DRAFT
INITIAL STUDY AND NEGATIVE DECLARATION
Removal of Underground Storage Tanks at Cabrillo Marina, Berth 31, Port of Los Angeles

APP No. 161121-169

SCH No. [TBD]

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THE PORT OF LOS ANGELES

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Removal of Underground Storage Tanks at Cabrillo Marina Project, Berth 31, Port of Los Angeles

Draft Initial Study and Negative Declaration

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

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1. INTRODUCTION

The City of Los Angeles Harbor Department (LAHD) has prepared this Initial Study/Negative Declaration (IS/ND) to address potential environmental effects associated with the removal of three 10,000-gallon underground storage tanks (USTs) and all associated electrical utilities, pumps, conveyances, and fuel dispensers at Cabrillo Marina, Berth 31 (proposed Project). This IS/ND also addresses potential environmental effects associated with possible additional soil remediation activities, as necessary, following the excavation and removal of the tanks. Cathay Bank (Applicant) is the owner of all developments at the Project site, including the USTs and all associated equipment. The USTs, which include two diesel tanks and one gasoline tank, were originally installed in 1985 and are located beneath an existing parking lot adjacent to the west of an LAHD-owned mixed-use facility comprised of office and retail space as well as a banquet and meeting facility. In August 1992, petroleum hydrocarbon odors were detected coming from the sewer system beneath the Project site. Odors were also detected inside the former Madeo Restaurant (now a banquet and meeting room for the Doubletree Hotel), which is located adjacent to the USTs and connected to the same sewer system. Water samples collected by LAHD indicated the presence of gasoline within the adjacent Cabrillo Marina. A Phase II Environmental Site Assessment conducted in October 1992 identified soil and groundwater contamination in the area surrounding the tanks (Pacific Edge Engineering, Inc. 2012). The source of the contamination was found to be the piping connection to the 10,000-gallon gasoline UST, which had shifted over time causing a leak. The leak was reported by LAHD to the Los Angeles Regional Water Quality Control Board (LARWQCB) in August 1992, and groundwater remediation/monitoring resulting from the leak is on-going under LARWQCB Case No. 907310061A.

The proposed Project would be executed in either one or two phases (depending upon the presence of contamination beneath the UST and/or associated equipment).

Phase I – UST Removal under Permit from the City of Los Angeles Fire Department (LAFD). This phase of work would consist of the physical removal of the three USTs and all associated electrical utilities, pumps, conveyances lines, fuel dispensers, and other appurtenances[1] associated with the USTs. During the removal phase, the LAFD requires the collection of soil samples beneath each UST (and associated pipelines) and from the sidewalls of the excavation. The LAFD Inspector may also direct the excavation of a limited amount of chemically impacted soil, if present.

To enable the excavation, a 35-foot by 35-foot area of the existing parking lot (i.e., concrete and asphalt pavements) overlying the tanks would be demolished and removed. Following the

[1] UST appurtenances include electrical utilities, pumps, conveyance lines, fuel dispensers, etc. Specifically, appurtenances do not include remediation equipment, monitoring wells, or other piping associated with LARWQCB case No. 907310061A. Only LARWQCB can direct/approve Cathay Bank as to removal of monitoring and remediation equipment.

removal of the tanks and sampling of the soils as directed, the excavation would be backfilled with clean fill and repaved with asphalt consistent with the existing parking lot material and grade.

Phase II – Potential Additional Soil and/or Groundwater Remediation. If extensive soil and/or groundwater contamination is identified upon initial excavation and removal of the USTs, additional remediation may be required by the LARWQCB. This phase of the proposed Project, if necessary, may involve additional excavation of chemically impacted soils and/or treatment of groundwater. Based on the information currently available (e.g., previous investigations and monitoring reports), it is estimated that a volume of approximately 700 tons or 518 cubic yards of contaminated soil (i.e., 35-40 truckloads), from an estimated 1,600 square foot area, could potentially be present. Additional asphalt and/or concrete above this area would need to be removed prior to the excavation of the contaminated soil. Following the completion of all additional remediation activities, the excavation would be backfilled and repaved with asphalt consistent with the existing parking lot material and grade.

1.1 CEQA PROCESS

This document has been prepared in accordance with California Environmental Quality Act (CEQA), Public Resources Code Section 21000 *et seq*. and the State CEQA Guidelines, California Code of Regulations (CCR) Section 15000 *et seq*. 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. The LAHD will consider the information in this document when determining whether to approve and issue appropriate permits for the proposed Project.

One of the main objectives of CEQA is to disclose to the public and decision-makers potential environmental effects of proposed activities. CEQA requires that the potential environmental effects of a project be evaluated prior to implementation. Preparation of an IS is guided by Section 15063 of the CEQA Guidelines, whereas Sections 15070–15075 guide the process for the preparation of a Negative Declaration or Mitigated Negative Declaration. Where appropriate and supportive to an understanding of the issues, reference will be made to the statute, the CEQA Guidelines, or appropriate case law. This IS/ND includes a discussion of the proposed Project's potential impact on the existing environment and identifies standard construction-related best management practices (BMPs) and LAHD's Environmental Guidance for Industrial Fill Material (February 2016). The LAHD has determined that an IS/ND is the appropriate level of CEQA-compliant documentation for the proposed Project because potential environmental impacts resulting from proposed Project implementation would be below significance thresholds, resulting in no requirement for mitigation.

In accordance with the CEQA statutes and Guidelines, this IS/ND will be circulated for a period of 30 days for public review and comment. The public review period is scheduled to begin on May 1, 2017, and end on May 31, 2017. This Draft IS/ND will be distributed to Responsible

public agencies, other interested or involved agencies, organizations, and private individuals for review and will be made available for general public review online at the Port of Los Angeles website at http://www.portoflosangeles.org and in hardcopy at the LAHD Environmental Management Division at 222 W 6th Street, Suite 900, 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 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 either through mail or email prior to the end of the 30-day public review period on May 31, 2017. All correspondence, through mail or email, should include the project title "Underground Storage Tank Removal at Cabrillo Marina, Berth 31" in the subject line. For additional information, please contact the LAHD Environmental Management Division at (310) 732-3675.

Written comments submitted by mail must be postmarked on or before May 31, 2017 and addressed to:

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

Written comments sent via email on or before May 31, 2017 should be addressed to cegacomments@portla.org.

Responses to all public comments on the Draft IS/ND will be included in the Final IS/ND and considered by the LAHD prior to making a decision as to whether necessary approvals should be granted for the proposed Project. The project IS/ND will only be approved when the 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."

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. Upon completion of the IS, 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). Upon completion of the IS, 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.

2. PROJECT DESCRIPTION

This IS/ND has been prepared to evaluate the potential environmental impacts associated with the proposed excavation and removal of three 10,000-gallon USTs and associated equipment at 210 Whalers Walk, Cabrillo Marina, Berth 31 (proposed Project). Under the proposed Project, Cathay Bank (Applicant) would excavate and remove the three USTs (including a 10,000-gallon gasoline tank that was determined to have leaked at its piping connection and was subsequently repaired). Specifically, the proposed Project would include installation of shoring (i.e., temporary support structures to facilitate excavation); demolition and removal of the existing overlying concrete slab and surrounding asphalt pavements; and soil excavation to facilitate removal of the three USTs and all associated electrical utilities, pumps, conveyance lines, fuel dispensers, and other appurtenances. Following removal of the three USTs and all visibly stained soils to the satisfaction of the LAFD Inspector, the base and the sidewalls of the excavation would be sampled as directed by the Inspector. Once sampling is completed, the excavation would be backfilled and repaved with asphalt consistent with the material and grade of the existing parking lot at the Project site. However, if extensive soil and/or groundwater contamination is identified during sampling, additional remediation of the soil and/or groundwater may be required by the LARWQCB. This potential phase of work may involve additional excavation of chemically impacted soils and/or treatment of groundwater. Based on available information (e.g., previous investigations and monitoring reports), it is estimated that a volume of approximately 700 tons or 518 cubic yards of contaminated soil (i.e., between 35 and 40 truckloads) could potentially be present within a 1,600-square-foot area adjacent to the tanks. Additional asphalt and/or concrete above this area would need to be removed prior to the excavation of the contaminated soil. Following the completion of contaminated soil excavation and any other additional remediation activities, the area would be backfilled and repaved with asphalt consistent with the existing parking lot material and grade. If any free-floating hydrocarbon is observed, LAHD would notify LARWQCB and the free-floating hydrocarbon would be skimmed and removed as deemed necessary.

2.1 PROJECT LOCATION

Regional Location

The Port of Los Angeles (POLA) is located at the southernmost portion of the City of Los Angeles and encompasses approximately 7,500 acres of land and water along 43 miles of waterfront, with approximately 270 commercial berths and 24 passenger and cargo terminals. It is located approximately 23 miles south of Downtown Los Angeles and is surrounded by the community of San Pedro to the west, the community of Wilmington to the north, the Port of Long Beach to the east, and the Pacific Ocean to the south (see Figure 1).

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Regional Location

FIGURE 1

POLA operations are predominately centered on shipping activities, cruise ships, and commercial fishing; however, the POLA is an area of mixed uses, supporting various maritime-based activities. The POLA has retail shops and restaurants, primarily located along the west side of the Main Channel. The POLA also includes 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. The Cabrillo Marina

Source: California Coastal Records Project, Kenneth & Gabrielle Adelman 2015 ©.

Project Setting

Figure 3. Project Site at 210 Whalers Walk

Cathay Bank's approximately 16,465-square-foot former premises are located within the Cabrillo Marina, one of 15 marinas at the POLA. The Cabrillo Marina contains the Double Tree Hotel and associated restaurant and retail facilities, Cabrillo Plaza, the Los Angeles Yacht Club, harbor and yacht facilities, and a large surface parking lot (refer to Figure 2). The Project site is located immediately adjacent to the west of an LAHD-owned mixed-use facility, comprised of office and retail space as well as a banquet and meeting space, on the eastern end of the marina. The Project site is surrounded by the Cabrillo Yacht Marina to the east and surface parking to the west, north, and south (see Figure 3 and Figure 5).

Landside access to Cabrillo Marina 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-170), the San Diego Freeway (I-405), and the Seaside Freeway (State Route [SR]-47). The Project site is located off the Harbor Freeway at the North Harbor Boulevard exit, from Via Cabrillo Marina at Whalers Walk.

Land Use and Zoning

Figure 4. USTs within the Project Area

The Project site is located within Planning Area 1 of the Port of Los Angeles Master Plan (LAHD 2014). Planning Area 1 encompasses the San Pedro Waterfront, from the breakwater to the Vincent Thomas Bridge along the western boundary of the POLA. Planning Area 1 extends from Berths 19 to 95 and primarily includes land uses focused on public access to the waterfront for institutional and recreational uses, cruise ship operations, cargo, and fishing activities. Planning Area 1 emphasizes waterfront access through a waterfront promenade, parks, museums, academic uses, and visitor-serving commercial uses and attractions.

The Project site is identified as Assessor's Parcel Number (APN) 7440039911 and is designated as recreation and commercial land uses under the City of Los Angeles General Plan and is zoned quasi-public light industrial ([Q]M2-1) under the City of Los Angeles Zoning Ordinance.

2.2 PROJECT BACKGROUND AND OBJECTIVES

Project Background

Cathay Bank (Applicant) is the owner of all developments at the Project site, including the three 10,000-gallon USTs and all associated electrical utilities, pumps, conveyance lines, fuel dispensers, and other appurtenances installed in 1985. In August 1992, petroleum hydrocarbon odors were discovered in the sewer system beneath the Project site. Odors were also detected inside the former Madeo Restaurant adjacent to the USTs and connected to the same sewer system, which prompted LAHD investigation. Water samples collected by LAHD indicated the presence of gasoline within the adjacent Cabrillo Marina in the Berth 31 area and a Phase II Environmental Site Assessment, conducted in October 1992 identified soil and groundwater contamination in the area surrounding the tanks (Pacific Edge Engineering, Inc. 2012). The source of the contamination was found to be the piping connection to the 10,000-gallon gasoline UST which had shifted over time causing a leak. No leaks were identified from the two 10,000-gallon diesel tanks at the time of assessment. The leak was reported by LAHD to the

LARWQCB in August 1992 and repaired. Groundwater remediation/monitoring resulting from the leak is on-going under LARWQCB Case No. 907310061A.

Cathay Bank, the responsible party under the jurisdiction of LARWQCB Case Number 907310061A, prepared and submitted a Remedial Action Plan (RAP) on June 6, 2006. The RAP was approved by LARWQCB on November 30, 2009. As indicated in the RAP and other site reports, contaminant levels of concern were primarily in groundwater and included gasoline components methyl tert-butyl ether (MTBE) and tert-butyl alcohol (TBA). Other contaminants including total petroleum hydrocarbons (i.e., gasoline), benzene, toluene, ethylbenzene and xylenes (BTEX) were also identified within the groundwater but were of lesser concern, as BTEX is less soluble in groundwater and can be more easily oxidized.

The approved RAP recommended installation of a vapor extraction system with groundwater circulation wells to remediate soil and groundwater beneath the site. A dual phase extraction remediation system was implemented with treated groundwater discharges under a National Pollutant Discharge Elimination System (NPDES) permit with remediation activities beginning in July 2011. However, the system was shut down in mid-2014 as the LARWQCB changed the copper discharge limit to a range that was below what the system was capable of meeting. The system has not been in operation since 2014.

Concession Agreement No. 518 (CA518) between the LAHD and Cathay Bank expired on December 31, 2015. Prior to the expiration of the agreement, in October 2015, LAHD began working with Cathay Bank to develop an agreement for clean-up of any residual contamination, including removal of the USTs, and ultimately closure of LARWQCB Case No. 907310061A associated with the leak from the gasoline tank. In November 2016, Cathay Bank submitted an Application for POLA Permit (No. 161121-169) to carry out the excavation and removal of the USTs, consistent with the vacating terms of CA518.

Project Objective

The objective of the proposed Project is to excavate and remove the three 10,000-gallon USTs (including a 10,000-gallon gasoline tank that was determined to have leaked), electrical utilities, conveyances, fuel dispensers, and all other appurtenances as well as the surrounding contaminated soils as directed by LAFD. If extensive soil and/or groundwater contamination is identified upon removal of the USTs, additional remediation may be required by the LARWQCB (see Section 2.3, *Proposed Project Construction Activities*). This potential phase of work may involve additional excavation of chemically impacted soils and/or skimming or other treatment of groundwater. Based on available information (e.g., previous investigations and monitoring), it is estimated that a volume of approximately 700 tons or 518 cubic yards (i.e., between 35 and 40 truckloads) of contaminated soil could potentially be present within a 1,600-square-foot area adjacent to the tanks.

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Project Site – Cathay Bank Removal of Leaking Underground Storage Tanks Cabrillo Marina, Berth 31

FIGURE 5

2.3 PROPOSED PROJECT CONSTRUCTION ACTIVITIES

Construction activities associated with Phase I include removing existing paving, excavating the surrounding soil, removing the three USTs and associated appurtenances, testing for any residual soil contamination, backfilling the excavation with clean fill, and repaving with asphalt consistent with the surrounding parking lot. Soil samples will be taken along the walls of the tank and pipeline trenches prior to backfilling to be used by LARWQCB in determining the need for additional remediation (i.e., Phase II), which would be conducted separately after the completion of all backfilling activities and repaving in Phase I.

Phase II of the proposed Project, if necessary, would include removal of existing paving, excavation of approximately 700 tons or 518 cubic yards of soil, backfilling the excavation with clean fill, and repaving with asphalt consistent with the surrounding parking lot and grade. This remediation would occur in accordance with all applicable federal, state, and local laws and regulations as enforced by various agencies (e.g., U.S. Environmental Protection Agency [USEPA], State Department of Toxic Substances Control [DTSC], and LARWQCB).

UST Removal (Phase I)

Figure 6. USTs Removal

Prior to the initiation of construction, all electrical power to the three USTs would be disconnected, residual fluids would be removed, and the tanks would be washed. Additionally, vertical shoring would be installed to ensure the continued geotechnical stability of the existing mixed-use facility, which would be located approximately 11 feet from the edge of the excavation. A minimum of a 35-foot by 35-foot area would be excavated over the existing USTs to a depth sufficient to remove the USTs as directed by LAFD (assumed to be approximately 12 feet). Following preparation activities, the concrete slab and surrounding asphalt pavement covering the three USTs (up to approximately 23 cubic yards assuming a 6-inch pavement depth over the Project area) would be demolished and recycled off-site at a permitted facility within approximately 110 miles from the POLA. Approximately 290 cubic yards of soil would be required for the initial tank removal during Phase I of the proposed Project. Additionally, removal of a limited amount of chemically impacted soil would likely be implemented as directed by LAFD. During excavation, the soil would be stockpiled a minimum of 5 feet from the edge of the open excavation. Volatile organic compounds (VOCs) would be monitored during excavation activities in accordance with South Coast Air Quality Management District (SCAQMD) Rule 1166. Excavated soils would be removed from the Project site using haul trucks and disposed of at an approved disposal site in accordance with all regulations surrounding transport and disposal of such material. For

purposes of this assessment, soil was assumed to be transported to Soil Safe, Inc., a thermal desorption facility, located at 12328 Hibiscus Road, Adelanto, California for disposal; however, these soils could be disposed of at another approved facility of similar distance from the POLA.

The LAFD Inspector would oversee the rinsing of the three USTs and a marine chemist would verify that the tanks are clean and ready for removal. The tanks would be lifted from the open excavation using a crane and loaded onto flatbed trailers for recycling off-site at Ecology Recycling, located at 13780 East Imperial Hwy, Santa Fe Springs, CA 90670, or another similar facility at a similar distance from the Project site. Additionally, the proposed Project would remove electrical utilities, pumps, conveyance lines, fuel dispensers, and other appurtenances associated with the USTs. Following the collection of soil samples, the excavation would be backfilled with clean pea gravel material from the bottom of the excavated area to 5 feet below ground surface. A filter fabric would be installed over the pea gravel and the remaining 5 feet would be backfilled to grade and compacted to 90 percent with clean fill that meets the requirements of the LAHD Environmental Guidance for Industrial Fill Material (February 2016). The fill material would be sourced from Hanson Aggregates located at 13550 Live Oak Ave, Irwindale, CA 91706 or a similar facility located at a similar distance from the Project site. After the excavation has been filled, shoring would be removed and this area would be repaved with asphalt and restriped to match the existing parking lot.

Potential Additional Soil and/or Groundwater Remediation (Phase II)

This potential phase of work may involve additional excavation of chemically impacted soils and/or treatment of groundwater following initial excavation and removal of the three USTs. Based on available information (e.g., previous investigations and monitoring reports), it is estimated that a volume of approximately 700 tons or 518 cubic yards of contaminated soil (i.e., 35-40 truckloads), from an estimated 1,600-square-foot area, could occur adjacent to the tanks and piping. The paving overlaying the excavation site (up to approximately 30 cubic yards) would be demolished and recycled off-site and the contaminated soil would be excavated and disposed of at the DTSC-approved disposal site. Following the completion of the remediation activities, the excavation would be backfilled with clean pea gravel, filter fabric, and compacted soil similar to Phase I. Additionally, similar to Phase I, the excavation under Phase II would be repaved to match the existing surrounding parking lot area.

Construction Timing, Equipment, and Staging

UST Removal (Phase I)

The Phase I construction activities necessary to remove the three 10,000-gallon USTs would occur over approximately 12 days (see Table 1). Consistent with the City of Los Angeles Noise Ordinance (Ordinance No. 144.331; 41.40 Los Angeles Municipal Code), construction activities would occur Monday through Friday from the hours of 7:00 AM to 5:00 PM.

Table 1. Phase I Construction Activities Schedule

Construction Activity	Duration
Install Shoring and Removal of Dockside Piping	3 days
Remove Concrete and Soils	3 days
Wash and Remove Tanks	2 days
Backfill and Compact Soils	2 days
Remove Shoring, Repave, and Restripe Parking Spaces	2 days

Activities associated with the proposed Project would require the use of a crane, an excavator, a dry vacuum truck (including a portable thermal oxidizer to degas the USTs prior to removal), a backhoe, and a roller. A one-time water truck delivery would be required to provide water to rinse the USTs prior to removal. Additionally, flatbed trailers would be used to remove the three USTs and heavy haul dump trucks would remove excavated soils and deliver clean fill.

