacific Ocean to the south. The Port is an area of mixed uses, supporting various maritime-themed activities. Port operations are predominantly centered on shipping activities, including containerized, breakbulk, dry bulk, liquid bulk, auto, and intermodal rail shipping. In addition to the large shipping industry, the Port also supports a cruise ship industry and a commercial fishing fleet. The Port also accommodates boat repair yards and provides slips for approximately 3,800 recreational vessels, 150 commercial fishing boats, 35 miscellaneous small service crafts, and 15 charter vessels that handle sport fishing and harbor cruises. The Port has retail shops and restaurants, primarily located along the west side of the Main Channel. It also accommodates recreation, community, and educational facilities, such as a public swimming beach, Cabrillo Beach Youth Waterfront Sports Center, the Cabrillo Marine Aquarium, the Los Angeles Maritime Museum, 22nd Street Park, and the Wilmington Waterfront Park. Figure 2-1 shows the regional location of the proposed Project.

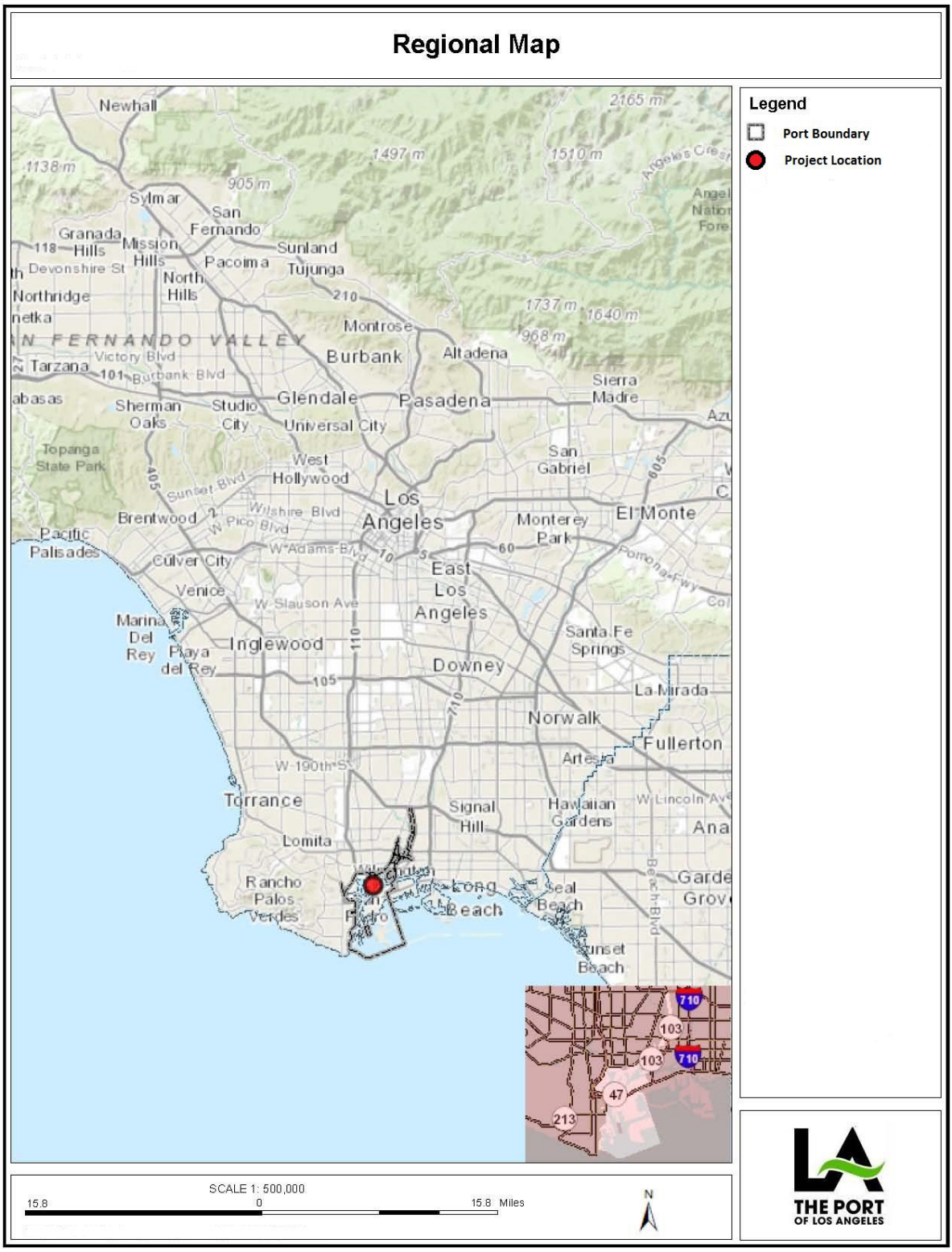


Figure 2-1. Regional Location

The LAHD is a proprietary (self-funded) department of the City of Los Angeles charged with the operation, maintenance, and protection of the Port. The LAHD is a landlord port that leases properties to more than 300 tenants, including private sector terminal, tug, and marine cargo and cruise industry entities. The LAHD administers the Port under the California Tidelands Trust Act of 1911 and the Los Angeles City Charter. The LAHD is chartered to develop and operate the Port to benefit maritime uses.

2.1.2 Project Setting

Access to and from the proposed Project site is provided by a network of freeways and arterial routes. The freeway network consists of the Harbor Freeway (Interstate [I]-110), the Long Beach Freeway (I-710), the San Diego Freeway (I-405), the Terminal Island Freeway (State Route [SR]-103), and Seaside Avenue/Ocean Boulevard (SR-47). Figure 2-2 depicts the location of the Project site within the Port relative to this network of freeways and arterial routes. The proposed Project is located at Berths 177-178 and is bounded by W. Water Street to the north, S. Fries Avenue to the west, and the East Basin Channel to the east and south. Berth 163 (NuStar Energy – liquid bulk), Berth 164 (Valero – liquid bulk), Berths 165-166 (Rio Tinto Minerals – dry bulk), and Berths 167-169 (Shell – liquid bulk) are located to the west of the Project site.

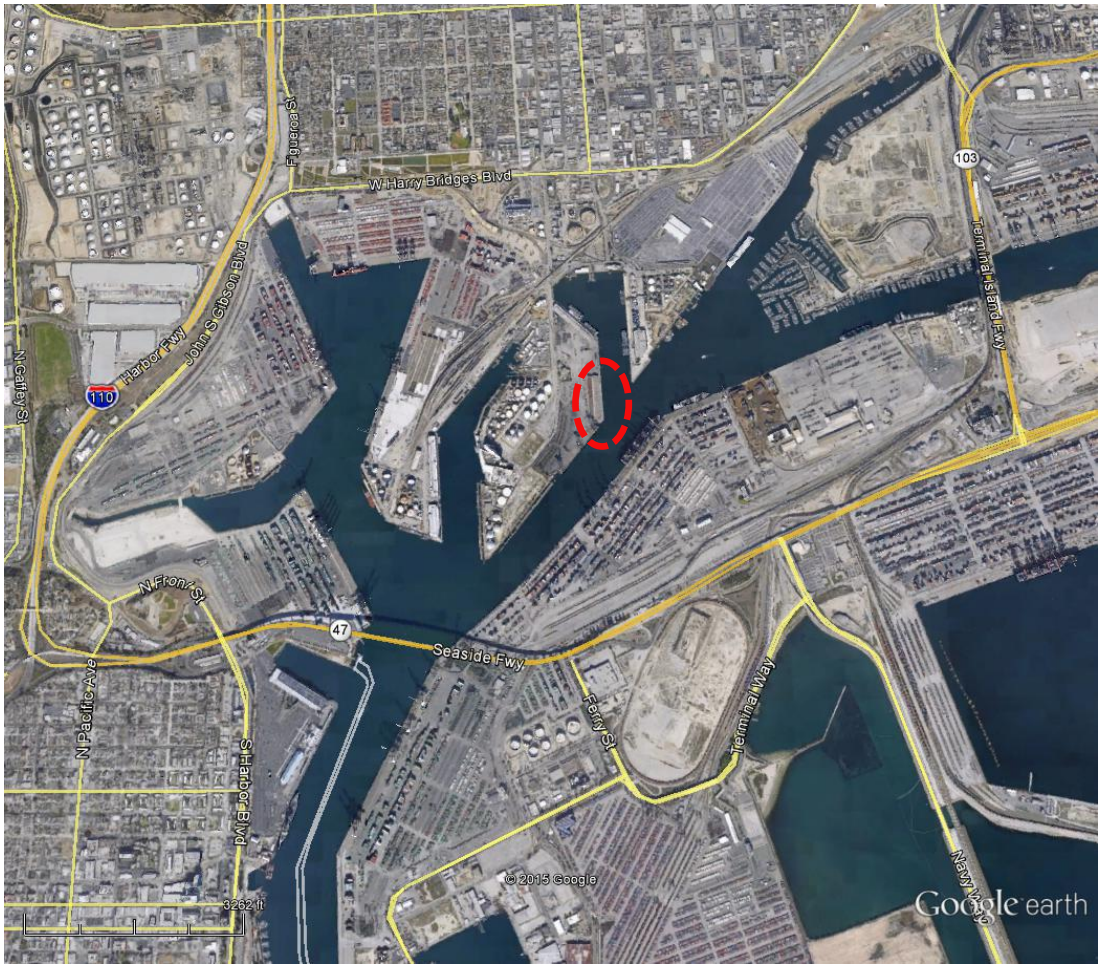


Figure 2-2. Project Vicinity

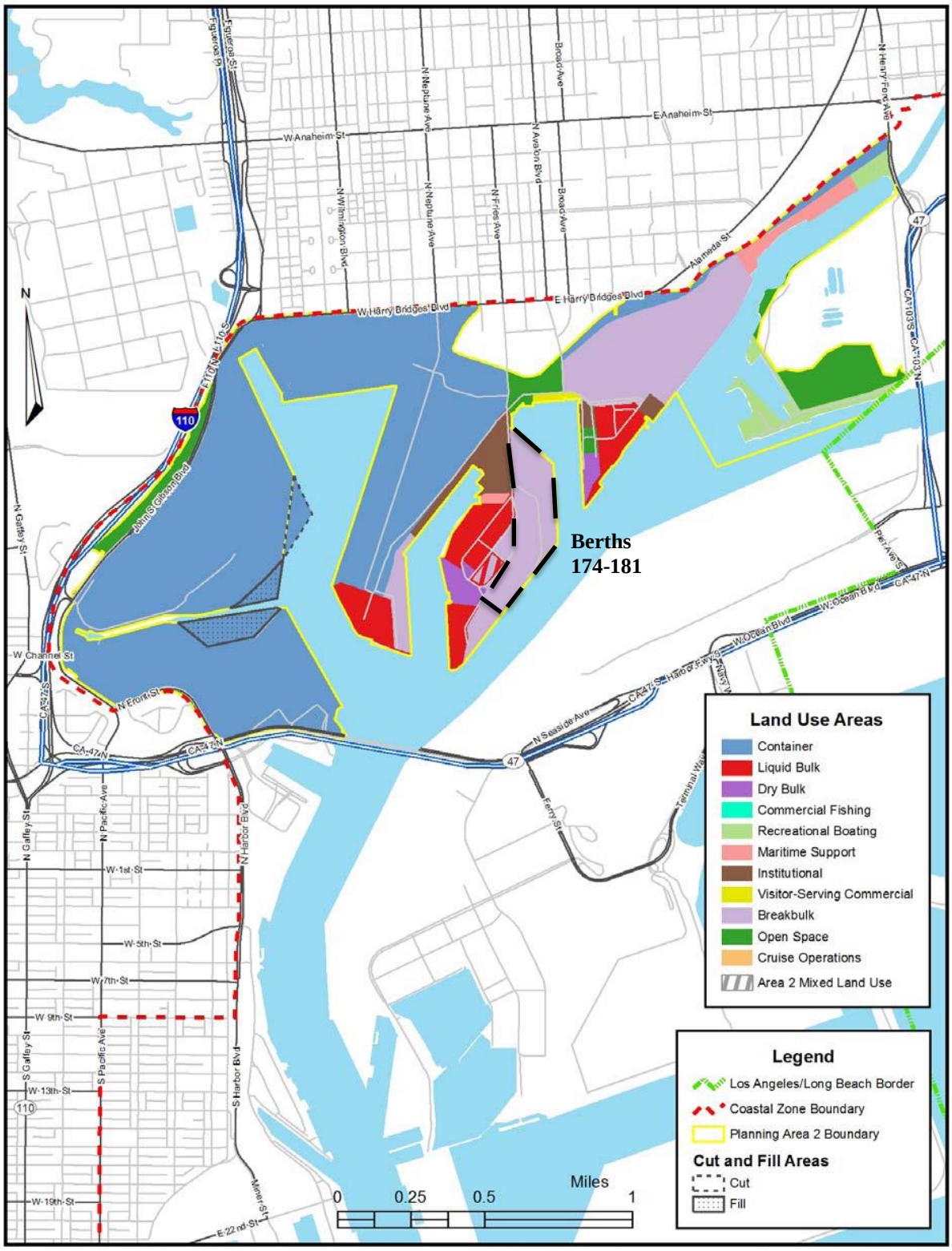
2.1.3 Land Use and Zoning

The proposed Project site the 135,000-square-foot transit shed which is a part of the 40-acre property comprising Berths 174-181, located on Mormon Island. Mormon Island is part of Planning Area 2 as designated in the Port Master Plan (POLA 2014). Planning Area 2 encompasses the West Basin and Wilmington areas and includes Berths 96-204, comprising approximately 1,098 acres in total. This planning area primarily focuses on container and breakbulk operations. The West Basin consists of container terminals, while the remaining Wilmington areas consist of a variety of uses including liquid bulk at Berths 148-150, liquid and breakbulk uses on Mormon Island, and recreational boating and open space along Anchorage Road. The Wilmington Waterfront land uses provide public access to the waterfront at Berths 183-186. Future projects in this area will continue to accommodate recreational and visitor-serving commercial opportunities near Banning's Landing and along the Avalon Corridor. Additional recreational and open space opportunities near the Wilmington marinas will become available with the redevelopment of the former Anchorage Road Soil Storage Site. Refer to Figure 2-3, Port Master Plan Designations for Planning Area 2.

The Project site was vacated following the fire in September 2014 and has remained vacant since that time, with PST continuing operations at alternate premises until demolition of the building has been completed. Upon completion of demolition PST will resume operations at the project site, utilizing the property for the storage of steel sheets, coils, rebar and other steel materials. This planned use is consistent with the previously-existing use of the property before the fire occurred, and is consistent with the Port Master Plan designation for the Project area.

The proposed Project site is identified as Los Angeles County Assessor's Parcel Number (APN) 7440014904. This parcel is zoned for manufacturing and heavy industrial uses ([Q] M3-1) by the City of Los Angeles Zoning Ordinance. [Q] M3-1 is designated as "quasi-heavy industrial" uses (City of Los Angeles 2015a). This designation permits all M-2 ("light industrial") uses, when located in whole or in part within the boundaries of the Port of Los Angeles Community Plan area (Los Angeles Planning Department 2014).

The overall character of Mormon Island where the Project site is located is industrial. The proposed Project is part of the 40-acre PST site that makes up Berths 174-181, located at 802 S. Fries Avenue. The site consists of covered on-dock warehouses, office buildings, an administration building, three cranes, and specialized on-dock service for steel. The property is located off Harry Bridges Boulevard adjacent to the I-110 Freeway. A railroad right of way (ROW) lies directly to the west of the property. Further west of the ROW lies a dry bulk terminal operated by Rio Tinto Minerals, as well as a series of three liquid bulk terminals. The proposed Project site is bordered by the East Basin Channel to the east and south.



Source: POLA 2014

Figure 2-3. Port Master Plan Designations for Planning Area 2

2.2 PROJECT BACKGROUND AND OBJECTIVES

2.2.1 Project Background

Berths 177-178: Pasha Stevedoring and Terminals Transit Shed

The transit shed has had a long history at Berths 177-178. It was constructed with steel in 1924 by LAHD along with the wood wharf. The City of Los Angeles has retained ownership of the transit shed, first leasing it to the McCormick Steamship company in 1926. In 1935 LAHD enlarged the transit shed to function as a passenger and general cargo facility as cargo congestion throughout the Port became more severe. The shed was extended at its southern elevation, thereby increasing the storage area by 25%. The enlarged building measured 736 by 120 feet and covered 122,880 square feet, and additional upgrades included earthquake retrofitting. Two rail tracks were also installed to serve the transit shed. Additional extensions to the building were made in 1940 and 1965 to further relieve cargo congestion and accommodate office spaces. From the early 1950s to 1975, Williams, Dimond & Co. used Berths 177-178 as a general cargo terminal.

Pasha Stevedoring and Terminals occupied the site in 1986 and continues to use the terminal to discharge and load cargo. PST is a professional breakbulk (cargo as separate pieces instead of in containers) cargo-handling company that provides stevedoring (to load or unload the cargo of a ship) services for the global maritime transportation industry at POLA. PST specializes in omni-terminal operation which allows a terminal to accommodate various commodities in addition to standard containers. Currently, PST uses Berths 174-181 as their primary site for operation of an omni-terminal to handle steel slab, breakbulk and containers. PST also has secondary breakbulk handling sites at Berths 153-155 and Berths 206-209.

PST has used the transit shed at Berths 177-178 to store steel sheets, coils, rebar and other breakbulk cargo as part of their terminal operations. The shed is a long, rectangular one-story structure covering approximately 135,000 square feet. The building is comprised of essentially two elements, an original section (facing east) and a large addition (facing west). The original section is clad with corrugated steel and has a flat roof with a raised central section forming a clerestory. The addition is also raised and covered with a flat roof, and its walls are comprised of tilt-up concrete. Large panels of exposed aggregate flank the main entrance of the addition (Jones and Stokes 2002). A historic resource evaluation was completed for the building and concluded that the transit shed is not eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR), and does not meet eligibility for designation as a Historic-Cultural Monument (HCM) for the City of Los Angeles (Applied Earthworks 2015).

On September 22, 2014 the wharf underneath the transit shed caught fire as the result of a torch-welding accident. The liquid creosote material that was used to coat the timbers supporting the wharf in the 1930s to prevent erosion made them highly flammable, and the fire caused extensive damage to both the wharf and the transit shed. The fire burned directly under the shed and caused the collapse of areas of the flooring. Berths 177-178 were evacuated and the property has remained vacant since that time, with PST continuing its cargo operations using its other available berths in the Port. Following the demolition of the building, PST plans to reestablish the use of the property for the handling and storage of their steel cargo products. Figures 2-4a, 2-4b, 2-4c and 2-4d show the existing condition of the transit shed.

Figure 2-4a. Primary Entrance, West Side of Transit Shed

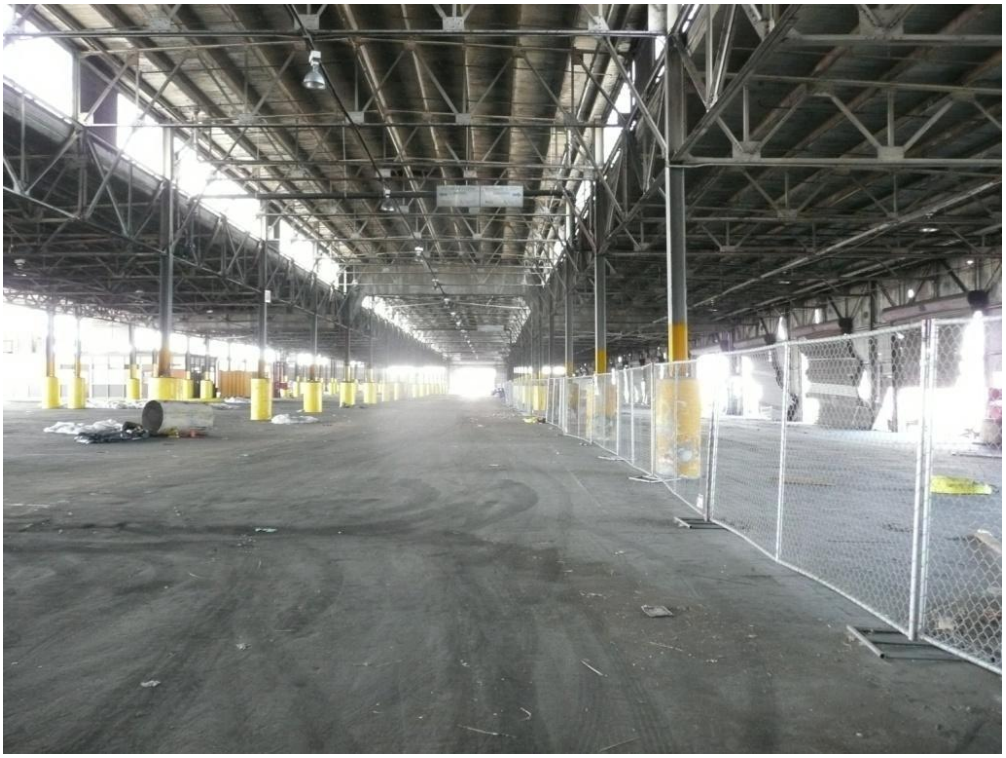


Figure 2-4b. Interior of Building, Facing North

Figure 2-4c. Fire-Damaged East Façade of Building and Wood Wharf

Figure 2-4d. Collapsing Floor and Fire-Damaged Metal Roll-up Doors

2.2.2 Project Objective

The objective of the proposed Project is to demolish and remove the vacant transit shed. The building suffered significant damage and became compromised as a result of the September 2014 fire. It is currently a safety hazard and cannot be used or occupied. As a result of the inspections conducted after the fire, LAHD was faced with either costly retrofits on a damaged vacant building or demolition of the structure. LAHD has determined that the most cost-effective approach given the future plans for the property would be demolition. Upon Project completion, the site's long term use of breakbulk cargo handling and storage will be restored.

2.3 PROJECT DESCRIPTION

The proposed Project solely involves the demolition of the transit shed located at 802 S. Fries Avenue. Until the fire occurred, the transit shed was used for storage of steel coils and other breakbulk cargo. Due to safety concerns after the fire, no operations have occurred within the building since that time. Upon completion of demolition the property will be returned to PST per their lease agreement with LAHD[1] for the continued handling and storage of steel coils and other breakbulk cargo, which is consistent with the previously existing use of the property before the damage occurred. The building will be demolished to the top of the asphalt concrete with the foundations left in place so that PST can use the site as an open storage area. Upon Project completion conditions at the Project site would be essentially similar to those that existed before the fire occurred.

2.4 CONSTRUCTION SCENARIO

Construction activities involve the demolition and removal of the damaged transit shed at Berths 177-178. The building is approximately 135,000 square feet and was constructed with steel on a wood wharf. It also has a western addition which was constructed with concrete. Asbestos and lead surveys were conducted for the building and identified the presence of asbestos-containing materials as well as lead-based paints (ENV America 2014). The identified asbestos-containing materials will be removed by a California licensed asbestos abatement contractor prior to demolition, and the South Coast Air Quality Management District will be notified prior to removal. Damaged lead-based paints will be removed or stabilized prior to demolition activities to prevent environmental contamination.

Demolition will be completed in sections, starting from one end of the transit shed and progressing to the other. All existing utility lines will be capped off. The building will be demolished to top of grade and there will be no removal of any foundations. Included in the demolition will be the removal of approximately 88 interior steel columns; these columns will be removed to the top of the asphalt concrete with a slurry seal patch to cover the holes. There would be no removal or demolition of any structures below the asphalt concrete. No grading or fill will be required as the site is currently paved. All debris materials (i.e., concrete, trash, steel) will be transported to the nearest recycling or disposal facilities.

1 LAHD is currently in the process of establishing a new lease with PST at Berths 153-155, 174-181, and 206-209; and this action is unrelated to the proposed Project. The lease renewal is being completed for financial reasons, whereas the proposed Project is being undertaken for reasons related to safety. Furthermore the two projects are not linked in any manner (i.e. either project is not a consequence of the other, and either project could proceed in the absence of the other). Consequently, the demolition of the transit shed represents the whole of the action; and the lease renewal is being analyzed through a separate environmental document.

Demolition is anticipated to begin in May 2016 and is estimated to take a total of 53 working days including asbestos/lead abatement, mobilization, preparation, demolition, cleanup, and demobilization. The phases of the proposed Project are summarized in Table 2-1.

Table 2-1. Summary of Project Components

Project Element	Description
PHASE I: 30 WORKING DAYS	
Lead abatement	Lead-based paint will be removed or stabilized prior to demolition.
Asbestos Abatement	Asbestos-containing materials will be removed prior to demolition.
PHASE II: 23 WORKING DAYS	
Utilities	All existing utility lines will be capped off at foundation level before commencement of demolition.
Demolish 135,000 square foot structure	The transit shed will be demolished to top of grade. 88 interior steel columns will be removed to the top of the asphalt concrete and the holes will be covered with a slurry seal patch.
Debris Haul	All steel, concrete and trash debris generated by the demolition will be removed from the site and hauled to the nearest recycling or disposal facilities.