During Phase I, approximately 29 truck trips would be required to remove the pavement and excavated soil and an additional 29 truck trips would be required to deliver clean fill. (The average tandem axel commercial dump truck holds anywhere from 10 to 14 cubic yards of soil.) During the 3-day excavation period, it is anticipated that there would be a maximum of 10 truck trips per day; however, during the two-day backfill and soil compaction period, there could be as many as 15 truck trips per day. The staging area for stockpiled soils, backfill materials, construction supplies, and equipment would be located adjacent to the site on the west side of the existing building. The Project site, including the construction staging area, would be fenced and screened, which could temporarily eliminate up to eight parking spaces within the parking lot.

Potential Additional Soil and/or Groundwater Remediation (Phase II)

Depending on the results of the sampling of soil beneath each UST and associated pipelines and from the sidewalls of the excavation, additional excavation of a certain amount of chemically impacted soil may be necessary. This potential phase of work may involve additional excavation of chemically impacted soils and/or treatment of groundwater. Based on available information (e.g., previous investigations and monitoring reports), it is estimated that a volume of approximately 700 tons or 518 cubic yards of contaminated soil could potentially be present in an approximately 1,600-square-foot area adjacent to the tanks. These additional potential construction activities under Phase II of the proposed Project could require an additional 15 days of construction.

Table 2. Phase II Construction Activities Schedule

Construction Activity	Duration
Install Shoring	4 days
Remove Concrete and Soils	5 days
Backfill and Compact Soils	3 days
Remove Shoring, Repave, and Restripe Parking Spaces	3 days

As with Phase I, activities associated with Phase II would require the use of an excavator, a dry vacuum truck, a backhoe, and a roller. Additionally, heavy haul dump trucks would remove excavated soils and deliver clean fill.

During Phase II, approximately 35-40 truck trips would be required to remove the pavement and excavated soil and an additional 35-40 truck trips would be required to deliver clean fill. During the 5-day excavation period, it is anticipated that there would be a maximum of 8 truck trips per day; however, during the two-day backfill and soil compaction period, there could be as many as 20 truck trips per day. As with Phase I, the staging area for stockpiled soils, backfill materials, construction supplies, and equipment associated with Phase II would be located adjacent to the site on the west side of the existing building. The Project site, including the construction staging area, would be fenced and screened, which could temporarily eliminate up to eight parking spaces within the parking lot.

Construction Best Management Practices

Below is a list of construction BMPs and standard conditions that are requirements of all permits issues by the LAHD and would be implemented during Project construction. BMPs comprise regulatory compliance measures that the LAHD regularly implements as part of their activities, as appropriate. These are different from “mitigation measures,” which are defined as project specific requirements and necessary to reduce identified potentially significant adverse environmental impacts to *less-than-significant* levels. *No project-specific mitigation measures are needed to reduce impacts to less-than-significant levels.*

Air Quality:

- All trucks would be required to cover their loads as required by California Vehicles Code Section 23114 and consistent with the *LAHD Sustainable Construction Guidelines for Reducing Air Emissions* (LAHD 2009).
- Fugitive dust would be controlled in compliance with SCAQMD Rule 403 and *LAHD Sustainable Construction Guidelines for Reducing Air Emissions* (LAHD 2009). All excavated material, backfill material, exposed soil areas would be treated to prevent fugitive dust. Treatment would include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization material, and/or roll-

compaction. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.

- Consistent with SCAQMD Rule 403 and *LAHD Sustainable Construction Guidelines for Reducing Air Emissions* (LAHD 2009) during periods of winds 25 miles per hour or greater (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties) or at the direction of the LAHD, all excavation operations would be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site.
- Construction equipment idling time is limited to 5 minutes when not in use, consistent with the *LAHD Sustainable Construction Guidelines for Reducing Air Emissions* (LAHD 2009) and California Air Resources Board (CARB) Airborne Toxic Control Measure to limit idling of diesel-fueled commercial motor vehicles (CCR, Title 13, Section 2485).
- Implementation of all applicable requirements for On-Road and Off-Road Trucks consistent with the *LAHD Sustainable Construction Guidelines for Reducing Air Emissions* (LAHD 2009).

Noise:

- The proposed Project would comply with Los Angeles Municipal Code Section 112.05, *Maximum Noise Level of Powered Equipment or Powered Hand Tools*.

Hazardous Materials:

- A marine chemist would verify that the USTs are clean prior to removal.
- The Project would follow guidelines and procedures within the *LAHD 2016 Environmental Guidance for Industrial Fill Materia*l, which determine the suitability of soil and fill materials for industrial land uses and states allowable chemical concentrations.
- Maintain equipment according to manufacturer's specifications consistent with the *LAHD Sustainable Construction Guidelines for Reducing Air Emissions* (LAHD 2009).

Utilities:

- Underground Service Alert (USA) would be contacted to mark all known utilities on adjacent public property. If utility lines are encountered at any point during excavation, the construction crew would cease the use of heavy machinery and hand dig until the utility is fully located.

Geology and Soils:

- A standard 12-inch high berm would be required at the top of all graded slopes associated with the excavation.
- Temporary erosion control measures would be installed for all work completed between October 1 and April 15. Approval of the proposed procedures would be required from the City of Los Angeles grading inspector.

- A soil engineer would observe and approve compaction activities. This soil engineer would certify the base elevation of the excavation prior to any compaction operations.
- No fill would be placed until the City grading inspector inspects and approves the base elevation of the excavation.
- The compaction report would be submitted to the City grading division for review and approval.

Transportation:

- Notices would be posted consistent with POLA policy to notify businesses and members of the public of temporary construction activities and temporary displacement of up to eight parking spaces.
- Construction site boundaries would be fenced and screened and configured in such a way to reduce parking displacement at the Cabrillo Marina to the maximum extent possible.
- Pedestrian access and sidewalks would be impeded as minimally as possible during the construction period of up to 12 days associated with Phase I. Similarly, access would be impeded as minimally as possible during the construction period of up to 15 days associated with Phase II.

2.4 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 Project is the LAHD. Anticipated permits and approvals issued by the lead agency that would be required to implement the proposed Project are listed below, and would indicate that the USTs and all appurtenances associated with the USTs shall be removed and the premises shall be restored consistent with existing conditions. Other permits and approvals required to implement the proposed Project that are issued by other responsible agencies are listed in Section 3, Paragraph 9.

- LAHD Coastal Development Permit (Level I);
- LAHD Harbor Engineer Permit; and
- LAHD Temporary Entry and Use Permit (TEUP) (site access and use permissions for Project construction).

3. INITIAL STUDY CHECKLIST

This Initial Study is prepared in accordance with CEQA Guidelines Section 15063 and CEQA Guidelines Appendix G.

1.	**Project Title:**	Removal of Underground Storage Tanks at Cabrillo Marina, Berth 31, Port of Los Angeles
2.	**Lead Agency:**	City of Los Angeles Harbor Department Environmental Management Division 425 S. Palos Verdes Street San Pedro, CA 90731
3.	**Contact Person:**	Nicole Enciso, Project Manager, Environmental Management Division
4.	**Project Location:**	The Project site is located at 210 Whalers Walk on the Cabrillo Marina, Berth 31, Port of Los Angeles. The Cabrillo Marina is designated as Planning Area 1 in the *Port Master Plan* (LAHD 2014), which is the largest planning area, consisting of approximately 1,940 acres and more than 9.5 miles of usage waterfront (excluding Seaplane Lagoon).
5.	**General Plan Designation:**	Port of Los Angeles – Recreation and Commercial
6.	**Zoning:**	(Q)M2-1 – Quasi Public Light Industrial; APN #7440039911
7.	**Description of Project:**	The Project is necessary to remove three 10,000-gallon USTs underlying the Project site. The Applicant would install shoring, excavate the site, wash and remove the USTs, test for additional soil and groundwater contamination, conduct additional remediation activities as necessary, backfill the site with clean material, and repave with asphalt to be consistent with the existing parking lot.
8.	**Surrounding Land Uses/Setting:**	The Project site is surrounded by the Cabrillo Yacht Marina to the east and surface parking to the west, north, and south. Landside 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 Seaside Freeway (SR-47).

9.	**Other Public Agencies Whose Approval is Required:**	· LARWQCB (Phase II); · City of Los Angeles, Department of Building and Safety Permits; · DSTC Underground Storage Tank Closure Application and Permit; and · LAFD Permit for Tank Installation, Modification, and Removal.

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	☐ Tribal Cultural Resources	☐ Utilities and Service Systems
☐ Mandatory Findings of Significance		

3.2 DETERMINATION

Based on this initial evaluation:

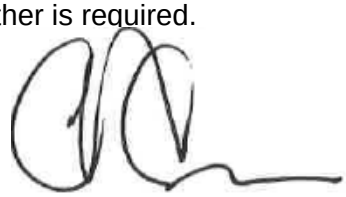
I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☒

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 ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. ☐



04-26-17

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

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
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	

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
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:			X	
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	

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
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	
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	

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
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	

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
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

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
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

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
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:			X	
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	

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
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. TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).				X
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				X
18. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	

	Potentially Significant Impact	*Less than Significant Impact After Mitigation Incorporated*	*Less than Significant Impact*	*No Impact*
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	
19. 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. IMPACTS AND MITIGATION MEASURES

4.1 AESTHETICS

The purpose of this section is to identify and evaluate key visual and aesthetic resources in the 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. There are no protected or designated scenic vistas in the Project vicinity. Construction activities associated with the proposed removal of the three USTs and associated contaminated soils would be short-term and temporary. Excavation and removal of the USTs, backfill of the excavation, and repaving the Project site consistent with the surrounding parking lot would have no long-term effects on the appearance of the Project site or the overall character of Berth 31 at the Cabrillo Marina.

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

No Impact. The Project site is not visible from any eligible or designated state scenic highway. The nearest designated state scenic highway is located approximately 34 miles north of the proposed Project (Route 2, from La Cañada-Flintridge to the San Bernardino County Line). The nearest eligible state scenic highway (i.e., State Highway 1, from State Highway 19 near Long Beach to I-5 south of San Juan Capistrano) is approximately 10 miles northeast of the proposed Project site (California Department of Transportation [Caltrans] 2011). In addition to Caltrans state scenic highways, the City of Los Angeles has city-designated scenic highways. However, the proposed Project site is not visible from any city-designated scenic highways. As such, there are no scenic resources, such as trees, rock outcroppings, or historic buildings, within a scenic highway that could be affected by the proposed Project. No impacts related to scenic resources within a state scenic highway would occur with the implementation of the proposed Project.

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

No Impact. As described in Section 2.3, *Proposed Project Construction Activities*, Phase I construction activities necessary to remove the USTs and associated contaminated soils would occur over a construction period of approximately 12 days (refer to Table 1). During that time construction equipment including excavators, backhoes, cranes, and heavy haul trucks, would be present at the Project site. However, following removal of the USTs the proposed Project would backfill the excavation, compact the fill, and repave the project site with new asphalt

consistent with the surrounding parking lot. Implementation of the proposed Project would not degrade the existing visual character of the site or its surroundings. Similarly, Phase II construction activities, if necessary, would occur over a construction period of approximately 15 days (refer to Table 2). During that time, construction equipment would be temporarily present at the Project site; however, following the removal of the contaminated soils, the proposed Project would backfill the excavation, compact the fill, and repave the project site with new asphalt consistent with the surrounding parking lot. Implementation of the proposed Project would not degrade the existing visual character of the site or its surroundings.

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

No Impact. As described in Section 2.3, *Proposed Project Construction Activities* consistent with the City of Los Angeles Noise Ordinance, construction activities associated with the proposed Project would occur Monday through Friday from the hours of 7:00 AM to 5:00 PM. As such, lighting for the proposed excavation and removal of the USTs and associated contaminated soils would not be required. Following the completion of construction activities under Phase I and Phase II, including repaving of the Project site, the proposed Project would neither introduce a new source of light or glare nor any new reflective materials. Consequently, there would be no impacts associated with light and glare as a result of the proposed Project.

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

No Impact. Project improvements are underground only and would not include the installation of any above ground structures that could create a new source of shade or shadows. As such, the proposed Project would have no impacts related to the creation of shade or shadows.

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 proposed Project would not involve the conversion of farmland to non-agricultural use. The California Department of Conservation's Farmland Mapping and Monitoring Program identifies categories of agricultural resources that are significant and require special consideration. According to the Farmland Map, the Project site is not located in

an area designated as Prime Farmland, Unique Farmland or Farmland of Statewide Importance. Therefore, there would be no impact to farmland associated with the implementation of the proposed Project

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

No Impact. The Project site is neither zoned for agricultural uses nor under a Williamson Act contract. No lands zoned for agriculture are present in the Project vicinity. Therefore, the proposed Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.

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

No Impact. The Project site is located on fully developed marina and no agricultural land, forest land, or timberland zoning is present in the Project vicinity. Further, the proposed Project would not result in a change in 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 impact would occur with the implementation of the proposed Project.

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

No Impact. The Project site is not designated as forest land and no loss or conversion of forest land would result from the implementation of the proposed Project.

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. No farmlands exist near the Project site and as a result the proposed Project would have no effect on farmlands.

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, mobile source, odor, and toxic air contaminant (TAC) emissions are consistent with the guidelines of the SCAQMD. Air emissions were estimated for the proposed Project. The proposed Project is limited to construction only (i.e., excavation and removal of USTs and remediation), with no operational activity after completion, hence there are no operational emissions. Sources contributing to air emissions during construction activities consist of off-road construction equipment and on-road construction vehicles (e.g., heavy haul trucks), described in further detail below.

Would the Project:

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

Less than Significant. The Project site is located within the South Coast Air Basin (Basin), which is currently classified as a nonattainment area for National Ambient Air Quality Standards (NAAQS) 1-hour and 8-hour ozone (O_3) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). In order to address regional nonattainment issues the SCQAMD, with contributions from and collaborations with the CARB and Southern California Association of Governments (SCAG), developed four comprehensive Air Quality Management Plans (AQMP) since the late 1990's, each of which included updates to air quality standards and attainment deadlines. An AQMP serves as a regional blueprint for achieving federal air quality standards. A proposed project would be considered inconsistent with an air quality plan if it is inconsistent with the assumptions regarding land use and emissions in the approved 2016 AQMP, which was recently adopted on March 3, 2017. The proposed Project is a construction project including excavation and UST removal over a short construction period, with no ongoing operations on the Project site after completion. Therefore, the proposed Project would be consistent with the assumptions regarding land use and motor vehicle / construction equipment emissions within the 2016 AQMP and would not obstruct implementation of the Plan. Short-term construction vehicles and equipment would work over a short-term period and would be subject to the requirements of the BMPs listed in Section 2.3 and the Clean Air Action Plan (CAAP) and SCAQMD Localized Significance Thresholds (LSTs) as described below. Based on the discussion provided above, the proposed Project would have less than significant impacts on applicable air quality plans or clean air programs. No mitigation would be required.

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

Less than Significant. Based on criteria set by the SCAQMD, a project would have the potential to violate an air quality standard or contribute substantially to an existing violation if construction emissions would exceed thresholds of significance for daily maximum construction emissions or localized peak day construction emissions. Sources of emissions for the proposed Project include the following construction equipment and vehicles: heavy haul dump trucks, flatbed trailers, a water truck, a crane, an excavator, a dry vacuum truck (including a portable thermal oxidizer to degas the USTs prior to removal), a backhoe, and a roller. Table 3 and Table 4 describe the maximum emissions of nitrogen oxides (NO_x), carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM_{10}), and $PM_{2.5}$ that would occur during the excavation and grading activities associated with the proposed Project. The analysis assumed that construction activities would comply with SCAQMD Rule 403 to control fugitive dust, resulting in a 61 percent reduction. Additionally, the Project would comply with *LAHD Sustainable Construction Guidelines for Reducing Air Emissions* (LAHD 2009) and CARB Airborne Toxic Control Measure to limit idling of diesel-fueled commercial motor vehicles (CCR,

Title 13, Section 2485) to minimize idling emissions from diesel-fueled vehicles (i.e., diesel-powered vehicles are not permitted to idle for a period of more than 5 minutes). Compliance with these requirements is consistent with and meets the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. The emissions analysis also assumes that all equipment would be operating simultaneously, which is highly conservative. The number and type of construction equipment, heavy haul truck trips (e.g., transport of concrete, asphalt, and soil, one-time water truck delivery, and removal of the USTs for off-site recycling), and worker trips were evaluated in CalEEMod, which was used to estimate potential emissions resulting from proposed Project during Phase I and Phase II construction activities. Based on this analysis, the proposed Project was determined to have less than significant impact on air quality.

UST Removal (Phase I)

Construction activities associated with Phase I include removing existing paving, excavating the surrounding soil, removing the three USTs and associated appurtenances, testing for any residual soil contamination, backfilling the excavation with clean fill, and repaving with asphalt consistent with the surrounding parking lot. Activities associated with the proposed Project would require the use of a crane, an excavator, a dry vacuum truck (including a portable thermal oxidizer to degas the USTs prior to removal), a backhoe, and a roller. Additionally, during Phase I, approximately 29 truck trips would be required to remove the excavated soil and an additional 29 truck trips would be required to deliver clean fill. Additional truck trips would include a one-time water truck delivery for rinsing the USTs as well as the use of three flatbed trucks for the removal of the USTs for off-site recycling. During Phase I, short-term Project construction emissions associated with these activities would occur over a 12-day period.

As shown in Tables 3 and 4, construction emissions associated with Phase I would not exceed SCAQMD's thresholds of significance for peak day construction emissions or localized peak day construction emissions. Therefore, construction-related impacts would be less than significant.

Potential Additional Soil and/or Groundwater Remediation (Phase II)

Phase II of the proposed Project, if necessary, would include removal of existing paving, excavation of approximately 700 tons or 518 cubic yards of soil, backfilling the excavation with clean fill, and repaving with asphalt consistent with the surrounding parking lot. Activities associated with Phase II would require the use of an excavator, a backhoe, and a roller. Removal of additional contaminated soil under Phase II would also require approximately 35 to 40 additional truck trips. During Phase II short-term Project emissions associated with these additional construction activities would occur over a 15-day period.

Table 3. Peak Day Construction Emissions1 (lbs/day)

	PM_{10} Exhaust	PM_{10} Fugitive Dust	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Fugitive Dust	PM_{10} total	$PM_{2.5}$ total	NO_X	SO_X	CO	VOC
Phase I	1.6	2.8	1.5	0.7	4.3	2.1	54.4	0.1	24.0	3.6
Significance Threshold[2]	N/A	N/A	N/A	N/A	150	55	100	150	550	75
Exceeds Threshold?	**N/A**	**N/A**	**N/A**	**N/A**	**No**	**No**	**No**	**No**	**No**	**No**
Phase II	1.9	2.5	1.8	0.6	4.5	2.4	55.2	0.1	28.0	4.3
Significance Threshold[2]	N/A	N/A	N/A	N/A	150	55	100	150	550	75
Exceeds Threshold?	**N/A**	**N/A**	**N/A**	**N/A**	**No**	**No**	**No**	**No**	**No**	**No**

Prepared by: iLanco Environmental, LLC

Notes: Values may not add up due to rounding.

Emissions from on-site and off-site construction equipment and construction vehicles were calculated using CalEEMod. Emissions from tank degassing and thermal oxidizer combustion exhaust were calculated using USEPA Tanks 4.09d and thermal oxidizer emission factors, respectively.

Tank degassing activities would occur during Phase I only.

Emissions might not add precisely due to rounding.

PM_{10} exhaust and PM_{10} fugitive emissions do not have separate thresholds. They are presented for informational purposes to highlight that fugitive dust emissions are a large component of total PM emissions.

61% control of fugitive dust is assumed as part of the project.

[1]Refer to Appendix A for CalEEMod output sheets; overall emissions based on rounded totals.

[2] SCAQMD 2015

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. The SCAQMD recommends that a proposed project's potential contribution to cumulative emissions should be assessed using the same significance criteria as those for project-specific emissions. As discussed in 4.3(b), the proposed Project would not generate construction emissions during Phase I or Phase II, if necessary, that would approach or exceed the SCAQMD thresholds. Therefore, the proposed Project would not generate a cumulatively considerable increase in emissions of the pollutants for which the Basin is in nonattainment, and impacts to air quality would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant. For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a residence, hospital, school, or convalescent facility where persons

could be exposed to substantial pollutant concentrations (SCAQMD 2003). The nearest sensitive receptors to the Project site include "liveaboards" or people living on boats in nearby boat slips within the Cabrillo Marina. The Project site is located approximately 125 feet from the nearest liveaboard to the north and 145 feet from the nearest liveaboard to the east. Additionally, commercial land uses, including a hotel, are located approximately 300 feet east of the Project site. SCAQMD LSTs aim to protect sensitive receptors from the effects of air pollutants. As described in 4.3(b) and shown in Table 4, construction-related emissions would be nominal and would not exceed LSTs. There would be no operational emissions associated with the proposed Project following the removal of the USTs and associated contaminated soils. Therefore, impacts to sensitive receptors would be less than significant.

Table 4. Localized Peak Day Construction Emissions[1] (lbs/day)

	PM_{10} Exhaust	PM_{10} Fugitive Dust	$PM_{2.5}$ Exhaust	$PM_{2.5}$ Fugitive Dust	PM_{10} total	$PM_{2.5}$ total	NO_2	CO
Phase I On-Site Emissions	1.6	1.2	1.5	0.2	2.8	1.7	30.4	18.4
LST Threshold[2]	N/A	N/A	N/A	N/A	4	3	57	585
Significant?	**N/A**	**N/A**	**N/A**	**N/A**	**No**	**No**	**No**	**No**
Phase II On-Site Emissions	1.8	1.1	1.7	0.2	2.8	1.8	32.0	22.5
LST Threshold[2]	N/A	N/A	N/A	N/A	4	3	57	585
Significant?	**N/A**	**N/A**	**N/A**	**N/A**	**No**	**No**	**No**	**No**

Prepared by: iLanco Environmental, LLC
Notes: Values may not add up due to rounding.
[1]Refer to Appendix A for CalEEMod output sheets; overall emissions based on rounded totals.
2SCAQMD LST look-up tables included in SCAQMD Final Localized Significance Threshold Methodology, Appendix C, based on Source Receptor Area 4 (South Coastal Los Angeles County), less than 1 acre construction area and approximately 125 feet (i.e., 25 meters) to the nearest sensitive receptor were used to estimate localized impacts based on the following: 1) Day disturbed area of 1 acre; 2) 25 meter PM_{10} exhaust and PM_{10} fugitive dust emissions do not have separate thresholds'. They are presented for informational purposes to highlight that fugitive dust emissions drive PM emissions
61% control of fugitive dust is assumed as part of the project.

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

Less than Significant. Construction of the proposed Project could produce discernible odors typical of construction sites associated with diesel exhaust from heavy construction equipment operations on-site. Additionally, following removal of the USTs and associated contaminated soils, asphalt odors would be expected during repaving of the Project site. Such odors would be a temporary source of nuisance to adjacent sensitive receptor uses (e.g., liveaboards). Based on mandatory compliance with SCAQMD Rules and the site's distance from sensitive receptors

(i.e., more than 125 feet from the nearest liveaboard to the north and 145 feet from the nearest liveaboard to the east), construction would not cause substantial odor-related impacts to a substantial number of people in the Project vicinity. Additionally, the construction activities under Phase I and Phase II would not cause substantial odor-related impacts to the nearby hotel uses located approximately 500 feet to the South. Therefore, impacts associated with objectionable odors would be less than significant.

4.4 BIOLOGICAL RESOURCES

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

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?

Less than Significant. The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system was reviewed to gather information regarding potential federally listed species that could occur within the vicinity of the Project site (USFWS 2017). The USFWS IPaC system identified three endangered species, California least tern (*Sterna antillarum browni*), Palos Verdes blue butterfly (*Glaucopsyche lygdamus*), and Pacific pocket mouse (*Perognathus longimembris pacificus*) and two threatened species, western snowy plover (*Charadrius alexandrines nivosus*), and coastal California gnatcatcher (*Polioptilla californica californica*) with the potential to occur within, or be affected by activities on the site. Additionally, 27 species of migratory birds are known to occur in the vicinity of the Project site (USFWS 2017). However, the Project site consists of a paved surface lot within a heavily used marina. Given the developed nature of the Project area and considering that the Project site has already been disturbed, the likelihood of any sensitive or special status species being present is very low. No riparian habitat or other sensitive natural communities occur at the Project site and no trees or other vegetation would be removed as part of the proposed Project. Project-related construction activities on land under Phase I and Phase II of the proposed Project would be temporary and minor and would not result in a loss of individuals or habitat for rare, threatened, endangered, protected or species of special concern. Further, there are no waterside construction improvements under Phase I or Phase II of the proposed Project that would affect any marine life. Therefore, the proposed Project would not have an adverse effect on any sensitive or special status species or habitats and would not conflict with any regional plans, policies, or regulations. Due to the developed nature of the site, the lack of critical habitat, and the short-term duration of construction, impacts to special status species would be less than significant.

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 U.S. Fish and Wildlife Service?

No Impact. As discussed in Section 4.4(a) above, the proposed Project site is completely paved and does not contain riparian habitat or other sensitive communities. As such, no impacts would occur as a result of the proposed Project.

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?

Less than Significant. The proposed Project site does not contain any federally jurisdictional wetlands. The closest recognized saltwater wetland is located 115 feet east of the Project and is associated with the Cabrillo Marina. With implementation of construction BMPs as outlined in Section 2.3, *Proposed Construction Activities*, no runoff or other indirect impacts to wetland habitats in the vicinity would occur under Phase I or Phase II of the proposed Project. Additionally, Phase I of the proposed Project would remove USTs and Phase I and Phase II (if necessary) would remove contaminated soils. These activities would have beneficial impacts on groundwater quality at the project site. The proposed Project would have a less than significant effect on federally jurisdictional wetlands as defined by Section 404 of the Clean Water Act (CWA).

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?

Less than Significant. The POLA provides valuable habitat for foraging, resting, and breeding by numerous bird species. The proposed Project site, however, is located within a developed parking lot, which does not support special status species, and is not a major migration corridor or wildlife corridor. Additionally, there are no waterside improvements associated with the proposed Project that could potentially impact marine wildlife. Further, construction activities associated with the proposed removal of the USTs would involve minimal equipment and construction personnel for approximately 12 days. Phase II activities, as necessary, would also involve minimal equipment and construction personnel for an additional 15 days. However, similar to Phase I these activities would be short term and temporary. As such, there are no long-term impacts to the movement of wildlife species or the use of wildlife nursery sites as a result of the proposed Project.

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

No Impact. The proposed Project site is located in Berth 31 of the Cabrillo Marina, a heavily developed area of the POLA. The Project site is entirely paved and requires no vegetation or tree removal under either phase of construction. The Project site is located adjacent to a parking lot median, which contains two landscape trees; however, the trees would be preserved in place during construction and would not be affected by the proposed Project. 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.

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. As previously mentioned, no habitat for any special status or sensitive biological species exists at the project site or in the vicinity. Accordingly, no Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved habitat conservation plan applies to the project site. HCPs are administered by the USFWS and are intended to identify how impacts would be mitigated when a project impacted an endangered species. The County of Los Angeles has established Significant Ecological Areas (SEAs) to preserve a variety of biological communities for public education, research, and other nondisruptive outdoor uses. The proposed Project is not located in a SEA; the nearest SEA is the California least tern nesting area at the southern tip of Pier 400, approximately 1 mile southeast of the Project site. In addition, there are no HCPs currently in place at the POLA. Therefore, no impact would occur as a result of the implementation of Phase I or Phase II of the proposed Project.

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).

Would the Project:

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

No Impact. A historical resource is defined in Section 15064.5(a)(3) of the CEQA Guidelines as any object, building, structure, site, area, place, record, or manuscript determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Historic resources are further defined as being associated with significant events, important persons, or distinctive characteristics of a type, period or method of construction; representing the work of

an important creative individual; or possessing high artistic values. Resources listed in or determined eligible for inclusion in the California Register, included in a local register, or identified as significant in a historic resource survey are also considered historical resources under CEQA. The Project site is located on an existing paved site that has previously been disturbed. The proposed Project would not result in any alternations or modifications to historical resources. There are no known historic resources at the site nor would any be disturbed or compromised as a result of the proposed Project. The proposed Project would have no impact on historical resources.

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

Less than Significant. The potential to discover an unknown archaeological resource within the Project site is highly unlikely as the site is underlain by manmade fill. Further, previous disturbance of the site, including excavation for the initial installation of the USTs in 1985 and past soil remediation efforts would have disturbed or destroyed any potential historic or archaeological resources that may have occurred beneath the surface. As such, there would be virtually no possibility of encountering intact cultural resources within the Project site or immediate surrounding vicinity. Nevertheless, 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 highly unlikely event an archaeological discovery is made. Once the discovery has been evaluated by a qualified archaeologist, (see 36 Code of Federal Regulations [CFR] 800.11.1 and CCR, Title 14, Section 15064.5 [f]) and if the resource is found to not be significant, the work can resume. If the resource is found to be significant, they shall be avoided or shall be treated consistent with Section 106 or State Historic Resource Preservation Officer Guidelines. As such, the proposed Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to state CEQA Guidelines Section 15064.5. Therefore, the proposed Project would have a less than significant impact to archaeological resources with adherence to applicable regulatory requirements.

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

Less than Significant. No unique geologic features or paleontological resources are known to exist in or around the Project site. The site is underlain by manmade fill, is already paved, and has experienced considerable previous disturbance, described above in Section 4.5(b). Therefore, there is very little potential to encounter paleontological resources during construction. However, because there is a remote chance of discovering previously unknown paleontological resources, the proposed excavation and removal of the USTs and associated contaminated soils would have a less than significant impact on paleontological resources.

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

Less than Significant. As the Project site is underlain by manmade fill and is already paved and experienced considerable previous disturbance, described above in Section 4.5(b) and (c), there is a very low potential to encounter or disturb any human remains. Nevertheless, California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98 mandate that in the event of an inadvertent or unanticipated discovery of any human remains in a location other than a dedicated cemetery, work shall stop immediately. If the coroner determines the remains are Native American, the coroner shall contact the Native American Heritage Council (NAHC). The NAHC shall identify the most likely descended from the deceased Native American and make recommendations for means of treating or disposing of the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98. With compliance with existing regulations prescribed in California Health and Safety Code Section 7050.5, CEQA Section 15064.5, and Public Resources Code Section 5097.98, impacts to human remains would be less than significant.

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. 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 proposed Project site is located approximately 0.4 mile east of the Palos Verdes fault zone and is not located within an Alquist-Priolo Earthquake Fault Zone. While the proposed Project site is not located within a fault zone, it is located within an landslide and liquefaction zone as defined by the California Department of Conservation (California Department of Conservation 2015).

Proposed project construction under Phase I and Phase II, if necessary, would be confined to paved and previously disturbed areas of Berth 31 within the Cabrillo Marina. Prior to excavation activities under both phases, shoring would be installed at the Project site to ensure the stability of the nearby mixed-use facility, which would be located as close as 11 feet from the excavation

(refer to Section 2.3, *Proposed Project Construction Activities*). Following the completion of construction activities under both phases, the excavations would be backfilled, compacted, and paved with asphalt consistent with the surrounding parking lot. No habitable structures are proposed and as such the proposed Project site would have limited potential for damage from seismic activity. Further, any potential damage to the Project site as a result of seismic activities (e.g., pavement cracking) would not create impacts to public health or safety. Finally, the project would not increase overall visitation to the area, and thus would not increase public exposure to seismic hazards. The proposed Project, therefore, would result in a less than significant impact to earthquake faults or seismic shaking.

ii) Strong seismic ground shaking?

Less than Significant. Please see the response to 4.6 (a)(i) above.

iii) Seismic-related ground failure, including liquefaction?

Less than Significant. Please see the response to 4.6 (a)(i) above.

iv) Landslides?

Less than Significant. The proposed Project site is flat with no significant natural or graded slopes. The excavation and removal of the USTs and associated contaminated soils would not increase the potential for landslides at the Project site. Following the completion of construction activities, the excavation would be backfilled, compacted, and paved with asphalt consistent with the surrounding parking lot and grade. No habitable structures are proposed and as such the proposed Project site would have limited potential for damage from seismic activity or landslides. Therefore, impacts to the potential for landslides would be less than significant.

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

Less than Significant. Construction activities under Phase I would be limited to the excavation and removal of three USTs and approximately 290 cubic yards of soil the over approximately a 35-foot by 35-foot area. As described in Section 2.3, Proposed Construction Activities following removal of the three USTs, the base and the sidewalls of the excavation would be sampled as directed by LAFD, and the excavation would be backfilled, compacted, and repaved. If extensive soil and/or groundwater contamination is identified during Phase I, additional remediation of the soil and/or groundwater may be required by the LARWQCB under a separate Phase II of construction. This potential phase of work may involve a new excavation of up to approximately 700 tons or 518 cubic yards of additional contaminated soil from an estimated 1,600-square-foot area adjacent to the tanks proposed for removal under Phase I. Following the removal of residual contamination, the area would be backfilled with clean fill, compacted, and paved with asphalt consistent with the surrounding parking lot. The proposed Project would not create new areas of impervious surface or generate any new sources of runoff. During all

construction activities under Phase I and Phase II, if necessary, the construction BMPs described in Section 2.3, *Proposed Project Construction Activities* would be implemented, as appropriate. For example, all excavated material, backfill material, exposed soil areas would be treated to prevent fugitive dust. Therefore, impacts to soil erosion or the loss of topsoil will be less than significant.

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. The proposed Project site is located within an area susceptible to landslides and liquefaction (California Department of Conservation 2015). However, construction is minor and involves removal of three USTs and backfilling with clean fill that meets the requirements of the LAHD Environmental Guidance. Implementation of the proposed Project would have little potential to create a landslide, lateral spreading, subsidence, liquefaction or collapse. Prior to the placement of fill or repaving, consistent with City grading requirements, the Applicant's soil engineer would observe and approve compaction activities and a compaction report would be submitted to the City grading division for review and approval. Therefore, it is highly unlikely that the proposed Project would result in the creation of unstable geologic units or soils. Therefore, impacts would be less than significant.

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?

No Impact. No habitable buildings would be constructed as a part of Phase I or Phase II of the proposed Project. No impact to life or property due to expansive soils would occur as a result of implementing the proposed Project.

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 presents no need for additional capacity or any alternative wastewater disposal system, as there is no additional land use or operation. Therefore, there would be no impacts associated with the use of septic tanks or wastewater disposal systems.

4.7 GREENHOUSE GASES

This section includes a discussion of the potential greenhouse gas (GHG) emission impacts associated with the proposed Project. The methods of analysis for construction and operational emissions are consistent with the guidelines of the SCAQMD and LAHD's standard protocol.

GHG emissions were estimated for the baseline conditions and the proposed Project. The proposed Project is limited to construction only (i.e., excavation, removal of USTs, remediation

and site restoration), with no operational activity after completion, hence there are no operational emissions. Sources contributing to GHG emissions during construction include the following construction equipment and vehicles: heavy haul dump trucks, flatbed trailers, a water truck, a crane, an excavator, a dry vacuum truck (including a portable thermal oxidizer to degas the USTs prior to removal), a backhoe, and a roller. The construction contractor shall be required to comply with applicable construction BMPs and LAHD Sustainable Construction Guidelines (see Section 2.3, *Proposed Project Construction Activities*). Carbon dioxide equivalent (CO_2e) emissions analysis utilized the CalEEMod model.

CEQA Significance Thresholds

State CEQA Guidelines Section 15064.4(b) sets forth the factors that should be considered by a lead agency when assessing the significance of impacts from GHG emissions on the environment. These factors include:

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

The guidelines do not specify significance thresholds and allow the lead agencies discretion in how to address and evaluate significance based on these criteria.

The SCAQMD has adopted an interim CEQA significance threshold of 10,000 metric tons per year of CO_2e (MT/yr CO_2e) for industrial projects where SCAQMD is the lead agency. For the purpose of this IS/ND, this analysis used this threshold to evaluate the proposed Project's 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.

LAHD has determined the SCAQMD-adopted interim industrial threshold of 10,000 MT/yr CO_2e to be suitable for the proposed Project following reasons:

- The SCAQMD interim threshold used as the basis for its development, Governor Schwarzenegger's June 1, 2005 Executive Order S-3-05 which set emission reduction targets of reducing GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. The 2020 target is the core of the California Global Warming Solutions Act of 2006, widely known as Assembly Bill (AB) 32.

- The proposed Project's primary GHG sources are construction equipment and vehicle mobile sources. The SCAQMD industrial source threshold is appropriate for projects with mobile emission sources. California Air Pollution Control Officers Association (CAPCOA) guidance considers industrial projects to include substantial GHG emissions associated with mobile sources. SCAQMD, on industrial projects for which it is the lead agency, uses the 10,000 MT/yr threshold to determine CEQA significance by combining a project's stationary source and mobile source emissions. Although the threshold was originally developed for stationary sources, SCAQMD staff views the threshold as conservative for projects with both stationary and mobiles source because it is applied to a larger set of emissions and therefore captures a greater percentage of projects than would be captured if the threshold was only used for stationary sources.
- The SCAQMD industrial source threshold is appropriate for projects with sources that use primarily diesel fuel. Although most of the sources that were considered by the SCAQMD in the development of the 10,000 MT/yr threshold are natural gas-fueled, both natural gas and diesel combustion produce CO_2 as the dominant GHG. Furthermore, the conversion of all GHG species into a CO_2e ensures that the GHG emissions from any source, regardless of fuel type, can be evaluated equitably.

After considering these guidelines, LAHD has set the following threshold for use in this IS/ND to determine the significance of proposed Project-related GHG impacts. The proposed Project would create a significant GHG impact if it:

a) Generates GHG emissions that, either directly or indirectly, that may have a significant impact on the environment?

Table 5 below shows the proposed Project's annual GHG emissions.

Table 5. Annual GHG Emissions – Proposed Project

	CO_2 (MT/yr)	CH_4 (MT/yr)	N_2O (MT/yr)	CO_2e (MT/yr)
Phase I and II	70	0	0	70
Significance Threshold[2]	-	-	-	10,000
Exceeds Threshold?	-	-	-	**No**

Prepared by: iLanco Environmental, LLC
Notes:

a) One metric ton equals 1,000 kilograms, 2,205 lbs, or 1.1 U.S. (short) tons.
b) CO_2e = 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 carbon dioxide (CO_2); 21 for methane (CH_4); and 310 for nitrous oxide (N_2O).

[1]Refer to Appendix A for CalEEMod output sheets; overall emissions based on rounded totals.
[2]SCAQMD 2015

Less than Significant. Based on criteria set by the SCAQMD, a proposed project would have the potential to violate an air quality standard or contribute substantially to an existing violation if construction emissions would exceed thresholds of significance in Table 5.

The proposed Project would primarily generate increased GHG emissions over the short-term related to operation of construction equipment and heavy haul truck trips associated with the export of contaminated soils and the import of clean fill. The total emissions from the proposed Project construction under Phase I and Phase II, if necessary, were modeled using CalEEMod with a conservative assumption that GHG emissions would occur within 2017 for both Phase I and Phase II activities.

During Phase I, activities associated with the proposed Project would require the use of a crane, an excavator, a dry vacuum truck (including a portable thermal oxidizer to degas the USTs prior to removal), a backhoe, and a roller. Additionally, during Phase I, approximately 29 truck trips would be required to remove the excavated soil and an additional 29 truck trips would be required to deliver clean fill. Additional truck trips would include a one-time water truck delivery for rinsing the USTs as well as the use of three flatbed trucks for the removal of the USTs for off-site recycling. During Phase I, short-term Project construction emissions associated with these activities would occur over a 12-day period. Activities associated with Phase II would require the use of an excavator, a backhoe, and a roller. Removal of additional contaminated soil under Phase II would also require approximately 35 to 40 additional truck trips. During Phase II short-term Project emissions associated with these additional construction activities would occur over a 15-day period.

The total estimated emissions from construction and hauling activity for both Phase I and Phase II would be 70 MT/yr CO_2e, which is well below the SCAQMD recommended significance threshold of 10,000 MT/yr CO_2e. Increases in emissions of GHGs associated with the implementation of the proposed Project would be short-term and less than significant.

Informational assessment: Consider whether the Project is consistent with certain statewide, regional and local plans and policies.

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

Several state, regional and local plans have been developed that set goals for the reduction of GHG emissions over the next few years and decades. Some of these plans and policies (notably, Executive Order S-3-05 and AB 32) were taken into account by the SCAQMD in developing the 10,000 MT/yr CO_2e threshold. However, no regulations or requirements have been adopted by relevant public agencies to implement those plans for specific projects, within the meaning of CEQA Guidelines Section 15064.4(b) (3). (See Center for Biological Diversity v.