2.5 ANTICIPATED PROJECT PERMITS AND APPROVALS

Under CEQA, the lead agency is the public agency with primary responsibility over approval of a proposed project. Pursuant to Section 15367, the CEQA lead agency for the proposed Project is LAHD. Anticipated permits and approvals that may be required to implement the proposed Project are listed below:

- LAHD Coastal Development Permit

3.0 INITIAL STUDY CHECKLIST

1.	**Project Title:**	Berths 177-178 Transit Shed Demolition Project
2.	**Lead Agency:**	City of Los Angeles Harbor Department Environmental Management Division 425 S. Palos Verdes St. San Pedro, CA 90731
3.	**Contact Person:**	Miller Zou, Project Manager, Environmental Management Division
4.	**Project Location:**	Berths 177-178: 802 South Fries Avenue, Wilmington, CA 90744
5.	**General Plan Designation:**	Port of Los Angeles (Commercial, Industrial/Non-Hazardous, General/Bulk Cargo)
6.	**Zoning:**	Manufacturing and [Q] M3-1 (Heavy Industrial Zone)
7.	**Description of Project:**	The City of Los Angeles Harbor Department (LAHD) is the lead agency under CEQA. The objective of the proposed Project is to demolish and remove a damaged transit shed at Berths 177-178. The building was damaged in a 2014 fire and is currently unsafe to use. Upon Project completion the site's long term use of breakbulk cargo handling and storage will be restored.
8.	**Surrounding Land Uses/Setting:**	The Project site is within the Port of Los Angeles Community Plan area in the City of Los Angeles, which is adjacent to the communities of San Pedro and Wilmington, and approximately 23 miles south of downtown Los Angeles. Access to and from the proposed Project site is provided by a network of freeways and arterial routes. The freeway network consists of the Harbor Freeway (I-110), the Long Beach Freeway (I-710), the San Diego Freeway (I-405), and the Terminal Island Freeway (SR-103/SR-47). The overall character of the surrounding area is industrial. The proposed Project site is a part of the Pasha Stevedoring and Terminals omni-cargo terminal comprising Berths 174-181. The 40-acre terminal consists of covered on-dock warehouses, office buildings, an administration building, three cranes, and specialized on-dock rail service for steel. Berths 174-181 are bounded by San Clemente Avenue to the west, Slip 5 to the north and east, and the East Basin Channel to the south and southwest. Refer to figure 2-2, Project Vicinity.
9.	**Other Public Agencies Whose Approval is Required:**	• Coastal Development Permit

3.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by the proposed project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology and Water Quality
☐ Land Use and Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation and Traffic	☐ Utilities and Service Systems	☐ Mandatory Findings of Significance

3.2 DETERMINATION

Based on this initial evaluation:

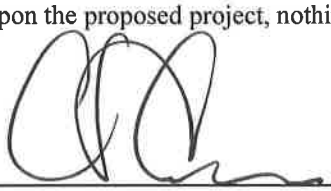
I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☒

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. ☐

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ☐

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. ☐

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. ☐



02-26-16

Signature
Christopher Cannon, Director
Environmental Management Division
City of Los Angeles Harbor Department

Date

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
1. AESTHETICS. Would the project:				
a. Have a substantial adverse effect on a scenic vista?				X
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c. Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?			X	
e. Create a new source of substantial shade or shadow that would adversely affect daytime views in the area?			X	
2. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, Lead Agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b. Conflict with existing zoning for agricultural use, or a Williamson act contract?				X
c. Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned timberland production?				X
d. Result in the loss of forest land or conversion of forest land to non-forest use?				X
e. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X

3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?			X	
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?			X	
d. Expose sensitive receptors to substantial pollutant concentrations?			X	
e. Create objectionable odors affecting a substantial number of people?			X	
4. BIOLOGICAL RESOURCES. Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
5. CULTURAL RESOURCES. Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?				X

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?				X
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d. Disturb any human remains, including those interred outside of formal cemeteries?				X
6. GEOLOGY AND SOILS. Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b. Result in substantial soil erosion, loss of topsoil, or changes in topography or unstable soil conditions from excavation, grading, or fill?			X	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
7. GREENHOUSE GAS EMISSIONS: Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	
8. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X
9. HYDROLOGY AND WATER QUALITY. Would the project:				
a. Violate any water quality standards or waste discharge requirements?				X
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?				X
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?				X
e. Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f. Otherwise substantially degrade water quality?				X

g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j. Inundation by seiche, tsunami, or mudflow?				X
k. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the sea level rise?				X
10. LAND USE AND PLANNING. Would the project:				
a. Physically divide an established community?				X
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
11. MINERAL RESOURCES. Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				X
12. NOISE. Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
13. POPULATION AND HOUSING. Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
14. PUBLIC SERVICES.				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?			X	
ii) Police protection?			X	
iii) Schools?				X
iv) Parks?				X
v) Other public facilities?				X
15. RECREATION.				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X

16. TRANSPORTATION AND TRAFFIC. Would the project:				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e. Result in inadequate emergency access?				X
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X
17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g. Comply with federal, state, and local statutes and regulations related to solid waste?			X	

18. MANDATORY FINDINGS OF SIGNIFICANCE.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X
b. Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.			X	
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			X	

4.0 IMPACTS AND MITIGATION MEASURES

4.1 AESTHETICS

The purpose of this section is to identify and evaluate key visual and aesthetic resources in the proposed Project area and to determine the degree of visual and aesthetic impacts that would be attributable to the proposed Project.

Would the Project:

a) Have a substantial adverse effect on a scenic vista?

No Impact. The proposed Project site does not include any protected or designated scenic vistas. The proposed Project site is situated in Planning Area 2 – West Basin/Wilmington, as designated in the Port Master Plan. Planning Area 2 consists of approximately 1,098 acres and includes all of Mormon Island. This planning area focuses on container, breakbulk and liquid bulk operations. The overall character of the area is industrial with no scenic vistas near the Project site. The proposed Project site and its surrounding properties are designated as [Q] M3-1.

Construction activities would solely involve demolition of the vacant building, which is a part of the breakbulk cargo terminal comprising Berths 174-181. The proposed Project would remove the damaged transit shed and restore the site's long term use of breakbulk cargo handling and storage, which would be consistent with the industrial/manufacturing landscape of the area. Therefore, no impacts related to scenic vistas would occur. No mitigation is required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. Per the California Department of Transportation (Caltrans), the nearest officially designated state scenic highway is located approximately 32 miles north of the proposed Project (State Highway 2, from approximately 3 miles north of I-210 in La Cañada to the San Bernardino County Line). The nearest eligible state scenic highway is approximately 10 miles southeast of the proposed Project site (State Highway 1, from State Highway 19 near Long Beach to I-5 south of San Juan Capistrano) (Caltrans 2015).

In addition to Caltrans' officially designated and eligible state scenic highways, the City of Los Angeles has city-designated scenic highways that are considered for local planning and development decisions (City of Los Angeles 1998). These include several streets in San Pedro that are in the vicinity of the proposed Project site. John S. Gibson Boulevard, Pacific Avenue, Front Street, and Harbor Boulevard are city-designated scenic highways because they afford views of the Port and the Vincent Thomas Bridge. The proposed Project site is approximately 1 mile northeast of the Vincent Thomas Bridge and is not visible from any city-designated scenic

highways. There are no other scenic resources, such as trees, rock outcroppings, or historic buildings, within a scenic highway that could be affected by the proposed Project. Therefore, no impacts related to scenic resources within a state scenic highway would occur. No mitigation is required.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant Impact. The proposed Project site is located within the industrial waterfront that is actively used for breakbulk handling and storage. The area is zoned for manufacturing and heavy industrial uses ([Q]M3-1) and is completely within LAHD property. The proposed Project consists of demolishing a damaged transit shed; the building is currently unusable and would be removed so that the property's long term use of breakbulk handling and storage can be restored to its previously existing footprint. This restoration of operations at the Project site would remain consistent with the industrial/commercial visual landscape and character of the area. The visual environment would remain very similar to the existing aesthetic of the Berths 174-181 breakbulk cargo terminal. Therefore, the proposed Project would not substantially degrade the existing visual character and quality of the site. Impacts would be less than significant, and no mitigation is required.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Less than Significant Impact. The proposed Project site consists of demolishing a 135,000 square foot transit shed within an urban industrial setting. The damaged building is unoccupied and utilities will be capped as part of demolition. The proposed Project would demolish the transit shed to top of grade so that the property's long term use of breakbulk cargo handling and storage can be restored. The proposed Project does not involve construction of new or additional sources of lighting that would alter the lighting levels at the facilities or from any nighttime vantage of the property. Demolition of the transit shed would remove current sources of day and nighttime glare from building windows, metal doors, and light-colored building surfaces. Upon completion of demolition there would be no further construction that could include reflective building materials or signage. Therefore, impacts related to light and glare would be less than significant. No mitigation is required.

e) Create a new source of substantial shade or shadow that would adversely affect daytime views in the area?

Less than Significant Impact. The proposed Project would involve the demolition of a 135,000 square foot transit shed. The building is not being replaced. Following demolition the property will again be used to store steel coils and other breakbulk cargo, which are currently being stored off-site at Pasha's other berths within the Port. The proposed Project would remove any shadow or shade currently made by the vacant building. No new structures of substantial height or mass

that could create large areas of shade or shadow would be constructed as part of the proposed Project. The proposed Project would restore the operation of equipment (e.g., tractors, forklifts, etc.), trucks, and other equipment typically associated with storage and transloading activities, which would not generate a substantial amount of shade. Therefore, the proposed Project would not create a substantial new source of shade or shadow that would adversely affect daytime views in the area and impacts would be less than significant. No mitigation is required.

4.2 AGRICULTURE AND FORESTRY RESOURCES

The purpose of this section is to identify and evaluate agricultural and forestry resources in the proposed Project area and to determine the degree of impacts that would be attributable to the proposed Project.

Would the Project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The California Department of Conservation's Farmland Mapping and Monitoring Program develops maps and statistical data to be used for analyzing impacts on California's agricultural resources (California Department of Conservation 2015a). The Farmland Mapping and Monitoring Program categorizes agricultural land according to soil quality and irrigation status; the best quality land is identified as Prime Farmland.

According to the Farmland Mapping and Monitoring Program, the proposed Project site is designated as Urban and Built-Up Land, which is described as land occupied by structures that has a variety of uses including industrial, commercial, institutional facilities, railroad, or other transportation yards. There is no Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Farmland of Local Importance in the proposed Project vicinity (California Department of Conservation 2015a). Further, the City of Los Angeles General Plan does not designate the proposed Project site as Farmland. In addition, no Farmland currently exists on the proposed Project site and, therefore, none would be converted to accommodate the proposed Project. No impacts would occur. No mitigation is required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments, which are much lower than normal because they are based upon farming and open space uses as opposed to full market value.

The proposed Project site is identified as Los Angeles County APN 7440014904 and is zoned for manufacturing and heavy industrial uses ([Q] M3-1) by the City of Los Angeles Zoning Ordinance. The Williamson Act applies to agricultural parcels consisting of at least 20 acres of Prime Farmland or at least 40 acres of land not designated as Prime Farmland. The proposed Project site is not located within a Prime Farmland designation, nor does it consist of more than 40 acres of Farmland. The proposed Project site is not within a Williamson Act contract. Thus, the proposed Project would not conflict with existing zoning for agricultural use, or a Williamson Act Contract. No impacts would occur and no mitigation is required.

c) Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned timberland production?

No Impact. The proposed Project is located on fully developed land within LAHD property. The site does not contain any property designated as forest or timberland. The proposed Project site is zoned for industrial uses and is not in the vicinity of any forest or timberland. Further, the proposed Project would not result in a change in the use of the existing site or surrounding area. Therefore, the proposed Project would not conflict with existing zoning or cause rezoning of forest or timberland. No impacts would occur and no mitigation is required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As discussed in the response to Question 4.2(c), the proposed Project site does not contain any forest land or property designated as forest land. Therefore, the proposed Project would not result in the loss of forest land, nor would it convert forest land to a non-forest use. No impacts would occur and no mitigation is required.

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

No Impact. Please see the response provided in 4.2 (a) and (b).

4.3 AIR QUALITY

This section includes a description of existing air quality conditions in the proposed Project area and analyses of potential short-term air quality impacts of the proposed Project. The methods of analysis for construction, local mobile source, odor, and toxic air contaminant (TAC) emissions are consistent with the guidelines of the South Coast Air Quality Management District (SCAQMD) and LAHD's standard air quality protocols.

Would the Project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. The proposed Project is located within the South Coast Air Basin (Basin), which includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. Due to the combined air pollution sources within the Basin and meteorological and geographical effects that limit dispersion of air pollution, the Basin can experience high air pollutant concentrations. The Basin is currently classified as an extreme nonattainment area for the 8-hour national ambient air quality standard (NAAQS) for ozone (O_3), and a nonattainment area for the NAAQS for particulate matter less than 2.5 microns ($PM_{2.5}$). On June 12, 2013, the U.S. Environmental Protection Agency (USEPA) redesignated the Basin as a maintenance area for the NAAQS for particulate matter less than 10 microns (PM_{10}). The Basin is classified as a maintenance area for the NAAQS for carbon monoxide (CO). The Basin is also classified as a nonattainment area for the California ambient air quality standards (CAAQS) for O_3, $PM_{2.5}$, and PM_{10}.

The SCAQMD is responsible for the development and implementation of air quality plans and programs. Air quality plans describe air pollution control strategies to be implemented within the Basin designed to attain and maintain the NAAQS and CAAQS in accordance with the requirements of the federal and California Clean Air Acts (CAAs). The most recent Air Quality Management Plan (AQMP) was adopted on December 7, 2012 (SCAQMD 2012). The 2012 AQMP proposes emission reduction strategies and provides a demonstration that the Basin would attain the federal $PM_{2.5}$ standard in 2014 with implementation of all feasible control strategies. The AQMP also includes specific additional control measures to implement the ozone strategy within the 2007 AQMP that are designed to achieve attainment of the 8-hour NAAQS by 2023. The additional measures are also designed to demonstrate attainment of the revoked 1-hour O_3 NAAQS, which is required by the USEPA.

LAHD provides input to SCAQMD regarding its projected mobile source emissions, including truck trips that would be associated with the proposed Project. The proposed Project would remove the damaged transit shed and restore the property's long term use of breakbulk cargo handling and storage to its previously existing footprint. Conditions at the Project site would be very similar to those that existed before the 2014 fire occurred. Therefore, the proposed Project would be consistent with the assumptions regarding land use and motor vehicle emissions within

the 2012 AQMP. Any short-term construction vehicles would be subject to the requirements of the San Pedro Bay Port's Clean Air Action Plan (CAAP), including the Port of Los Angeles' Clean Trucks Program. Based on the discussion provided above, the proposed Project would not conflict with or obstruct implementation of the AQMP. The proposed Project would have less than significant impacts on the applicable air quality plan. No mitigation is required.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less than Significant Impact. The SCAQMD provides guidance on analysis of the air quality impacts of proposed projects in its CEQA Handbook (SCAQMD 1993). The SCAQMD updated its thresholds of significance for potential air quality impacts in 2015 (SCAQMD 2015). Table 4.3-1 shows the SCAQMD thresholds of significance for potential air quality impacts.

Table 4.3-1
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds [a]		
Pollutant	**Construction [b]**	**Operation [c]**
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs), Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO2eq for industrial facilities	
Ambient Air Quality Standards for Criteria Pollutants [d]		
NO2 1-hour average annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM10 24-hour average annual average	10.4 µg/m^3 (construction)[e] & 2.5 µg/m^3 (operation) 1.0 µg/m^3	
PM2.5 24-hour average	10.4 µg/m^3 (construction)[e] & 2.5 µg/m^3 (operation)	
SO2 1-hour average 24-hour average	0.25 ppm (state) & 0.075 ppm (federal – 99th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 µg/m^3 (state)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day Average Rolling 3-month average	1.5 µg/m^3 (state) 0.15 µg/m^3 (federal)	

[a] Source: SCAQMD CEQA Handbook (SCAQMD, 1993)
[b] Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).
[c] For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.
[d] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.
[e] Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million µg/m^3 = microgram per cubic meter ≥ = greater than or equal to
MT/yr CO2eq = metric tons per year of CO2 equivalents > = greater than

Demolition of the transit shed involves 135,000 square feet of concrete and corrugated steel along with 88 interior steel columns. The building will be demolished to the top of the asphalt concrete and no foundations will be removed. There will be no grading or fill necessary since the site is already paved and the building will only be demolished to top of grade. Construction emissions are short term and temporary in duration. The proposed Project will follow the *Sustainable Construction Guidelines* prepared by LAHD for reducing air emissions from all LAHD-sponsored construction projects (POLA 2009).

Emissions associated with construction activities and vehicles were calculated using Project-specific equipment usage, truck trips and emissions factors. The emissions calculations were conservative and utilized worst-case scenarios for workers, equipment and truck trips, although it is unlikely that all pieces of equipment and workers will be in use every day. The calculations included implementation of all CAAP construction requirements, the Port's Sustainable Construction Practices and Clean Trucks Program and the requirements of SCAQMD Rule 403 for fugitive dust. Operational emissions were not analyzed because the Project site has only been vacant on a short-term, temporary basis due to the damage and safety hazard caused by the fire, and operations at the Project site would be essentially similar to pre-fire conditions upon Project completion.

Tables 4.3-2 and 4.3-3 provide a summary of the emissions associated with both phases of the proposed Project. Phase I consists of lead and asbestos abatement activities, and Phase II consists of the demolition of the transit shed. The peak daily emissions generated by both phases of the proposed Project would not exceed any of the SCAQMD daily significance thresholds.

Table 4.3-2
Phase I – Maximum Daily Construction Emissions

	Peak Daily Emissions, lbs/day					
	ROG	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
Phase I Construction Activities*	1.7	35.1	7.3	0.1	4.4	1.7
SCAQMD Daily CEQA Significance Threshold	75	100	550	150	150	55
Significance Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

*Phase I and Phase II do not occur simultaneously.

Table 4.3-3
Phase II – Maximum Daily Construction Emissions

	Peak Daily Emissions, lbs/day					
	ROG	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
Phase II Construction Activities	3.3	46.2	19.8	0.1	4.4	1.9
SCAQMD Daily CEQA Significance Threshold	75	100	550	150	150	55
Significance Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

*Phase I and Phase II do not occur simultaneously.

The SCAQMD has also developed Localized Significance Thresholds (LSTs) to assist CEQA lead agencies in analyzing localized air quality impacts from proposed projects (SCAQMD 2008a). LSTs were developed based on a calculation of the maximum emissions from a project that would not cause or contribute to a violation of the most stringent applicable federal or state ambient air quality standard. Accordingly, the LSTs were derived based on the ambient concentration of pollutant versus distance to receptor for each source-receptor area within the Basin. LSTs have been developed for NOx, CO, and particulate matter (PM_{10} and $PM_{2.5}$). The SCAQMD has developed LST look-up tables that apply to projects with an area of 5 acres or less.

The proposed Project site is 3.1 acres so it is appropriate to use the Localized Significance Thresholds to evaluate ambient air quality impacts from the proposed Project demolition activities. Table 4.3-2 provides a summary of the proposed Project emissions when compared to the applicable LSTs. Maximum daily emission from the Project would not exceed any of the applicable SCAQMD LST standards. Accordingly, the proposed Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Impacts would be less than significant and no mitigation is required.

Table 4.3-2
Maximum Daily Construction Emissions Compared to SCAQMD Localized Significance Thresholds

	Peak Daily Emissions, lbs/day					
	ROG	**NOx[1]**	**CO[2]**	**SOx**	**PM10[3]**	**PM2.5[4]**
Phase II Construction Activities	3.3	46.2	19.8	0.1	4.4	1.9
SCAQMD LST standards[5]	NA	222	4,119	NA	88	35
Significance Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

[1]Table C-1 – 2006 – 2008 Thresholds for Construction and Operation with Gradual Conversion of NOx to NO_2
[2]Table C-2 – 2006 – 2008 CO Emission Thresholds for Construction and Operation
[3]Table C-4 – PM10 Emission Thresholds for Construction
[4]Table C-6 – PM2.5 Emission Thresholds for Construction
[5]Source Receptor Area #3 – 5 Acre site with nearest receptors > 200 meters away
*Since Phase I involves truck deliveries off-site, Phase II maximum daily emissions (on-site) were utilized to represent worst-case localized impacts.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

Less than Significant Impact. As discussed under Question 4.3(a), the Basin is currently classified as an extreme nonattainment area for the 8-hour NAAQS for O_3, and a nonattainment area for $PM_{2.5}$. The Basin is also classified as a nonattainment area for the CAAQS for O_3, $PM_{2.5}$, and PM_{10}. As discussed under Question 4.3(b), the proposed Project would result in the temporary generation of O_3 precursors which are reactive organic gases (ROG) and NOx, and emissions of nonattainment pollutants $PM_{2.5}$ and PM_{10}. Based on the analysis, implementation of the proposed Project would not result in emissions that exceed the LSTs or the SCAQMD's regional daily significance thresholds. SCAQMD's regional emission thresholds are inherently cumulative in nature since they factor in effects across the Basin based on growth projections and are designed to assist the region in attaining the applicable state and national ambient air quality

standards. Thus, projects that do not exceed the regional thresholds do not contribute to a significant cumulative impact. Accordingly, the proposed Project would not contribute to a cumulatively considerable air quality impact since regional emissions are below the levels of significance. Impacts would be less than significant and no mitigation is required.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain for 24 hours. Commercial and industrial facilities are not included in the definition of a sensitive receptor because employees do not typically remain on-site for a full 24 hours, but are present for shorter periods of time, such as eight hours (SCAQMD 2008a).

The nearest sensitive receptors to the Project site are liveaboard boat tenants at the Cerritos Channel Marina approximately 3,500 feet from the Project site across the East Basin Channel. Impacts to sensitive receptors are evaluated in terms of the greatest potential for exposure to toxic air contaminants (TACs). Diesel particulate matter (DPM) is the most prevalent TAC that would be emitted from the equipment used in the demolition of the transit shed (e.g., bobcats, excavators, haul trucks, etc.). DPM is considered to be a carcinogenic TAC, and also is considered to have the potential for adverse non-cancer health effects with chronic (i.e., long-term) exposure. According to SCAQMD methodology, health effects from carcinogenic TACs are usually described in terms of individual excess cancer risk based upon a lifetime of exposure, which is based on 70 years.

Demolition activities would occur over a short-term period, anticipated to be 53 working days in total, which is much lower than the 70-year exposure period for which carcinogenic risks are evaluated. Additionally, the proposed Project's emissions during demolition would not exceed the SCAQMD's LSTs for PM_{10} and $PM_{2.5}$. The proposed Project would follow the *Sustainable Construction Guidelines* prepared by the LAHD for reducing air emissions from all LAHD-sponsored construction projects. The Guidelines require that all on-road heavy-duty diesel trucks with a gross vehicle weight of 19,500 pounds or greater used at LAHD would comply with the USEPA 2007 on-road emission standards for PM_{10} and NOx (0.01 g/bhp-hr and at least 1.2 g/bhp-hr, respectively). Furthermore, the Guidelines require that off-road construction equipment be equipped with engines that meet Tier 3 emission standards. Because the use of off-road heavy-duty diesel equipment would be temporary and because sensitive receptors are located 3,500 feet from the proposed Project, construction-related emissions of TACs would not expose sensitive receptors to substantial emissions of TACs. Impacts would be less than significant, and no mitigation is required.

e) Create objectionable odors affecting a substantial number of people?

Less than Significant Impact. The SCAQMD identifies land uses associated with odor complaints, including agricultural operations, wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies and fiberglass molding plants. The proposed Project involves the demolition of a damaged transit shed at Berths 177-178 over the course of 53 days and does not involve any processes with the potential to generate significant odor impacts. Upon Project completion the damaged transit shed will be removed and the property's long term use of breakbulk storage will be restored.

The greatest source of odor from construction activities associated with the proposed Project would be diesel exhaust from heavy-duty diesel equipment operating temporarily on-site. Some individuals might find diesel combustion emissions to be objectionable in nature. However, quantifying the odorous impacts of these emissions to the public would be difficult based on the complex mixture of chemicals in the diesel exhaust, the differing odor thresholds of these constituent species, and the difficulty quantifying the potential for changes in perceived odors even when air contaminant concentrations are known. The mobile nature of the emissions sources would help to disperse proposed Project emissions. Additionally, the distance between proposed Project emission sources and the nearest sensitive receptors (approximately 0.7 miles from the Project site across the East Basin Channel) is expected to be far enough to allow for adequate dispersion of these emissions to below objectionable odor levels. Furthermore, the existing industrial setting of the proposed Project represents an already complex odor environment. For example, existing on-site and nearby breakbulk, dry bulk, liquid bulk and container terminals include freight and goods movement activities that use diesel trucks and diesel cargo-handling equipment that generate similar diesel exhaust odors as would the proposed Project.

Due to the temporary nature of demolition activities, distance to the nearest sensitive receptors, and the existing industrial odor environment, the proposed Project would not have the potential to create objectionable odors affecting a substantial number of people. Impacts would be less than significant, and no mitigation is required.

4.4 BIOLOGICAL RESOURCES

LAHD, in conjunction with the Port of Long Beach, conducted biological baseline surveys of the Port area in 1988, 2000 and 2008. Several candidate, sensitive, or special-status species have been identified in the Port area. The following description of biological resources incorporates information from the previous environmental documents, including information from the most recent surveys. The most recent comprehensive survey was completed in 2008 (SAIC 2010). The 2008 survey studied adult and juvenile fish; ichthyoplankton; benthic invertebrates; riprap associated organisms; kelp and macroalgae surface canopy; eelgrass; birds; and various exotic species. The goal of the biological baseline surveys conducted in 1988, 2000, and 2008 was to provide quantitative information on the physical/chemical and biological conditions within the different marine habitats of both the POLA and the Port of Long Beach. The following evaluation incorporates information from these previous biological baseline surveys conducted in 2008. Biological resource sampling throughout the Port is not undertaken on an annual basis, and the most recent comprehensive surveys were completed in 2008 and are considered to be representative of current biological conditions as the site has not been substantially modified since that time. Because it is fully paved and used for breakbulk cargo handling, the Project site contains no terrestrial biological resources.