Cal. Dept. of Fish and Wildlife [Newhall Ranch] [2015] 62 Cal.4th 204, 223.) Consequently, no CEQA significance assessment based upon compliance with such regulations or requirements can be made for the proposed Project. Nevertheless, for the purpose of disclosure, LAHD has considered for informational purposes only, whether the proposed Project activities and features are consistent with federal, state or local plans, policies or regulations for the reduction of GHG emissions, as set forth below:

The State of California is leading the way in the United States, related to GHG reductions. Several legislative and municipal targets for reducing GHG emissions, below 1990 levels have been established. Key examples include:

- Senate Bill (SB) 32
  - 1990 levels by 2020
  - 40 percent below 1990 levels by 2030
- AB 32
  - 80 percent below 1990 levels by 2050
- City of Los Angeles Sustainable City Plan
  - 45 percent below 1990 levels by 2025
  - 60 percent below 1990 levels by 2035
  - 80 percent below 1990 levels by 2050

LAHD has been tracking GHG emissions, in terms of CO_2e since 2005 through the LAHD municipal GHG inventory and the annual inventory of air emissions. POLA-related GHG emissions started making significant reductions since 2006, reaching a maximum reduction in CO_2e of 15 percent from 1990 levels in 2013. Subsequently, 2014 and 2015 saw GHG levels rise due to a period of port congestion that arose from circumstances outside of the control of either the LAHD or its tenants. This event illustrates a major challenge related to managing GHG-related emissions, as events outside the control of LAHD or its individual tenants will continue to have a varying degree of impact on the progress of reduction efforts.

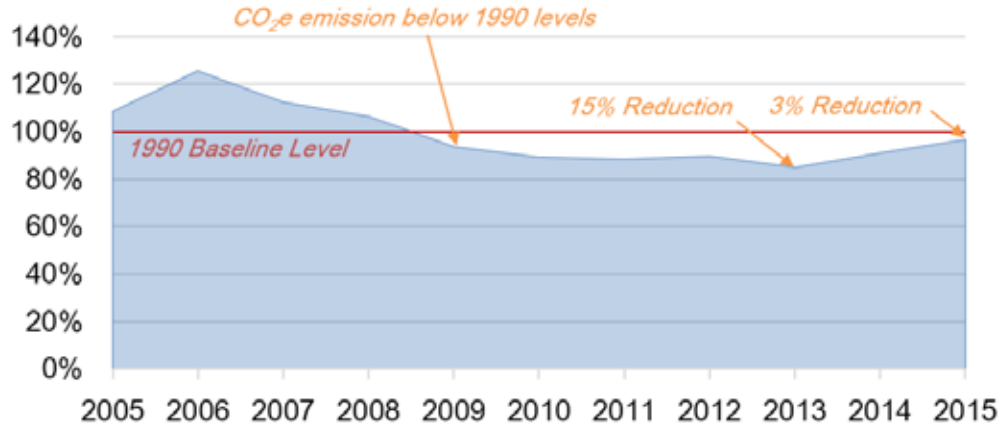


Figure 7. GHG Emissions 2005-2015

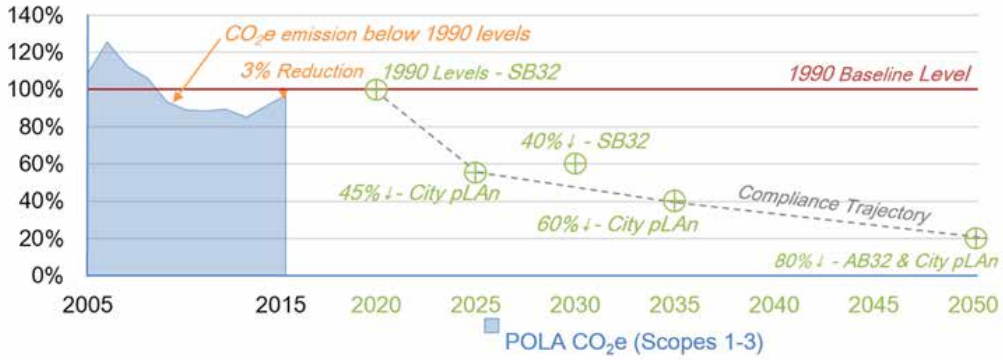


Figure 8. Actual GHG Emissions 2005-2015 & 2015-2050 GHG Compliance Trajectory

LAHD and its tenants have initiated a number of wide-ranging strategies to reduce all port-related GHGs, which includes the benefits associated with the CAAP, Zero Emission Roadmap, Energy Management Action Plan (EMAP), operational efficiency improvements, and land use and planning initiatives. Looking toward 2050, there are several unknowns that will affect future GHG emission levels. These unknowns include grid power portfolios; maritime industry preferences of power sources and fuel types for ships, harbor craft, terminal equipment, locomotives, and trucks; advances in cargo movement efficiencies; the locations of manufacturing centers for products and commodities moved; and increasing consumer demand for goods. The key relationships that have led to operational efficiency improvements to date are the cost of energy, current and upcoming regulatory programs, and the competitive nature of the goods movement industry. We anticipate these relationships will continue to produce benefits with regards to GHG emissions for the foreseeable future.

Nevertheless, with the very aggressive targets shown in Figure 8 above, it is not possible at this time to determine whether POLA-wide emissions or any particular Project applicant will be able to meet the compliance trajectory shown. Compliance will depend upon future regulations or requirements that may be adopted, future technologies that have not been identified or fully developed at this time, or any other POLA-wide GHG reduction strategies that may be established. As a result, while LAHD will continue to work with its tenants to implement aggressive GHG reduction measures to meet the compliance trajectory that is shown, LAHD cannot with certainty confirm compliance with these future plans and policies at this time.

4.8 HAZARDS AND HAZARDOUS MATERIALS

This section discusses the potential for the proposed Project to expose people to hazards and hazardous materials. Hazardous materials are defined as substances with physical and chemical properties of flammability, corrosivity, reactivity, or toxicity, which may pose a threat to human health or the environment. Hazardous materials management is subject to multiple laws, policies, and regulations. Enforcement agencies at the state level include two branches of the

California Environmental Protection Agency (CalEPA): the DTSC and the LARWQCB. The federal enforcement agency is the USEPA.

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. As described in Section 2.2, *Project Background and Objectives*, the Project site is listed as an open Leaking Underground Storage Tank (LUST) Cleanup Site (LARWQCB Case No. 907310061A). Phase I of the proposed Project would remove the three 10,000-gallon USTs and all associated electrical utilities, pumps, conveyance lines, fuel dispensers, and other appurtenances associated with the USTs. Up to approximately 290 cubic yards of contaminated soils would be excavated and transported off-site to a DTSC-approved disposal site as a part of Phase I construction activities. All excavation and backfilling operations would be observed for the presence of free petroleum products or contaminated soil. The proposed Project would follow guidelines and procedures within the *LAHD 2016 Environmental Guidance for Industrial Fill Material*, which determine the suitability of soil and fill materials for industrial land uses and states allowable chemical concentrations. Further, depending on whether additional contamination is discovered during Phase I of the proposed Project, it is estimated that up to 700 tons or 518 cubic yards of additional contaminated soils (up to 40 truck trips) would be transported and disposed off-site during separate Phase II construction activities. The storage, handling, and disposal of the USTs and excavated soils would be in compliance with DTSC, USEPA, Occupational Safety and Health Administration (OSHA), and LAFD regulations governing such activities. If any groundwater contamination is observed, the free product would be skimmed and removed. LAHD's Director of Environmental Management and LARWQCB would be notified of all occurrences of soil and/or groundwater contamination.

Soils would be sampled for contamination in accordance with the *LAHD 2016 Environmental Guidance for Industrial Fill Material*. Any contaminated soils would be removed from the Project site, treated, and/or disposed of at the appropriate facilities in accordance with applicable regulations. Contaminated soil would be stockpiled on visqueen sheeting (i.e., polyethylene plastic sheeting), covered with visqueen, and characterized with appropriate signage and disposed of properly. Additional remediation actions would occur in the event that contaminated soils and/or groundwater are encountered.

With adherence to the abovementioned regulations and standards as well as all construction related BMPs described under Section 2.3, *Proposed Project Construction Activities*, impacts would be less than significant.

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. Refer to Section 4.8(a) above. Given the history of contaminated soils and groundwater at the Project site, the potential exists for construction workers to be exposed to these materials during excavation, the handling of the USTs, and/or hauling of soils during construction activities associated with Phase I and Phase II, if necessary, of the proposed Project. If contaminated materials are encountered or suspected during construction activities, standard regulatory practices would be applied and construction workers would adhere to the approved Health and Safety Plan (refer to Section 2.3, Proposed Project Construction Activities). Construction workers would be equipped with appropriate Personal Protective Equipment (PPE) and would temporarily cease work in the event that hazardous materials are suspected or discovered.

As described in the Section 2.3, *Proposed Project Construction Activities*, LAFD would perform inspections and monitor the removal of the USTs. If additional soil contamination and/or groundwater contamination is observed during sampling, LAHD would notify LARWQCB, which would oversee the completion of additional remediation activities under Phase II, if necessary. Overall, the proposed Project will remove hazardous materials from the area, which would have a beneficial effect on fire protection and safety in the area. There are no new hazards or hazardous materials nor anything that would create a new impact to fire protection or fire safety. Therefore, impacts to fire safety would be less than significant.

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 Project site is not within one-quarter mile of an existing or proposed school. The nearest school is the Port of Los Angeles High School which is located approximately 3 miles west of the proposed Project. As such there would be no impact to schools.

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?

Less than Significant. The Project site is currently included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (i.e., “Cortese List”) maintained by the California DTSC. Remedial actions and monitoring have occurred on the Project site since 2009. As described in Section 2.3, *Project Background and Objectives* contaminants of concern include MTBE, TBA, and BTEX. Although contaminants primarily affect soils underlying the site, MTBE and TBA are considered to be highly soluble in groundwater. Current monitoring results indicate that remediation to date at the site has reduced in contaminant concentrations in the groundwater, including MTBE by 90 percent, benzene by 80 percent, gasoline by 89 percent, and diesel by nearly 100 percent (Seatec Environmental, Inc. 2015).

As described in Section 2.3, *Proposed Project Construction Activities* if extensive soil and/or groundwater contamination is identified, additional remediation of the soil and/or groundwater

would be required by the LARWQCB. Any contaminated material would be removed and disposed of at Soil Safe, Inc. or an approved disposal site located at a similar distance from the Project site, in accordance with all regulations surrounding transport and disposal. If any groundwater contamination is observed, the free product would be skimmed and removed and LAHD would notify LARWQCB. With adherence to construction BMPs listed in Section 2.3, *Proposed Project Construction Activities* and compliance with regulations pertaining to the handling and disposal of hazardous materials, impacts would be less than significant.

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 Project site is not located near an existing public airport. The nearest airports are Torrance Airport, approximately 7 miles northwest, and Long Beach Airport, approximately 10 miles northeast of the site. Therefore, no impact would occur associated with airport-related hazards.

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. A helicopter-landing pad for Island Express is located at Berth 95 approximately 2.15 miles to the north of the Project site. Only small helicopters operate from this location and transit primarily via the Main Channel. The proximity of the heliport would not result in a safety hazard for people working in the Project area. The proposed Project would have no effect related to private airstrips. Accordingly, there would be no impact.

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

No Impact. The proposed Project involves temporary construction activities associated with the proposed removal of the USTs and associated contaminated soils under Phase I as well as additional remediation activities under Phase II, if necessary. During all construction activities associated with the proposed Project, emergency access would be maintained. Following the excavation and removal of the USTs, the Project site would be backfilled, compacted, and repaved with asphalt consistent with the surrounding parking lot. As such, following the completion of construction activities, the proposed Project will not impair or physically interfere with an adopted emergency response plan.

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 Project site is not located in an area designated as Very High Fire Hazard Severity Zone and there are no wildlands within the vicinity of the Project site. Therefore, no impact related to wildland fires would occur with the implementation of the proposed Project.

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?

Less than Significant. Implementation of the proposed Project would remove three USTs as well as up to approximately 290 cubic yards of contaminated soils under Phase I. Additionally, as described in the Project Description, if additional soil contamination is encountered during testing, such soils would be removed and remediated under a separate Phase II of construction, reducing the potential for negative effects to water quality. Construction activities under both phases, as necessary, would not result in substantial soil exposure and no new areas of impervious surface would be created by the Project. In addition, these activities would not result in any direct waste or water discharges, and any affected soil will be removed as part of implementation of the proposed Project. Additionally, no wastewater discharge or modifications to discharge systems would occur with implementation of the proposed Project. The Project requires a Coastal Development Permit and Harbor Engineer Permit from LAHD, which will include standard conditions, including BMPs, related to the landside improvements. With compliance with all permit conditions and the use of construction BMPs throughout the Project's duration, impacts to water quality standards or waste discharge requirements would be less than significant.

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. Implementation of the proposed Project would result in no impact to groundwater resources. The Project would not deplete groundwater supplies or interfere substantially with groundwater recharge. Groundwater in the harbor area is south of the Dominquez Gap Barrier and impacted by saltwater intrusion (salinity) and is, therefore, unsuitable for use as drinking water. In addition, the proposed Project site is entirely covered with impermeable surfaces and

does not support surface recharge of groundwater. The proposed Project site would involve very little excavation of concrete with immediate replacement after the excavation is complete. Therefore, no impacts to groundwater resources would occur with the implementation of the proposed Project.

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?

Less than Significant. The proposed Project site is entirely paved, and no alterations would be made to the existing drainage or waterway systems in the area. During construction, temporary erosion and sedimentation control measures would be installed to minimize erosion during excavation. Following removal of the USTs and completion of any remediation, the Project site would be repaved with asphalt, similar to the surrounding parking lot. Therefore, there would be less than significant impacts to drainage patterns.

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?

Less than Significant. Please see Section 4.9(c) above. The Project site is fully developed with impervious surfaces and the Project would not result in a substantial change to flood conditions or drainage patterns.

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?

Less than Significant. No alterations to existing drainage systems are proposed with implementation of the Project. With implementation of construction BMPs, including temporary erosion control measures, less than significant effects to stormwater runoff and drainage systems would occur as a result of the proposed Project.

f) Otherwise substantially degrade water quality?

Less than Significant. Implementation of Phase I and Phase II, if necessary, of the proposed Project would not violate any water quality standards or waste discharge requirements. 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 and would result in less than significant impacts.

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. No housing or other habitat structures are proposed with implementation of the proposed Project. Therefore no impact would occur.

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

No Impact. The proposed Project is located within Zone AE (elevation 9), an SFHA subject to inundation by the 1% (100-year) annual chance flood (Federal Emergency Management Agency [FEMA] 2008). Because the Project would not place any structures within the area, there would be no impacts to flood flows.

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 would be confined to a relatively small paved area. There are no dams or levees near the proposed Project and the proposed Project does not have the potential to create or contribute to a risk of a levee or dam failure. Implementation would not expose people or structures to risk involving flooding. Therefore, no impacts to flooding from the failure of a levee or dam would occur as a result of the Project.

j) Inundation by seiche, tsunami, or mudflow?

No Impact. According the Tsunami Inundation Map for Emergency Plan (California Department of Conservation 2009), the Project site is located within a tsunami inundation area. However, the proposed Project would be confined to existing paved areas and previously disturbed areas. No new areas of access would be added, and no new buildings would be constructed for the proposed Project. Therefore, no increased exposure to tsunami inundation areas, and no impact from inundation would occur.

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

No Impact. Due to its geographic location, the infrastructure and operations of the POLA would be vulnerable to SLR by nature. As the proposed Project would not involve the construction of any new structures, no people or structures would be exposed to significant risk due to SLR as a result of the proposed Project. Impacts associated with risks from SLR would not occur.

4.10 LAND USE AND PLANNING

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

Would the Project:

a) Physically divide an established community?

No Impact. The proposed Project would involve only short-term construction activities occurring in two separate phases, as necessary. No long-term 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 and no impact would occur.

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 Project site is zoned [Q]M2-1 under the City of Los Angeles Zoning Ordinance and would continue to have the same land uses as under existing conditions. The proposed Project would not alter the land use of the site or surrounding area, and would not conflict with the *Port Master Plan* (LAHD 2014) or any applicable land use plans. Therefore, no impact would occur with the implementation of the proposed Project.

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

No Impact. As discussed in Section 4.4(f), the site is not part of any HCP or NCCP. No impact would occur with the implementation of the proposed Project.

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. According to the California Department of Conservation, no known mineral resources underlie the Project site. The Wilmington Oil Field, the third largest oil field in the U.S., is located approximately 2 miles north of the site (California Department of Conservation 2014). However, the proposed Project would not create any obstacles to oil extraction operations associated with the Wilmington Oil Field. No known mineral resources would be impacted by the proposed Project and therefore no impact would occur as a result of the proposed Project.

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. The proposed Project site is not located within a mineral resource recovery site delineated in the *Port Master Plan* (LAHD 2014). As such, no loss of availability to mineral resources would occur and no impact would occur as a result of the proposed Project.

4.12 NOISE

The purpose of this section 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.

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. As described in Section 2.3, *Proposed Project Construction Activities* consistent with the City of Los Angeles Noise Ordinance, the Applicant would perform all construction activities Monday through Friday from the hours of 7:00 AM to 5:00 PM. The Los Angeles Municipal Code Section 112.05, *Maximum Noise Level of Powered Equipment or Powered Hand Tools*, details that the maximum noise level powered equipment may produce within a distance of 500 feet from a City residential zone is 75 A-weighted decibels (dBA) at a distance of 50 feet, unless compliance is technically infeasible. Technically infeasible means that the noise limitations cannot be attained during use of the equipment even with the use of mufflers, shields, sound barriers and/or other noise reduction techniques.

Construction-related noise and groundborne vibration would be generated by excavation activities, including operation of a backhoe, crane, compactor, and heavy haul trucks. Additional sources of noise may occur from general truck movement as well as jackhammers and smaller power tools. Construction noise levels for the Project were evaluated using data published by the U.S. Department of Transportation (DOT), as indicated in Table 6. The nearest sensitive receptors to the Project site include liveaboards in nearby boat slips within the Cabrillo Marina. The Project site is located approximately 125 feet from the nearest liveaboard to the north and 145 feet from the nearest liveaboard to the east. Due to the distance from residential areas, and the short-term nature of the construction Project, impacts to noise are anticipated to be less than significant.

Table 6. Noise Ranges of Typical Construction Equipment

Construction Equipment	Noise Levels in dBA L_{eq} at 50 Feet
Trucks	82–95
Jackhammers	81–98
Compressors	75–87
Concrete Mixers	75–88
Concrete Pumps	81–85
Back Hoe	73–95

Note: Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of noise emissions as that shown in this table.
Source**:** U.S. DOT *Construction Noise Handbook* (2006)

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

Less than Significant. Excavation activities during construction would result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. Given the nearest sensitive receptors include liveaboards that are situated in the harbor waters, by their very nature groundbourne vibrations would not be perceptible from boats. Within residential zones located more than 0.4 miles from the Project site, groundbourne vibration would be imperceptible. Any potential impacts related to groundborne noise levels would be short-term from excavation activities that would be limited to the 12-day construction period during Phase I. If additional soil contamination and/or groundwater contamination is identified during Phase I, additional excavation activities occurring during a separate 15-day period would generate additional groundborne noise, during Phase II of the proposed Project. Nevertheless, as these construction activities would be short-term and temporary, impacts related to groundborne noise levels would be less than significant.

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

No Impact. The noise that is anticipated to occur from construction under Phase I and Phase II, if necessary, of the proposed Project would be short-term and would not result in a permanent increase in noise levels. Following the completion of construction activities, the proposed Project would have no impact on ambient noise in the Project vicinity.

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

Less than Significant. Please see Section 4.12(a). Construction noise would be in compliance with Municipal Codes Sections 41.40 and 112.05 and impacts would be less than significant.

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 nearest airports are Torrance Airport, approximately 7 miles northwest, and Long Beach Airport, approximately 10 miles northeast of the site. The proposed Project is not located within an airport land use plan. Therefore, no impacts are anticipated to occur.

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. A helicopter-landing pad for Island Express is located at Berth 95 approximately 2.15 miles to the north of the Project site. Only small helicopters operate from this location and transit primarily via the Main Channel. The proposed excavation and construction activities would be located too far from the helicopter-landing pad to effect or be affected by helicopter noise. Therefore, construction workers would not be exposed to excessive noise levels. Additionally, implementation of the proposed Project would not result in the construction of any habitable structures that could be affected by helicopter noise over the long-term. Therefore, no impact would occur with the implementation of the proposed Project.