Would the Project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. Federal and state listed threatened and endangered species are found in the Los Angeles Harbor; however, there is no federally designated critical habitat in the harbor. The California least tern (*Sterna antillarum browni*), a federally and state listed endangered species, nests and forages within the Port. A 15-acre California least tern nesting area is located on Pier 400, approximately 3.1 miles south of the Project site. The California brown pelican (*Pelecanus occidentalis californicus*) roosts on the outer breakwater, plunge-dives for fish or rests on open waters within and outside the harbor, and the peregrine falcon (*Falco peregrinus*) nests on certain bridges within the harbor area; both these species have been removed from the federal and state endangered species lists.

Other special-status species (designated by the California Department of Fish and Wildlife [CDFW] and/or U.S. Fish and Wildlife Service [USFWS]) with the potential to occur within the Port include: black oystercatcher (*Haematopus bachmani)*, black skimmer (*Rynchops niger)*, Caspian tern (*Hydroprogne caspia)*, elegant tern (*Thalasseus elegans)*, common loon (*Gavia immer*) double-crested cormorant (*Phalacrocorax auritus)*, loggerhead shrike (*Lanius ludovicianus*), merlin (*Falco columbarius*), osprey (*Pandion haliaetus*), and burrowing owl (*Athene cunicularia)* (SAIC 2010). Several of these species are known to nest, roost, and/or

forage (feed) within the harbor, such as the double-crested cormorant, elegant tern, and Caspian tern.

There is a designated California least tern nesting area located 3.1 miles south from the Project site on Pier 400. Based on the paucity of observations, the distance from a designated nesting area, and the nesting habitats required by these species (bare ground, such as sand/soil) (Shuford and Gardali 2008), which is lacking at the Project site, no impact on terns is anticipated. Therefore, because of the lack of habitat conducive to nesting associated with special-status bird species, no impact on nesting is anticipated as a result of the proposed Project.

Marine mammals, including dolphins, seals, and sea lions, are protected by the Marine Mammal Protection Act (MMPA) of 1972. Marine mammals may forage in the harbor but do not breed there because breeding occurs on islands from the Gulf of the Farallones down to Baja California, including some of the Channel Islands off southern California. Sightings of marine mammals were recorded during the 2008 biological surveys of the Port Complex (SAIC 2010). During 2008 California sea lions (*Zalophus californianus*) were observed throughout the Los Angeles-Long Beach Harbor, including near the Project site, while harbor seals (*Phoca vitulina*) were limited to Outer Harbor waters. Neither of these pinniped species is endangered, and there are no designated significant ecological areas for either species within the Port Complex.

Demolition associated with the proposed Project would occur entirely on land, and the proposed Project site is fully paved and developed and has been historically operated as a breakbulk storage facility. The site is not suitable for use by special status species. There are no plants located at the Project site, and therefore no plants or habitats will be removed or disturbed by the proposed Project. No in- or over-water construction is proposed and all stormwater runoff generated during demolition will be controlled by Best Management Practices as outlined in the project's Stormwater Pollution Prevention Plan (SWPPP). There would be no direct or indirect impacts to any candidate, sensitive, or special status species, and no mitigation is required.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

No Impact. As discussed in Question 4.4(a), the proposed Project site is fully developed and has been historically operated as a transit shed for breakbulk cargo. The proposed Project site does not contain any federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA), and also contains no riparian habitat or any other designated sensitive natural community (USFWS 2016). As such, no impacts to riparian habitat or sensitive natural community would occur as a result of the proposed Project. No mitigation is required.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The proposed Project site does not contain any federally protected wetlands as defined by Section 404 of the CWA. There are two designated wetlands within the Port of Los Angeles. The closest wetlands are the Anchorage Road Salt Marsh 1 mile east of the proposed Project (USFWS 2016). The second is the Salinas de San Pedro salt marsh (also referred to as Cabrillo marsh), a 3.3-acre salt marsh constructed by the Port, located approximately 3 miles southwest of the proposed Project near Cabrillo Beach in the Outer Harbor (POLA 2014). Proposed construction activities would be confined to the immediate Project site, and no in- or over-water construction is proposed. No activities would occur within or near wetlands. Thus, the proposed Project would not affect this or any other federally protected wetlands as defined by Section 404 of the CWA. No impacts would occur and no mitigation is required.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact. Los Angeles and Long Beach Harbors provide valuable habitat for foraging, resting, and breeding by numerous species of birds. Per the baseline surveys, over 100 avian species use the various habitats within the Ports seasonally, year-round, or during migration. A total of 96 species representing 30 families were observed within the Ports during the 2008 study. Of these species, 68 are dependent on marine habitats. Species numbers varied seasonally, with a greater variety of birds present in fall and winter and fewer species during summer, consistent with large-scale migratory patterns. Bird abundance was more variable and was attributed to differences in bird migratory patterns and nesting activities. Bird abundance along the Southern California coast typically follows a seasonal pattern, with the greatest numbers of individuals and species occurring during fall and winter. The highest numbers of birds were noted in the Long Beach West Basin and main shipping channel of Los Angeles Harbor, with counts being approximately an order of magnitude lower at small basin and channel zones at inner harbor locations.

The proposed Project site is an existing structure on a paved surface. It does not contain habitat suitable for wildlife species and is not used by native resident or migratory species for movement or nursery purposes. There are no trees or other plants near the perimeter of the structure that could be used for nesting. After demolition, the Project site's long term use of breakbulk storage will be restored, which would not have any operational components with the potential to interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nurseries. As such, no impacts related to the movement of wildlife species or the use of wildlife nursery sites would occur from implementation of the proposed Project. No mitigation is required.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The only biological resources protected by City of Los Angeles ordinance (Ordinance No. 177404) pertain to certain tree species. A permit is required for removal or relocations (City of Los Angeles Municipal Code 2015). The protected trees are:

- Oak tree including Valley Oak (*Quercus lobata*) and California Live Oak (*Quercus agrifolia*)
- Any other tree of the oak genus indigenous to California but excluding the scrub oak (*Quercus dumosa*)
- Southern California Black Walnut (*Juglans californica* var. *californica*)
- Western Sycamore (*Platanus racemosa*)
- California Bay (*Umbellularia californica*).

The proposed Project site is located in a heavily industrial region of the Port. The Project site is entirely paved and contains no trees. No trees or other vegetation will be removed as part of the demolition process. As such, the proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. No impacts would occur and no mitigation is required.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. Habitat Conservations Plans (HCPs) are administered by the U.S. Fish and Wildlife Service and are intended to identify how impacts would be mitigated when a project would impact endangered species. There are no HCPs currently in place at the Port of Los Angeles (USFWS 2015). The County of Los Angeles has established Significant Ecological Areas (SEAs) to preserve a variety of biological communities for public education, research, and other non-disruptive outdoor uses. The only designated SEA in Los Angeles Harbor is Pier 400, Terminal Island for the California least tern nesting site (County of Los Angeles 2015a). Pier 400 is approximately 3 miles south from the proposed Project site and the proposed Project does not involve any construction or operational components within the vicinity of Pier 400.

The nearest Natural Community Conservation Plan (NCCP) to the proposed Project site, the Rancho Palos Verdes Peninsula Sub-Regional Plan, is located approximately six miles to the southwest (CDFW 2015). This plan intends to protect coastal sage scrub and does not include Port lands. Thus, the proposed Project would not conflict with the provisions of an adopted HCP or other approved local, regional, or state habitat conservation plan. Neither the proposed Project site nor any adjacent areas are included as part of an NCCP. No impacts would occur and no mitigation is required.

4.5 CULTURAL RESOURCES

This section addresses potential impacts on cultural resources that could result from implementation of the proposed Project. Cultural resources customarily include archaeological resources, ethnographic resources, and those of the built environment (architectural resources). Though not specifically a cultural resource, paleontological resources (fossils predating human occupation) are also considered in this evaluation, as they are discussed in Appendix G of the State CEQA Guidelines (Environmental Checklist Form).

Regulatory Framework

CEQA provides a definition of what constitutes a cultural or historical resource. Cultural resources can include traces of prehistoric habitation and activities, historic-era sites and materials, and places used for traditional Native American observances or places with special cultural significance. In general, it is required to treat any trace of human activity more than 50 years in age as a potential cultural resource. CEQA states that if a project would have significant impacts on important cultural resources, then alternative plans or mitigation measures must be considered. However, only significant cultural resources (termed "historical resources") need to be addressed. The CEQA Guidelines define a historical resource as a resource listed or eligible for listing on the California Register of Historical Resources (CRHR) (PRC Section 5024.1).

Cultural resources in California are protected by a number of federal, state, and local regulations, statutes, and ordinances. The determination of CRHR significance of a resource is guided by specific legal context outlined in Sections 15064.5 (b), 21083.2, and 21084.1 of the Public Resources Code (PRC), and the CEQA Guidelines (CCR Title 14, Section 15064.5). A cultural resource may be eligible for listing in the CRHR if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region or method of construction or Represents the work of an important creative individual or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, historical resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be able to convey the reasons for their significance. Such integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

The CEQA Guidelines also require consideration of unique archaeological resources (Section 15064.5). As defined in the PRC (Section 21083.2), the term "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In addition to the NRHP and CRHP, the City of Los Angeles has a Cultural Heritage Ordinance that allows historically significant structures and sites to be designated as individual local landmarks termed Historic-Cultural Monuments (HCMs). The City currently has over 1,000 HCMs, providing official recognition and protection for Los Angeles' most significant and cherished historic resources. HCM designation is reserved for resources that have a special aesthetic, architectural or engineering interest or value of a historic nature, granted that the building has retained its integrity through the retention of original design and materials.

Would the Project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

No Impact. As a result of previous evaluations, Berths 177 and 178 were found to be ineligible for listing in the NRHP and ineligible for designation as HCMs in 1996, and ineligible for listing in the CRHR in 2002 due to loss of integrity (San Buenaventura Research Associates 1996, Jones and Stokes 2002). The transit and wood wharf were re-evaluated for eligibility for inclusion in the NRHP and the CRHR and for designation as HCMs following the 2014 fire, at which point LAHD proposed to demolish the structures. A Historic Resource Evaluation was conducted in August 2015 to assess the significance of the transit shed and wood wharf as historical resources, and concluded that they do not possess sufficient integrity to be considered eligible for listing in the NRHP or the CRHR and are not eligible for designation as HCMs for the same reason (Applied Earthworks 2015).

Although originally constructed in 1924 and associated with the historic timber industry at the Port, the transit shed does not possess the integrity necessary to qualify for eligibility. The transit shed is utilitarian in design and materials and is a common example of a resource type found throughout the Port, and has also been extensively altered with many of the original design elements now gone or modified. There are no historic persons known to be associated with the

building. Additionally, the western façade and wood wharf were severely damaged and largely destroyed during the 2014 fire, and the eastern side of the building's floor is collapsing into the harbor as a result. Therefore, the transit shed does not possess integrity of design, materials, workmanship, feeling, and association (Applied Earthworks 2015).

The re-evaluation concluded that the damaged transit shed did not possess exceptional properties warranting inclusion in the NRHP or CRHR or designation as a LAHCM. The proposed Project would not cause a substantial adverse change to a historic property. There would be no impacts to historical resources and no mitigation is required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

No Impact. The proposed Project is located on Mormon Island, which was created in the early 20th Century and is predominantly comprised of man-made fill material. The Project site is flat and fully paved and possesses no unique geologic features. Further, no paleontological resources are known to exist in or around the Project site. Activities associated with the proposed Project will occur at the site of an existing vacant structure only. Very little area will be disturbed, all of which will be at or near the surface with no extensive digging or trenching associated with demolition. Because the proposed Project site is comprised of fill and has been extensively disturbed and because demolition activities would not include digging or trenching, there is extremely low potential for discovering archaeological or ethnographic cultural resources. For these reasons, proposed Project demolition activities are not anticipated to result in significant impacts to known archaeological or ethnographic cultural resources under CEQA.

Although impact to unknown resources is remote given the high degree of previous disturbance, the presence of man-made fill materials, and the nature of the demolition activities, archaeological or ethnographic cultural resources have been encountered throughout the Port in the past. The proposed Project would adhere to CEQA Guidelines (CCR Title 14, Section 15064.5), which states that construction activities would cease in the affected area in the event an archaeological discovery is made. For the reasons discussed above and with adherence to applicable regulatory requirements, the proposed Project would have no impact to archaeological resources. No mitigation measures are required.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact. As mentioned in 4.5 (b), the proposed Project is located on Mormon Island, which is mostly made of man-made fill material. The proposed Project site is flat, fully paved and developed. There would be an extremely low potential to destroy buried resources as construction activities would not involve grading, digging or trench work. There would be no removal of foundations, and surface disturbance activities associated with demolition would be limited to the proposed Project site. As such, the proposed Project would not encounter

paleontological resources, which are typically found in underlying bedrock and geologic formations. The proposed Project would have no impacts related to paleontological resources. No mitigation is required.

d) Disturb any human remains, including those interred outside of formal cemeteries?

No Impact. The proposed Project site is located on man-made fill area created in the 20th Century. Mormon Island has been subject to extensive previous construction activity and ground disturbance. Additionally, there are no human remains known to exist within the Port boundary. Demolition activities associated with the proposed Project will occur at or near the surface within the footprint of previous construction activity and does not have the potential to disturb any human remains. There would be no removal of building foundations, and there is no digging or trenching associated with the proposed Project. As such, the proposed Project would have no impacts related to the disturbance of human remains. No mitigation is required.

4.6 GEOLOGY AND SOILS

This section describes the regional and local geologic and soil characteristics of the proposed Project area.

Would the Project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less than Significant Impact. The proposed Project site is located within the Los Angeles Coastal Plain of the Peninsular Ranges geomorphic province of southern California, approximately 23 miles southwest of downtown Los Angeles at the north end of the Los Angeles Harbor. The proposed Project site is located within the seismically active Southern California region and has the potential to be subjected to ground shaking hazards associated with earthquake events on active faults. The Newport-Inglewood-Rose Canyon Fault Zone is located approximately six miles northeast of the proposed Project site. The proposed Project site is within one mile of the Palos Verdes Hills Fault Zone. The probability of a moderate or major earthquake along the Palos Verdes fault zone is low (USGS 2015). The Safety Element of the City of Los Angeles General Plan does not identify the proposed Project site as located within an Alquist-Priolo Earthquake Fault Zone but a portion of the Project site is in a Fault Rupture Study Area (City of Los Angeles 1996). The proposed Project involves demolition of an existing structure and will comply with all City building and safety guidelines, restrictions, and permit regulations as well as other applicable building safety requirements. Compliance with these existing requirements would result in less than significant impacts related to the risk of surface rupture due to faulting. No mitigation is required.

ii) Strong seismic ground shaking?

Less than Significant Impact. The proposed Project site is located within the seismically active Southern California region and could experience effects of ground shaking. The proposed Project site is not located within an Alquist-Priolo Earthquake Fault Zone but a portion of the Project site is located within a Fault Rupture Study Area (City of Los Angeles 1996). The Palos Verdes Fault, which is not identified by the Alquist-Priolo Earthquake Fault Zoning Map, lies one mile to the west of the site. Construction activities would not involve significant earth removal activities, digging or trench work. The proposed Project would also not involve permanent construction of any structures or infrastructure. All demolition activities would comply with Port and City of Los Angeles building and safety guidelines, restrictions, and permit regulations, which are designed to

address the risks associated with seismic ground shaking. Compliance with existing regulations would ensure a less than significant impact. No mitigation is required.

iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact. Liquefaction is the process in which saturated silty to cohesionless soils below the groundwater table temporarily lose strength during strong ground shaking as a consequence of increased pore pressure during conditions such as those caused by an earthquake. Earthquake waves cause water pressures to increase in the sediment and the sand grains to lose contact with each other, leading the sediment to lose strength and behave like a liquid.

Per the City of Los Angeles General Plan Safety Element, the proposed Project site is located in an area identified as being susceptible to liquefaction (City of Los Angeles 1996). The area is designated as a "Liquefiable Area" (recent alluvial deposits; ground water less than 30 feet deep). The proposed Project involves demolition of an existing building only and does not involve the construction of any structures, and upon Project completion the site would continue to comply with all City building and safety guidelines, restrictions, and permit regulations. Adherence to these requirements would result in less than significant impacts related to liquefaction. No mitigation is required.

iv) Landslides?

No Impact. Landslides occur when masses of rock, earth, or debris move down a slope. Landslides are caused by disturbances in the natural stability of a slope. They can accompany heavy rains or follow droughts, earthquakes, or volcanic eruptions. Construction activities, such as grading, can accelerate landslide activity.

The proposed Project site is flat with no significant natural or graded slopes. According to the City of Los Angeles Safety Element, the proposed Project site is not located within an area susceptible to landslides (City of Los Angeles 1996). The potential for seismically induced landslides in the proposed Project site is considered remote. As such, no impacts would occur and no mitigation is required.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant. Construction activities would be limited to demolition of the transit shed. The building will be demolished to top of grade without any removal of foundations, and the interior steel columns will be removed to the top of the asphalt concrete with a slurry seal patch to cover the holes. There would be no removal or demolition of any structures below the asphalt concrete, and no grading or fill will be required as the site is already paved. The proposed Project would not involve construction of any new structures or infrastructure. In addition, the entire surrounding area is already paved and would not be disrupted as a result of the project.

The proposed Project would not create new areas of impervious surface or generate new sources of runoff. The proposed Project would restore the property's previously-existing use of breakbulk storage and handling, and long-term operation of the proposed Project site would not result in substantial soil erosion or loss of topsoil because the site and its surrounding area are already developed with structures and pavement. The Project would not alter the existing drainage infrastructure and would not change the direction or volume of flow, and would obtain and comply with a General Construction Activity NPDES permit. Therefore, impacts to soil erosion would be less than significant. No mitigation is required.

c) Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less than Significant Impact. As discussed in the response to Question 4.6(a)(iv) above, the proposed Project site is not located within an area susceptible to landslides. As discussed in Question 4.6(a)(iii), the proposed Project site is located in an area identified as being susceptible to liquefaction. The proposed Project would not cause any soil to become unstable because the transit shed will only be demolished to top of the pavement without any removal of foundations. The proposed Project would make use of existing property and no new structures would be constructed. The property would continue to be subject to City building and safety guidelines, restrictions, and permit regulations. Adherence to these requirements would result in less than significant impacts related to unstable geologic units or soils. No mitigation is required.

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

Less than Significant Impact. Expansive soils are clay-based soils that tend to expand (increase in volume) as they absorb water and shrink (lessen in volume) as water is drawn away. Expansive soils can occur in any climate; however, arid and semi-arid regions are subject to more extreme cycles of expansion and contraction than more consistently moist areas. The hazard associated with expansive soils lies in the structural damage that may occur when buildings are placed on these soils. Expansive soils are often present in liquefaction zones due to the high level of groundwater typically associated with liquefiable soils.

As previously discussed in Question 4.6(a)(iii), the proposed Project site is located in an area identified as susceptible to liquefaction. However, the proposed Project involves the demolition of an existing structure only. There would be no construction of any new structures. Upon Project completion the property's long term use as a breakbulk storage and handling facility will be restored. The Project site would continue to be subject to Port and City of Los Angeles building and safety guidelines, restrictions, and permit regulations. Compliance with the existing regulations would minimize any risks relating to expansive soils. Therefore, impacts would be less than significant. No mitigation is required.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed Project site has been vacant since 2014. Upon Project completion there will be no need for septic tanks or alternative wastewater disposal systems as the transit shed will be demolished and not be replaced with any new structure. During demolition of the transit shed, portable toilets will be brought to the site for the construction crew and discharged wastewater disposed of into the sewer system. After Project completion, the need for wastewater disposal from the site will be eliminated and the use of septic tanks or other alternative wastewater disposal systems would not be necessary. Therefore, no impacts associated with use of wastewater disposal systems would occur. No mitigation is required.

4.7 GREENHOUSE GASES

This section includes a description of the potential effects of greenhouse gases (GHGs) and analyses of potential GHG emissions and impacts of the proposed Project. The methods of analysis for construction emissions are consistent with the guidelines of the SCAQMD and LAHD's standard protocols.

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. A portion of the solar radiation that enters the atmosphere is absorbed by the surface of the earth and a portion of this energy is reflected back toward space as infrared radiation. This infrared radiation released from the earth that otherwise would escape back into space is instead absorbed or "trapped" by GHGs, resulting in a warming of the atmosphere.

GHGs occur in the atmosphere naturally or are emitted by human sources or are formed by secondary reactions in the atmosphere. The most common GHGs emitted from natural processes and human activities include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Examples of GHGs created and emitted primarily through human activities include fluorinated gases (hydro fluorocarbons and per fluorocarbons) and sulfur hexafluoride. Each GHG is assigned a global warming potential (GWP), which is the ability of a gas or aerosol to trap heat in the atmosphere. The GWP rating system is standardized to CO_2, which has a value of one. For example, CH_4 has a GWP of 21, which means that it has a global warming effect 21 times greater than CO_2 on an equal-mass basis. Total GHG emissions from a source are often reported as a CO_2 equivalent (CO_2e). The CO_2e is calculated by multiplying the emissions of each GHG by its GWP and adding the results together to produce a single, combined emission rate representing all GHGs.

The SCAQMD has adopted an interim CEQA significance threshold of 10,000 metric tons per year of CO_2e for industrial projects where SCAQMD is the lead agency (SCAQMD 2008b). For the purpose of this IS/ND, this analysis used the SCAQMD GHG threshold identified above to evaluate proposed project GHG emissions under CEQA. If estimated GHG emissions remain below this threshold, they would be expected to produce less than significant impacts to GHG levels.

Would the Project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact. As discussed in Section 4.3, construction emissions are associated with the demolition of the transit shed at Berths 177-178. Demolition is anticipated to take 53 days and does not include removal of any foundations. Construction activities are limited solely to demolition, and upon Project completion the damaged building will be removed and the site's previously-existing use of breakbulk cargo handling and storage will be restored. As such, only construction-related emission calculations were conducted. The proposed Project would follow the *Sustainable Construction Guidelines* prepared by LAHD for reducing air emissions from all LAHD-sponsored construction projects (POLA 2009).

Construction GHG emissions were calculated with Project-specific equipment usage and emissions factors (please see Appendix A). Table 4.7-1 presents a summary of the GHG emissions estimated for the proposed Project. As shown in Table 4.7-1, GHG emissions from the proposed Project are below SCAQMD significance thresholds. Therefore, impacts from the proposed Project are less than significant and no mitigation is required.

Table 4.7-1
Total GHG Emissions from Construction of the Proposed Project

Construction Activity	CO_2 (Metric Tonnes/year)[a]	CO_2e[b] (Metric Tonnes/year)[a]
Total Construction-Related Emissions (Phase I and Phase II)	162.2	163.7
Amortized Emissions[c]	5.45	
Significance Threshold	10,000	
Exceed Significance Threshold	**NO**	

Notes:

a) One metric ton equals 1,000 kilograms, 2,205 lbs, or 1.1 U.S. (short) tons.
b) CO2e = the carbon dioxide equivalent emissions of all GHGs combined. The carbon dioxide equivalent emission rate for each GHG represents the emission rate multiplied by its global warming potential (GWP). The GWPs are 1 for CO_2; 21 for CH_4; and 310 for N_2O.
c) SCAQMD recommends amortizing construction emissions over a 30-year period to evaluate the contribution of construction to GHG emissions over the lifetime of the project.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact. Statewide GHG emissions must adhere to the requirements of Assembly Bill (AB) 32, first signed by Governor Arnold Schwarzenegger in 2006. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions.

In May 2007, the City of Los Angeles Mayor's Office released the Green LA Plan, which is an action plan to lead the nation in fighting global warming. The Green LA Plan presents a citywide framework for confronting global climate change to create a cleaner, greener, sustainable Los Angeles (City of Los Angeles 2007). The Green LA Plan directs the Port to develop an individual Climate Action Plan, consistent with the goals of Green LA, to examine opportunities to reduce GHG emissions from Port operations. In accordance with this directive, LAHD prepared a Harbor Department Climate Action Plan that details GHG emissions related to municipally controlled Port activities (such as Port buildings and Port workforce operations) and outlines current and proposed actions to reduce GHGs from these operations (POLA 2007). The

Port is a founding member of The Climate Registry (TCR). LAHD completed annual GHG emissions inventories for LAHD-controlled operations beginning in 2006, and they submitted annual GHG inventories for trucks, ships, and rail to TCR (formerly the California Climate Action Registry) beginning in 2008 for year 2006. LAHD is developing a Sustainability Plan in accordance with the Mayor's Office Directive that would incorporate Port environmental programs and reports, including the Port's Climate Action Plan.

As shown in Table 4.7-1, demolition of the transit shed would not result in significant GHG emissions. Thus, the proposed Project would not conflict with AB 32, the City of Los Angeles Green LA Plan, or the Port's Climate Action Plan. Impacts would be less than significant and no mitigation is required.