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 would not establish new housing or extend any roads. Construction employment opportunities provided by the proposed Project would not result in household relocation by construction workers due the small scale and short-timeline of construction activities. The proposed Project would not affect population or housing located within the project area, nor in the vicinity; therefore, there would be no population growth impacts as a result of the proposed Project.

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

No Impact. Please see the response to 4.13(a) above.

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

No Impact. Please see the response to 4.13(a) above.

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. The LAFD provides fire protection services as well as emergency medical (paramedic) services within the City of Los Angeles. LAFD No. 110, located at Berth 43, is the closest station to the Project site (POLA 2017). During construction, emergency access to the Project vicinity would be maintained for emergency service vehicles. Further, the LAFD inspector would supervise all construction-related activities, ensuring safety during the 12-day construction period during Phase I. Similarly, emergency access would also during construction activities associated with Phase II, which would occur over a separate 15-day period. Following the excavation and removal of the tanks, the proposed Project would not result in a long-term increase in demand for fire protection services. Therefore, impact to fire protection services would be less than significant.

ii) Police protection?

No Impact. The Los Angeles Port Police (Port Police) is the primary law enforcement agency within the POLA. The Port Police are responsible for patrol and surveillance of POLA property including 12 square miles of landside property and 43 miles of waterfront. 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.

Construction of the proposed Project, under Phase I and Phase II, if necessary, is not anticipated to result in temporary interruption and/or delays for law enforcement. Trip generation during construction would be minimal and short-term and would not result in roadway closures. The proposed Project construction would not increase demand for law enforcement and no new facilities would be required. Therefore, implementation of the proposed Project would have no impact on police protection.

iii) Schools?

No Impact. No new residential units would be constructed as a part of the proposed Project, and the proposed Project would not result in new permanent populations that require school facilities. No new students would be generated and no increase in demand on local schools would result from implementation of the proposed Project, therefore no impact would occur.

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 impact related to parks would occur with the implementation of the proposed Project.

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 services or facilities. As such, no impacts to other public facilities would occur from the implementation of the proposed Project.

4.15 RECREATION

This section evaluates recreation impacts associated with the implementation of the proposed Project. The analysis addresses construction-related and operational impacts and the associated potential impact to any surrounding local parks or other recreation facilities that would occur as a result 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 is short-term construction project that would not increase demand on existing or planned recreational facilities, including boat facilities at the Cabrillo Marina. Therefore, 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.

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 would not include the development of, or require the construction of recreational facilities that would physically affect the environment. Therefore, no impact would occur with the implementation of the proposed Project.

4.16 TRANSPORTATION AND TRAFFIC

The purpose of this section is to identify and evaluate transportation and traffic conditions in the proposed Project area and to analyze the potential short-term transportation and traffic impacts of 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. According to the Los Angeles County Congestion Management Program (CMP), a Traffic Impact Analysis (TIA) should be conducted at all CMP arterial monitoring intersections, including monitored freeway on-ramps or off-ramps, where a proposed project would add 50 or more trips during either the AM weekday peak hour (7:00 AM – 9:00 PM) or the PM weekday peak hour (4:00 PM to 6:00 PM) and at all mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during the AM or PM weekday peak hours (Los Angeles County Metropolitan Transportation Authority 2010). The City of Los Angeles states that 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 operating at Level of Service (LOS) E or F (City of Los Angeles 2016). Additionally, the guidelines state that a Traffic Study is required when the project is likely to add 43 or more AM or PM peak hour trips. Construction-related activities associated with the proposed Project would only require approximately four construction workers. As such, the effect of construction worker commutes on surrounding roadway segments and intersections would be negligible during the AM and PM peak hours. As described in Section 2.3, *Proposed Construction Activities,* approximately 29 truck trips would be required to remove the excavated soil, and an additional 29 trips would be required to deliver clean fill under Phase I construction activities. During the three-day excavation period, it is anticipated that there would be a maximum of 10 truck trips per day. During the two-day backfill and soil compaction period, there could be as many as 15 truck trips

per day. However, these trips would be spaced out throughout the day and would not approach the thresholds Los Angeles County CMP thresholds triggering a TIA or the City of Los Angeles thresholds triggering a Technical Memorandum or Traffic Study.

If contaminated soils are found within the site during Phase I construction activities, the LARWQCB may require additional Phase II construction activities. During these additional remediation activities, which would occur following the completion of all Phase I construction activities, approximately 35-40 truck trips would be required to remove the excavated soil and an additional 35-40 truck trips would be required to deliver clean fill. During the 5-day excavation period, it is anticipated that there would be a maximum of 8 truck trips per day; however, during the two-day backfill and soil compaction period, there could be as many as 20 truck trips per day. However, similar to the truck trips during Phase I, these trips would be spaced out throughout the day and would not approach the Los Angeles County CMP thresholds trigger a TIA or the City of Los Angeles thresholds triggering a Technical Memorandum or Traffic Study.

The proposed Project, including Phase I and Phase II construction activities, would not result in significant traffic trip generation and would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. In addition, the Project would not encourage or promote non-motorized transit and would not result in the deterioration of transportation service standards, transportation infrastructure, or transit. Impacts from the construction associated with the proposed Project would be short-term and less than significant.

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. Implementation of the proposed Project would not increase visitation to the POLA, and therefore would not increase overall levels of traffic or congestion on any CMP roads or intersections. Although the proposed Project would result in additional trips to the site during construction and removal of soil, these impacts would be limited and short-term. Therefore, impacts to CMP standards would be less than significant.

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

No Impact. The nearest airports are Torrance Airport, approximately 7 miles northwest, and Long Beach Airport, approximately 10 miles northeast of the site. Therefore, the project has no potential to increase traffic levels or shift a location of air traffic levels or patterns.

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 does not include any alterations to ingress, egress or circulation patterns within the site and vicinity and would not interfere with any existing access. As described in Section 2.3, *Proposed Project Construction Activities*, notices would be posted consistent with POLA policy to notify businesses and members of the public of temporary construction activities and associated hazards. Therefore, no impacts would occur under implementation of the proposed Project.

e) Result in inadequate emergency access?

Less than Significant. The proposed Project would result in minimal traffic increases during a 12-day period associated with Phase I construction activities, and during a separate 15-day period associated with Phase II construction activities, if necessary. During construction activities, all access routes for emergency services in the vicinity of the Project site would be maintained. No aspect of the proposed Project would impair or degrade emergency access. Therefore, the proposed Project would not result in inadequate emergency access, and impacts are anticipated to be less than significant.

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 would not alter the land use of the site or surrounding area, and would not conflict with any applicable land use plans. As described in Section 2.3, *Proposed Project Construction Activities*, during construction, the Project site boundaries would be fenced and screened and configured in such a way to reduce parking displacement at the Cabrillo Marina to the maximum extent possible. Additionally, pedestrian access and sidewalks would be impeded as minimally as possible during the construction period of up to 12 days associated with Phase I. Similarly, access would be impeded as minimally as possible during the construction period of up to 15 days associated with Phase II. The proposed Project would not conflict with policies, plans, or programs supporting alternative transportation, (e.g., bicycles, buses, carpools, vanpools, ridesharing, walking).

4.17 TRIBAL CULTURAL RESOURCES

This section evaluates impacts related to tribal cultural resources associated with the implementation of the proposed Project.

AB 52, which went into effect on July 1, 2015, established a consultation process with all California Native American Tribes on the NAHC List and required consideration of Tribal Cultural Values in the determination of project impacts and mitigation. AB 52 established a new class of resources, tribal cultural resources, defined as a site feature, place, cultural landscape, sacred place or object, which is of cultural value to a Tribe that is either: (1) on or eligible for the California Historic Register or a local historic register; or (2) treated by the lead agency, at its discretion, as a traditional cultural resource per Public Resources Code 21074 (a)(1)(A)-(B).

Public Resources Code Section 21083.09, added by AB 52, required the California Natural Resources Agency to update Appendix G of the CEQA Guidelines to address tribal cultural resources. Pursuant to Government Code Section 11346.6, on August 8, 2016 the California Natural Resources Agency adopted and amended the CEQA Guidelines to include consideration of impacts to tribal cultural resources. These amendments separated the consideration of paleontological resources from tribal cultural resources and updated the relevant sample questions to add specific consideration of tribal cultural resources.

Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).

No Impact. As discussed in Section 4.5, *Cultural Resources*, the potential to discover an unknown tribal cultural resource within the Project site is highly unlikely as the site is underlain by manmade fill. Previous disturbance of the site, including excavation for the initial installation of the USTs in 1985 and past soil remediation efforts would have destroyed any potential tribal cultural resources that may have occurred beneath the surface. No evidence of tribal cultural resources have been identified within or adjacent to the project site and no “unexpected resources” are anticipated based on previous archeological studies at the Cabrillo Marina (LAHD 2002). Therefore, the proposed Project would not result in any impacts to known tribal cultural resources.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

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

4.18 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. The proposed project is limited to construction only. As described in Section 2.3, *Proposed Project Construction Activities* USA would be contacted to mark all known utilities on adjacent public property. If utility lines are encountered at any point during excavation, the

construction crew would cease the use of heavy machinery and hand dig until the utility is fully located.

Would the Project:

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

Less than Significant. The proposed Project would be confined to an existing paved area within Berth 31. Construction would not require a LARWQCB discharge permit. No alterations would be made to the existing water drainage systems that would affect wastewater or stormwater facilities. There would be no new employees or operational changes under the proposed Project that would generate wastewater. The USTs would be washed in place, and affected soils would be removed as part of project implementation. Temporary erosion control measures will be implemented as described in Section 2.3, *Proposed Project Construction Activities*. Therefore, no impacts to wastewater treatment requirements would occur as a result of Project implementation.

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. No impact would occur with the implementation of the proposed Project.

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. Please see the response to 4.17(a) above. No impact would occur with the implementation of the proposed Project.

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. The Project would require water in order to wash the USTs prior to removal. This water would either be sourced on-site (e.g., fire hydrant connection) or imported to the site via a water truck for one-time use. Construction water use would be limited by task and time and would not represent a long-term increase in demand on available water supplies. After completion of the Project, no new demands to water supplies would occur. Therefore, impacts would be less than significant.

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?

No Impact. Please see the response to Section 4.17(a) above. No impact would occur with the implementation of the proposed Project.

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

Less than Significant. As outlined in Section 2.3, *Proposed Construction Activities*, the three USTs would be transported off-site to Ecology Recycling, or a similar approved recycling facility at a similar distance from the Project site. Contaminated soils would be hauled off-site to Soil Safe, Inc. or an approved and permitted facility at a similar distance from the Project site. Similarly, the existing concrete slab would be demolished and hauled to a permitted recycling facility located within 110 miles of the Project site. If additional soil remediation activities are found to be necessary, up to 700 tons or 518 cubic yards of soil would be removed under Phase II construction activities and would be properly disposed of as described in Section 2.3, *Proposed Construction Activities*. Implementation of the proposed Project is not expected to significantly affect any local landfills' ability to accommodate waste. All waste would be disposed of in accordance with the City of Los Angeles' Solid Waste Integrated Resource Plan (City of Los Angeles 2013). Therefore, impacts to landfills and solid waste are expected to be short-term and less than significant.

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

Less than Significant. The proposed Project would be required to conform to the policies and programs of the City of Los Angeles' Solid Waste Integrated Resource Plan (City of Los Angeles 2013). Compliance with the Solid Waste Integrated Resource Plan would ensure sufficient permitted capacity to serve the proposed Project. As such, impacts would be less than significant.

4.19 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?

Less than Significant. The project has been determined to have no impacts or less than significant impacts. As discussed in Section 4.4, *Biological Resources,* because the project site is located in a developed marina, there are no rare or endangered habitats or protected plant or wildlife species. In addition, because the proposed Project has no waterside improvements, it would not cause a fish or wildlife population to drop below self-sustaining levels or threaten to eliminate a plant or wildlife community.

As discussed in Section 4.5, *Cultural Resources,* impacts to cultural resources would be less than significant because the entire Project site is underlain by manmade fill, zoned for industrial purposes, and has been extensively disturbed by previous development. As a result, no known examples of major periods of California history or prehistory would be eliminated with implementation of the Project. Additionally, there is no demolition of any historic building or structures associated with the proposed Project. Therefore, the proposed Project would not degrade the quality of the environment and impacts would be less than significant.

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. The proposed Project would result in no impacts or less than significant impacts to all resource areas. Because of the small scale and localized effects of the proposed Project, the potential incremental contribution would not be cumulatively considerable. Implementation of the Project will not result in a change of operations at the POLA. Removal of the USTs and associated contaminated soils would result in environmental benefits to geology and soils, water quality, and hazardous materials. Impacts from construction will be short-term and less than significant, which would not contribute substantially to a cumulatively considerable impact.

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

Less than Significant. Based on the analysis provided in this IS, the proposed Project would not result in any significant impacts on an individual or cumulative level, and would not result in any significant adverse effects on human beings. As described in the analyses contained in the IS, the proposed Project would result in less than significant effects on human beings.

5. 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. PREPARERS AND CONTRIBUTORS

This IS/ND was prepared for and under the direction of LAHD by Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler). Members of the professional staff are listed below:

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7. ACRONYMS AND ABBREVIATIONS

(Q)M2-1	Quasi-public Light Industrial Uses
AB	Assembly Bill
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
Basin	Southern California Air Basin
BMP	Best Management Practice
BTEX	benzene, toluene, ethylbenzene and xylenes
CAAP	Clean Air Action Plan
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	methane
CMP	Congestion Management Program
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CWA	Clean Water Act
dBA	A-weighted decibel
DOT	Department of Transportation
DTSC	Department of Toxic Substances
EMAP	Energy Management Action Plan
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
GWP	Global Warming Potential
HCP	Habitat Conservation Plan
I-	Interstate
IPaC	Information for Planning and Consultation
IS	Initial Study
LAFD	Los Angeles Fire Department
LAHD	Los Angeles Harbor Department
LAPD	Los Angeles Police Department
LARWQCB	Los Angeles Regional Water Quality Control Board
lbs/day	pounds per day
LOS	Level of Service
LST	Localized Significance Threshold

LUST	Leaking Underground Storage Tank
MT/yr	metric tons per year
MTBE	methyl tert-butyl ether
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Council
NCCP	Natural Community Conservation Plan
ND	Negative Declaration
NO_X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
O_3	ozone
OSHA	Occupational Safety and Health Administration
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
POLA	Port of Los Angeles
Port Police	Los Angeles Port Police
PPE	Personal Protective Equipment
RAP	Remedial Action Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SEA	Significant Ecological Area
SLR	sea-level rise
SO_x	sulfur oxides
SR	State Route
TAC	toxic air contaminant
TEUP	Temporary Entry and Use Permit
TIA	Traffic Impact Analysis
USA	Underground Service Alert
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
VOC	volatile organic compound

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Appendix A

Air Quality Calculations

A1 – Summary Air Quality Calculations
A2 – CalEEMod Output Annual
A3 – CalEEMod Output Winter

Project: **POLA B31 UST Removal**
Prepared by: iLanco Environmental, LLC
Date: 4/20/2017

Peak Day Construction Emissions Without Mitigation - Proposed Project

	Emissions (lb/day)									
	PM10 Exhaust	PM10 Fugitive Dust	PM2.5 Exhaust	PM2.5 Fugitive Dust	PM10 total	PM2.5 total	NOX	SOX	CO	VOC
Phase I	1.6	2.8	1.5	0.7	4.3	2.1	54.4	0.1	24.0	3.6
Significance Threshold	na	na	na	na	150	55	100	150	550	75
Exceeds Threshold?	na	na	na	na	**No**	**No**	**No**	**No**	**No**	**No**
Phase II	1.9	2.5	1.8	0.6	4.5	2.4	55.2	0.1	28.0	4.3
Significance Threshold	na	na	na	na	150	55	100	150	550	75
Exceeds Threshold?	na	na	na	na	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

Emissions from on-site and off-site construction equipment and construction vehicles were calculated using CalEEMod. Emissions from tank degassing and thermal oxidizer combustion exhaust were calculated using EPA Tanks 4.09d and thermal oxidizer emission factors, respectively.

Tank degassing activities would occur during Phase I only.

Emissions might not add precisely due to rounding.

PM10 exhaust and PM10 fugitive emissions do not have separate thresholds.They are presented for informational purposes to highlight that fugitive dust emissions are a large component of total PM emissions.

61% control of fugitive dust is assumed as part of the project.

Annual GHG Emissions Without Mitigation - Proposed Project

	Emissions (mty)			
	CO2	CH4	N2O	CO2e
Phase I and II	70	0.0	0.0	70
Significance Threshold				10,000
Exceeds Threshold?				**No**

Notes:

Emissions might not add precisely due to rounding.

On-Site Peak Day Construction Emissions Without Mitigation - Proposed Project

	Peak Day Emissions (lb/day)							
	PM10	PM10	PM2.5	PM2.5	PM10 total	PM2.5	NO2	CO
Phase I On-Site Emissions	1.6	1.2	1.5	0.2	2.8	1.7	30.4	18.4
LST Threshold	na	na	na	na	4	3	57	585
Significant?					**No**	**No**	**No**	**No**
Phase II On-Site Emissions	1.8	1.1	1.7	0.2	2.8	1.8	32.0	22.5
LST Threshold	na	na	na	na	4	3	57	585
Significant?					**No**	**No**	**No**	**No**

Notes:

SCAQMD LST look-up tables were used to estimate localized impacts based on the following: 1) Day disturbed area of 1 acre; 2) 25 meter separation distance to the closest residential/sensitive receptor; 3) 25 meter separation distance to the closest offsite worker receptor; 4) Source Receptor Area 4.

PM10 exhaust and PM10 fugitive emissions do not have separate thresholds; they are presented for informational purposes to highlight that fugitive dust emissions drive PM emissions.

61% control of fugitive dust is assumed as part of the project.

Exhaust PM10 | Fugitive PM10 | Exhaust PM2.5 | Fugitive PM2.5 | PM10 Total | PM2.5 Total | NOx | SO2 | CO | ROG

Regional Impacts

Peak Day Construction Emissions Without Mitigation - Proposed Project

	Emissions (lb/day)									
	PM10 Exhaust	PM10 Fugitive Dust	PM2.5 Exhaust	PM2.5 Fugitive Dust	PM10 total	PM2.5 total	NOX	SOX	CO	VOC
Unmitigated Maximum Phase I										
Phase I	1.6	2.8	1.5	0.7	4.3	2.1	54.4	0.1	24.0	3.6
Significance Threshold	na	na	na	na	150	55	100	150	550	75
Exceeds Threshold?	na	na	na	na	**No**	**No**	**No**	**No**	**No**	**No**
Unmitigated Maximum Phase II										
Phase II	1.9	2.5	1.8	0.6	4.5	2.4	55.2	0.1	28.0	4.3
Significance Threshold	na	na	na	na	150	55	100	150	550	75
Exceeds Threshold?	na	na	na	na	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
Emissions from on-site and off-site construction equipment and construction vehicles were calculated using CalEEMod. Emissions from tank degassing and thermal oxidizer combustion exhaust were calculated using EPA Tanks 4.09d and thermal oxidizer emisson factors, respectively.
Tank degassing activities would occur during Phase I only.
Emissions might not add precisely due to rounding.
PM10 exhaust and PM10 fugitive emissions do not have separate thresholds.They are presented for informational purposes to highlight that fugitive dust emissions are a large component of total PM emissions.
61% control of fugitive dust is assumed as part of the project.

GHG Impacts

Total CO2 | CH4 | N2O | CO2e

Annual GHG Emissions Without Mitigation - Proposed Project

	Emissions (mty)			
	CO2	CH4	N2O	CO2e
Unmitigated Construction 2017				
Phase I and II	70	0.0	0.0	70
Significance Threshold				10,000
Exceeds Threshold?				**No**

Notes:
Emissions might not add precisely due to rounding.

Localized Impacts

On-Site Peak Day Construction Emissions Without Mitigation - Proposed Project

	Peak Day Emissions (lb/day)							
	PM10 exhaust	PM10 fugitive	PM2.5 exhaust	PM2.5 fugitive	PM10 total	PM2.5 total	NO2	CO
Unmitigated Construction On-Site Phase I / Mitigated Construction On-Site Phase I								
Phase I On-Site Emissions	1.6	1.2	1.5	0.2	2.8	1.7	30.4	18.4
LST Threshold	na	na	na	na	4	3	57	585
Significant?					**No**	**No**	**No**	**No**
Unmitigated Construction On-Site Phase II / Mitigated Construction On-Site Phase II								
Phase II On-Site Emissions	1.8	1.1	1.7	0.2	2.8	1.8	32.0	22.5
LST Threshold	na	na	na	na	4	3	57	585
Significant?					**No**	**No**	**No**	**No**

Notes:

SCAQMD LST look-up tables were used to estimate localized impacts based on the following: 1) Day disturbed area of 1 acre; 2) 25 meter separation distance to the closest residential/sensitive receptor; 3) 25 meter separation distance to the closest offsite worker receptor; 4) Source Receptor Area 4.
PM10 exhaust and PM10 fugitive emissions do not have separate thresholds; they are presented for informational purposes to highlight that fugitive dust emissions drive PM emissions.
61% control of fugitive dust is assumed as part of the project.

		Exhaust PM10	Fugitive PM10	Exhaust PM2.5	Fugitive PM2.5	PM10 Total	PM2.5 Total	NOx	SO2	CO	ROG

Peak Day Construction Emissions Without Mitigation - Proposed Project

		Source Category	PM10 Exhaust (lb/day)	PM10 Fugitive Dust (lb/day)	PM2.5 Exhaust (lb/day)	PM2.5 Fugitive Dust (lb/day)	PM10 total (lb/day)	PM2.5 total (lb/day)	NOX (lb/day)	SOX (lb/day)	CO (lb/day)	VOC (lb/day)
Unmitigated On-site 1a	Mitigated On-site 1a	On-site 1a	0.5	0.0	0.5	0.0	0.5	0.5	8.7	0.0	7.2	0.8
Unmitigated Off-site 1a	Mitigated Off-site 1a	Off-site 1a	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.0
Unmitigated On-site 1b	Mitigated On-site 1b	On-site 1b	1.4	0.8	1.3	0.1	2.2	1.4	26.4	0.0	17.7	2.7
Unmitigated Off-site 1b	Mitigated Off-site 1b	Off-site 1b	0.2	2.0	0.2	0.5	2.2	0.7	28.0	0.1	6.3	1.0
Unmitigated On-site 1c	Mitigated On-site 1c	On-site 1c	1.6	0.0	1.5	0.0	1.6	1.5	30.4	0.0	18.4	3.0
Unmitigated Off-site 1c	Mitigated Off-site 1c	Off-site 1c	0.0	0.2	0.0	0.1	0.2	0.1	1.3	0.0	0.9	0.1
Unmitigated On-site 1c tank degas	Mitigated On-site 1c tank dega	On-site 1c tank degassing	0.1		0.1		0.1	0.1	5.5	0.0	1.4	0.2
Unmitigated On-site 1d	Mitigated On-site 1d	On-site 1d	1.0	1.2	0.9	0.2	2.2	1.1	18.5	0.0	12.6	1.8
Unmitigated Off-site 1d	Mitigated Off-site 1d	Off-site 1d	0.1	1.1	0.1	0.3	1.2	0.4	17.1	0.0	4.0	0.6
Unmitigated On-site 1e	Mitigated On-site 1e	On-site 1e	1.3	0.0	1.2	0.0	1.3	1.2	22.5	0.0	15.2	2.4
Unmitigated Off-site 1e	Mitigated Off-site 1e	Off-site 1e	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.7	0.1
		1a	0.5	0.1	0.5	0.0	0.6	0.5	8.7	0.0	7.4	0.9
		1b	1.6	2.8	1.5	0.7	4.3	2.1	54.4	0.1	24.0	3.6
		1c	1.7	0.2	1.6	0.1	1.9	1.7	37.2	0.1	20.7	3.3
		1d	1.1	2.3	1.0	0.5	3.5	1.5	35.7	0.1	16.6	2.4
		1e	1.3	0.1	1.2	0.0	1.5	1.3	22.6	0.0	15.9	2.5
Unmitigated Maximum Phase I		Maximum Phase I	1.6	2.8	1.5	0.7	4.3	2.1	54.4	0.1	24.0	3.6
Unmitigated On-site 2a	Mitigated On-site 2a	On-site 2a	0.5	0.0	0.5	0.0	0.5	0.5	8.7	0.0	7.2	0.8
Unmitigated Off-site 2a	Mitigated Off-site 2a	Off-site 2a	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.0
Unmitigated On-site 2b	Mitigated On-site 2b	On-site 2b	1.8	0.9	1.7	0.1	2.6	1.8	32.0	0.0	22.5	3.4
Unmitigated Off-site 2b	Mitigated Off-site 2b	Off-site 2b	0.2	1.7	0.2	0.5	1.8	0.6	23.2	0.1	5.5	0.8
Unmitigated On-site 2c	Mitigated On-site 2c	On-site 2c	1.0	1.1	0.9	0.2	2.1	1.1	18.5	0.0	12.6	1.8
Unmitigated Off-site 2c	Mitigated Off-site 2c	Off-site 2c	0.1	0.8	0.1	0.2	0.9	0.3	11.8	0.0	2.9	0.4
Unmitigated On-site 2d	Mitigated On-site 2d	On-site 2d	1.1	0.0	1.0	0.0	1.1	1.0	16.3	0.0	12.3	1.9
Unmitigated Off-site 2d	Mitigated Off-site 2d	Off-site 2d	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.5	0.1
		2a	0.5	0.1	0.5	0.0	0.6	0.5	8.7	0.0	7.4	0.9
		2b	1.9	2.5	1.8	0.6	4.5	2.4	55.2	0.1	28.0	4.3
		2c	1.1	1.9	1.0	0.4	3.0	1.4	30.3	0.1	15.5	2.2
		2d	1.1	0.1	1.0	0.0	1.2	1.1	16.4	0.0	12.8	1.9
Unmitigated Maximum Phase II		Maximum Phase II	1.9	2.5	1.8	0.6	4.5	2.4	55.2	0.1	28.0	4.3

Thermal Oxidizer Combustion Emissions

Tank Capacity				Fuel Consumption/Burner Rating		Propane Emission Factors [4],[5]								Natural Gas Emission Factors [4],[5]								Propane Emissions								Natural Gas Emissions							
Tank Capacity [1] gal	Tank Capacity scf	Max Process Flow Rate scfm	Time to Degas Tank hr	Propane [2] gal/hr	Natural Gas [3] MMBtu/hr	NOx	PM	SOx	CO	VOC	CO2	CH4	N2O	NOx	PM	SOx	CO	VOC	CO2	CH4	N2O	NOx	PM	SOx	CO	VOC	CO2	CH4	N2O	NOx	PM	SOx	CO	VOC	CO2	CH4	N2O
						lb/1000 gal	lb/1000 gal	lb/1000 gal	lb/1000 gal	lb/1000 gal	kg CO2/gal	kg/MMBtu	kg/MMBtu	lb/MMcf	lb/MMcf	lb/MMcf	lb/MMcf	lb/MMcf	kg CO2/MMBtu	kg/MMBtu	kg/MMBtu	lb/day	lb/day	lb/day	lb/day	lb/day	tonnes	tonnes	tonnes	lb/day	lb/day	lb/day	lb/day	lb/day	tonnes	tonnes	tonnes
10,000	74,800	4,000	0.3	460	42.2	12.8	0.28	0.054	3.2	0.26	5.72	0.003	0.0006	130	7.5	0.6	35	7	53.06	0.001	0.0001	5.51	0.12	0.02	1.38	0.11	2.46	0.00	0.00	5.03	0.29	0.02	1.35	0.27	2.09	0.00	0.00

Notes:

[1] Each tank is 10,000 gal
[2], [3] Thermal Oxidizer design specifications for EMECS 42 MMBtu/hr.
[4] Criteria pollutant emission factors are from SCAQMD AER Emission Factors.
[5] GHG pollutant emission factors are from The Climate Registry 2015.
Assumes that 3 tanks would be degassed on a single day.
Propane and natural gas emissions from thermal oxidizer were calculated; propane emissions were used in summary calculations

Thermal Oxidizer Permit Limit

< 40	NOx lb/day permit limit
130	lb NOx/MMcf natural gas
12.8	lb NOx/1000 gal propane
< 30	VOC lb/day permit limit
4000	scfm inlet gas flow permit limit

Source:
AP42, Chapter 1, Table 1.5-1 (0.10 S). S is the sulfur content of propane (0.54 g/1000 ft3) (Reference: EPA. Bernd H. Haneke. A National Methodology and Emission Inventory for residential Fuel Combustion).

Tank Degassing Emissions

UST	lb VOC/tank	lb VOC/hr	lb VOC/day	lb VOC total
Gasoline				
Displacement of vapors in tank [1]	87.59			
Thermal Oxidizer Control Efficiency	99.9%			
VOC Emissions	0.088	0.28	0.09	0.26
Diesel				
Displacement of vapors in tank [1]	0.23			
Thermal Oxidizer Control Efficiency	99.9%			
VOC Emissions	0.000	0.00	0.00	0.00

Notes:
[1] EPA TANKS 4.09 program: Displacement of vapors from the tank during degassing was estimated by assuming 1 turnover and calculating working losses.
Conservatively assumed 3 gasoline UST degassed: 3

Tank Characteristics

Volume (gal)	Diameter (in)	Length (ft)
10,000	96	27

Source: Stanwade Metal Products
http://www.stanwade.com/tanks-underground-sti-p3-dw.htm

Project name: Cathay Bank Removal of Leaking Underground Storage Tanks, Cabrillo Marina, Berth 31
Prime: Amec

Data

Project Site	2,825	sft
Phase I: Removal of 3, 10,000-gallon USTs	1,225	sft
Phase II: Remediation	1,600	sft

Construction Schedule

CalEEMod Phase Name	CalEEMod Phase Type	Construction Activity	Duration (days)	Hours/Day	Debris/Export/Import (ton)	Debris Export (cyd)	Soil Import (cyd)	Trucks (loads)	Truck Trips (one-way)	Disposal/Import Location (one-way distance) (mi)
		Phase I								
Demolition 1a	Demolition	Install Shoring and Removal of Dockside Piping	3	10						
Demolition 1b	Site Preparation	Remove Concrete and Soils	3	10	392	290		29	58	110
Demolition 1c	Site Preparation	Wash and Remove Tanks	2	10				3	6	25
Demolition 1d	Site Preparation	Backfill and Compact Soils	2	10	392		290	29	58	40
Demolition 1e	Paving	Remove Shoring, Repave, and Restripe Parking Spaces	2	10						
		Phase II								
Demolition 2a	Demolition	Install Shoring	3	10						
Demolition 2b	Site Preparation	Remove Concrete and Soils	5	10	700	518		40	80	110
Demolition 2c	Site Preparation	Backfill and Compact Soils	4	10	700		518	40	80	40
Demolition 2d	Paving	Remove Shoring, Repave, and Restripe Parking Spaces	3	10						

Notes:
Assumed start date September 2017
Construction data was provided by Amec 4/14/17.
Average haul truck capacity assumed to be 12 cyd (per Amec); source: IS/ND, Section 2.3.
Contaminated soil exported to: Soil Safe, Inc., a thermal desorption facility, located at 12328 Hibiscus Road, Adelanto, California (110 mi).
Imported soil from Hansen Aggregates (40 mi).
Demolished tanks would be transported by 3 flatbed trucks to Ecology Recycling in Santa Fe Springs (25 mi).

Construction Equipment

	crane	excavator	off-road truck	pump	backhoe	roller	pavers	concrete saw	air compressor	QA/QC
Demolition 1a		10			10					20
Demolition 1b		10	10		10			10		40
Demolition 1c	10	10	5	10	10					35
Demolition 1d		10	5		10	10				35
Demolition 1e			5		10	10	10		10	45
Demolition 2a		10			10					20
Demolition 2b		10	10	10	10			10		50
Demolition 2c		10	5		10	10				35
Demolition 2d					10	10	10		10	40

Notes:
CalEEMod defaults were used for equipment rating and load factors.
CARB fleet mix was assumed.
Equipment data was provided by Amec 4/14/17. Equipment was assumed to operate 10 hr/day.
Off-road trucks include a dry vacuum truck and a water truck.

HC to VOC	1.053	EPA, 2010. Conversion Factors for Hydrocarbon Emission Components, EPA-420-R-10-015. July. Available online: http://www.epa.gov/oms/models/nonrdmdl/nonrdmdl2010/420r10015.pdf			
kW to hp	1.34102209				
g to lb	0.002204586				
g to mton	0.000001				
hp to kW	0.74599				
short ton to gram	907,185				
yd^3 to ft^3	27				
ft^2 to acres	0.00002296				
density of concrete (lb/ft^3)	89		2400	lb/yd^3	Source: CalRecycle: Calculations: Construction and Demolition and Inert Debris (CDI), Construction/Demolition and Inert Debri
density of soil (lb/ft^3)	94		2550	lb/yd^3	Source: CalRecycle: Calculations: Construction and Demolition and Inert Debris (CDI), Construction/Demolition and Inert Debri
bbl to gal	42				
scf to gal	7.48				
HEV natural gas	1020	Btu/scf			
l to gal	0.264172				

GHG Emission Factors

	CO2	CH4	N2O	Fuel
	(kg CO2/gal fuel)	(kg CH4/gal fuel)	(kg N2O/gal fuel)	
offroad construction equipment[1],[2]	10.21	0.000576	0.000256	diesel
	(kg CO2/gal fuel)	(g CH4/mile)	(g N2O/mile)	
onroad medium and heavy duty vehicles[1],[3]	10.21	0.0051	0.0048	diesel
onroad light duty vehicles[1],[3]	8.78	0.2024	0.022	gasoline
	kg CO2/gal	kg/MMBtu	kg/MMBtu	
non-transport fuel combustion[4],[5]	5.72	0.003	0.0006	propane
	kg CO2/MMBtu	kg/MMBtu	kg/MMBtu	
non-transport fuel combustion[4],[5]	53.06	0.001	0.0001	natural gas

Notes:

[1] CO2 emission factors: 2016 Climate Registry Default Emission Factors, *Table 13.1, US Default CO2 Emission Factors for Transport Fuels*

[2] N2O and CH4 emission factors: 2016 Climate Registry Default Emission Factors, *Table 13.7, Default CH4 and N2O Emission Factors for Non-Highway Vehicles.*

[3] N2O and CH4 emission factors: 2016 Climate Registry Default Emission Factors, *Table 13.4, Default CH4 and N2O Emission Factors for Highway Vehicles by Technology Type.*

[4] CO2 emission factors: 2016 Climate Registry Default Emission Factors, Table 12.1, Default Factors for Calculating CO2 Emissions from Fossil Fuel and Biomass Combustion

[5] CH4 and N2O emission factors: 2016 Climate Registry Default Emission Factors, *Table 12.9.1, Default CH4 and N2O Emission Factors by Fuel Type, Industrial and Energy Sectors*

Fuel density

Diesel (lb/gal)	7.04
Gasoline (lb/gal)	6.15

Global Warming Potentials (GWP):

CO2	CH4	N2O
1	28	265

IPCC 2015. Intergovernmental Panel on Climate Change. *5th Assessment Report.*

POLA B31 UST Removal

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	2.83	1000sqft	0.06	2,825.00	0
Parking Lot	2.83	1000sqft	0.06	2,825.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2019
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Trips and VMT - Data provided by Amec.

Demolition -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripLength	20.00	110.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00

tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripLength	20.00	110.00
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripNumber	29.00	58.00
tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	HaulingTripNumber	29.00	58.00
tblTripsAndVMT	HaulingTripNumber	51.00	80.00
tblTripsAndVMT	HaulingTripNumber	51.00	80.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0339	0.4235	0.2302	7.4000e-004	0.0277	0.0166	0.0443	5.4600e-003	0.0156	0.0211	0.0000	69.9587	69.9587	0.0106	0.0000	70.2231
Maximum	**0.0339**	**0.4235**	**0.2302**	**7.4000e-004**	**0.0277**	**0.0166**	**0.0443**	**5.4600e-003**	**0.0156**	**0.0211**	**0.0000**	**69.9587**	**69.9587**	**0.0106**	**0.0000**	**70.2231**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0339	0.4235	0.2302	7.4000e-004	0.0172	0.0166	0.0338	3.8700e-003	0.0156	0.0195	0.0000	69.9587	69.9587	0.0106	0.0000	70.2230

Maximum	**0.0339**	**0.4235**	**0.2302**	**7.4000e-004**	**0.0172**	**0.0166**	**0.0338**	**3.8700e-003**	**0.0156**	**0.0195**	**0.0000**	**69.9587**	**69.9587**	**0.0106**	**0.0000**	**70.2230**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**38.07**	**0.00**	**23.81**	**29.12**	**0.00**	**7.55**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-4-2017**	**9-30-2017**	0.1692	0.1692
		Highest	0.1692	0.1692

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0112	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Energy	2.8000e-004	2.5100e-003	2.1100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	21.9176	21.9176	5.1000e-004	1.4000e-004	21.9731
Mobile	1.8000e-003	0.0102	0.0272	9.0000e-005	7.1300e-003	1.0000e-004	7.2300e-003	1.9100e-003	1.0000e-004	2.0100e-003	0.0000	8.2604	8.2604	4.3000e-004	0.0000	8.2711
Waste						0.0000	0.0000		0.0000	0.0000	0.4019	0.0000	0.4019	0.0238	0.0000	0.9958
Water						0.0000	0.0000		0.0000	0.0000	0.1174	2.6833	2.8007	0.0121	3.0000e-004	3.1924
Total	**0.0132**	**0.0127**	**0.0294**	**1.1000e-004**	**7.1300e-003**	**2.9000e-004**	**7.4200e-003**	**1.9100e-003**	**2.9000e-004**	**2.2000e-003**	**0.5193**	**32.8615**	**33.3808**	**0.0368**	**4.4000e-004**	**34.4326**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0112	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Energy	2.8000e-004	2.5100e-003	2.1100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	21.9176	21.9176	5.1000e-004	1.4000e-004	21.9731
Mobile	1.8000e-003	0.0102	0.0272	9.0000e-005	7.1300e-003	1.0000e-004	7.2300e-003	1.9100e-003	1.0000e-004	2.0100e-003	0.0000	8.2604	8.2604	4.3000e-004	0.0000	8.2711
Waste						0.0000	0.0000		0.0000	0.0000	0.4019	0.0000	0.4019	0.0238	0.0000	0.9958
Water						0.0000	0.0000		0.0000	0.0000	0.1174	2.6833	2.8007	0.0121	3.0000e-004	3.1924
Total	**0.0132**	**0.0127**	**0.0294**	**1.1000e-004**	**7.1300e-003**	**2.9000e-004**	**7.4200e-003**	**1.9100e-003**	**2.9000e-004**	**2.2000e-003**	**0.5193**	**32.8615**	**33.3808**	**0.0368**	**4.4000e-004**	**34.4326**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition 1a	Demolition	9/4/2017	9/6/2017	6	3	Install Shoring and Removal of Dockside Piping
2	Demolition 1b	Demolition	9/7/2017	9/9/2017	6	3	Remove Concrete and Soils
3	Demolition 1c	Demolition	9/11/2017	9/12/2017	6	2	Wash and Remove Tanks
4	Demolition 1d	Demolition	9/13/2017	9/14/2017	6	2	Backfill and Compact Soils
5	Demolition 1e	Paving	9/15/2017	9/16/2017	6	2	Remove Shorin Repavn and Restripe Parking Spacesn
6	Demolition 2a	Demolition	10/9/2017	10/11/2017	6	3	Install Shoring
7	Demolition 2b	Demolition	10/12/2017	10/17/2017	6	5	Remove Concrete and Soils
8	Demolition 2c	Demolition	10/18/2017	10/21/2017	6	4	Backfill and Compact Soils
9	Demolition 2d	Paving	10/23/2017	10/25/2017	6	3	Remove Shorin Repavn and Restripe Parking Spacesn

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.06

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition 1a	Excavators	1	10.00	158	0.38
Demolition 1a	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 1b	Concrete/Industrial Saws	1	10.00	81	0.73
Demolition 1b	Excavators	1	10.00	158	0.38
Demolition 1b	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 1b	Off-Highway Trucks	1	10.00	402	0.38
Demolition 1c	Cranes	1	10.00	231	0.29
Demolition 1c	Excavators	1	10.00	158	0.38
Demolition 1c	Off-Highway Trucks	1	5.00	402	0.38
Demolition 1c	Pumps	1	10.00	84	0.74
Demolition 1c	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 1d	Excavators	1	10.00	158	0.38
Demolition 1d	Rollers	1	10.00	80	0.38
Demolition 1d	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 1d	Off-Highway Trucks	1	5.00	402	0.38
Demolition 1e	Air Compressors	1	10.00	78	0.48
Demolition 1e	Pavers	1	10.00	130	0.42
Demolition 1e	Rollers	1	10.00	80	0.38
Demolition 1e	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 1e	Off-Highway Trucks	1	5.00	402	0.38
Demolition 2a	Excavators	1	10.00	158	0.38
Demolition 2a	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 2b	Concrete/Industrial Saws	1	10.00	81	0.73
Demolition 2b	Excavators	1	10.00	158	0.38
Demolition 2b	Off-Highway Trucks	1	10.00	402	0.38