4.8 HAZARDS AND HAZARDOUS MATERIALS

This section discusses the potential for the proposed Project to expose people to hazards and hazardous materials. Hazardous substances are defined by state and federal regulations as substances that must be regulated to protect the public health and the environment. Hazardous materials have certain chemical, physical, or infectious properties that cause them to be hazardous. The California Code of Regulations (CCR) Title 22, Chapter 11, Article 2, Section 66261 provides the following definition:

> A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of or otherwise managed.

According to CCR Title 22 Chapter 11, Article 3, substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, contaminated, or stored prior to disposal.

Toxic substances may cause short-term or long-term health effects, ranging from temporary effects to permanent disability or death. Examples of toxic substances include most heavy metals, pesticides, benzene, petroleum, hexane, natural gas, sulfuric acid, lye, explosives, pressurized canisters, and radioactive and bio-hazardous materials. Soils may also be toxic because of accidental spilling of toxic substances.

Would the Project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact. Construction activities would be limited to the demolition of a 135,000 square foot transit shed. The building will be demolished to the top of the asphalt pavement without any removal of foundations, and no digging or trench work would occur as a result of the Project. Demolition activities would be temporary in nature and the proposed Project would not result in the routine transport, use or disposal of any hazardous materials. The short-term handling and transport of hazardous materials associated with the demolition itself are discussed in Question 4.8(b).

Upon Project completion the damaged transit shed will be removed and the property's long term use of breakbulk handling and storage will be restored to its original capacity that existed before the 2014 fire occurred. Breakbulk handling and storage at the Project site could involve the limited transport, storage, use and disposal of hazardous materials, such as lubricating fluids and

solvents to service the breakbulk storage, containers and other equipment associated with breakbulk handling activities. These types of standard materials are not acutely hazardous, and all storage, handling, and disposal of these materials are regulated by the California Department of Toxic Substances (DTSC), USEPA, the Occupational Safety & Health Administration (OSHA), and the Los Angeles City and County Fire Departments. Furthermore, the reinstatement of breakbulk cargo storage at the Project site represents the restoration of an existing use that was disrupted as a result of the 2014 fire, as opposed to the generation of a new operational use. The transport, use, and disposal of any hazardous materials used or identified at the Project site would occur in conformance with all applicable local, federal, state, and local regulations governing such activities. Impacts would be less than significant with adherence to required regulations and standards, and no mitigation is required.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact. The presence of potentially hazardous materials, including asbestos-containing materials and lead-based paints, was identified within the transit shed. Prior to commencement of demolition, proper abatement procedures as described below will be implemented to prevent release into the environment. Demolition activities themselves would not involve the use of hazardous materials. Any potential hazardous materials would be related to the temporary construction vehicles at the site. The most likely cause of spills or releases of hazardous materials during construction would involve petroleum products, such as diesel fuel, oils, and lubricants. All storage, handling, and disposal of these materials are regulated by DTSC, USEPA, OSHA, and the Los Angeles City and County Fire Departments. As such, impacts related to the release of hazardous materials into the environment during construction would be less than significant with adherence to required regulations and standards. No mitigation is required.

Asbestos-Containing Materials (ACM)

The transit shed was originally constructed in 1924. Buildings of this time period have the potential for asbestos containing material (ACM). LAHD Engineering staff contracted with ENV America Incorporated to prepare an Asbestos Survey Report of the Berths 177-178 transit shed. The building inspection was conducted on November 26 and December 1, 2014 (ENV America 2014). The objective of the survey was to identify friable and non-friable asbestos-containing building materials and to document the location, material type, asbestos content, friability and the estimated total quantity.

The laboratory analysis of the transit shed confirmed the presence of asbestos in the roofing material, transite walls, drywall and floor tiling. Based on this finding, LAHD will contract with a California-licensed asbestos abatement contractor to remove all ACM prior to demolition. Further, LAHD is required to comply with South Coast Air Quality Management District procedures regarding asbestos abatement and will notify the agency prior to building demolition.

LAHD and its contractors are experienced and trained in the safe and appropriate removal of ACM from construction/demolition sites. With abatement procedures in place and the survey report indicating where ACMs exist within the structure, impacts from ACMs are less than significant with no mitigation necessary.

Lead-Based Paint (LBP)

LAHD Engineering staff contracted with ENV America Incorporated to prepare a Lead Survey Report for the transit shed at Berths 177-178. The lead survey was conducted on November 26 and December 1, 2014 (ENV America 2014). The purpose of the survey was to identify lead-based paint (LBP) and to document the location, paint type (i.e., color), substrate, total lead content, condition and estimated total quantity for each LBP identified.

The survey was conducted in accordance with the County of Los Angeles lead-based paint standard which considers any paint containing greater than or equal to 0.7 mg/cm^2 of lead to be a lead-based paint. ENV America obtained approximately 188 samples from the structures and identified lead in quantities greater than 0.7 mg/cm^2 in 77 of the tests. In total, 45 lead-based paints/materials were identified in the 135,000 square foot building. All of the identified lead-based paints/materials were found to be in good condition, with the exception of the grey paint on the wood roof deck, metal structural members, and sprinkler pipes.

LAHD will comply with all regulations regarding the proper removal and disposal of LBP. Prior to demolition, all damaged LBP will be removed and stabilized to prevent environmental contamination. The extent of paint film stabilization or intacting required will be evaluated prior to demolition and included in the contractor's specifications. The contractor will also be informed of all locations of LBP, regardless of condition, prior to the commencement of demolition. LAHD and its contractors are accustomed and trained in the safe and appropriate removal of LBP from construction/demolition sites. With safety procedures in place and the survey report indicating where the LBP exists in the structure, impacts from LBP are less than significant with no mitigation necessary.

Other Chemicals of Concern (COCs)

Shortly after the fire, LAHD contracted with Leighton Consulting Incorporated to collect samples from the transit shed floor consisting of burned material/dust/ash from a portion of the building that had been damaged by the fire. Environmental assessment and monitoring activities were conducted between October 2, 2014 and January 22, 2015. Chemicals of Concerns (COCs) detected in samples of burned material from the transit shed primarily included lead, polycyclic aromatic hydrocarbons (PAHs), dioxins and furans. In all probability, these COCs were a result of residues from smoke generated by the burning dock materials and/or heat-related degradation of LBP (Leighton 2015).

Based upon the analytical results of the floor samples, Ancon Services was contracted by LAHD to provide personnel and equipment to remove loose, impacted materials and clean the transit shed floor to the extent practicable. Ancon used low pressure sprayers to mist the floor with

water to minimize dust generation in the work area prior to removal of the dust, dirt and debris from the floor area.

It is important to note that the walls, ceilings or structural frame work of the transit shed were not sampled. Based on the COCs detected, including PAHs, dioxins, furans, lead and asbestos, a Health and Safety Plan will be prepared prior to any abatement or demolition activities of the building. With safety procedures in place, impacts related to the release of hazardous materials are less than significant with no mitigation necessary.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The proposed Project location is not within one-quarter mile of an existing or proposed school. The George De La Torre Junior Elementary School at 500 Island Avenue in Wilmington is the closest school (approximately 1 mile north) to the proposed Project site. Due to distance from local schools and adherence to all regulatory requirements related to handling and use of hazardous materials, no impacts would occur. No mitigation is required.

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

No Impact. Government Code Section 65962.5 requires the Department of Toxic Substances Control (DTSC) to compile and update as appropriate, but at least annually, a list of all of the following:

(1) All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.

(2) All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code.

(3) All information received by DTSC pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposals on public land.

(4) All sites listed pursuant to Section 25356 of the Health and Safety Code.

(5) All sites included in the Abandoned Site Assessment Program.

The California Environmental Protection Agency (CalEPA) maintains these lists on their website at http://www.calepa.ca.gov/sitecleanup/corteselist/, which was accessed on January 11, 2016 (CalEPA 2016). The proposed Project site is not identified on any list pursuant to Government Code Section 65962.5. Therefore, no impacts would occur and no mitigation is required.

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

No Impact. The proposed Project site is not located within 2 miles of a public airport or private airstrip, nor is it located within an airport land use plan. The nearest airport facilities are helicopter-landing pads at Berth 95 (approximately 1.2 miles southwest of the proposed Project site and across the East Basin Channel) and at 1175 Queens Highway, in Long Beach (over 4 miles to the east of the proposed Project site). Given the distance of the heliports and the fact that no structures would be constructed, persons at or near the proposed Project site would not be exposed to safety hazards associated with aircraft. Therefore, no impacts related to safety hazards within two miles of a public airport or private airstrip would occur. No mitigation is required.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. Please see the response provided in Question 4.8(e).

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The proposed Project is being implemented to demolish and remove a transit shed that has become unsafe and unusable due to fire damage. All demolition activities would conform to the City of Los Angeles Municipal Code and LAHD contractor specifications. Upon Project completion the property's long term use of breakbulk handling and storage will be restored. There would be no impacts to any adopted emergency response plan or emergency evacuation plan. No mitigation is required.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. Per the Safety Element of the City of Los Angeles General Plan, the proposed Project site and its surrounding vicinity are not located in an area designated as Very High Fire Hazard Severity Zone (City of Los Angeles 1996). Upon Project completion, the damaged transit shed will be removed and the property's long term use of breakbulk cargo storage will be restored. The Project site is fully paved and is a part of the PST cargo terminal that comprises Berths 174-181. The potential for wildland fires is extremely limited due to the lack of flammable vegetation. There is no aspect of Project demolition that would create the potential for wildland fires to occur within the vicinity. Therefore, no impacts related to wildland fires would occur and no mitigation is required.

4.9 HYDROLOGY AND WATER QUALITY

This section describes the existing conditions relating to hydrology and water quality and the potential impacts associated with the proposed Project. In addition, this analysis includes a discussion on the potential sea-level rise (SLR) impacts that may result with implementation of the proposed Project.

Would the Project:

a) Violate any water quality standards or waste discharge requirements?

No Impact. The proposed Project consists of the demolition of the damaged transit shed at Berths 177-178. The entire Project site and the surrounding area are fully paved and developed, and the building will be demolished to the top of the asphalt concrete with no removal of foundations. Thus, the proposed Project would not create any new areas of impervious surface. All stormwater runoff generated during demolition will be controlled by Best Management Practices as outlined in the Project's SWPPP. The proposed Project would not affect water quality or result in additional wastewater discharge. Therefore, implementation of the proposed Project would not violate any water quality standards or waste discharge requirements. The proposed Project would restore the long term use of the property for breakbulk storage to its previously existing footprint, and would continue to comply with the City of Los Angeles Municipal Code and all other applicable federal, state, and local regulations. No impacts would occur and no mitigation is required.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

No Impact. Groundwater in the Project area is impacted by saltwater intrusion (salinity), and is, therefore, unsuitable for use as drinking water. No groundwater extraction will take place as part of the Project. In addition, the proposed Project site is covered entirely with impermeable surfaces and does not support surface recharge of groundwater. The proposed Project site would remain paved upon Project completion. The proposed Project would have no effect on existing groundwater supplies and would not interfere with groundwater recharge. No impacts would occur and no mitigation is required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

No Impact. The proposed Project site is fully paved and is not within the course of a stream or a river. As such, implementation of the proposed Project would not alter the course of a stream or

river. Construction would not result in substantial erosion or siltation as there would be no removal of foundations and no areas of soil would be exposed. Upon Project completion the site will remain paved and would continue to direct runoff to the existing storm drain system. No impacts would occur and no mitigation is required.

d) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

No Impact. The Project site is fully paved and is not within the course of a stream or a river. The proposed Project would demolish the damaged transit shed to the top of the asphalt concrete and restore the property's long term use of breakbulk cargo storage. The proposed Project would not result in the addition of any impervious surfaces or create new sources of runoff. The drainage pattern of the site would not be adversely impacted by the implementation of the proposed Project, and runoff would continue to be directed to the existing storm drain system. No impacts to flooding would occur and no mitigation is required.

e) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

No Impact. The Project site is already paved and developed with existing stormwater infrastructure. The proposed Project would restore the previously-existing use of the property for breakbulk handling and storage activities by removing the damaged transit shed. No new areas of impervious surface would be created and drainage to the existing storm drain system would continue in a similar manner to existing conditions. Therefore, the proposed Project would not create or contribute new runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff. The proposed Project would comply with the City of Los Angeles Municipal Code and all other applicable, federal, state, and local regulations. No impacts would occur and no mitigation is required.

f) Otherwise substantially degrade water quality?

No Impact. As discussed in Question 4.9(a), the implementation of the proposed Project would not violate any water quality standards or waste discharge requirements. The Project site is already developed and paved, and the proposed Project would restore the long term use of the property for breakbulk handling and storage to its previously existing footprint. The proposed Project would comply with the City of Los Angeles Municipal Code and all other applicable federal, state, and local regulations prior to project approval. No impacts would occur and no mitigation is required.

g) Place housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. A 100-year flood is one that has a one percent chance of occurring in any given year. The proposed Project site (Panel 06037C1945F) is mapped by the Federal Emergency Management Agency (FEMA) as Flood Zone X, defined as moderate flood hazard areas between the limits of the 1-percent-annual-chance flood and the 0.2-percent-annual-chance (or 500-year) flood (FEMA 2015). As such, flooding in the proposed Project sites may occur due to its proximity to the waterfront. However, the proposed Project is the demolition of a transit shed and does not involve any housing or other structures. Because the proposed Project does not involve placing housing within a 100-year flood hazard area, no impacts would occur. No mitigation is required.

h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?

No Impact: Please see response provided in 4.9 (g). The proposed Project does not involve construction or placement of any structures, and is not located within a 100-year flood hazard area. Therefore, no impacts related to structures in a 100-year flood hazard area would occur. No mitigation is required.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. The proposed Project site is not within a potential dam or levee inundation area as identified in the Los Angeles General Plan Safety Element (City of Los Angeles 1996). The proposed Project consists solely of the demolition of a transit shed and would not expose people or structures to significant risk of loss, injury or death from flooding, including flooding from failure of a levee or dam. No impacts would occur and no mitigation is required.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. Seiches are oscillations generated in enclosed bodies of water usually as a result of earthquake related ground shaking. A seiche wave has the potential to overflow the sides of a containing basin to inundate adjacent or downstream areas. However, the Pacific Ocean and San Pedro Bay are not of the nature that would result in a seiche. The Port is open to the ocean and not entirely closed, allowing entry and dispersal of seismically induced waves, therefore reducing the potential for inundation resulting from a seiche.

Tsunamis are large ocean waves caused by the sudden water displacement that results from an underwater earthquake, landslide, or volcanic eruption, and affect low-lying areas along the coastline. According to the Safety Element of the City of Los Angeles General Plan, the proposed Project site is located within an area potentially susceptible to inundation impacts from

a tsunami. However, in the period since publication of the Safety Element, detailed studies of tsunami hazard were conducted for the Port (Moffatt & Nichol 2007). Conclusions of the studies indicate that under various tsunami scenarios, the proposed Project site would not experience significant impacts from inundations or flooding. Furthermore, the City of Los Angeles Tsunami Response Plan does not identify the proposed Project area as part of the Tsunami Inundation Zone for San Pedro and the Harbor Area (City of Los Angeles 2008).

The topography of the proposed Project site and its surrounding area, which is essentially flat, lacks sufficient relief to support a mudflow; the occurrence of mudflows at the proposed Project site is unlikely due to the lack of slope on or surrounding the proposed Project site. As such, there would be no impacts related to inundation by seiche, tsunami, or mudflow. No mitigation is required.

k) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the sea level rise (SLR)?

No Impact. Due to its geographic location, the infrastructure and operations of the Port would be vulnerable to SLR by nature. Wharves and piers may be damaged in strong storms, waves or surges resulting from SLR.

As part of the climate change research, there have been many recent developments in the science underlying the projection of SLR. Higher temperatures are expected to further raise sea level by expanding ocean water, melting mountain glaciers and small ice caps, and causing portions of Greenland and the Antarctic ice sheets to melt. The International Panel on Climate Change (IPCC) estimates that the global average sea level would rise between 0.6 and 2 feet (0.18 to 0.59 meters) in the next century (IPCC 2007). Due to increases in ocean warming and loss of mass from glaciers and ice sheets, it is very likely that the rate of global mean sea level rise during the 21st century would exceed the rate observed during 1971-2010 (IPCC 2013).

Coastal zones are particularly vulnerable to climate variability and change. Rising sea levels inundate wetlands and other low-lying lands, erode beaches, intensify flooding, and increase the salinity of rivers, bays, and groundwater tables. Some of these effects may be further compounded by other effects of a changing climate. Additionally, measures that people take to protect private property from rising sea level may have adverse effects on the environment and on public uses of beaches and waterways. Some property owners and state and local governments are already starting to take measures to prepare for the consequences of rising sea level.

On November 14, 2008, the Governor's Executive Order S-13-08 was issued to provide guidance for incorporating SLR projections into planning and decision making for projects in California (Office of Governor 2008). The executive order requested the National Research Council to issue a report on SLR to advise California on planning efforts. In October 2010, the Sea Level Rise Task Force of the Co-CAT prepared the *State of California Sea Level Rise Interim Guidance Document.* An updated *State of California Sea-Level Rise Guidance Document* was prepared in

March 2013. The intent of these guidance documents is to inform and assist state agencies as they develop approaches for incorporating SLR into planning decisions (Co-CAT 2010, 2013).

The proposed Project would not construct any new structures, including habitable structures. Furthermore, LAHD and the Rand Corporation analyzed various strategies for managing risk associated with sea level rise at the Port and identified SLR considerations for incorporation into design guidelines. The analysis examined four Port facilities of varying height above sea level. A cost-benefit analysis was completed with respect to whether or not to harden Port facilities to withstand rising sea level at the next scheduled facilities upgrade. Overall, the analysis concluded that a decision to harden at the next upgrade would merit serious consideration only for one of the four Port facilities considered: Alameda and Harry Bridges Crossing (POLA 2012).

The proposed Project seeks to demolish a damaged building and would not construct any new structures, including habitable structures. Upon Project completion the property's use of breakbulk cargo storage will be restored to its previously-existing footprint before the fire occurred. There would be no impacts to people or structures associated with risks from SLR. No mitigation is required.

4.10 LAND USE AND PLANNING

This section contains a description and analysis of the land use and planning considerations that would result from the proposed Project implementation.

Would the Project:

a) Physically divide an established community?

No Impact. The proposed Project consists of the demolition of a damaged transit shed, and is located in a heavily industrial area that does not contain any established communities. The Wilmington community is located one mile north of the Project site; however, demolition activities would be limited to the immediate Project site. Additionally, no separation of land uses or disruption of access between land use types would occur as a result of the proposed Project. Therefore, implementation of the proposed Project would not divide an established community. No impacts would occur and no mitigation is required.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The proposed Project would not conflict with a specific plan, general plan, or zoning ordinance. The proposed Project site, which is a part of the 40-acre breakbulk cargo terminal that comprises Berths 174-181, is zoned for manufacturing and industrial uses ([Q]M3-1) by the City of LA Zoning Ordinance (City of Los Angeles 2015a). The Port Master Plan designates Berths 174-181 as a breakbulk cargo land use type (POLA 2014). The demolition of the transit shed would be consistent with existing zoning and land use designations, as the Project site's long term use for breakbulk cargo storage will be restored upon Project completion. The proposed Project would not alter the land use of the proposed Project site or surrounding area, and would not conflict with any applicable land use plan, policy or regulation. Therefore, no impacts would occur and no mitigation is required.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. As discussed in response to question 4.4(f), the site is not part of any HCP or NCCP. Therefore, no impacts would occur and no mitigation is required.

4.11 MINERAL RESOURCES

The purpose of this section is to identify and evaluate key mineral resources in the proposed Project area and to determine the degree of impacts that would be attributable to the proposed Project.

Would the Project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The proposed Project site is located in proximity to a formerly active oil drilling area and is subject to developmental regulations relating to guidelines to mitigate oil drilling area hazards (City of Los Angeles Municipal Code 2015). The Project site is on the southern edge of the Wilmington Oil Field, the third largest oil field in the United States based on cumulative production. The Wilmington Oil Field extends from Torrance to the Harbor District of the City of Long Beach, a distance of approximately 13 miles (Otott and Clarke 1996). Although located within the Wilmington Oil field, the proposed Project would not result in a loss of availability to this resource. The surrounding area is zoned industrial, allowing for oil extraction, and the proposed Project would not impair or interfere with opportunities for drilling productive oil wells from other nearby industrial properties. Demolition activities would be confined to the immediate Project site, and would not create any obstacles to oil extraction operations associated with the Wilmington Oil Field.

The proposed Project is located on Mormon Island, which is made primarily of man-made fill material. No known valuable mineral resources would be impacted by the proposed Project. According to the California Department of Conservation Division of Mines and Geology mineral resource maps, the nearest non-petroleum mineral resources area is located in the San Gabriel Valley (California Department of Conservation 2015b). Thus, the proposed Project site is not located within an area containing known mineral resources. No impacts would occur and no mitigation is required.

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

No Impact. As discussed in Question 4.11(a), the proposed Project site is not located within a mineral resource recovery site delineated in the Port of Los Angeles Master Plan or City of Los Angeles General Plan. As such, no loss of availability to mineral resources would occur. No mitigation is required.

4.12 NOISE

The purpose of this chapter is to identify sensitive noise receptors in the proposed Project area and to determine the degree of noise impacts that would be attributable to the proposed Project.

Existing Noise Environment

The proposed Project site is within the Port of Los Angeles Community Plan area in the City of Los Angeles, which is adjacent to the communities of San Pedro and Wilmington, and approximately 23 miles south of downtown Los Angeles. Existing noise levels within the Port complex are from a wide array of sources that include ship engines, operations of bulk loading facilities, container terminal uses, truck traffic, train operations, and vehicle traffic on the local street network and freeways. The proposed Project site is zoned for manufacturing and heavy industrial uses ([Q] M3-1) by the City of Los Angeles Zoning Ordinance. The City of Los Angeles' Municipal Code permissible ambient noise levels within areas zoned [Q] M3-1 are 65 A-weighted decibels (dBA) during daytime and nighttime due to light and heavy industrial uses (City of Los Angeles Municipal Code 2015).

The main source of existing noise in the proposed Project area is existing operations related to Pasha's breakbulk terminal at Berths 174-181. Although there is no noise currently associated with the immediate Project site at Berths 177-178 since it has been vacant since the 2014 fire, the rest of the Berths 174-181 terminal has remained operational. Other sources of noise surrounding the proposed Project area include terminal operations and vehicular traffic. Train movements of the Port Harbor Line also present substantial noise levels within the proposed Project site. During train passes, the railroad becomes the dominant source of noise. Other noise sources contributing to the ambient noise environment include occasional distant aircraft overflights, movement of ships in the East Basin Channel, and general industrial noise from other terminal operations in the vicinity.

Noise-Sensitive Uses

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Noise- and vibration-sensitive land uses are categorized as residences, schools, libraries, churches, hospitals, nursing homes, and certain types of passive recreational uses. The nearest sensitive receptors are liveaboard boat tenants identified approximately 0.7 mile from the site across the East Basin in the Cerritos Channel Marina.

Would the Project Result In:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact. The overall surrounding area is primarily industrial. The proposed Project site and the surrounding properties are zoned for heavy industrial uses ([Q] M3-1). The nearest sensitive receptors are liveaboard boat tenants at the Cerritos Channel Marina which is approximately 3,500 feet from the Project site, separated by the East Basin Channel. To

the west of the site are S. Fries Avenue and San Clemente Avenue, which experience heavy truck traffic, as well as existing railroad tracks. Both streets have a large percentage of heavy duty diesel trucks from the surrounding liquid bulk, dry bulk, and container terminals. Typical traffic noise at 50-feet is between 70-80 dBA and heavy duty diesel truck at 50-feet 88 dBA (FTA 2006).

Construction is anticipated to begin in May 2016 and take approximately 53 days. Construction activities solely involve the demolition of an existing structure with no subsequent construction of any structures. Table 4.12-1 highlights the typical decibel rating for the pieces of construction equipment being used for the proposed Project. It should be noted that these decibel ratings are associated with a sensitive receptor approximately 50 feet from the activity. The nearest receptor to the proposed Project site is across the East Basin Channel at over 3,500 feet away.

Table 4.12-1
Typical Noise Levels for Construction Equipment

Construction Equipment Type	Typical Noise Level (dBA) 50 feet from Source
Tractors/Loaders	85
Excavators	N/A
Trucks	88

(FTA 2006)

The construction equipment will generate noise in the range of that from existing traffic. As stated above, the nearest sensitive receptors are the liveaboard boat tenants identified approximately 3,500 feet northeast of the proposed Project across the East Basin Channel. Construction noise for the proposed Project would fall within the typical range for daytime existing ambient noise in an industrial setting. Given the background noise and distance to the closest receptor, it is unlikely that short-term project-related noise would be perceptible. Construction activities would be limited to between 8:00 a.m. and 5:00 p.m. on weekdays, and no construction would occur on weekends or evenings. Further, City of Los Angeles Noise Ordinance Section 41.40 (b) allows for construction work to be performed in any district zoned for manufacturing or industrial uses. The site is zoned for heavy industrial uses by the City of Los Angeles. Upon Project completion the site's long term use of breakbulk handling and storage will be restored. Conditions at the Project site would be essentially similar to those that existed before the 2014 fire occurred. There are no new operations that will occur beyond what were previously normal noise levels for the site. The proposed Project would not expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Noise impacts would be less than significant and no mitigation is required.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

No Impact. Construction would take approximately 53 days and would involve only the demolition of the damaged transit shed. Demolition would result in varying degrees of temporary ground vibration, depending on the specific equipment used. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effects of ground vibration may be imperceptible at the lowest levels, with low rumbling sounds; detectable at moderate levels; and damaging to nearby structures at the highest levels. The construction activities that typically generate the highest levels of vibration are blasting and impact pile driving, which are not required for the proposed Project. The transit shed would be demolished to the top of the asphalt pavement without any removal of foundations or other subsurface activity. Liveaboard boat tenants, identified as located approximately 3,500 feet northwest of the proposed Project, would not be impacted as they are across the East Basin Channel.

Upon Project completion the damaged transit shed will be removed and the site's long term use of breakbulk cargo handling and storage will be restored. Vibration could be generated by trucks and other cargo handling equipment within the Project site. However, according to the Federal Transit Administration, Transit Noise and Vibration Impact Assessment, significant vibration impact from rubber tire vehicles is extremely rare. Vehicle suspension design and rubber tires act as a highly effective barrier to vibration transmission from the vibration-generating carriage and the ground (FTA 2006). Therefore, no vibration impacts would occur from the proposed Project and no mitigation is required.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact. The transit shed is a part of the 40-acre PST omni-terminal comprising Berths 174-181. There are employees, personal vehicles, cargo handling equipment, rail and trucks trips associated with the current operation of the terminal. The proposed Project would not add any sources of noise to the site that are inconsistent with the activities already occurring. Upon Project completion the damaged transit shed will be removed and the site's long term use of breakbulk handling and storage will thereby be restored. Conditions at the Project site would be essentially similar to those that existed before the 2014 fire occurred. Any noise associated with the Project would be consistent with what is already occurring (i.e., breakbulk cargo handling and storage) and would not result in a substantial increase from any operational source. Because of the extensive existing industrial noise environment surrounding the Project site, the proposed Project would not result in a substantial permanent increase in ambient noise levels in the project vicinity. Impacts would be less than significant and no mitigation is required.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact. As stated in 4.12(a) above, construction noise for the proposed Project would fall within the typical range for daytime existing ambient noise. The nearest sensitive receptors are 3,500 feet away and are not expected to experience any noise impacts due to construction activities. Further, construction activities would be limited to between 8:00 a.m. and 5:00 p.m. on weekdays, and no construction would occur on weekends. The proposed Project would not expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Construction noise impacts would be less than significant and no mitigation is required.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or pubic use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The proposed Project site is not located within 2 miles of a public airport or private airstrip, nor is it located within an airport land use plan. The nearest public airport to the Project site is the Long Beach Airport, located approximately 7 miles to the northeast. The nearest airport facilities are private helicopter-landing pads at Berth 95 (approximately 1.2 miles southwest of the proposed Project site and across the East Basin Channel) and at 1175 Queens Highway, in Long Beach (over 4 miles to the east of the proposed Project site). Small helicopters operate from these locations and transit primarily via the Main Channel of the Port. Given the distance of the heliports and the existing noise environment, the proposed Project would not expose workers to excessive noise levels associated with airport activities. Therefore, the proposed Project would not result in an impact related to exposure to noise generated at public airports. No impacts would occur and no mitigation is required.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. Please see response provided in Question 4.12(e).

4.13 POPULATION AND HOUSING

This section describes potential impacts to population and housing associated with the proposed Project.

Would the Project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The proposed Project consists of demolishing a damaged transit shed in an industrial-zoned region within the Port. Following completion of demolition the site will be used for the storage of cargo, which is a restoration of the property's previous use before the building became damaged. The proposed Project does not include any residential land uses and would not construct any new structures or infrastructure. Thus, the Project has no potential to increase the population of the region necessitating the construction of additional housing, businesses, or infrastructure. No impacts on population growth would occur and no mitigation is required.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed Project site is zoned for manufacturing and industrial uses and is located completely within LAHD property. Demolition of the transit shed would not displace any existing housing as there is no housing within the Project area. No impacts to housing displacement would occur and no mitigation is required.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. As discussed in the responses to Questions 4.13 (a) and (b) above, the proposed Project would not displace housing, necessitating the construction of replacement housing elsewhere. No people would be displaced as a result of the proposed Project, which consists of demolishing a damaged transit shed. No impacts would occur and no mitigation is required.

4.14 PUBLIC SERVICES

This section evaluates public services impacts associated with the implementation of the proposed Project in terms of fire protection, police protection, schools, parks, and other public services.

Would the Project:

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

i) Fire Protection?

Less than Significant Impact. The City of Los Angeles Fire Department (LAFD) provides fire protection and emergency services for the proposed Project site. Fire protection capabilities are based on the distance from the emergency to the nearest fire station and the number of simultaneous emergency or fire-related calls. LAFD facilities in the vicinity of the proposed Project site include land-based fire stations and fireboat companies. In the Harbor area, Battalion 6 is responsible for all of Wilmington and its waterfronts, Terminal Island and all of the surrounding water, San Pedro, Harbor City, and Harbor Gateway. The closest fire station to the proposed Project site is Station 49, which is also the Battalion 6 headquarters. Station 49 is located at 400 Yacht Street, Berth 194 in Wilmington, and is approximately 0.5 mile to the northeast of the Project site.

The proposed Project would remove the damaged transit shed so that the property's previous use of breakbulk cargo storage can be restored. Upon Project completion PST would no longer need to use alternative sites for storage of its breakbulk cargo, and operations at Berths 174-181 would be restored to the conditions that existed prior to the September 2014 fire. The Project site and the terminal as a whole would continue to conform to the provisions of the Los Angeles Fire Code and of other relevant laws. Therefore, it would not increase the net demand for fire services and would neither require the expansion of existing facilities nor the construction of new fire facilities. Impacts to fire protection would be less than significant, and no mitigation is required.

ii) Police protection?

Less than Significant Impact. The Los Angeles Police Department (LAPD) provides police protection to the entire City of Los Angeles. The proposed Project site is located within the LAPD Harbor Division Area, which includes a 27.5-square-mile area including Harbor City, Harbor Gateway, San Pedro, Wilmington, and Terminal Island. The LAPD Harbor Community Police Station is located at 22175 John S. Gibson Boulevard, approximately 1.5 miles west of the proposed Project site (Berths 174-181). The Los Angeles Port Police (Port Police) is the primary

law enforcement agency within the Port. The Port Police are authorized a total of 128 sworn officers. The Port Police are responsible for patrol and surveillance of Port property. The Port Police headquarters are located at 330 S. Centre Street (between 3rd and 5th Streets), which is approximately 1.5 miles southwest of the proposed Project site.

The proposed Project would have minimal impacts on law enforcement. Trip generation during demolition related to equipment and material deliveries or hauling activities by truck would not be substantial, and the proposed Project would not result in roadway closures that could cause temporary interruption and/or delays for law enforcement. No more than 11 workers at a time would be associated with construction activities related to the proposed Project. Additionally, the proposed Project would not result in substantial changes to current LAPD or Port Police service levels because the storage of breakbulk cargo is being directly transferred from temporary alternative sites within the Port back to the original site at Berths 177-178. Therefore, implementation of the proposed Project would not increase the overall net demand for law enforcement such that new facilities would be required. Impacts to police protection would be less than significant. No mitigation is required.

iii) Schools?

No Impact. The proposed Project solely consists of the demolition of a damaged building. No new students would be generated and no increase in demand on local schools would result from implementation of the proposed Project. No impacts to schools would occur and no mitigation is required.

iv) Parks?

No Impact. The proposed Project does not include development of any residential uses and would not generate any new permanent residents that would increase the demand on local parks. Therefore, no impacts related to parks would occur and no mitigation is required.

v) Other public facilities?

No Impact. The proposed Project does not include development of residential uses and would not generate any new permanent residents that would increase the demand on other public facilities. Therefore, no impacts would occur and no mitigation is required.

4.15 RECREATION

This section evaluates recreation impacts associated with the implementation of the proposed Project.

Would the Project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed Project does not include development of any residential uses and would not generate new permanent residents. Thus, the proposed Project would not result in an increased demand on existing parks and recreational facilities such that substantial physical deterioration would occur or be accelerated. Therefore, no impact would occur. No mitigation is required.

b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

No Impact. The proposed Project does not include any recreational facilities. The proposed Project does not include development of any residential uses and, thus, would not generate new permanent residents that would increase the demand on local recreational facilities. Further, the proposed Project would not promote or indirectly induce new development that would require the construction or expansion of recreational facilities. Therefore, no impact would occur and no mitigation is required.

4.16 TRANSPORTATION AND TRAFFIC

The purpose of this section is to identify and evaluate transportation and traffic in the proposed Project area and to determine the degree of impacts that would be attributable to the proposed Project.

Would the Project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less than Significant Impact. Demolition is anticipated to begin in May 2016 and will take approximately 53 days to complete. As summarized in Table 2-1, construction activities involve the demolition of a 135,000 square foot building. No more than 11 workers at a time would be associated with construction activities related to the proposed Project and there would be no additional construction once demolition is complete. Upon Project completion the property will again be used for the handling and storage of breakbulk cargo, thereby restoring the Project site's previously-existing use and allowing PST to restore its operational capacity at Berths 174-181. Conditions at the Project site would be very similar to those that existed before the 2014 fire occurred and would not create a substantial new net impact on transportation or traffic.

Trip generation during construction would be related to construction workers commuting to the site and truck trips associated with bringing in equipment and removing debris. Truck trips are not significant and are short-term in nature, with an estimated total of 115 trips at 20 tons per load over the course of the entire demolition process. The proposed Project will not result in roadway closures. There would be no temporary loss of pedestrian access, bus stops, rerouting of transit service, or loss of on-street parking, because none of these elements are currently present at the Project site. Operation of nearby arterial routes would be preserved during demolition.

According to the City of Los Angeles Department of Transportation (LADOT) Traffic Study Guidelines (LADOT 2013), a Technical Memorandum is required when the project is likely to add 25 to 42 AM or PM peak hour trips, and the adjacent intersection(s) are presently estimated to be operating at Level of Service (LOS) E or F. A traffic study is required when the project is likely to add 500 or more daily trips, or likely to add 43 or more AM or PM peak hour trips. There are approximately 115 total haul trips spread out over the 53 days associated with the Project for debris removal from the Project site. When combined with a maximum of 11 workers per day, project-related vehicle trips are estimated to be less than 15 trips per day. Per the screening criteria contained in the LADOT Traffic Study Guidelines, proposed Project traffic is well below the threshold for requiring a more detailed traffic analysis. With less than 15 vehicle trips generated, the proposed Project would not result in traffic impacts and would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the

performance of the circulation system. Impacts would be less than significant and no mitigation is required.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less than Significant Impact. Pursuant to the Los Angeles County Congestion Management Program (CMP) administered by the Los Angeles County Metropolitan Transportation Authority, a traffic impact analysis is required at the following:

- CMP arterial monitoring intersections, including freeway on- or off-ramps, where the proposed Project would add 50 or more trips during either the AM (7:30 – 8:30) or PM (4:30 - 5:30) weekday peak hours.
- CMP freeway monitoring locations where the proposed Project would add 150 or more trips during either the AM or PM weekday peak hours.

Construction activities would involve no more than 11 workers a day (8:00 a.m. – 5:00 p.m.) for a period of 53 working days. However this is a worst case scenario and not all workers would be needed daily throughout this period. There are approximately 115 total haul trips spread out over the 53 days associated with the Project for debris removal from the Project site. When combined with a maximum of 11 workers per day, project-related vehicle trips are estimated to be less than 15 trips per day. Because these trips are spread out over 53 days and would not exceed 50 trips per day, the proposed Project would not require a traffic impact analysis under the CMP. Therefore, CMP arterial intersection impacts are considered to be less than significant and no mitigation is required.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The proposed Project consists only of the demolition of a transit shed and would not result in a permanent aerial structure. Upon Project completion the property will be used to handle and store breakbulk cargo. No changes to air traffic patterns would occur. Therefore no impacts would occur and no mitigation measures are required.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The proposed Project consists only of the demolition of the transit shed and does not include any alterations to or interference with existing access points or routes to the site. Therefore, the proposed Project would not substantially increase hazards due to a design feature. As such, no impacts would occur and no mitigation is required.

e) Result in inadequate emergency access?

No Impact. The County of Los Angeles has designated disaster routes throughout the County. Disaster routes are freeway, highway, or arterial routes pre-identified for use during times of crisis. These routes are used to bring in emergency personnel, equipment, and supplies to impacted areas in order to save lives, protect property, and minimize impact to the environment (County of Los Angeles 2015b). During a disaster, these routes have priority for clearing, repairing, and restoration over all other roads. The nearest disaster routes to the proposed Project site include Harbor Freeway (I-110), Terminal Island Freeway (SR-103), Seaside Avenue/Ocean Boulevard (CA-47), Harry Bridges Boulevard, Henry Ford Avenue, and Ocean Boulevard.

The proposed Project would not alter any access points or routes and would not result in any closures of roadways during demolition. Upon Project completion there would be no significant impacts to County-designated disaster routes, as the proposed Project would restore the site's long term use of breakbulk cargo storage which has temporarily been relocated to Pasha's nearby alternate sites within the Port. Thus the proposed Project would not increase the net demand/capacity ratio for roads and would not increase traffic congestion at intersections within the surrounding area of the Project site. Therefore, the proposed Project would not result in inadequate emergency access. No impacts would occur and no mitigation is required.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The proposed Project involves the demolition of a damaged transit shed, and implementation of the Project would allow for the restoration of the property's long term use of breakbulk cargo storage. Upon Project completion the operation of Berths 174-181 as a breakbulk cargo terminal will be restored to its pre-fire levels. Construction activities related to demolition would be minimal and constrained to the immediate Project site. There would be no temporary loss of pedestrian or bicycle access, rerouting of transit service, or loss of on-street parking because the proposed Project site is located inside an industrial cargo terminal and does not contain any of these elements. Further, the proposed Project would not alter the land use of the Project site or surrounding area, and would not conflict with any applicable land use plans. As such, the proposed Project would not conflict with policies, plans, or programs supporting alternative transportation (e.g., bicycles, buses, carpools, vanpools, ridesharing, walking, etc.). No impacts would occur and no mitigation is required.

4.17 UTILITIES AND SERVICE SYSTEMS

This section evaluates impacts related to utilities and service systems associated with the implementation of the proposed Project in terms of water service, wastewater, solid waste and stormwater.

Would the Project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less than Significant Impact. The proposed Project site is serviced by the City of Los Angeles Bureau of Sanitation's Terminal Island Water Reclamation Plant (TIWRP). The proposed Project consists of the demolition of a building and upon Project completion the site will again be used for the storage of breakbulk cargo, with the same footprint and land use as that of the transit shed before the 2014 fire occurred. This anticipated use would be very similar to that of the previously existing conditions at the Project site and is not anticipated to generate significant additional volumes of wastewater or otherwise exceed the wastewater treatment requirements of the Los Angeles Regional Water Quality Control Board. The proposed Project would not provide new housing or a large number of employment opportunities, and no population increase would result from the implementation of the proposed Project. Therefore, the proposed Project would not substantially increase the wastewater volume discharged to the sewer and subsequently would not alter the current discharge from TIWRP and would not exceed wastewater treatment requirements of the Los Angeles Regional Water Quality Control Board. Impacts would be less than significant and no mitigation is required.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. Please see the response to 4.17 (a) above.

c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. The proposed Project site is entirely developed and paved. Surface runoff water and drainage are directed generally toward existing municipal storm drains. The proposed Project will demolish a damaged transit shed so that the site's long term use of breakbulk cargo handling and storage can be restored. The building is currently on a concrete foundation that is impervious in nature, and the proposed Project would demolish the building to top of grade with no removal of foundations. The proposed Project would not increase the amount of impervious area or generate increased volumes of runoff or stormwater, and therefore would not require the construction of new stormwater drainage facilities or expansion of existing facilities. Thus, there would be no impact to stormwater drainage facilities and no mitigation is required.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less than Significant Impact. There is minimal water usage associated with the proposed Project's construction activities. Usage is associated with dust management during demolition, and the proposed Project does not include any grading or foundation removal that would require the substantial use of water for dust control. As such, water usage would be minimal with adequate water supply and facilities to service the site. Upon Project completion the property will again be used for the handling and storage of breakbulk cargo, with the same footprint and land use as that of the transit shed before the 2014 fire occurred, resulting in no additional net demand for water supplies for the Project site.

Additionally, in the 2010 Urban Water Management Plan (UWMP), Los Angeles Department of Water and Power (LADWP) forecasted that the City of Los Angeles would grow 0.4 percent annually over the next 25 years, or by approximately 367,300 persons over the next 25 years. Total citywide demand for water is predicted to be 701,164 acre-feet in 2030 and 710,760 acre-feet in 2035. According to the 2010 UWMP, under wet, average, and dry years throughout the 25-year projection period, LADWP's supply portfolio is expected to be reliable, with adequate supplies available to meet projected demands through 2035 (LADWP 2011). As such, the proposed Project would have adequate water supply and facilities to service the site. Therefore, impacts would be less than significant and no mitigation is required.

e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact. As discussed in Question 4.17(a), the proposed Project sites are serviced by the City of Los Angeles Bureau of Sanitation's TIWRP. No population increase on or in the vicinity of the proposed Project site would result from the implementation of the proposed Project. In addition, it would not provide new housing or a large number of employment opportunities. The proposed Project will demolish a damaged transit shed so that the property's long term use of breakbulk cargo storage can be restored. Operations at the proposed Project site, as well as at Berths 174-181 in general, would be very similar to the conditions present before the 2014 fire occurred. Because the proposed Project is making use of existing property with established uses, the infrastructure has been sized to accommodate this type of facility and land use. As such, impacts would be less than significant. No mitigation is required.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less than Significant Impact. The Solid Waste Integrated Resource Plan is a long-range master plan for solid waste management in the City of Los Angeles (City of Los Angeles 2015b). It proposes an approach for the City to achieve a goal of diverting 75 percent of solid waste from landfills by 2013 and 90 percent by 2025. The Solid Waste Integrated Resource Plan recommends a series of policies, programs, and facilities to be implemented over the next 20 years. Minimal solid waste would be generated during demolition as most debris would be recycled; LAHD's Construction and Maintenance Division recycles asphalt and concrete demolition debris by crushing and stockpiling the crushed material to use on other Port projects. Demolition debris that cannot be recycled will be disposed of at a permitted landfill with adequate capacity to serve the Project's needs. Upon Project completion the property will again be used for the storage of breakbulk cargo, with the same footprint and land use as that of the transit shed before the 2014 fire occurred, resulting in no additional net generation of solid waste. In addition, the proposed Project would be in compliance with the Solid Waste Integrated Resource Plan to ensure sufficient permitted capacity to service proposed Project. As such, the impact to landfills would be less than significant and no mitigation measures are required.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less than Significant Impact. As discussed in Question 4.17(f), the proposed Project would conform to the policies and programs of the Solid Waste Integrated Resource Plan. Compliance with the Solid Waste Integrated Resource Plan would ensure sufficient permitted capacity to service the proposed Project. As such, the impacts would be less than significant. No mitigation is required.

4.18 MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

No Impact. As described above, the proposed Project would not impact biological resources. The proposed Project site is fully paved and developed and has been historically operated as a breakbulk handling and storage facility. The site is not suitable for use by biological species and does not contain any trees or vegetation. The proposed Project site does not contain habitat suitable for wildlife species and is not used by native resident or migratory species for movement or nursery purposes. The proposed Project site does not contain any federally protected wetlands as defined by Section 404 of the CWA. Proposed demolition activities would be confined to the immediate Project site, and no in- or over-water construction is proposed.

The proposed Project would not have a significant impact on historic resources. A Historic Resource Evaluation was conducted in August 2015 and concluded that the structure does not meet the eligibility criteria for listing in the CRHR or the NRHR, and is not eligible for designation as a HCM for the City of Los Angeles. Although originally constructed in 1924, the transit shed has been extensively altered and damaged and does not possess the integrity necessary to quality as a historic resource under CEQA.

The proposed Project would not have a significant impact on cultural, ethnographic or paleontological resources. The proposed Project site is located on man-made fill material that has been subject to extensive ground disturbance. The transit shed would be demolished to the top of the asphalt concrete without any removal of foundations. There would be no excavation or other below-surface disturbance that could damage or destroy unknown buried cultural resources. Because the site is composed of fill and has been extensively disturbed, there is extremely low potential for discovering archaeological or ethnographic cultural resources.

The proposed Project would not degrade the quality of the environment. There would be no impacts to biological and cultural resources. As such, the proposed Project would not have the potential to substantially degrade the quality of the environment.

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

Less than Significant Impact. The proposed Project would not result in cumulatively considerable impacts. Several other development projects are currently under construction, are

planned, or have recently been completed within the Port, including container terminal developments, industrial developments, and other waterfront plans. Future projects, including any proposed at the Project site, would be evaluated in a separate environmental document.

As discussed throughout the impact analyses in Chapter 4, the proposed Project would result in no impacts to agricultural and forestry resources, biological resources, cultural resources, hydrology and water quality, land use and planning, mineral resources, population and housing, and recreation. Thus, these topics have no potential to contribute to a cumulative impact.

The proposed Project would result in less than significant impacts to aesthetics, air quality, geology and soils, GHG emissions, hazards and hazardous materials, noise, public services, transportation and traffic, and utilities systems. The proposed Project would not result in significant impacts or require mitigation measures.

The proposed Project site was previously developed and is a part of the 40–acre PST omni-terminal comprising Berths 174-181. This transit shed suffered substantial damage and became unusable as the result of a 2014 fire, and LAHD subsequently determined that demolition was the most cost-effective option for the building. Upon Project completion the damaged structure will be removed and the site's long term use of breakbulk handling and storage will thereby be restored. Because the conditions at the Project site would be essentially similar to those that existed before the fire occurred, the potential incremental contribution from the proposed Project would not be cumulatively considerable. The approved projects and other present and/or probable future projects are required to comply with CEQA requirements, including implementation of mitigation measures to reduce or avoid environmental impacts, as well as with applicable laws and regulations at the federal, state and local level, including but not limited to the City of Los Angeles Municipal Code and local ordinances governing land use and development. The analysis contained herein has determined that the proposed Project would not have any individually limited but cumulatively considerable impacts. No mitigation measures are required.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact. The proposed Project would not result in substantial adverse effects on human beings, either directly or indirectly. The proposed Project would demolish a damaged transit shed so that the site's long term use of breakbulk handling and storage can be restored. There would be no construction of any new structures. As described in the analysis presented throughout this IS/ND, minimal environmental effects would result from the proposed Project for all issue areas and are not of the magnitude or significance to create a substantial adverse effect on humans, either directly or indirectly. Adverse effects on human beings resulting from implementation of the proposed Project would be less than significant. No mitigation measures are required.

5.0 PROPOSED FINDING

LAHD has prepared this IS/ND to address the environmental effects of the proposed Project. Based on the analysis provided in this IS/ND, LAHD finds that the proposed Project would not have a significant effect on the environment.

6.0 PREPARERS AND CONTRIBUTORS

IS/ND PREPARATION AND OVERSIGHT

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Applied Earthworks, Inc.

- Carrie Chasteen, Historic Resource Assessment

ENV America, Inc.

- Jack Samuels, Asbestos and Lead Survey Reports

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- Eric Wood, Air Quality and Greenhouse Gases
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- Erin Sheehy, Air Quality and Greenhouse Gases

7.0 ACRONYMS AND ABBREVIATIONS

[Q]M3-1	Heavy Industrial Uses
AB	Assembly Bill
ACM	asbestos containing material
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
CARB	California Air Resources Board
CAA	Clean Air Act
CAAP	Clean Air Action Plan
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
CO	carbon monoxide
CO_2e	CO_2-equivalents
COC	chemical of concern
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dBA	A-weighted decibel
DPM	diesel particulate matter
DOT	Department of Transportation
DTSC	Department of Toxic Substances
FEMA	Federal Emergency Management Agency
FTA	Federal Transit Administration
g/bhp-hr	grams per brake-horsepower hour
GHG	greenhouse gas
GWP	Global Warming Potential
HCM	Historic Cultural Monument
HCP	Habitat Conservation Plan
I	Interstate
IPCC	International Panel on Climate Change
IS	Initial Study
LADOT	City of Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAHD	Los Angeles Harbor Department
LAPD	Los Angeles Police Department

lbs/day	pounds per day
LST	Localized Significance Threshold
LBP	lead based paint
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Plan
ND	Negative Declaration
NO_X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OSHA	Occupational Safety & Health Administration
PAH	polycyclic aromatic hydrocarbon
PM_{10}	diesel-emitted particulate matter less than 10 microns
$PM_{2.5}$	directly emitted particulate matter less than 2.5 microns
POLA	Port of Los Angeles
PRC	Public Resources Code
PST	Pasha Stevedoring and Terminals
ROG	reactive organic gases
ROW	railroad right-of-way
SCAQMD	South Coast Air Quality Management District
SEA	Significant Ecological Area
SLR	sea-level rise
SO_X	sulfur oxides
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
TACs	toxic air contaminants
TCR	The Climate Registry
TIWRP	Terminal Island Water Reclamation Plant
TSCA	Toxic Substances Control Act
UWMP	Urban Water Management Plan
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

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APPENDIX A

AIR QUALITY CALCULATIONS

Berth 177-178 Transit Shed Demolition Project

Constuction-Related Air Quality Impacts

Daily Emissions

	Construction Emissions (lb/day)							
	NOx	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**CO2e**
Phase 1	35.1	1.7	7.3	4.4	1.7	0.1	6,336	6,393
Phase 2	46.2	3.3	19.8	4.4	1.9	0.1	6,965	7,028
Max. Daily Emissions*	**46.2**	**3.3**	**19.8**	**4.4**	**1.9**	**0.1**	**6,965**	**7,028**
SCAQMD Significance Threshold	**100**	**75**	**550**	**150**	**55**	**150**	-	-
Significant?	**No**	**No**	**No**	**No**	**No**	**No**	**-**	**-**

Significance thresholds from http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2 (2015 revision)

* Maximum daily average emissions from Phase 1 or Phase 2 (Phase 1 and Phase 2 do not overlap)

Annual Emissions

	Construction Emissions (ton/yr)							
	NOx	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2 (metric tons)**	**CO2e (metric tons)**
Phase 1	0.53	0.03	0.12	0.81	0.14	0.00	89.6	90.4
Phase 2	0.53	0.04	0.23	0.05	0.02	0.00	72.6	73.3
Annual Emissions	**1.06**	**0.06**	**0.35**	**0.86**	**0.16**	**0.00**	**162.2**	**163.7**
SCAQMD Significance Threshold	-	-	-	-	-	-	-	10,000
Significant?	No	No	No	No	No	No	-	No

"Annual" means project total (project duration is less than 1 year)
CO2e includes estimated CH4 and N2O greenhouse gases.