Demolition 2b	Pumps	1	10.00	84	0.74
Demolition 2b	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 2c	Excavators	1	10.00	158	0.38
Demolition 2c	Rollers	1	10.00	80	0.38
Demolition 2c	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 2c	Off-Highway Trucks	1	5.00	402	0.38
Demolition 2d	Air Compressors	1	10.00	78	0.48
Demolition 2d	Pavers	1	10.00	130	0.42
Demolition 2d	Rollers	1	10.00	80	0.38
Demolition 2d	Tractors/Loaders/Backhoes	1	10.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition 1a	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition 1b	4	10.00	0.00	58.00	14.70	6.90	110.00	LD_Mix	HDT_Mix	HHDT
Demolition 1c	5	13.00	0.00	6.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Demolition 1d	4	10.00	0.00	58.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Demolition 1e	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition 2a	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition 2b	5	13.00	0.00	80.00	14.70	6.90	110.00	LD_Mix	HDT_Mix	HHDT
Demolition 2c	4	10.00	0.00	80.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Demolition 2d	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition 1a - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2600e-003	0.0131	0.0107	2.0000e-005		7.9000e-004	7.9000e-004		7.3000e-004	7.3000e-004	0.0000	1.4393	1.4393	4.4000e-004	0.0000	1.4503
Total	**1.2600e-003**	**0.0131**	**0.0107**	**2.0000e-005**		**7.9000e-004**	**7.9000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**1.4393**	**1.4393**	**4.4000e-004**	**0.0000**	**1.4503**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	4.0000e-005	4.0000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0813	0.0813	0.0000	0.0000	0.0814
Total	**4.0000e-005**	**4.0000e-005**	**4.0000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0813**	**0.0813**	**0.0000**	**0.0000**	**0.0814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2600e-003	0.0131	0.0107	2.0000e-005		7.9000e-004	7.9000e-004		7.3000e-004	7.3000e-004	0.0000	1.4393	1.4393	4.4000e-004	0.0000	1.4503
Total	**1.2600e-003**	**0.0131**	**0.0107**	**2.0000e-005**		**7.9000e-004**	**7.9000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**1.4393**	**1.4393**	**4.4000e-004**	**0.0000**	**1.4503**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	4.0000e-005	4.0000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0813	0.0813	0.0000	0.0000	0.0814
Total	**4.0000e-005**	**4.0000e-005**	**4.0000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0813**	**0.0813**	**0.0000**	**0.0000**	**0.0814**

3.3 Demolition 1b - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1000e-003	0.0000	3.1000e-003	4.7000e-004	0.0000	4.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9900e-003	0.0396	0.0266	5.0000e-005		2.0500e-003	2.0500e-003		1.9400e-003	1.9400e-003	0.0000	4.7454	4.7454	1.2300e-003	0.0000	4.7762
Total	**3.9900e-003**	**0.0396**	**0.0266**	**5.0000e-005**	**3.1000e-003**	**2.0500e-003**	**5.1500e-003**	**4.7000e-004**	**1.9400e-003**	**2.4100e-003**	**0.0000**	**4.7454**	**4.7454**	**1.2300e-003**	**0.0000**	**4.7762**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3800e-003	0.0427	8.5800e-003	1.1000e-004	2.7400e-003	2.8000e-004	3.0200e-003	7.5000e-004	2.7000e-004	1.0200e-003	0.0000	11.2386	11.2386	6.6000e-004	0.0000	11.2552
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	8.0000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1626	0.1626	1.0000e-005	0.0000	0.1627
Total	**1.4700e-003**	**0.0427**	**9.3800e-003**	**1.1000e-004**	**2.9000e-003**	**2.8000e-004**	**3.1900e-003**	**7.9000e-004**	**2.7000e-004**	**1.0600e-003**	**0.0000**	**11.4012**	**11.4012**	**6.7000e-004**	**0.0000**	**11.4179**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2100e-003	0.0000	1.2100e-003	1.8000e-004	0.0000	1.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9900e-003	0.0396	0.0266	5.0000e-005		2.0500e-003	2.0500e-003		1.9400e-003	1.9400e-003	0.0000	4.7454	4.7454	1.2300e-003	0.0000	4.7762
Total	**3.9900e-003**	**0.0396**	**0.0266**	**5.0000e-005**	**1.2100e-003**	**2.0500e-003**	**3.2600e-003**	**1.8000e-004**	**1.9400e-003**	**2.1200e-003**	**0.0000**	**4.7454**	**4.7454**	**1.2300e-003**	**0.0000**	**4.7762**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3800e-003	0.0427	8.5800e-003	1.1000e-004	2.7400e-003	2.8000e-004	3.0200e-003	7.5000e-004	2.7000e-004	1.0200e-003	0.0000	11.2386	11.2386	6.6000e-004	0.0000	11.2552
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	9.0000e-005	7.0000e-005	8.0000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1626	0.1626	1.0000e-005	0.0000	0.1627
Total	**1.4700e-003**	**0.0427**	**9.3800e-003**	**1.1000e-004**	**2.9000e-003**	**2.8000e-004**	**3.1900e-003**	**7.9000e-004**	**2.7000e-004**	**1.0600e-003**	**0.0000**	**11.4012**	**11.4012**	**6.7000e-004**	**0.0000**	**11.4179**

3.4 Demolition 1c - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9600e-003	0.0304	0.0184	3.0000e-005		1.5900e-003	1.5900e-003		1.4900e-003	1.4900e-003	0.0000	3.1011	3.1011	7.9000e-004	0.0000	3.1210
Total	**2.9600e-003**	**0.0304**	**0.0184**	**3.0000e-005**		**1.5900e-003**	**1.5900e-003**		**1.4900e-003**	**1.4900e-003**	**0.0000**	**3.1011**	**3.1011**	**7.9000e-004**	**0.0000**	**3.1210**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.2400e-003	2.4000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2863	0.2863	2.0000e-005	0.0000	0.2868
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	6.9000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1409	0.1409	1.0000e-005	0.0000	0.1410
Total	**1.2000e-004**	**1.3000e-003**	**9.3000e-004**	**0.0000**	**2.0000e-004**	**1.0000e-005**	**2.1000e-004**	**6.0000e-005**	**1.0000e-005**	**6.0000e-005**	**0.0000**	**0.4272**	**0.4272**	**3.0000e-005**	**0.0000**	**0.4278**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.9600e-003	0.0304	0.0184	3.0000e-005		1.5900e-003	1.5900e-003		1.4900e-003	1.4900e-003	0.0000	3.1011	3.1011	7.9000e-004	0.0000	3.1210
Total	**2.9600e-003**	**0.0304**	**0.0184**	**3.0000e-005**		**1.5900e-003**	**1.5900e-003**		**1.4900e-003**	**1.4900e-003**	**0.0000**	**3.1011**	**3.1011**	**7.9000e-004**	**0.0000**	**3.1210**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.2400e-003	2.4000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2863	0.2863	2.0000e-005	0.0000	0.2868
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	6.9000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1409	0.1409	1.0000e-005	0.0000	0.1410
Total	**1.2000e-004**	**1.3000e-003**	**9.3000e-004**	**0.0000**	**2.0000e-004**	**1.0000e-005**	**2.1000e-004**	**6.0000e-005**	**1.0000e-005**	**6.0000e-005**	**0.0000**	**0.4272**	**0.4272**	**3.0000e-005**	**0.0000**	**0.4278**

3.5 Demolition 1d - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1000e-003	0.0000	3.1000e-003	4.7000e-004	0.0000	4.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	1.7700e-003	0.0185	0.0126	2.0000e-005		1.0200e-003	1.0200e-003		9.4000e-004	9.4000e-004	0.0000	2.0296	2.0296	6.2000e-004	0.0000	2.0452
Total	**1.7700e-003**	**0.0185**	**0.0126**	**2.0000e-005**	**3.1000e-003**	**1.0200e-003**	**4.1200e-003**	**4.7000e-004**	**9.4000e-004**	**1.4100e-003**	**0.0000**	**2.0296**	**2.0296**	**6.2000e-004**	**0.0000**	**2.0452**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.4000e-004	0.0174	3.4300e-003	4.0000e-005	1.0000e-003	1.0000e-004	1.1000e-003	2.7000e-004	1.0000e-004	3.7000e-004	0.0000	4.2624	4.2624	2.8000e-004	0.0000	4.2694
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	5.0000e-005	5.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1084	0.1084	0.0000	0.0000	0.1085
Total	**6.0000e-004**	**0.0175**	**3.9600e-003**	**4.0000e-005**	**1.1100e-003**	**1.0000e-004**	**1.2100e-003**	**3.0000e-004**	**1.0000e-004**	**4.0000e-004**	**0.0000**	**4.3708**	**4.3708**	**2.8000e-004**	**0.0000**	**4.3779**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2100e-003	0.0000	1.2100e-003	1.8000e-004	0.0000	1.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7700e-003	0.0185	0.0126	2.0000e-005		1.0200e-003	1.0200e-003		9.4000e-004	9.4000e-004	0.0000	2.0296	2.0296	6.2000e-004	0.0000	2.0452
Total	**1.7700e-003**	**0.0185**	**0.0126**	**2.0000e-005**	**1.2100e-003**	**1.0200e-003**	**2.2300e-003**	**1.8000e-004**	**9.4000e-004**	**1.1200e-003**	**0.0000**	**2.0296**	**2.0296**	**6.2000e-004**	**0.0000**	**2.0452**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.4000e-004	0.0174	3.4300e-003	4.0000e-005	1.0000e-003	1.0000e-004	1.1000e-003	2.7000e-004	1.0000e-004	3.7000e-004	0.0000	4.2624	4.2624	2.8000e-004	0.0000	4.2694
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	5.0000e-005	5.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1084	0.1084	0.0000	0.0000	0.1085
Total	**6.0000e-004**	**0.0175**	**3.9600e-003**	**4.0000e-005**	**1.1100e-003**	**1.0000e-004**	**1.2100e-003**	**3.0000e-004**	**1.0000e-004**	**4.0000e-004**	**0.0000**	**4.3708**	**4.3708**	**2.8000e-004**	**0.0000**	**4.3779**

3.6 Demolition 1e - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.3500e-003	0.0225	0.0152	3.0000e-005		1.3200e-003	1.3200e-003		1.2400e-003	1.2400e-003	0.0000	2.4014	2.4014	6.5000e-004	0.0000	2.4177
Paving	8.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.4300e-003**	**0.0225**	**0.0152**	**3.0000e-005**		**1.3200e-003**	**1.3200e-003**		**1.2400e-003**	**1.2400e-003**	**0.0000**	**2.4014**	**2.4014**	**6.5000e-004**	**0.0000**	**2.4177**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	6.9000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1409	0.1409	1.0000e-005	0.0000	0.1410
Total	**8.0000e-005**	**6.0000e-005**	**6.9000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1409**	**0.1409**	**1.0000e-005**	**0.0000**	**0.1410**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.3500e-003	0.0225	0.0152	3.0000e-005		1.3200e-003	1.3200e-003		1.2400e-003	1.2400e-003	0.0000	2.4014	2.4014	6.5000e-004	0.0000	2.4177
Paving	8.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.4300e-003**	**0.0225**	**0.0152**	**3.0000e-005**		**1.3200e-003**	**1.3200e-003**		**1.2400e-003**	**1.2400e-003**	**0.0000**	**2.4014**	**2.4014**	**6.5000e-004**	**0.0000**	**2.4177**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	6.0000e-005	6.9000e-004	0.0000	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1409	0.1409	1.0000e-005	0.0000	0.1410
Total	**8.0000e-005**	**6.0000e-005**	**6.9000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1409**	**0.1409**	**1.0000e-005**	**0.0000**	**0.1410**

3.7 Demolition 2a - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2600e-003	0.0131	0.0107	2.0000e-005		7.9000e-004	7.9000e-004		7.3000e-004	7.3000e-004	0.0000	1.4393	1.4393	4.4000e-004	0.0000	1.4503
Total	**1.2600e-003**	**0.0131**	**0.0107**	**2.0000e-005**		**7.9000e-004**	**7.9000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**1.4393**	**1.4393**	**4.4000e-004**	**0.0000**	**1.4503**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	4.0000e-005	4.0000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0813	0.0813	0.0000	0.0000	0.0814
Total	**4.0000e-005**	**4.0000e-005**	**4.0000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0813**	**0.0813**	**0.0000**	**0.0000**	**0.0814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	1.2600e-003	0.0131	0.0107	2.0000e-005		7.9000e-004	7.9000e-004		7.3000e-004	7.3000e-004	0.0000	1.4393	1.4393	4.4000e-004	0.0000	1.4503
Total	**1.2600e-003**	**0.0131**	**0.0107**	**2.0000e-005**		**7.9000e-004**	**7.9000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**1.4393**	**1.4393**	**4.4000e-004**	**0.0000**	**1.4503**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	4.0000e-005	4.0000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0813	0.0813	0.0000	0.0000	0.0814
Total	**4.0000e-005**	**4.0000e-005**	**4.0000e-004**	**0.0000**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0813**	**0.0813**	**0.0000**	**0.0000**	**0.0814**

3.8 Demolition 2b - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.5400e-003	0.0000	5.5400e-003	8.4000e-004	0.0000	8.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5200e-003	0.0801	0.0563	1.1000e-004		4.4100e-003	4.4100e-003		4.2100e-003	4.2100e-003	0.0000	9.6753	9.6753	2.2100e-003	0.0000	9.7305
Total	**8.5200e-003**	**0.0801**	**0.0563**	**1.1000e-004**	**5.5400e-003**	**4.4100e-003**	**9.9500e-003**	**8.4000e-004**	**4.2100e-003**	**5.0500e-003**	**0.0000**	**9.6753**	**9.6753**	**2.2100e-003**	**0.0000**	**9.7305**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9000e-003	0.0588	0.0118	1.6000e-004	3.7800e-003	3.9000e-004	4.1700e-003	1.0400e-003	3.7000e-004	1.4100e-003	0.0000	15.5015	15.5015	9.1000e-004	0.0000	15.5244
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.6000e-004	1.7300e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3523	0.3523	1.0000e-005	0.0000	0.3526
Total	**2.0900e-003**	**0.0590**	**0.0136**	**1.6000e-004**	**4.1400e-003**	**3.9000e-004**	**4.5300e-003**	**1.1300e-003**	**3.7000e-004**	**1.5100e-003**	**0.0000**	**15.8538**	**15.8538**	**9.2000e-004**	**0.0000**	**15.8770**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.1600e-003	0.0000	2.1600e-003	3.3000e-004	0.0000	3.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.5200e-003	0.0801	0.0563	1.1000e-004		4.4100e-003	4.4100e-003		4.2100e-003	4.2100e-003	0.0000	9.6752	9.6752	2.2100e-003	0.0000	9.7305
Total	**8.5200e-003**	**0.0801**	**0.0563**	**1.1000e-004**	**2.1600e-003**	**4.4100e-003**	**6.5700e-003**	**3.3000e-004**	**4.2100e-003**	**4.5400e-003**	**0.0000**	**9.6752**	**9.6752**	**2.2100e-003**	**0.0000**	**9.7305**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	1.9000e-003	0.0588	0.0118	1.6000e-004	3.7800e-003	3.9000e-004	4.1700e-003	1.0400e-003	3.7000e-004	1.4100e-003	0.0000	15.5015	15.5015	9.1000e-004	0.0000	15.5244
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.6000e-004	1.7300e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3523	0.3523	1.0000e-005	0.0000	0.3526
Total	**2.0900e-003**	**0.0590**	**0.0136**	**1.6000e-004**	**4.1400e-003**	**3.9000e-004**	**4.5300e-003**	**1.1300e-003**	**3.7000e-004**	**1.5100e-003**	**0.0000**	**15.8538**	**15.8538**	**9.2000e-004**	**0.0000**	**15.8770**

3.9 Demolition 2c - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.5400e-003	0.0000	5.5400e-003	8.4000e-004	0.0000	8.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0370	0.0252	4.0000e-005		2.0400e-003	2.0400e-003		1.8800e-003	1.8800e-003	0.0000	4.0592	4.0592	1.2400e-003	0.0000	4.0903
Total	**3.5500e-003**	**0.0370**	**0.0252**	**4.0000e-005**	**5.5400e-003**	**2.0400e-003**	**7.5800e-003**	**8.4000e-004**	**1.8800e-003**	**2.7200e-003**	**0.0000**	**4.0592**	**4.0592**	**1.2400e-003**	**0.0000**	**4.0903**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.5000e-004	0.0240	4.7300e-003	6.0000e-005	1.3700e-003	1.4000e-004	1.5200e-003	3.8000e-004	1.4000e-004	5.1000e-004	0.0000	5.8792	5.8792	3.9000e-004	0.0000	5.8888
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.0000e-004	1.0700e-003	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2168	0.2168	1.0000e-005	0.0000	0.2170
Total	**8.7000e-004**	**0.0241**	**5.8000e-003**	**6.0000e-005**	**1.5900e-003**	**1.4000e-004**	**1.7400e-003**	**4.4000e-004**	**1.4000e-004**	**5.7000e-004**	**0.0000**	**6.0960**	**6.0960**	**4.0000e-004**	**0.0000**	**6.1058**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.1600e-003	0.0000	2.1600e-003	3.3000e-004	0.0000	3.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0370	0.0252	4.0000e-005		2.0400e-003	2.0400e-003		1.8800e-003	1.8800e-003	0.0000	4.0592	4.0592	1.2400e-003	0.0000	4.0903
Total	**3.5500e-003**	**0.0370**	**0.0252**	**4.0000e-005**	**2.1600e-003**	**2.0400e-003**	**4.2000e-003**	**3.3000e-004**	**1.8800e-003**	**2.2100e-003**	**0.0000**	**4.0592**	**4.0592**	**1.2400e-003**	**0.0000**	**4.0903**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.5000e-004	0.0240	4.7300e-003	6.0000e-005	1.3700e-003	1.4000e-004	1.5200e-003	3.8000e-004	1.4000e-004	5.1000e-004	0.0000	5.8792	5.8792	3.9000e-004	0.0000	5.8888
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.0000e-004	1.0700e-003	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2168	0.2168	1.0000e-005	0.0000	0.2170
Total	**8.7000e-004**	**0.0241**	**5.8000e-003**	**6.0000e-005**	**1.5900e-003**	**1.4000e-004**	**1.7400e-003**	**4.4000e-004**	**1.4000e-004**	**5.7000e-004**	**0.0000**	**6.0960**	**6.0960**	**4.0000e-004**	**0.0000**	**6.1058**

3.10 Demolition 2d - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Off-Road	2.7100e-003	0.0245	0.0184	3.0000e-005		1.6400e-003	1.6400e-003		1.5500e-003	1.5500e-003	0.0000	2.4531	2.4531	6.2000e-004	0.0000	2.4687
Paving	8.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.7900e-003**	**0.0245**	**0.0184**	**3.0000e-005**		**1.6400e-003**	**1.6400e-003**		**1.5500e-003**	**1.5500e-003**	**0.0000**	**2.4531**	**2.4531**	**6.2000e-004**	**0.0000**	**2.4687**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	8.0000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1626	0.1626	1.0000e-005	0.0000	0.1627
Total	**9.0000e-005**	**7.0000e-005**	**8.0000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1626**	**0.1626**	**1.0000e-005**	**0.0000**	**0.1627**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7100e-003	0.0245	0.0184	3.0000e-005		1.6400e-003	1.6400e-003		1.5500e-003	1.5500e-003	0.0000	2.4531	2.4531	6.2000e-004	0.0000	2.4687
Paving	8.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.7900e-003**	**0.0245**	**0.0184**	**3.0000e-005**		**1.6400e-003**	**1.6400e-003**		**1.5500e-003**	**1.5500e-003**	**0.0000**	**2.4531**	**2.4531**	**6.2000e-004**	**0.0000**	**2.4687**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	8.0000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1626	0.1626	1.0000e-005	0.0000	0.1627
Total	**9.0000e-005**	**7.0000e-005**	**8.0000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1626**	**0.1626**	**1.0000e-005**	**0.0000**	**0.1627**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.8000e-003	0.0102	0.0272	9.0000e-005	7.1300e-003	1.0000e-004	7.2300e-003	1.9100e-003	1.0000e-004	2.0100e-003	0.0000	8.2604	8.2604	4.3000e-004	0.0000	8.2711
Unmitigated	1.8000e-003	0.0102	0.0272	9.0000e-005	7.1300e-003	1.0000e-004	7.2300e-003	1.9100e-003	1.0000e-004	2.0100e-003	0.0000	8.2604	8.2604	4.3000e-004	0.0000	8.2711