Construction Air Emissions Estimates (Phase 1 Subtotal)

Daily Emissions

	Construction Emissions (lb/day)							
	NOx	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**CO2e**
Onroad Equipment Exhaust	35.0	1.6	6.0	0.8	0.8	0.1	5,962.6	6,016
Worker Commute Exhaust	0.1	0.0	1.4	0.0	0.0	0.0	373	376
Fugitive Dust	-	-	-	3.6	0.9	-	-	-
Total Emissions	**35.1**	**1.7**	**7.3**	**4.4**	**1.7**	**0.1**	**6,336**	**6,393**
SCAQMD Significance Threshold	100	75	550	150	55	150	-	-
Significant?	**No**	**No**	**No**	**No**	**No**	**No**	**-**	**-**

Significance thresholds from http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2 (2015 revision)

Annual Emissions

	Construction Emissions (ton/yr)							
	NOx	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**CO2e (metric tons)**
Onroad Equipment Exhaust	0.52	0.02	0.09	0.01	0.01	0.00	89.4	81.9
Worker Commute Exhaust	0.00	0.00	0.03	0.00	0.00	0.00	9.3	8.5
Fugitive Dust	-	-	-	0.80	0.13	-	-	-
Total Emissions	0.53	0.03	0.12	0.81	0.14	0.00	98.8	90.4
SCAQMD Significance Threshold	-	-	-	-	-	-	-	10,000
Significant?	No	No	No	No	No	No	-	No

CO2e includes estimated CH4 and N2O greenhouse gases.

Construction Air Emissions Estimates (Phase 1 Onroad Equipment)

Daily and Annual Emissions

				Exhaust Emission Factor (grams/vehicle-mile)							Exhaust Emissions (lb/day)							Controlled Exhaust Emissions (ton/yr)						
Equipment Category	**Avg Engine Model Year**	**EMFAC Vehicle Class**	**Fuel (DSL or GAS)**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**
Haul truck	Aggregated	T7 tractor construction	DSL	9.9180	0.4609	1.6917	0.2223	0.2127	0.0161	1690	34.984	1.626	5.967	0.784	0.750	0.057	5963	0.52	0.02	0.09	0.01	0.01	0.00	89.44

Notes:
Emission factors from CARB's EMFAC2014 emissions database, http://www.arb.ca.gov/emfac/
Road dust, brake wear, and tire wear PM10 and PM2.5 emissions included in Fugitive Dust emissions estimates.

<u>Haul trucks</u>

Number	4	trucks/day	Project description
Daily mileage per truck	400	mi/day/truck	Project description
Work days	30	days	Project description

Construction Air Emissions Estimates (Phase 1 Worker Commute)

Daily and Annual Emissions

				Exhaust Emission Factor (grams/mile)							Exhaust Emissions (lb/day)							Exhaust Emissions (ton/yr)						
Description	**Engine Model Year**	**EMFAC Vehicle Class**	**Fuel**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**
Worker commuting	All	LDA	Gas	0.110	0.036	1.250	0.002	0.002	0.003	338.5	1E-01	0.04	1.38	0.00	0.00	0.00	373.13	0.00	0.00	0.03	0.00	0.00	0.00	9.33

Notes:
Emission factors from CARB's EMFAC2014 model for calendar year 2015, and assume aggregated speeds and vehicle model years.
Fugitive dust estimate includes brake wear, tire wear, and travel on paved roads.

Assumptions:

Parameter	Value		Basis
Equipment workers	10	worker trips/day	Project description
Trip VMT:	50	miles roundtrip/worker	Project description
Daily VMT:	500	VMT/day	Calc
Working days	50	days	Project description
Total VMT during project:	25,000	VMT	Calc

VMT = vehicle miles traveled

Construction Air Emissions Estimates (Phase 1 Fugitive PM)

Daily and Annual Emissions

				Daily Emissions		Annual Emissions	
Description	**Mean Vehicle Weight (lb)**	**Uncontrolled PM10 EF (lb/ VMT)**	**Uncontrolled PM2.5 EF (lb/ VMT)**	**Controlled PM10 (lb/ day)**	**Controlled PM2.5 (lb/day)**	**Controlled PM10 (ton/yr)**	**Controlled PM2.5 (ton/yr)**
Commute vehicle travel on paved roa	3500	3.08E-04	9.04E-05	0.15	0.05	3.9E-03	1.1E-03
Haul truck travel on paved roads	41667	2.15E-03	5.43E-04	3.44	0.87	5.2E-02	1.3E-02
Asbestos abatement	-	-	-	2.5E-02	3.7E-03	7.4E-01	1.1E-01

Notes:

PM = Particulate matter

VMT = vehicle miles travelled

Daily and annual vehicle fugitive emissions estimates include road dust, brake wear, and tire wear.

General

Onsite fugitive dust (PM10/PM2.5) control: 0% (no water truck for fugitive dust control)

Paved Roads

Empirical formula from AP42, Section 13.2.1 (Paved Roads, 1/11):

PM10 Emissions (lb/VMT) = k * [(sL)^(0.91)] * [(W)^(1.02)]

PM10 particle size multiplier (k):	0.0022	(AP42, Table 13.2.1-1, Particle Size Multipliers for Paved Road Equation)
PM2.5 particle size multiplier (k):	0.00054	(AP42, Table 13.2.1-1, Particle Size Multipliers for Paved Road Equation)
Commute vehicle road surface silt loading (sL):	0.0402	grams/m2. Blended value of Local road (20%), Major/Collector (40%), and Freeway (40%) sL factors. Local Road = 0.135 g/m2 (LA County), Major/Collector = 0.013 g/m2 (LA County), Freeway = 0.02 g/m2 (EPA default value) Ref: CARB Miscellaneous Process Methodology 7.9 (April 2014), Table 3 (California Statewide and Local Default Silt Loading Values), http://www.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2014.pdf
Haul truck road surface silt loading (sL):	0.0308	grams/m2. Blended value of Local road (10%), Major/Collector (10%), and Freeway (80%) sL factors. Local Road = 0.135 g/m2 (LA County), Major/Collector = 0.013 g/m2 (LA County), Freeway = 0.02 g/m2 (EPA default value) Ref: CARB Miscellaneous Process Methodology 7.9 (April 2014), Table 3 (California Statewide and Local Default Silt Loading Values), http://www.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2014.pdf
Average weight of vehicle (W):	See above	tons.

Asbestos Abatement

Building size:	2000	tons. Project description.
Average asbestos debris concentration:	25%	Estimate per EPA/ CAQMD Reporting Procedures for AB2588 Facilities
Average asbestos debris:	500	tons total
Abatement work days:	30	Project description.
Daily average asbestos debris:	16.67	ton/day
Fugitive PM10 emission factor:	0.0015	lb/ton (see Phase 2 Fugitive PM calculations)
Fugitive PM2.5 emission factor:	0.00022	lb/ton (see Phase 2 Fugitive PM calculations)

Construction Air Emissions Estimates (Phase 2 Subtotal)

Daily Emissions

	Construction Emissions (lb/day)							
	NOx	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**CO2e**
Offroad Diesel Equipment Exhaust	45.3	3.2	18.2	1.5	1.4	0.1	6,427	6,485
Onroad Equipment Exhaust	0.7	0.0	0.1	0.0	0.0	0.0	127	128
Worker Commute Exhaust	0.1	0.0	1.5	0.0	0.0	0.0	410	414
Fugitive Dust	-	-	-	2.9	0.5	-	-	-
Total Emissions	**46.2**	**3.3**	**19.8**	**4.4**	**1.9**	**0.1**	**6,965**	**7,028**
SCAQMD Significance Threshold	100	75	550	150	55	150	-	-
Significant?	No	No	No	No	No	No	**-**	**-**

Significance thresholds from http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2 (2015 revision)

Annual Emissions

	Construction Emissions (ton/yr)							
	NOx	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**CO2e (metric tons)**
Offroad Diesel Equipment Exhaust	0.52	0.04	0.21	0.02	0.02	0.00	73.9	67.6
Onroad Equipment Exhaust	0.01	0.00	0.00	0.00	0.00	0.00	1.5	1.3
Worker Commute Exhaust	0.00	0.00	0.02	0.00	0.00	0.00	4.7	4.3
Fugitive Dust	-	-	-	0.03	0.01	-	-	-
Total Emissions	**0.53**	**0.04**	**0.23**	**0.05**	**0.02**	**0.00**	**80.1**	**73.3**
SCAQMD Significance Threshold	-	-	-	-	-	-	-	10,000
Significant?	No	No	No	No	No	No	-	No

CO2e includes estimated CH4 and N2O greenhouse gases.

Construction Air Emissions Estimates (Phase 2 Offroad Equipment)

Daily and Annual Emissions

								Exhaust Emission Factor (g/hp-hr)							Daily Emissions (lb/day)							Annual Emissions (ton/yr)						
Equipment Description	**CARB Off-Road Category**	**Fuel**	**Engine Rating (hp)**	**Qty**	**hr/ day**	**day/ yr**	**Load Factor**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**
Excavator	Excavators	Diesel	345	4	8	23	0.3819	3.214	0.232	1.317	0.104	0.096	4.9E-03	510	29.9	2.2	12.2	1.0	0.9	0.0	4739	0.34	0.02	0.14	0.01	0.01	0.00	54.5
Bobcat	Tractors/Loaders/Backhoes	Diesel	200	2	8	23	0.3685	4.783	0.326	1.374	0.155	0.143	4.9E-03	510	12.4	0.8	3.6	0.4	0.4	0.0	1325	0.14	0.01	0.04	0.00	0.00	0.00	15.2
High reach	Rough Terrain Forklifts	Diesel	100	1	8	23	0.402	4.280	0.338	3.366	0.247	0.228	4.9E-03	512	3.0	0.2	2.4	0.2	0.2	0.0	363	0.03	0.00	0.03	0.00	0.00	0.00	4.2

Notes:
Quantity (Qty), daily operation (hr/day), and annual operation (day/yr) from project description.
Emission factors from CalEEMod/CARB OFFROAD2011, Scenario Year 2015
Load factors from CARB OFFROAD2011.

Construction Air Emissions Estimates (Phase 2 Onroad Equipment)

Daily and Annual Emissions

				Exhaust Emission Factor (grams/vehicle-mile)							Exhaust Emissions (lb/day)							Controlled Exhaust Emissions (ton/yr)						
Equipment Category	**Avg Engine Model Year**	**EMFAC Vehicle Class**	**Fuel Type**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**
Water truck	Aggregated	MH	DSL	5.723	0.097	0.451	0.164	0.157	0.0095	998	0.30	0.01	0.02	0.01	0.01	0.001	53	0.00	0.00	0.00	0.00	0.00	0.00	0.61
Haul truck	Aggregated	T7 tractor construction	Diesel	9.918	0.461	1.692	0.222	0.213	0.016	1690	0.44	0.02	0.07	0.01	0.01	0.001	75	0.01	0.00	0.00	0.00	0.00	0.00	0.86

Notes:
Emission factors from CARB's EMFAC2014 emissions database, http://www.arb.ca.gov/emfac/
Road dust, brake wear, and tire wear PM10 and PM2.5 emissions included in Fugitive Dust emissions estimates.

<u>Water truck</u>

Number	1	trucks/day	Project description
Daily mileage per truck	24	mi/day/truck	Project description
Work days	23	days	Project description

<u>Haul trucks</u>

Number	5	trucks/day	Project description
Daily mileage per truck	4	mi/day/truck	Project description
Work days	23	days	Project description

Construction Air Emissions Estimates (Phase 2 Worker Commute)

Daily and Annual Emissions

				Exhaust Emission Factor (grams/mile)							Exhaust Emissions (lb/day)							Exhaust Emissions (ton/yr)						
Description	**Engine Model Year**	**EMFAC Vehicle Class**	**Fuel**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**	**NOx**	**VOC**	**CO**	**PM10**	**PM2.5**	**SO2**	**CO2**
Worker commuting	All	LDA	Gas	0.110	0.036	1.250	0.002	0.002	0.003	338.5	0.1	0.0	1.5	0.0	0.0	0.0	410.4	0.00	0.00	0.02	0.00	0.00	0.00	4.7

Notes:
Emission factors from CARB's EMFAC2014 model for calendar year 2015, and assume aggregated speeds and vehicle model years.
Fugitive dust estimate includes brake wear, tire wear, and travel on paved roads.

Assumptions:

Parameter	Value		Basis
Equipment workers	11	worker trips/day	Project description
Trip VMT:	50	miles roundtrip/work	Project description
Daily VMT:	550	VMT/day	Calc
Working days	23	days	Project description
Total VMT during project:	12,650	VMT	Calc

VMT = vehicle miles traveled

Construction Air Emissions Estimates (Phase 2 Fugitive PM)

Daily and Annual Emissions

				Daily Emissions		Annual Emissions	
Description	**Mean Vehicle Weight (lb)**	**Uncontrolled PM10 EF (lb/ VMT)**	**Uncontrolled PM2.5 EF (lb/ VMT)**	**Controlled PM10 (lb/ day)**	**Controlled PM2.5 (lb/day)**	**Controlled PM10 (ton/yr)**	**Controlled PM2.5 (ton/yr)**
Water truck on paved roads	32000	6.23E-03	1.55E-03	0.06	0.01	6.7E-04	1.7E-04
Haul truck on paved roads	45000	6.64E-03	1.65E-03	0.13	0.03	1.5E-03	3.8E-04
Commute vehicle on paved roads	3500	3.08E-04	9.04E-05	0.15	0.05	1.8E-03	5.2E-04
Building demolition	-	-	-	0.05	0.01	5.8E-04	8.8E-05
Debris loading/unloading	-	-	-	2.45	0.37	2.8E-02	4.3E-03

Notes:

VMT = vehicle miles travelled

Daily and annual vehicle fugitive emissions estimates include road dust, brake wear, and tire wear.

General

Onsite fugitive dust control for demolition and loading: 61% SCAQMD, Fugitive Dust Table XI-A

http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-a.doc?sfvrsn=2

Paved Roads

Empirical formula from AP42, Section 13.2.1 (Paved Roads, 1/11):

PM10 Emissions (lb/VMT) = k * [(sL)^(0.91)] * [(W)^(1.02)]

PM10 particle size multiplier (k):	0.0022	(AP42, Table 13.2.1-1, Particle Size Multipliers for Paved Road Equation)
PM2.5 particle size multiplier (k):	0.00054	(AP42, Table 13.2.1-1, Particle Size Multipliers for Paved Road Equation)
Water truck road surface silt loading (sL):	0.135	grams/m2. Assumes 100% Local road sL factor. Local Road = 0.135 g/m2 (LA County), Major/Collector = 0.013 g/m2 (LA County), Freeway = 0.02 g/m2 (EPA default value) Ref: CARB Miscellaneous Process Methodology 7.9 (April 2014), Table 3 (California Statewide and Local Default Silt Loading Values), http://www.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2014.pdf
Haul truck road surface silt loading (sL):	0.0991	grams/m2. Blended value of Local road (70%), Major/Collector (20%), and Freeway (10%) sL factors. Local Road = 0.135 g/m2 (LA County), Major/Collector = 0.013 g/m2 (LA County), Freeway = 0.02 g/m2 (EPA default value) Ref: CARB Miscellaneous Process Methodology 7.9 (April 2014), Table 3 (California Statewide and Local Default Silt Loading Values), http://www.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2014.pdf
Commute vehicle road surface silt loading (sL):	0.0402	grams/m2. Blended value of Local road (20%), Major/Collector (40%), and Freeway (40%) sL factors. Local Road = 0.135 g/m2 (LA County), Major/Collector = 0.013 g/m2 (LA County), Freeway = 0.02 g/m2 (EPA default value) Ref: CARB Miscellaneous Process Methodology 7.9 (April 2014), Table 3 (California Statewide and Local Default Silt Loading Values), http://www.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2014.pdf
Average weight of vehicle (W):	See above	tons.

Demolition

CalEEMod and AP42, Section 13.2.4 (Aggregate Handling and Storage Piles, 11/06):

PM10 Emissions (lb/ton) = k * (0.0032) * ((u / 5)^(1.3) / (M / 2)^(1.4)) -- Note: equation is the same as that provided in Table 9-9-G of the 1993 CEQA Handbook--, where:

PM10 particle size multiplier (k):	0.35	unitless.
PM2.5 particle size multiplier (k):	0.053	unitless.
Mean wind speed (u):	6.2	mi/hr. Average wind speed for Los Angeles County = 6.2 mi/hr (EPA Tanks v4)
Material moisture content (M):	2	%. (2.0% = Dry). Default in CalEEMod based on M1988 Midwest Research Institute report. (See also Table 9-9-G-1, 1993 CEQA Handbook)
Uncontrolled PM10 emission factor (lb/ton)	1.5E-03	lb/ton
Uncontrolled PM2.5 emission factor (lb/ton)	2.2E-04	lb/ton

Construction Air Emissions Estimates (Phase 2 Fugitive PM)

Daily and Annual Emissions

Building demolition waste (total):	2000	tons.	Project description. Note that asbestos containing debris removed in Phase 1.
Demolition duration:	23	days.	Project description.
Building demolition waste (per day):	87	tons/day.	
Uncontrolled PM10 emissions:	1.3E-01	lb/day	
Uncontrolled PM2.5 emissions:	2.0E-02	lb/day	

Debris loading

Debris loading PM10 emission factor	0.0203	lb/ton.	TSP emission fractor of 0.058 lb/ton and AP-42 default PM10 particle size multiplier of 0.35 (CalEEMod Appendix A)
Debris loading PM2.5 emission factor	0.003074	lb/ton.	TSP emission fractor of 0.058 lb/ton and AP-42 default PM2.5 particle size multiplier of 0.053 (CalEEMod Appendix A)
Debris loading (per day):	174	tons/day.	Daily demolition waste multiplied by 2 for loading (onsite) and unloading (offsite).
Uncontrolled PM10 emissions:	3.53	lb/day	
Uncontrolled PM2.5 emissions:	0.53	lb/day	

Load Factors for Offroad Equipment

Source: CARB OFFROAD2011 Model

EquipmentTypeID	Adj ARB LF
A/C Tug Narrow Body	0.536
A/C Tug Wide Body	0.536
Baggage Tug	0.3685
Belt Loader	0.335
Bobtail	0.3685
Cargo Loader	0.335
Cargo Tractor	0.3618
Forklift (GSE)	0.201
Lift (GSE)	0.335
Other GSE	0.335
Bore/Drill Rigs	0.5025
Cranes	0.2881
Crawler Tractors	0.4288
Excavators	0.3819
Graders	0.4087
Off-Highway Tractors	0.4355
Off-Highway Trucks	0.3819
Other Construction Equipment	0.4154
Pavers	0.4154
Paving Equipment	0.3551
Rollers	0.3752
Rough Terrain Forklifts	0.402
Rubber Tired Dozers	0.3953
Rubber Tired Loaders	0.3618
Scrapers	0.4824
Skid Steer Loaders	0.3685
Surfacing Equipment	0.3015
Tractors/Loaders/Backhoes	0.3685
Trenchers	0.5025
Aerial Lifts	0.3082
Forklifts	0.201
Other General Industrial Equipment	0.3417
Other Material Handling Equipment	0.3953
Drill Rig (Mobile)	0.5025
Workover Rig (Mobile)	0.5025
Sweepers/Scrubbers	0.4556
Passenger Stand	0.3953

CalEEMod OFFROAD Equipment Emission Factors (g/bhp-hr)

Source: Table 3.4, CalEEMod Appendix D

Equipment Type	Year	Low HP	High HP	TOG	ROG	CO	NOX	SO2
Aerial Lifts	2015	6	15	0.295589	0.2484	3.23342	3.93284	0.0054
Aerial Lifts	2015	16	25	0.295589	0.2484	3.23342	3.93284	0.0054
Aerial Lifts	2015	26	50	0.295589	0.2484	3.23342	3.93284	0.0054
Aerial Lifts	2015	51	120	0.226785	0.1906	3.21782	3.1134	0.0049
Aerial Lifts	2015	251	500	0.284874	0.2394	0.98755	4.62077	0.0049
Aerial Lifts	2015	501	750	37.246	0.278	1.13	3.38	0.005
Air Compressors	2015	6	15	2.191	0.84	3.658	5.196	0.008
Air Compressors	2015	16	25	4.662	0.894	2.666	4.89	0.007
Air Compressors	2015	26	50	15.015	1.868	5.968	5.223	0.007
Air Compressors	2015	51	120	13.925	0.821	3.84	5.19	0.006
Air Compressors	2015	121	175	18.243	0.571	3.218	4.504	0.006
Air Compressors	2015	176	250	18.067	0.381	1.207	3.967	0.006
Air Compressors	2015	251	500	29.662	0.354	1.198	3.455	0.005
Air Compressors	2015	501	750	46.316	0.358	1.198	3.586	0.005
Air Compressors	2015	751	1000	71.885	0.409	1.37	5.157	0.005
Bore/Drill Rigs	2015	6	15	1.007942	0.847	4.73461	5.30345	0.0056
Bore/Drill Rigs	2015	16	25	1.007942	0.847	4.73461	5.30345	0.0056
Bore/Drill Rigs	2015	26	50	1.007942	0.847	4.73461	5.30345	0.0056
Bore/Drill Rigs	2015	51	120	0.378573	0.3181	3.3349	4.02775	0.0047
Bore/Drill Rigs	2015	121	175	0.359562	0.3021	3.03526	3.90422	0.0049
Bore/Drill Rigs	2015	176	250	0.253803	0.2133	1.17834	3.3245	0.0048
Bore/Drill Rigs	2015	251	500	0.237097	0.1992	1.25564	3.00307	0.0048
Bore/Drill Rigs	2015	501	750	0.19253	0.1618	1.10541	2.37558	0.005
Bore/Drill Rigs	2015	751	1000	0.130029	0.1093	0.95583	2.99386	0.0049
Cement and Mortar Mixers	2015	6	15	1.079	0.663	3.469	4.168	0.008
Cement and Mortar Mixers	2015	16	25	3.664	0.811	2.531	4.712	0.007
Concrete/Industrial Saws	2015	16	25	1.532	0.685	2.339	4.332	0.007
Concrete/Industrial Saws	2015	26	50	6.027	1.47	5.165	4.989	0.007
Concrete/Industrial Saws	2015	51	120	6.878	0.683	3.647	4.789	0.006

Concrete/Industrial Saws	2015	121	175	10.333	0.475	3.077	4.112	0.006
Cranes	2015	26	50	2.483294	2.0867	7.12517	6.07491	0.0053
Cranes	2015	51	120	1.444394	1.2137	4.88366	10.0604	0.0048
Cranes	2015	121	175	0.930749	0.7821	3.91821	8.3254	0.0049
Cranes	2015	176	250	0.764242	0.6422	2.65334	7.62156	0.0049
Cranes	2015	251	500	0.565318	0.475	4.10962	6.12404	0.0049
Cranes	2015	501	750	0.340293	0.2859	1.64279	4.31183	0.0049
Cranes	2015	1001	9999	0.156078	0.1311	0.95679	2.29477	0.0049
Crawler Tractors	2015	26	50	2.990271	2.5127	8.07628	6.37736	0.0053
Crawler Tractors	2015	51	120	1.05262	0.8845	4.18907	7.4938	0.0049
Crawler Tractors	2015	121	175	0.751623	0.6316	3.47922	6.84937	0.0049
Crawler Tractors	2015	176	250	0.536796	0.4511	1.81586	6.14312	0.0049
Crawler Tractors	2015	251	500	0.485596	0.408	2.84505	5.48324	0.0049
Crawler Tractors	2015	501	750	0.41802	0.3513	1.66415	4.88301	0.0049
Crawler Tractors	2015	751	1000	0.570092	0.479	2.08783	7.46329	0.0049
Crushing/Proc. Equipment	2015	26	50	4.722	1.796	5.996	5.195	0.007
Crushing/Proc. Equipment	2015	51	120	3.959	0.797	3.859	5.04	0.006
Crushing/Proc. Equipment	2015	121	175	5.614	0.562	3.247	4.343	0.006
Crushing/Proc. Equipment	2015	176	250	5.585	0.382	1.201	3.801	0.006
Crushing/Proc. Equipment	2015	251	500	8	0.358	1.184	3.304	0.005
Crushing/Proc. Equipment	2015	501	750	12.614	0.358	1.176	3.422	0.005
Crushing/Proc. Equipment	2015	1001	9999	32.981	0.422	1.343	5.019	0.005
Dumpers/Tenders	2015	16	25	0.831	0.696	2.35	4.402	0.007
Excavators	2015	16	25	0.991068	0.8328	4.92488	4.91817	0.0054
Excavators	2015	26	50	0.991068	0.8328	4.92488	4.91817	0.0054
Excavators	2015	51	120	0.60346	0.5071	3.67943	5.01907	0.0048
Excavators	2015	121	175	0.456597	0.3837	3.16762	4.4807	0.0049
Excavators	2015	176	250	0.343545	0.2887	1.33148	4.18222	0.0049
Excavators	2015	251	500	0.276143	0.232	1.31662	3.21395	0.0049
Excavators	2015	501	750	0.28808	0.2421	1.35372	3.47287	0.0048
Forklifts	2015	26	50	2.466892	2.0729	7.29982	5.93143	0.0054
Forklifts	2015	51	120	0.914509	0.7684	4.06346	6.60091	0.0049

Forklifts	2015	121	175	0.673169	0.5656	3.51969	6.13482	0.0049
Forklifts	2015	176	250	0.672054	0.5647	2.32501	6.69668	0.0049
Forklifts	2015	251	500	0.539875	0.4536	3.29951	5.33227	0.0049
Generator Sets	2015	6	15	1.984	0.747	3.658	5.141	0.008
Generator Sets	2015	16	25	3.639	0.793	2.666	4.89	0.007
Generator Sets	2015	26	50	10.213	1.281	4.538	4.858	0.007
Generator Sets	2015	51	120	13.208	0.651	3.499	4.769	0.006
Generator Sets	2015	121	175	16.277	0.44	2.938	4.138	0.006
Generator Sets	2015	176	250	15.884	0.287	1.104	3.633	0.006
Generator Sets	2015	251	500	22.677	0.258	1.114	3.231	0.005
Generator Sets	2015	501	750	37.88	0.267	1.114	3.347	0.005
Generator Sets	2015	1001	9999	95.984	0.351	1.269	4.822	0.005
Graders	2015	26	50	3.711306	3.1185	9.14399	6.56967	0.005
Graders	2015	51	120	1.474627	1.2391	4.88439	9.73775	0.0048
Graders	2015	121	175	1.004333	0.8439	3.95849	8.63742	0.005
Graders	2015	176	250	0.471304	0.396	1.46577	5.72754	0.0049
Graders	2015	251	500	0.388063	0.3261	1.79107	3.72122	0.0049
Graders	2015	501	750	16.846	0.414	1.42	3.501	0.005
Off-Highway Tractors	2015	51	120	0.802587	0.6744	3.96474	6.06726	0.0049
Off-Highway Tractors	2015	121	175	0.478075	0.4017	3.26419	4.72365	0.0049
Off-Highway Tractors	2015	176	250	0.476529	0.4004	1.60534	5.52773	0.0049
Off-Highway Tractors	2015	501	750	0.312134	0.2623	1.17195	3.87437	0.0049
Off-Highway Tractors	2015	751	1000	0.114305	0.096	0.96003	2.29983	0.0049
Off-Highway Trucks	2015	121	175	0.604782	0.5082	3.48853	5.10449	0.0048
Off-Highway Trucks	2015	176	250	0.563373	0.4734	1.89994	5.24228	0.0048
Off-Highway Trucks	2015	251	500	0.457555	0.3845	2.0367	4.52794	0.0049
Off-Highway Trucks	2015	501	750	0.537539	0.4517	2.61969	5.12427	0.0049
Off-Highway Trucks	2015	751	1000	0.489174	0.411	1.77206	6.28012	0.0049
Other Construction Equipment	2015	6	15	1.557753	1.3089	5.68113	5.56397	0.0054
Other Construction Equipment	2015	16	25	1.557753	1.3089	5.68113	5.56397	0.0054
Other Construction Equipment	2015	26	50	1.557753	1.3089	5.68113	5.56397	0.0054
Other Construction Equipment	2015	51	120	0.860334	0.7229	3.9159	6.53649	0.0049

Other Construction Equipment	2015	121	175	0.66302	0.5571	3.38183	6.2305	0.0048
Other Construction Equipment	2015	251	500	0.386006	0.3244	2.40724	4.41519	0.0049
Other General Industrial Equipment	2015	6	15	1.779268	1.4951	6.32452	5.52435	0.0054
Other General Industrial Equipment	2015	16	25	1.779268	1.4951	6.32452	5.52435	0.0054
Other General Industrial Equipment	2015	26	50	1.779268	1.4951	6.32452	5.52435	0.0054
Other General Industrial Equipment	2015	51	120	0.905303	0.7607	4.0811	6.50163	0.0048
Other General Industrial Equipment	2015	121	175	0.589015	0.4949	3.45434	5.3974	0.0049
Other General Industrial Equipment	2015	176	250	0.538134	0.4522	1.9257	5.64293	0.0049
Other General Industrial Equipment	2015	251	500	0.420225	0.3531	2.43603	4.42481	0.0049
Other General Industrial Equipment	2015	501	750	0.298831	0.2511	1.49062	3.36512	0.0049
Other General Industrial Equipment	2015	751	1000	0.422901	0.3554	1.09391	6.44797	0.0049
Other Material Handling Equipment	2015	26	50	2.062891	1.7334	6.75642	5.7994	0.0054
Other Material Handling Equipment	2015	51	120	0.628094	0.5278	3.75787	4.98312	0.0049
Other Material Handling Equipment	2015	121	175	0.624881	0.5251	3.43301	5.6445	0.0049
Other Material Handling Equipment	2015	176	250	0.503855	0.4234	1.74236	5.5323	0.0049
Other Material Handling Equipment	2015	251	500	0.396328	0.333	1.91761	4.27243	0.0049
Other Material Handling Equipment	2015	1001	9999	0.1762	0.1481	0.98449	3.45753	0.0049
Pavers	2015	16	25	2.205076	1.8529	6.34019	5.63731	0.0054
Pavers	2015	26	50	2.205076	1.8529	6.34019	5.63731	0.0054
Pavers	2015	51	120	0.809163	0.6799	3.78832	6.14096	0.0048
Pavers	2015	121	175	0.582419	0.4894	3.11546	5.53669	0.0049
Pavers	2015	176	250	0.254974	0.2142	1.03121	4.16051	0.0049
Pavers	2015	251	500	0.209561	0.1761	0.97787	2.91741	0.0048
Paving Equipment	2015	16	25	1.166929	0.9805	4.86895	5.02757	0.0054
Paving Equipment	2015	26	50	1.166929	0.9805	4.86895	5.02757	0.0054
Paving Equipment	2015	51	120	0.786628	0.661	3.83329	6.14454	0.0049
Paving Equipment	2015	121	175	0.48887	0.4108	3.10403	4.96561	0.0049
Paving Equipment	2015	176	250	0.374849	0.315	1.37947	4.77176	0.0049
Plate Compactors	2015	6	15	0.79	0.661	3.469	4.142	0.008
Pressure Washers	2015	6	15	2.059	0.747	3.657	5.141	0.008
Pressure Washers	2015	16	25	3.196	0.793	2.666	4.89	0.007
Pressure Washers	2015	26	50	7.868	0.976	3.833	4.685	0.007

Pressure Washers	2015	51	120	7.703	0.567	3.336	4.551	0.006
Pressure Washers	2015	121	175	27.567	0.427	2.917	4.115	0.006
Pressure Washers	2015	176	250	9.864	0.121	0.986	0.69	0.006
Pumps	2015	6	15	1.831	0.84	3.658	5.196	0.008
Pumps	2015	16	25	5.112	0.894	2.666	4.89	0.007
Pumps	2015	26	50	13.946	1.384	4.775	4.916	0.007
Pumps	2015	51	120	15.537	0.679	3.554	4.842	0.006
Pumps	2015	121	175	18.983	0.461	2.983	4.202	0.006
Pumps	2015	176	250	17.881	0.302	1.122	3.693	0.006
Pumps	2015	251	500	27.722	0.273	1.134	3.272	0.005
Pumps	2015	501	750	47.213	0.281	1.134	3.389	0.005
Pumps	2015	1001	9999	144.304	0.363	1.293	4.878	0.005
Rollers	2015	6	15	1.559602	1.3105	5.29043	5.36547	0.0054
Rollers	2015	16	25	1.559602	1.3105	5.29043	5.36547	0.0054
Rollers	2015	26	50	1.559602	1.3105	5.29043	5.36547	0.0054
Rollers	2015	51	120	0.813228	0.6833	3.80891	6.27158	0.0049
Rollers	2015	121	175	0.433087	0.3639	3.00605	4.63035	0.0049
Rollers	2015	176	250	0.41293	0.347	1.65049	4.93191	0.0049
Rollers	2015	251	500	0.441373	0.3709	3.24549	5.03147	0.0049
Rough Terrain Forklifts	2015	26	50	1.414803	1.1888	4.93325	5.18984	0.0054
Rough Terrain Forklifts	2015	51	120	0.401892	0.3377	3.36619	4.28003	0.0049
Rough Terrain Forklifts	2015	121	175	0.25808	0.2169	2.85917	3.42042	0.0049
Rough Terrain Forklifts	2015	176	250	0.166466	0.1399	1.01164	2.4626	0.0049
Rough Terrain Forklifts	2015	251	500	0.207111	0.174	0.95822	3.52067	0.0048
Rubber Tired Dozers	2015	121	175	1.147937	0.9646	4.23794	9.84425	0.0049
Rubber Tired Dozers	2015	176	250	0.866859	0.7284	2.7204	7.9837	0.0049
Rubber Tired Dozers	2015	251	500	0.842228	0.7077	6.10151	7.99736	0.0049
Rubber Tired Dozers	2015	501	750	0.616719	0.5182	2.76062	7.15777	0.0049
Rubber Tired Dozers	2015	751	1000	9.895	0.661	2.901	6.556	0.005
Rubber Tired Loaders	2015	16	25	2.508512	2.1078	7.83443	6.11232	0.0054
Rubber Tired Loaders	2015	26	50	2.508512	2.1078	7.83443	6.11232	0.0054
Rubber Tired Loaders	2015	51	120	1.018295	0.8557	4.27362	7.01153	0.0048

Rubber Tired Loaders	2015	121	175	0.708161	0.5951	3.58815	6.09735	0.0049
Rubber Tired Loaders	2015	176	250	0.482642	0.4056	1.47986	5.36927	0.0048
Rubber Tired Loaders	2015	251	500	0.494223	0.4153	2.33208	5.0195	0.0048
Rubber Tired Loaders	2015	501	750	0.469822	0.3948	1.78908	4.55578	0.0047
Rubber Tired Loaders	2015	751	1000	0.499538	0.4198	1.46167	6.71262	0.0049
Scrapers	2015	51	120	0.869823	0.7309	4.13678	7.10509	0.005
Scrapers	2015	121	175	0.849601	0.7139	3.80865	7.76471	0.0049
Scrapers	2015	176	250	0.868271	0.7296	3.00753	8.66317	0.0048
Scrapers	2015	251	500	0.561967	0.4722	3.788	6.08577	0.0049
Scrapers	2015	501	750	0.427981	0.3596	2.68469	4.83862	0.0049
Signal Boards	2015	6	15	1.04	0.661	3.469	4.142	0.008
Signal Boards	2015	26	50	13.489	1.461	5.068	4.943	0.007
Signal Boards	2015	51	120	14.067	0.687	3.624	4.791	0.006
Signal Boards	2015	121	175	18.694	0.474	3.052	4.136	0.006
Signal Boards	2015	176	250	20.523	0.38	1.371	4.365	0.007
Skid Steer Loaders	2015	16	25	0.760751	0.6392	4.00436	4.43612	0.0054
Skid Steer Loaders	2015	26	50	0.760751	0.6392	4.00436	4.43612	0.0054
Skid Steer Loaders	2015	51	120	0.349713	0.2939	3.33751	3.8106	0.0049
Surfacing Equipment	2015	26	50	1.223408	1.028	4.69178	5.25471	0.0055
Surfacing Equipment	2015	51	120	0.651534	0.5475	3.57496	5.37414	0.0049
Surfacing Equipment	2015	121	175	0.568	0.4773	3.02727	5.73307	0.0049
Surfacing Equipment	2015	176	250	0.36864	0.3098	1.44156	5.11205	0.0049
Surfacing Equipment	2015	251	500	0.286581	0.2408	1.51303	3.90037	0.0048
Surfacing Equipment	2015	501	750	0.211433	0.1777	1.02353	3.28678	0.0049
Sweepers/Scrubbers	2015	6	15	2.151059	1.8075	6.75408	5.77191	0.0054
Sweepers/Scrubbers	2015	16	25	2.151059	1.8075	6.75408	5.77191	0.0054
Sweepers/Scrubbers	2015	26	50	2.151059	1.8075	6.75408	5.77191	0.0054
Sweepers/Scrubbers	2015	51	120	0.991855	0.8334	4.09682	6.8863	0.0049
Sweepers/Scrubbers	2015	121	175	0.998266	0.8388	3.98239	8.69682	0.0049
Sweepers/Scrubbers	2015	176	250	0.610252	0.5128	2.07774	6.7446	0.0048
Tractors/Loaders/Backhoes	2015	16	25	1.555682	1.3072	5.79091	5.32019	0.0053
Tractors/Loaders/Backhoes	2015	26	50	1.555682	1.3072	5.79091	5.32019	0.0053

Tractors/Loaders/Backhoes	2015	51	120	0.677539	0.5693	3.83198	5.4221	0.0049
Tractors/Loaders/Backhoes	2015	121	175	0.501434	0.4213	3.2559	4.83599	0.0048
Tractors/Loaders/Backhoes	2015	176	250	0.387795	0.3259	1.37366	4.7831	0.0049
Tractors/Loaders/Backhoes	2015	251	500	0.371246	0.3119	1.88403	4.34833	0.0049
Tractors/Loaders/Backhoes	2015	501	750	0.36596	0.3075	1.823	4.1848	0.0048
Trenchers	2015	6	15	1.498018	1.2588	5.32346	5.40567	0.0054
Trenchers	2015	16	25	1.498018	1.2588	5.32346	5.40567	0.0054
Trenchers	2015	26	50	1.498018	1.2588	5.32346	5.40567	0.0054
Trenchers	2015	51	120	0.972367	0.8171	4.01434	7.17857	0.0049
Trenchers	2015	121	175	0.829448	0.697	3.68389	7.67382	0.0048
Trenchers	2015	176	250	0.597101	0.5017	2.0797	6.50988	0.0049
Trenchers	2015	251	500	0.370644	0.3114	2.05093	4.38344	0.0048
Trenchers	2015	501	750	0.135272	0.1137	0.96532	1.62336	0.0049
Welders	2015	6	15	2.109	0.84	3.658	5.196	0.008
Welders	2015	16	25	4.078	0.894	2.666	4.89	0.007
Welders	2015	26	50	17.994	1.715	5.562	5.113	0.007
Welders	2015	51	120	12.337	0.772	3.738	5.077	0.006
Welders	2015	121	175	21.139	0.532	3.133	4.408	0.006
Welders	2015	176	250	16.976	0.352	1.178	3.88	0.006
Welders	2015	251	500	21.953	0.324	1.176	3.398	0.005

PM10	PM2.5	CO2	CH4
0.136	0.1251	568.8305	0.1698
0.136	0.1251	568.8305	0.1698
0.136	0.1251	568.8305	0.1698
0.1431	0.1316	511.457	0.1527
0.1023	0.0941	511.3924	0.1527
0.098	0.098	568.299	0.025
0.311	0.311	568.299	0.075
0.27	0.27	568.299	0.08
0.459	0.459	568.299	0.168
0.446	0.446	568.299	0.074
0.245	0.245	568.299	0.051
0.121	0.121	568.299	0.034
0.113	0.113	568.3	0.032
0.116	0.116	568.299	0.032
0.142	0.142	568.299	0.036
0.3792	0.3489	585.1707	0.1747
0.3792	0.3489	585.1707	0.1747
0.3792	0.3489	585.1707	0.1747
0.2393	0.2201	496.9494	0.1484
0.1756	0.1615	517.2068	0.1544
0.0996	0.0916	506.5047	0.1512
0.0959	0.0882	499.9023	0.1492
0.0807	0.0743	520.4733	0.1554
0.0585	0.0538	511.2533	0.1526
0.171	0.171	568.3	0.059
0.24	0.24	568.299	0.073
0.162	0.162	568.299	0.061
0.386	0.386	568.299	0.132
0.372	0.372	568.3	0.061

0.207	0.207	568.299	0.042
0.6005	0.5525	561.2236	0.1675
0.7467	0.6869	508.8366	0.1519
0.4501	0.4141	514.2598	0.1535
0.3479	0.3201	512.4484	0.153
0.2534	0.2331	511.1972	0.1526
0.1518	0.1397	510.3342	0.1524
0.0554	0.051	511.3924	0.1527
0.7408	0.6816	558.8878	0.1669
0.63	0.5796	516.8433	0.1543
0.3758	0.3457	511.3059	0.1526
0.2369	0.2179	512.8973	0.1531
0.2124	0.1954	515.3725	0.1539
0.1788	0.1645	512.5402	0.153
0.22	0.2024	514.83	0.1537
0.446	0.446	568.299	0.162
0.43	0.43	568.299	0.071
0.237	0.237	568.299	0.05
0.117	0.117	568.299	0.034
0.109	0.109	568.299	0.032
0.111	0.111	568.299	0.032
0.14	0.14	568.299	0.038
0.187	0.187	568.299	0.062
0.3747	0.3447	569.5116	0.17
0.3747	0.3447	569.5116	0.17
0.3735	0.3436	506.1727	0.1511
0.2212	0.2035	511.6869	0.1528
0.1331	0.1224	512.0555	0.1529
0.1042	0.0959	509.8675	0.1522
0.1129	0.1039	506.6816	0.1513
0.6428	0.5914	569.2736	0.17
0.5545	0.5101	510.8225	0.1525

0.3348	0.308	511.4484	0.1527
0.2978	0.274	512.7693	0.1531
0.2368	0.2178	513.083	0.1532
0.28	0.28	568.299	0.067
0.256	0.256	568.299	0.071
0.353	0.353	568.299	0.115
0.347	0.347	568.299	0.058
0.191	0.191	568.299	0.039
0.1	0.1	568.3	0.025
0.094	0.094	568.299	0.023
0.096	0.096	568.299	0.024
0.124	0.124	568.299	0.031
0.8737	0.8038	533.6812	0.1593
0.8131	0.7481	509.597	0.1521
0.4857	0.4468	522.2182	0.1559
0.1856	0.1708	517.1275	0.1544
0.1442	0.1327	512.0975	0.1529
0.124	0.124	568.299	0.037
0.4942	0.4547	515.3203	0.1538
0.2393	0.2201	512.6079	0.153
0.1989	0.183	509.1896	0.152
0.1262	0.1161	511.0814	0.1526
0.0558	0.0513	511.3924	0.1527
0.2844	0.2616	508.7011	0.1519
0.2267	0.2086	507.8087	0.1516
0.173	0.1591	515.8419	0.154
0.2085	0.1918	514.6436	0.1536
0.1846	0.1698	511.1369	0.1526
0.5034	0.4631	573.0198	0.1711
0.5034	0.4631	573.0198	0.1711
0.5034	0.4631	573.0198	0.1711
0.5118	0.4709	510.1706	0.1523

0.3264	0.3003	509.3069	0.152
0.1626	0.1496	515.1953	0.1538
0.5324	0.4898	570.0241	0.1702
0.5324	0.4898	570.0241	0.1702
0.5324	0.4898	570.0241	0.1702
0.5528	0.5086	509.1664	0.152
0.294	0.2704	511.171	0.1526
0.2295	0.2111	512.6584	0.153
0.1671	0.1537	512.3397	0.153
0.1092	0.1004	512.9191	0.1531
0.1714	0.1577	511.3924	0.1527
0.5863	0.5394	567.3512	0.1694
0.3827	0.352	513.0541	0.1532
0.306	0.2815	511.5709	0.1527
0.2071	0.1905	510.7722	0.1525
0.1655	0.1523	509.4887	0.1521
0.0682	0.0627	511.3924	0.1527
0.5791	0.5327	571.0859	0.1705
0.5791	0.5327	571.0859	0.1705
0.4794	0.441	509.3767	0.1521
0.2774	0.2552	511.6457	0.1527
0.1066	0.098	513.4682	0.1533
0.0968	0.0891	506.0973	0.1511
0.4067	0.3742	563.5534	0.1682
0.4067	0.3742	563.5534	0.1682
0.4707	0.4331	513.1672	0.1532
0.2423	0.2229	509.8942	0.1522
0.1587	0.146	511.6544	0.1528
0.161	0.161	568.299	0.059
0.28	0.28	568.299	0.067
0.256	0.256	568.299	0.071
0.3	0.3	568.299	0.088

0.297	0.297	568.299	0.051
0.187	0.187	568.299	0.038
0.01	0.01	568.299	0.01
0.311	0.311	568.299	0.075
0.27	0.27	568.299	0.08
0.371	0.371	568.3	0.124
0.364	0.364	568.3	0.061
0.2	0.2	568.299	0.041
0.104	0.104	568.299	0.027
0.097	0.097	568.299	0.024
0.099	0.099	568.299	0.025
0.127	0.127	568.299	0.032
0.4811	0.4427	569.9207	0.1701
0.4811	0.4427	569.9207	0.1701
0.4811	0.4427	569.9207	0.1701
0.4674	0.43	513.5052	0.1533
0.2155	0.1982	511.3935	0.1527
0.1708	0.1572	512.8234	0.1531
0.195	0.1794	517.2848	0.1544
0.4314	0.3969	569.4875	0.17
0.2474	0.2276	512.0859	0.1529
0.1326	0.122	510.8541	0.1525
0.0582	0.0535	512.1638	0.1529
0.0771	0.071	506.4349	0.1512
0.5643	0.5192	513.0549	0.1532
0.3939	0.3624	514.7359	0.1537
0.3731	0.3433	519.1472	0.155
0.2587	0.238	512.5253	0.153
0.222	0.222	568.299	0.059
0.6746	0.6206	567.672	0.1695
0.6746	0.6206	567.672	0.1695
0.6061	0.5576	505.0231	0.1508

0.3407	0.3134	510.4677	0.1524
0.1833	0.1686	508.9127	0.1519
0.1895	0.1744	506.3723	0.1512
0.1791	0.1648	495.31	0.1479
0.1967	0.181	510.0449	0.1523
0.5348	0.4921	524.5601	0.1566
0.415	0.3818	518.8294	0.1549
0.3952	0.3636	507.5699	0.1515
0.2458	0.2261	511.9471	0.1528
0.1818	0.1673	512.0837	0.1529
0.161	0.161	568.299	0.059
0.382	0.382	568.299	0.131
0.371	0.371	568.299	0.062
0.205	0.205	568.299	0.042
0.127	0.127	686.695	0.034
0.2674	0.246	571.4195	0.1706
0.2674	0.246	571.4195	0.1706
0.2202	0.2026	511.595	0.1527
0.4019	0.3698	576.7706	0.1722
0.378	0.3478	510.1417	0.1523
0.2756	0.2536	510.5481	0.1524
0.1506	0.1385	516.058	0.1541
0.1265	0.1164	508.3985	0.1518
0.104	0.0957	511.1157	0.1526
0.6111	0.5622	569.1058	0.1699
0.6111	0.5622	569.1058	0.1699
0.6111	0.5622	569.1058	0.1699
0.6103	0.5614	513.6254	0.1533
0.4792	0.4409	512.5489	0.153
0.2676	0.2462	509.3035	0.152
0.477	0.4389	558.7085	0.1668
0.477	0.4389	558.7085	0.1668

0.4244	0.3904	517.3652	0.1545
0.2443	0.2248	508.6819	0.1519
0.1554	0.1429	509.6269	0.1521
0.1491	0.1372	511.8685	0.1528
0.152	0.1399	506.1469	0.1511
0.4934	0.4539	571.6674	0.1707
0.4934	0.4539	571.6674	0.1707
0.4934	0.4539	571.6674	0.1707
0.5616	0.5167	515.3955	0.1539
0.3958	0.3642	506.9434	0.1513
0.26	0.2392	512.4325	0.153
0.1626	0.1496	508.3296	0.1518
0.0531	0.0489	514.4002	0.1536
0.311	0.311	568.299	0.075
0.27	0.27	568.299	0.08
0.43	0.43	568.3	0.154
0.419	0.419	568.299	0.069
0.23	0.23	568.299	0.048
0.116	0.116	568.299	0.031
0.108	0.108	568.299	0.029

EMFAC2014 (v1.0.7) Emission Rates

Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2015
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Trips	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSO	ROG_RUNLO
South Coast AQMD	2015	All Other	Aggregated	Aggre	DSL	3455.79169	224390.476	0	0.14263704	0.1219136	0	0	0
South Coast AQMD	2015	LDA	Aggregated	Aggre	GAS	5785047.06	199305362	36367193.6	0.03595269	0	0.20751695	0.18538576	0.36697719
South Coast AQMD	2015	LDA	Aggregated	Aggre	DSL	36744.6005	1391190.39	222133.362	0.05197286	0	0	0	0
South Coast AQMD	2015	LDA	Aggregated	Aggre	ELEC	24945.3963	1196066.24	162099.416	0	0	0	0.00488399	0
South Coast AQMD	2015	LDT1	Aggregated	Aggre	GAS	539386.435	17799424.7	3262444.7	0.11090721	0	0.45813282	0.43606147	1.52851731
South Coast AQMD	2015	LDT1	Aggregated	Aggre	DSL	835.769292	22179.0232	4350.03411	0.21694945	0	0	0	0
South Coast AQMD	2015	LDT1	Aggregated	Aggre	ELEC	494.09913	15635.3402	3011.88505	0	0	0	0.00488399	0
South Coast AQMD	2015	LDT2	Aggregated	Aggre	GAS	1993222.18	73851064.2	12553732.1	0.04409841	0	0.24059552	0.17954375	0.57500827
South Coast AQMD	2015	LDT2	Aggregated	Aggre	DSL	1996.74225	91661.9221	12888.5598	0.0237636	0	0	0	0
South Coast AQMD	2015	LHD1	Aggregated	Aggre	GAS	158435.523	4973493.18	2360453.22	0.08897726	0.38078292	0.59005741	0.16892318	1.14669788
South Coast AQMD	2015	LHD1	Aggregated	Aggre	DSL	81588.8465	3016397.22	1026285.05	0.12504876	0.1097597	0	0	0
South Coast AQMD	2015	LHD2	Aggregated	Aggre	GAS	28011.0766	976807.86	417323.305	0.05665431	0.38967398	0.49284963	0.13398964	0.9383976
South Coast AQMD	2015	LHD2	Aggregated	Aggre	DSL	31314.5819	1245014.58	393898.047	0.10535616	0.1097597	0	0	0
South Coast AQMD	2015	MCY	Aggregated	Aggre	GAS	241010.846	1665377.55	481973.49	2.68416223	0	2.17574168	0.77951895	2.77194309
South Coast AQMD	2015	MDV	Aggregated	Aggre	GAS	1485183.39	50447503.5	9297140.73	0.07572478	0	0.4072914	0.1938889	0.59818016
South Coast AQMD	2015	MDV	Aggregated	Aggre	DSL	11493.0124	499940.996	73643.5438	0.02309351	0	0	0	0
South Coast AQMD	2015	MH	Aggregated	Aggre	GAS	43984.5752	354096.271	4400.2169	0.33374383	0	0.94638856	0.14432533	2.77614343
South Coast AQMD	2015	MH	Aggregated	Aggre	DSL	9972.34145	88265.3456	997.234145	0.09661338	0	0	0	0
South Coast AQMD	2015	Motor C	Aggregated	Aggre	DSL	883.130036	128089.728	0	0.26633595	4.3839272	0	0	0
South Coast AQMD	2015	OBUS	Aggregated	Aggre	GAS	7192.85446	348422.79	143914.632	0.09268494	0.62022073	0.60687273	0.02444562	0.23837465
South Coast AQMD	2015	PTO	Aggregated	Aggre	DSL	0	177848.693	0	0.82725446	0	0	0	0
South Coast AQMD	2015	SBUS	Aggregated	Aggre	GAS	1686.27327	66404.688	6745.09308	0.20015794	8.74078215	1.41917108	0.11343233	1.02933935
South Coast AQMD	2015	SBUS	Aggregated	Aggre	DSL	5065.95299	186211.926	0	0.22153065	0.4965031	0	0	0
South Coast AQMD	2015	T6 Ag	Aggregated	Aggre	DSL	478.079031	8754.41758	0	0.92508629	0.98313233	0	0	0
South Coast AQMD	2015	T6 CAIRF	Aggregated	Aggre	DSL	192.906934	11132.7243	0	0.1081033	0.08401844	0	0	0
South Coast AQMD	2015	T6 CAIRF	Aggregated	Aggre	DSL	543.856418	34174.7158	0	0.20791313	0.12662602	0	0	0
South Coast AQMD	2015	T6 instat	Aggregated	Aggre	DSL	3496.22476	195247.911	0	0.27813562	0.22174786	0	0	0
South Coast AQMD	2015	T6 instat	Aggregated	Aggre	DSL	8904.02717	520842.677	0	0.26410461	0.15201689	0	0	0
South Coast AQMD	2015	T6 instat	Aggregated	Aggre	DSL	25396.5473	1431588.55	0	0.14569624	0.11290257	0	0	0
South Coast AQMD	2015	T6 instat	Aggregated	Aggre	DSL	63473.9435	3701559.28	0	0.28525542	0.16038265	0	0	0
South Coast AQMD	2015	T6 OOS h	Aggregated	Aggre	DSL	111.461344	6378.63261	0	0.06418029	0.04674629	0	0	0
South Coast AQMD	2015	T6 OOS s	Aggregated	Aggre	DSL	311.609289	19580.8278	0	0.20791313	0.12662602	0	0	0
South Coast AQMD	2015	T6 Public	Aggregated	Aggre	DSL	6195.47644	97598.2049	0	0.06169201	0.08872479	0	0	0

EMFAC2014 (v1.0.7) Emission Rates

Region Type: Air District
Region: South Coast AQMD
Calendar Year: 2015
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

South Coast AQMD	2015	T6 utility	Aggregated	Aggre	DSL	1358.32563	26331.1715	0	0.04004637	0.03484086	0	0	0
South Coast AQMD	2015	T6TS	Aggregated	Aggre	GAS	20153.1309	988789.757	403223.842	0.21045687	0.80486246	1.30535546	0.15142553	0.67799241
South Coast AQMD	2015	T7 Ag	Aggregated	Aggre	DSL	392.868541	6532.9138	0	1.52760731	5.2404928	0	0	0
South Coast AQMD	2015	T7 CAIRF	Aggregated	Aggre	DSL	8410.25369	1796800.19	0	0.20989583	6.81357087	0	0	0
South Coast AQMD	2015	T7 CAIRF	Aggregated	Aggre	DSL	627.759581	138507.38	0	0.30604505	8.26416086	0	0	0
South Coast AQMD	2015	T7 NNOC	Aggregated	Aggre	DSL	9202.61344	2228034.47	0	0.09419022	4.46429052	0	0	0
South Coast AQMD	2015	T7 NOOS	Aggregated	Aggre	DSL	3330.07865	709735.544	0	0.15660579	6.93989959	0	0	0
South Coast AQMD	2015	T7 POLA	Aggregated	Aggre	DSL	12744.6672	1694947.32	0	0.24653972	2.25193991	0	0	0
South Coast AQMD	2015	T7 Public	Aggregated	Aggre	DSL	7104.53846	162779.75	0	0.10710047	2.32648447	0	0	0
South Coast AQMD	2015	T7 Single	Aggregated	Aggre	DSL	11745.197	895681.567	0	0.35502533	2.21386364	0	0	0
South Coast AQMD	2015	T7 single	Aggregated	Aggre	DSL	4714.37819	358300.368	0	0.32566832	1.87068823	0	0	0
South Coast AQMD	2015	T7 SWCV	Aggregated	Aggre	DSL	6464.34754	297694.363	0	0.26571621	1.47148406	0	0	0
South Coast AQMD	2015	T7 tractc	Aggregated	Aggre	DSL	14108.3188	2143541.99	0	0.30006731	1.45268403	0	0	0
South Coast AQMD	2015	T7 tractc	Aggregated	Aggre	DSL	3567.03131	267139.407	0	0.46092685	1.76581392	0	0	0
South Coast AQMD	2015	T7 utility	Aggregated	Aggre	DSL	593.699076	13586.3468	0	0.07383669	1.38230111	0	0	0
South Coast AQMD	2015	T7IS	Aggregated	Aggre	GAS	802.983097	90211.2381	16066.0858	0.88137699	0	3.22289085	0.26941884	1.0459181
South Coast AQMD	2015	UBUS	Aggregated	Aggre	GAS	1998.10325	237898.61	7992.41301	1.2857612	0	3.19281619	0.39344038	2.7261576
South Coast AQMD	2015	UBUS	Aggregated	Aggre	DSL	5830.93573	690920.601	23323.7429	1.24645202	0	0	0	0

ROG_RESTLO	ROG_DIURN	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSO/	TOG_RUNLO!	TOG_RESTLO	TOG_DIURN	CO_RUNEX	CO_IDLEX	CO_STREX	NOx_RUNEX
0	0	0.16238141	0.13878936	0	0	0	0	0	0.42875398	0.88906083	0	4.52420398
0.40542812	0.51477057	0.04853344	0	0.22704327	0.18538576	0.36697719	0.40542812	0.51477057	1.24806931	0	2.5764082	0.11019108
0	0	0.05916765	0	0	0	0	0	0	0.40078761	0	0	0.26426643
0.00843567	0.02438172	0	0	0	0.00488399	0	0.00843567	0.02438172	0	0	0	0
0.94890304	1.32066096	0.14608848	0	0.50114667	0.43606147	1.52851731	0.94890304	1.32066096	3.38134255	0	5.87315487	0.31742109
0	0	0.24698252	0	0	0	0	0	0	1.20344214	0	0	1.21466533
0.00781207	0.02311002	0	0	0	0.00488399	0	0.00781207	0.02311002	0	0	0	0
0.4220545	0.50218228	0.06052444	0	0.26330495	0.17954375	0.57500827	0.4220545	0.50218228	1.64106471	0	3.24563839	0.19258894
0	0	0.02705328	0	0	0	0	0	0	0.17636301	0	0	0.08643152
0.04474245	0.08563	0.12699425	0.55488042	0.64577407	0.16892318	1.14669788	0.04474245	0.08563	2.20489914	3.18575687	6.10663164	0.47316555
0	0	0.1423597	0.12495413	0	0	0	0	0	0.78416628	0.90974508	0	4.41540978
0.03464277	0.06639581	0.08183648	0.56837137	0.5395244	0.13398964	0.9383976	0.03464277	0.06639581	1.42547104	3.23784428	5.15824054	0.37618327
0	0	0.11994098	0.12495413	0	0	0	0	0	0.63556848	0.90974508	0	3.47172803
1.4730858	2.4302315	3.22919243	0	2.36550703	0.77951895	2.77194309	1.4730858	2.4302315	22.3022547	0	9.49448693	1.14733072
0.48488229	0.54424561	0.10336879	0	0.44573759	0.1938889	0.59818016	0.48488229	0.54424561	2.46241249	0	4.83184615	0.30906273
0	0	0.02629043	0	0	0	0	0	0	0.26809311	0	0	0.08840157
0.08317509	0.22235099	0.42772338	0	1.03219075	0.14432533	2.77614343	0.08317509	0.22235099	10.0574559	0	13.2628596	1.00645698
0	0	0.10998791	0	0	0	0	0	0	0.45073726	0	0	5.72300416
0	0	0.30320321	4.99076741	0	0	0	0	0	0.89926227	19.5657013	0	8.2630059
0.01956683	0.04257734	0.13285355	0.90294223	0.66377088	0.02444562	0.23837465	0.01956683	0.04257734	2.45421251	5.08640799	9.3291473	0.63481592
0	0	0.94176623	0	0	0	0	0	0	2.83994462	0	0	11.9200033
0.02397066	0.06228052	0.29206999	12.7545288	1.55381369	0.11343233	1.02933935	0.02397066	0.06228052	4.78072968	71.8653771	26.2492349	0.94791135
0	0	0.25219579	0.56523099	0	0	0	0	0	0.56807269	3.66873167	0	9.62086136
0	0	1.05314032	1.11922132	0	0	0	0	0	2.57179078	5.25249416	0	11.9275409
0	0	0.12306738	0.09564859	0	0	0	0	0	0.35074533	0.71509444	0	3.15904133
0	0	0.23669327	0.14415408	0	0	0	0	0	0.68621062	1.32627848	0	3.78459844
0	0	0.31663624	0.25244306	0	0	0	0	0	0.84403804	1.85556568	0	6.65957912
0	0	0.30066299	0.17305966	0	0	0	0	0	0.8391537	1.56432815	0	4.68699684
0	0	0.16586408	0.12853098	0	0	0	0	0	0.44892055	0.93348539	0	3.89367465
0	0	0.32474159	0.18258344	0	0	0	0	0	0.9052439	1.66762272	0	4.90861538
0	0	0.07306437	0.0532171	0	0	0	0	0	0.21735587	0.3956506	0	2.80561268
0	0	0.23669327	0.14415408	0	0	0	0	0	0.68621062	1.32627848	0	3.78459844
0	0	0.07023165	0.10100641	0	0	0	0	0	0.1863416	0.55938707	0	7.34216777

0	0	0.04558974	0.03966367	0	0	0	0	0	0.14206792	0.29326348	0	2.25166112
0.0434891	0.0805341	0.29677562	1.1647106	1.42672674	0.15142553	0.67799241	0.0434891	0.0805341	5.60380634	12.2866251	19.7717141	1.20436073
0	0	1.73906464	5.96590214	0	0	0	0	0	6.22083237	14.9777191	0	18.9346205
0	0	0.23895042	7.75673178	0	0	0	0	0	0.79244232	21.788511	0	5.93525433
0	0	0.348409	9.40811806	0	0	0	0	0	1.09650995	24.0080255	0	8.196748
0	0	0.1072284	5.08225492	0	0	0	0	0	0.42301296	16.0391598	0	3.36252503
0	0	0.17828377	7.90054741	0	0	0	0	0	0.59977156	24.4170122	0	5.54758708
0	0	0.28066671	2.56366217	0	0	0	0	0	0.78178456	9.06210724	0	6.90578456
0	0	0.12192574	2.64852548	0	0	0	0	0	0.44968512	8.08319	0	12.649576
0	0	0.40416931	2.52031523	0	0	0	0	0	1.35218521	8.13374899	0	9.2216265
0	0	0.37074859	2.12963615	0	0	0	0	0	1.20296299	7.48457344	0	9.0410866
0	0	2.97708176	2.37512964	0	0	0	0	0	5.39426096	9.52036719	0	13.6650403
0	0	0.34160379	1.65377019	0	0	0	0	0	1.07898898	5.78173026	0	7.68360291
0	0	0.52473014	2.01024473	0	0	0	0	0	1.69172227	7.18073665	0	9.91832371
0	0	0.08405745	1.57364459	0	0	0	0	0	0.28797703	5.81292132	0	4.50228627
0.05703054	0.09463613	1.22421583	0	3.51575814	0.26941884	1.0459181	0.05703054	0.09463613	38.9972294	0	70.7157445	4.24082662
0.04775112	0.09291248	1.82305686	0	3.49378849	0.39344038	2.7261576	0.04775112	0.09291248	14.4653727	0	44.4079767	2.49314283
0	0	5.76796356	0	0	0	0	0	0	15.8566502	0	0	19.6773133

NOx_IDLEX	NOx_STREX	CO2_RUNEX	CO2_IDLEX	CO2_STREX	PM10_RUNE	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW	PM2_5_RUNI	PM2_5_IDLE	PM2_5_STRE
7.18590319	0	1185.05843	714.193999	0	0.05716335	0.03119748	0	0.012	0.13034004	0.05469048	0.02984789	0
0	0.18555879	338.485351	0	70.3532656	0.00207033	0	0.00265579	0.008	0.03675001	0.00190789	0	0.00244919
0	0	316.06474	0	0	0.03436066	0	0	0.008	0.03675001	0.03287423	0	0
0	0	0	0	0	0	0	0	0.008	0.03675001	0	0	0
0	0.34851809	391.381235	0	81.034679	0.00484085	0	0.00531876	0.008	0.03675001	0.00446842	0	0.00491069
0	0	412.159762	0	0	0.16302967	0	0	0.008	0.03675001	0.15597708	0	0
0	0	0	0	0	0	0	0	0.008	0.03675001	0	0	0
0	0.32535622	454.741347	0	94.4780728	0.00204103	0	0.00246966	0.008	0.03675001	0.00188086	0	0.00227597
0	0	396.57311	0	0	0.00869917	0	0	0.008	0.03675001	0.00832284	0	0
0.03200667	1.84968353	749.737306	116.346899	56.8918465	0.00177273	0	0.00230522	0.008	0.07644002	0.00163278	0	0.00212818
2.59609421	0	512.964915	141.543646	0	0.028524	0.02872813	0	0.012	0.07644002	0.02729006	0.02748536	0
0.03284822	1.74143882	821.745975	135.318863	66.6612911	0.00133462	0	0.00168668	0.008	0.08918003	0.00122796	0	0.00155357
2.59609421	0	563.779543	226.037572	0	0.02462903	0.02866469	0	0.012	0.08918003	0.02356359	0.02742467	0
0	0.30884426	176.427147	0	48.6884559	0.00175254	0	0.00471873	0.004	0.01176	0.00165291	0	0.00448221
0	0.48828024	590.646638	0	122.063503	0.00218824	0	0.00283169	0.008	0.03675001	0.00201838	0	0.0026109
0	0	520.69039	0	0	0.01170599	0	0	0.008	0.03675001	0.01119959	0	0
0	1.36769302	1166.0574	0	93.8392981	0.00341573	0	0.00439025	0.012	0.13034004	0.00318001	0	0.00412636
0	0	997.984885	0	0	0.16355789	0	0	0.016	0.13034004	0.15648245	0	0
127.904142	0	1746.01088	11924.6986	0	0.08609705	0.38516283	0	0.012	0.13034004	0.08237253	0.36850085	0
0.05236307	1.48224606	1177.643	375.254523	79.390778	0.00071636	0	0.00118894	0.012	0.13034004	0.00066026	0	0.00110846
0	0	2217.6255	0	0	0.27065867	0	0	0	0	0.25895009	0	0
0.74137107	1.94556874	676.268512	2514.93547	127.474118	0.0018791	0	0.00221057	0.008	0.74480021	0.00172776	0	0.00203254
52.9172648	0	1317.15821	3731.53554	0	0.09684241	0.14887585	0	0.012	0.74480021	0.09265305	0.14243554	0
9.94671922	0	1108.89639	621.32608	0	0.60156885	0.31605182	0	0.012	0.13034004	0.57554524	0.30237955	0
6.13511215	0	1133.64835	707.51002	0	0.05356602	0.02103082	0	0.012	0.13034004	0.05124877	0.02012103	0
7.63503659	0	1148.3861	705.78329	0	0.15509241	0.04167856	0	0.012	0.13034004	0.14838318	0.03987556	0
9.64754303	0	1147.44275	696.363237	0	0.15924996	0.07355289	0	0.012	0.13034004	0.15236088	0.07037102	0
8.4140882	0	1157.84542	708.735599	0	0.17446878	0.05059369	0	0.012	0.13034004	0.16692134	0.04840503	0
7.13132273	0	1146.90407	713.272469	0	0.06628791	0.02969983	0	0.012	0.13034004	0.06342032	0.02841503	0
8.90429482	0	1157.46914	708.520692	0	0.19227247	0.05475323	0	0.012	0.13034004	0.18395485	0.05238463	0
5.64973444	0	1138.10185	709.896695	0	0.02130945	0.00731235	0	0.012	0.13034004	0.02038761	0.00699602	0
7.63503659	0	1148.3861	705.78329	0	0.15509241	0.04167856	0	0.012	0.13034004	0.14838318	0.03987556	0
9.03717108	0	1166.94999	673.333278	0	0.03894158	0.02632137	0	0.012	0.13034004	0.03725698	0.02518272	0

5.06473904	0	1188.85801	711.004612	0	0.0099153	0.00238238	0	0.012	0.13034004	0.00948637	0.00227932	0
0.06898224	2.55255074	1181.53713	536.253599	125.577621	0.00146954	0	0.00364161	0.012	0.13034004	0.00135804	0	0.0034017
24.2736734	0	1705.33919	1932.22355	0	0.99129804	0.95576052	0	0.03600001	0.06174002	0.94841493	0.91441475	0
149.981872	0	1618.3527	25892.4275	0	0.07569674	0.55798404	0	0.03600001	0.06174002	0.07242213	0.5338459	0
156.106224	0	1697.13988	22468.5848	0	0.13323423	0.92330413	0	0.03600001	0.06174002	0.12747058	0.88336241	0
124.925543	0	1557.20433	32526.3142	0	0.02051116	0.14193412	0	0.03600001	0.06174002	0.01962385	0.13579411	0
187.511679	0	1617.50222	33151.6083	0	0.04258377	0.34904736	0	0.03600001	0.06174002	0.04074162	0.33394773	0
65.2672307	0	1790.00901	9694.02058	0	0.03135937	0.01410161	0	0.03600001	0.06174002	0.03000278	0.01349158	0
95.9284372	0	1758.4399	8082.52944	0	0.07298464	0.34064074	0	0.03600001	0.06174002	0.06982735	0.32590477	0
30.8882377	0	1695.07833	3045.5662	0	0.19051332	0.31381045	0	0.03600001	0.06174002	0.1822718	0.30023515	0
30.4539334	0	1683.01191	3156.12384	0	0.15822672	0.24272788	0	0.03600001	0.06174002	0.15138191	0.23222758	0
89.7495692	0	4264.41208	8115.95785	0	0.01487395	0.28813313	0	0.03600001	0.06174002	0.01423051	0.27566862	0
35.9702945	0	1648.78339	4467.22711	0	0.10548058	0.10827647	0	0.03600001	0.06174002	0.10091754	0.10359248	0
31.7790077	0	1690.37779	3201.21608	0	0.22232737	0.22152021	0	0.03600001	0.06174002	0.21270959	0.21193734	0
60.5179458	0	1692.92429	8183.36288	0	0.01661678	0.04144793	0	0.03600001	0.06174002	0.01589794	0.03965491	0
0	4.94782026	1834.05245	0	194.621041	0.00130094	0	0.00744788	0.02000001	0.06174002	0.00121366	0	0.00705014
0	5.30233753	1718.40687	0	317.631553	0.00380777	0	0.00404867	0.012	0.13034004	0.00352874	0	0.00375063
0	0	2227.65089	0	0	0.27408048	0	0	0.012	0.84182024	0.26222388	0	0

PM2_5_PMT	PM2_5_PMB	SOx_RUNEX	SOx_IDLEX	SOx_STREX
0.003	0.05586002	0.01130601	0.00681374	0
0.002	0.01575	0.00339968	0	0.00074955
0.002	0.01575	0.00301735	0	0
0.002	0.01575	0	0	0
0.002	0.01575	0.003964	0	0.00091619
0.002	0.01575	0.00393473	0	0
0.002	0.01575	0	0	0
0.002	0.01575	0.00456663	0	0.00100195
0.002	0.01575	0.00378593	0	0
0.002	0.03276001	0.007522	0.00122755	0.00068325
0.003	0.03276001	0.00489708	0.00135126	0
0.002	0.03822001	0.00822723	0.00141813	0.00076267
0.003	0.03822001	0.00538219	0.00215789	0
0.001	0.00504	0.00220591	0	0.0007064
0.002	0.01575	0.00593735	0	0.00130772
0.002	0.01575	0.00497083	0	0
0.003	0.05586002	0.01180962	0	0.00117596
0.004	0.05586002	0.00952738	0	0
0.003	0.05586002	0.01665776	0.1137672	0
0.003	0.05586002	0.01179734	0.00385189	0.00095892
0	0	0.02115718	0	0
0.002	0.31920009	0.00683388	0.02660374	0.00173129
0.003	0.31920009	0.01256631	0.03560059	0
0.003	0.05586002	0.01057939	0.00592774	0
0.003	0.05586002	0.01081554	0.00674998	0
0.003	0.05586002	0.01095614	0.0067335	0
0.003	0.05586002	0.01094714	0.00664363	0
0.003	0.05586002	0.01104639	0.00676167	0
0.003	0.05586002	0.010942	0.00680495	0
0.003	0.05586002	0.0110428	0.00675962	0
0.003	0.05586002	0.01085802	0.00677275	0
0.003	0.05586002	0.01095614	0.0067335	0
0.003	0.05586002	0.01113325	0.00642391	0

0.003	0.05586002	0.01134226	0.00678332	0
0.003	0.05586002	0.01189041	0.00557955	0.00160686
0.009	0.02646001	0.01626973	0.01843432	0
0.009	0.02646001	0.01543984	0.24702586	0
0.009	0.02646001	0.01619151	0.2143608	0
0.009	0.02646001	0.01485646	0.31031624	0
0.009	0.02646001	0.01543173	0.31628184	0
0.009	0.02646001	0.01707752	0.09248549	0
0.009	0.02646001	0.01677634	0.07711111	0
0.009	0.02646001	0.01617184	0.02905613	0
0.009	0.02646001	0.01605672	0.0301109	0
0.009	0.02646001	0.02614458	0.04410811	0
0.009	0.02646001	0.01573016	0.04261943	0
0.009	0.02646001	0.01612699	0.0305411	0
0.009	0.02646001	0.01615129	0.07807311	0
0.005	0.02646001	0.01895463	0	0.00315832
0.003	0.05586002	0.01743299	0	0.00397305
0.003	0.3607801	0.00910361	0	0