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	4.24	4.24	4.24	18,765	18,765
Parking Lot	0.00	0.00	0.00		
Total	4.24	4.24	4.24	18,765	18,765

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.548893	0.044275	0.199565	0.124385	0.017503	0.005874	0.020174	0.028962	0.001990	0.002015	0.004673	0.000702	0.000989
Parking Lot	0.548893	0.044275	0.199565	0.124385	0.017503	0.005874	0.020174	0.028962	0.001990	0.002015	0.004673	0.000702	0.000989

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.1800	19.1800	4.5000e-004	9.0000e-005	19.2192
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19.1800	19.1800	4.5000e-004	9.0000e-005	19.2192
NaturalGas Mitigated	2.8000e-004	2.5100e-003	2.1100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7377	2.7377	5.0000e-005	5.0000e-005	2.7539

NaturalGas Unmitigated	2.8000e-004	2.5100e-003	2.1100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7377	2.7377	5.0000e-005	5.0000e-005	2.7539

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	51302	2.8000e-004	2.5100e-003	2.1100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7377	2.7377	5.0000e-005	5.0000e-005	2.7539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.8000e-004**	**2.5100e-003**	**2.1100e-003**	**2.0000e-005**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**	**0.0000**	**2.7377**	**2.7377**	**5.0000e-005**	**5.0000e-005**	**2.7539**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	51302	2.8000e-004	2.5100e-003	2.1100e-003	2.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	2.7377	2.7377	5.0000e-005	5.0000e-005	2.7539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.8000e-004**	**2.5100e-003**	**2.1100e-003**	**2.0000e-005**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**	**0.0000**	**2.7377**	**2.7377**	**5.0000e-005**	**5.0000e-005**	**2.7539**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
General Heavy Industry	31950.7	17.7953	4.2000e-004	9.0000e-005	17.8318
Parking Lot	2486	1.3846	3.0000e-005	1.0000e-005	1.3874
Total		**19.1800**	**4.5000e-004**	**1.0000e-004**	**19.2192**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	31950.7	17.7953	4.2000e-004	9.0000e-005	17.8318
Parking Lot	2486	1.3846	3.0000e-005	1.0000e-005	1.3874
Total		**19.1800**	**4.5000e-004**	**1.0000e-004**	**19.2192**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0112	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004

Unmitigated	0.0112	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Total	**0.0112**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0000**	**1.5000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	7.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Total	**0.0112**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0000**	**1.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.8007	0.0121	3.0000e-004	3.1924
Unmitigated	2.8007	0.0121	3.0000e-004	3.1924

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	0.37 / 0	2.8007	0.0121	3.0000e-004	3.1924
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.8007**	**0.0121**	**3.0000e-004**	**3.1924**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
General Heavy Industry	0.37 / 0	2.8007	0.0121	3.0000e-004	3.1924
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.8007**	**0.0121**	**3.0000e-004**	**3.1924**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.4019	0.0238	0.0000	0.9958
Unmitigated	0.4019	0.0238	0.0000	0.9958

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	1.98	0.4019	0.0238	0.0000	0.9958
Parking Lot	0	0.0000	0.0000	0.0000	0.0000

Total		**0.4019**	**0.0238**	**0.0000**	**0.9958**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	1.98	0.4019	0.0238	0.0000	0.9958
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.4019**	**0.0238**	**0.0000**	**0.9958**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

POLA B31 UST Removal

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	2.83	1000sqft	0.06	2,825.00	0
Parking Lot	2.83	1000sqft	0.06	2,825.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	11			**Operational Year**	2019
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Trips and VMT - Data provided by Amec.

Demolition -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblProjectCharacteristics	OperationalYear	2018	2019
tblTripsAndVMT	HaulingTripLength	20.00	110.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00

tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripLength	20.00	110.00
tblTripsAndVMT	HaulingTripLength	20.00	40.00
tblTripsAndVMT	HaulingTripNumber	29.00	58.00
tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	HaulingTripNumber	29.00	58.00
tblTripsAndVMT	HaulingTripNumber	51.00	80.00
tblTripsAndVMT	HaulingTripNumber	51.00	80.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	4.2558	55.2474	27.9771	0.1122	4.2271	1.9191	5.8169	0.8511	1.8334	2.6282	0.0000	11,848.1980	11,848.1980	1.4010	0.0000	11,883.2233
Maximum	**4.2558**	**55.2474**	**27.9771**	**0.1122**	**4.2271**	**1.9191**	**5.8169**	**0.8511**	**1.8334**	**2.6282**	**0.0000**	**11,848.1980**	**11,848.1980**	**1.4010**	**0.0000**	**11,883.2233**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	4.2558	55.2474	27.9771	0.1122	2.7740	1.9191	4.4646	0.6601	1.8334	2.4235	0.0000	11,848.1980	11,848.1980	1.4010	0.0000	11,883.2233

Maximum	**4.2558**	**55.2474**	**27.9771**	**0.1122**	**2.7740**	**1.9191**	**4.4646**	**0.6601**	**1.8334**	**2.4235**	**0.0000**	**11,848.1980**	**11,848.1980**	**1.4010**	**0.0000**	**11,883.2233**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**34.38**	**0.00**	**23.25**	**22.45**	**0.00**	**7.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0612	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2400e-003	1.2400e-003	0.0000		1.3200e-003
Energy	1.5200e-003	0.0138	0.0116	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.5357	16.5357	3.2000e-004	3.0000e-004	16.6340
Mobile	0.0101	0.0549	0.1469	4.9000e-004	0.0399	5.7000e-004	0.0405	0.0107	5.4000e-004	0.0112		49.3971	49.3971	2.6000e-003		49.4622
Total	**0.0728**	**0.0687**	**0.1590**	**5.7000e-004**	**0.0399**	**1.6200e-003**	**0.0415**	**0.0107**	**1.5900e-003**	**0.0123**		**65.9341**	**65.9341**	**2.9200e-003**	**3.0000e-004**	**66.0975**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0612	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2400e-003	1.2400e-003	0.0000		1.3200e-003
Energy	1.5200e-003	0.0138	0.0116	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.5357	16.5357	3.2000e-004	3.0000e-004	16.6340

Mobile	0.0101	0.0549	0.1469	4.9000e-004	0.0399	5.7000e-004	0.0405	0.0107	5.4000e-004	0.0112		49.3971	49.3971	2.6000e-003		49.4622
Total	**0.0728**	**0.0687**	**0.1590**	**5.7000e-004**	**0.0399**	**1.6200e-003**	**0.0415**	**0.0107**	**1.5900e-003**	**0.0123**		**65.9341**	**65.9341**	**2.9200e-003**	**3.0000e-004**	**66.0975**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition 1a	Demolition	9/4/2017	9/6/2017	6	3	Install Shoring and Removal of Dockside Piping
2	Demolition 1b	Demolition	9/7/2017	9/9/2017	6	3	Remove Concrete and Soils
3	Demolition 1c	Demolition	9/11/2017	9/12/2017	6	2	Wash and Remove Tanks
4	Demolition 1d	Demolition	9/13/2017	9/14/2017	6	2	Backfill and Compact Soils
5	Demolition 1e	Paving	9/15/2017	9/16/2017	6	2	Remove Shorin Repavn and Restripe Parking Spacesp
6	Demolition 2a	Demolition	10/9/2017	10/11/2017	6	3	Install Shoring
7	Demolition 2b	Demolition	10/12/2017	10/17/2017	6	5	Remove Concrete and Soils
8	Demolition 2c	Demolition	10/18/2017	10/21/2017	6	4	Backfill and Compact Soils
9	Demolition 2d	Paving	10/23/2017	10/25/2017	6	3	Remove Shorin Repavn and Restripe Parking Spacesp

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.06

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition 1a	Excavators	1	10.00	158	0.38
Demolition 1a	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 1b	Concrete/Industrial Saws	1	10.00	81	0.73

Demolition 1b	Excavators	1	10.00	158	0.38
Demolition 1b	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 1b	Off-Highway Trucks	1	10.00	402	0.38
Demolition 1c	Cranes	1	10.00	231	0.29
Demolition 1c	Excavators	1	10.00	158	0.38
Demolition 1c	Off-Highway Trucks	1	5.00	402	0.38
Demolition 1c	Pumps	1	10.00	84	0.74
Demolition 1c	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 1d	Excavators	1	10.00	158	0.38
Demolition 1d	Rollers	1	10.00	80	0.38
Demolition 1d	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 1d	Off-Highway Trucks	1	5.00	402	0.38
Demolition 1e	Air Compressors	1	10.00	78	0.48
Demolition 1e	Pavers	1	10.00	130	0.42
Demolition 1e	Rollers	1	10.00	80	0.38
Demolition 1e	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 1e	Off-Highway Trucks	1	5.00	402	0.38
Demolition 2a	Excavators	1	10.00	158	0.38
Demolition 2a	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 2b	Concrete/Industrial Saws	1	10.00	81	0.73
Demolition 2b	Excavators	1	10.00	158	0.38
Demolition 2b	Off-Highway Trucks	1	10.00	402	0.38
Demolition 2b	Pumps	1	10.00	84	0.74
Demolition 2b	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 2c	Excavators	1	10.00	158	0.38
Demolition 2c	Rollers	1	10.00	80	0.38
Demolition 2c	Tractors/Loaders/Backhoes	1	10.00	97	0.37
Demolition 2c	Off-Highway Trucks	1	5.00	402	0.38
Demolition 2d	Air Compressors	1	10.00	78	0.48
Demolition 2d	Pavers	1	10.00	130	0.42
Demolition 2d	Rollers	1	10.00	80	0.38

Demolition 2d	Tractors/Loaders/Backhoes	1	10.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition 1a	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition 1b	4	10.00	0.00	58.00	14.70	6.90	110.00	LD_Mix	HDT_Mix	HHDT
Demolition 1c	5	13.00	0.00	6.00	14.70	6.90	25.00	LD_Mix	HDT_Mix	HHDT
Demolition 1d	4	10.00	0.00	58.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Demolition 1e	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition 2a	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition 2b	5	13.00	0.00	80.00	14.70	6.90	110.00	LD_Mix	HDT_Mix	HHDT
Demolition 2c	4	10.00	0.00	80.00	14.70	6.90	40.00	LD_Mix	HDT_Mix	HHDT
Demolition 2d	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition 1a - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8376	8.7019	7.1630	0.0103		0.5271	0.5271		0.4849	0.4849		1,057.7028	1,057.7028	0.3241		1,065.8047
Total	**0.8376**	**8.7019**	**7.1630**	**0.0103**		**0.5271**	**0.5271**		**0.4849**	**0.4849**		**1,057.7028**	**1,057.7028**	**0.3241**		**1,065.8047**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0329	0.0243	0.2602	5.9000e-004	0.0559	4.6000e-004	0.0564	0.0148	4.3000e-004	0.0153		58.8120	58.8120	2.2300e-003		58.8678
Total	**0.0329**	**0.0243**	**0.2602**	**5.9000e-004**	**0.0559**	**4.6000e-004**	**0.0564**	**0.0148**	**4.3000e-004**	**0.0153**		**58.8120**	**58.8120**	**2.2300e-003**		**58.8678**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8376	8.7019	7.1630	0.0103		0.5271	0.5271		0.4849	0.4849	0.0000	1,057.7028	1,057.7028	0.3241		1,065.8047
Total	**0.8376**	**8.7019**	**7.1630**	**0.0103**		**0.5271**	**0.5271**		**0.4849**	**0.4849**	**0.0000**	**1,057.7028**	**1,057.7028**	**0.3241**		**1,065.8047**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0329	0.0243	0.2602	5.9000e-004	0.0559	4.6000e-004	0.0564	0.0148	4.3000e-004	0.0153		58.8120	58.8120	2.2300e-003		58.8678
Total	**0.0329**	**0.0243**	**0.2602**	**5.9000e-004**	**0.0559**	**4.6000e-004**	**0.0564**	**0.0148**	**4.3000e-004**	**0.0153**		**58.8120**	**58.8120**	**2.2300e-003**		**58.8678**

3.3 Demolition 1b - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0686	0.0000	2.0686	0.3132	0.0000	0.3132			0.0000			0.0000
Off-Road	2.6591	26.3828	17.7354	0.0347		1.3690	1.3690		1.2901	1.2901		3,487.2633	3,487.2633	0.9067		3,509.9303
Total	**2.6591**	**26.3828**	**17.7354**	**0.0347**	**2.0686**	**1.3690**	**3.4375**	**0.3132**	**1.2901**	**1.6033**		**3,487.2633**	**3,487.2633**	**0.9067**		**3,509.9303**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9218	27.9562	5.7707	0.0763	1.8555	0.1880	2.0435	0.5083	0.1799	0.6882		8,243.3107	8,243.3107	0.4899		8,255.5575
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0486	0.5203	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6240	117.6240	4.4600e-003		117.7355
Total	**0.9876**	**28.0048**	**6.2910**	**0.0775**	**1.9673**	**0.1889**	**2.1562**	**0.5379**	**0.1807**	**0.7187**		**8,360.9347**	**8,360.9347**	**0.4943**		**8,373.2930**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8067	0.0000	0.8067	0.1222	0.0000	0.1222			0.0000			0.0000
Off-Road	2.6591	26.3828	17.7354	0.0347		1.3690	1.3690		1.2901	1.2901	0.0000	3,487.2633	3,487.2633	0.9067		3,509.9303
Total	**2.6591**	**26.3828**	**17.7354**	**0.0347**	**0.8067**	**1.3690**	**2.1757**	**0.1222**	**1.2901**	**1.4123**	**0.0000**	**3,487.2633**	**3,487.2633**	**0.9067**		**3,509.9303**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9218	27.9562	5.7707	0.0763	1.8555	0.1880	2.0435	0.5083	0.1799	0.6882		8,243.3107	8,243.3107	0.4899		8,255.5575
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0486	0.5203	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6240	117.6240	4.4600e-003		117.7355
Total	**0.9876**	**28.0048**	**6.2910**	**0.0775**	**1.9673**	**0.1889**	**2.1562**	**0.5379**	**0.1807**	**0.7187**		**8,360.9347**	**8,360.9347**	**0.4943**		**8,373.2930**

3.4 Demolition 1c - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Off-Road	2.9614	30.3733	18.4172	0.0340		1.5879	1.5879		1.4923	1.4923		3,418.3718	3,418.3718	0.8759		3,440.2696
Total	**2.9614**	**30.3733**	**18.4172**	**0.0340**		**1.5879**	**1.5879**		**1.4923**	**1.4923**		**3,418.3718**	**3,418.3718**	**0.8759**		**3,440.2696**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0383	1.2186	0.2486	2.9000e-003	0.0655	6.9400e-003	0.0724	0.0179	6.6400e-003	0.0246		313.1589	313.1589	0.0229		313.7314
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0855	0.0632	0.6764	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		152.9111	152.9111	5.8000e-003		153.0562
Total	**0.1238**	**1.2817**	**0.9250**	**4.4400e-003**	**0.2108**	**8.1500e-003**	**0.2189**	**0.0565**	**7.7500e-003**	**0.0642**		**466.0700**	**466.0700**	**0.0287**		**466.7876**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9614	30.3733	18.4172	0.0340		1.5879	1.5879		1.4923	1.4923	0.0000	3,418.3718	3,418.3718	0.8759		3,440.2696
Total	**2.9614**	**30.3733**	**18.4172**	**0.0340**		**1.5879**	**1.5879**		**1.4923**	**1.4923**	**0.0000**	**3,418.3718**	**3,418.3718**	**0.8759**		**3,440.2696**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0383	1.2186	0.2486	2.9000e-003	0.0655	6.9400e-003	0.0724	0.0179	6.6400e-003	0.0246		313.1589	313.1589	0.0229		313.7314
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0855	0.0632	0.6764	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		152.9111	152.9111	5.8000e-003		153.0562
Total	**0.1238**	**1.2817**	**0.9250**	**4.4400e-003**	**0.2108**	**8.1500e-003**	**0.2189**	**0.0565**	**7.7500e-003**	**0.0642**		**466.0700**	**466.0700**	**0.0287**		**466.7876**

3.5 Demolition 1d - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1029	0.0000	3.1029	0.4698	0.0000	0.4698			0.0000			0.0000
Off-Road	1.7739	18.5059	12.5946	0.0219		1.0192	1.0192		0.9376	0.9376		2,237.2725	2,237.2725	0.6855		2,254.4099
Total	**1.7739**	**18.5059**	**12.5946**	**0.0219**	**3.1029**	**1.0192**	**4.1220**	**0.4698**	**0.9376**	**1.4074**		**2,237.2725**	**2,237.2725**	**0.6855**		**2,254.4099**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.5487	17.1008	3.5063	0.0433	1.0125	0.1050	1.1175	0.2774	0.1004	0.3778		4,675.0432	4,675.0432	0.3120		4,682.8428
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0486	0.5203	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6240	117.6240	4.4600e-003		117.7355
Total	**0.6145**	**17.1494**	**4.0266**	**0.0445**	**1.1243**	**0.1059**	**1.2302**	**0.3070**	**0.1013**	**0.4083**		**4,792.6672**	**4,792.6672**	**0.3164**		**4,800.5783**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2101	0.0000	1.2101	0.1832	0.0000	0.1832			0.0000			0.0000
Off-Road	1.7739	18.5059	12.5946	0.0219		1.0192	1.0192		0.9376	0.9376	0.0000	2,237.2725	2,237.2725	0.6855		2,254.4099
Total	**1.7739**	**18.5059**	**12.5946**	**0.0219**	**1.2101**	**1.0192**	**2.2293**	**0.1832**	**0.9376**	**1.1208**	**0.0000**	**2,237.2725**	**2,237.2725**	**0.6855**		**2,254.4099**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5487	17.1008	3.5063	0.0433	1.0125	0.1050	1.1175	0.2774	0.1004	0.3778		4,675.0432	4,675.0432	0.3120		4,682.8428
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0486	0.5203	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6240	117.6240	4.4600e-003		117.7355

Total	**0.6145**	**17.1494**	**4.0266**	**0.0445**	**1.1243**	**0.1059**	**1.2302**	**0.3070**	**0.1013**	**0.4083**		**4,792.6672**	**4,792.6672**	**0.3164**		**4,800.5783**

3.6 Demolition 1e - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3543	22.4905	15.2241	0.0263		1.3250	1.3250		1.2421	1.2421		2,647.0995	2,647.0995	0.7169		2,665.0211
Paving	0.0786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4329**	**22.4905**	**15.2241**	**0.0263**		**1.3250**	**1.3250**		**1.2421**	**1.2421**		**2,647.0995**	**2,647.0995**	**0.7169**		**2,665.0211**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0855	0.0632	0.6764	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		152.9111	152.9111	5.8000e-003		153.0562
Total	**0.0855**	**0.0632**	**0.6764**	**1.5400e-003**	**0.1453**	**1.2100e-003**	**0.1465**	**0.0385**	**1.1100e-003**	**0.0397**		**152.9111**	**152.9111**	**5.8000e-003**		**153.0562**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3543	22.4905	15.2241	0.0263		1.3250	1.3250		1.2421	1.2421	0.0000	2,647.0995	2,647.0995	0.7169		2,665.0211
Paving	0.0786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4329**	**22.4905**	**15.2241**	**0.0263**		**1.3250**	**1.3250**		**1.2421**	**1.2421**	**0.0000**	**2,647.0995**	**2,647.0995**	**0.7169**		**2,665.0211**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0855	0.0632	0.6764	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		152.9111	152.9111	5.8000e-003		153.0562
Total	**0.0855**	**0.0632**	**0.6764**	**1.5400e-003**	**0.1453**	**1.2100e-003**	**0.1465**	**0.0385**	**1.1100e-003**	**0.0397**		**152.9111**	**152.9111**	**5.8000e-003**		**153.0562**

3.7 Demolition 2a - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8376	8.7019	7.1630	0.0103		0.5271	0.5271		0.4849	0.4849		1,057.7028	1,057.7028	0.3241		1,065.8047
Total	**0.8376**	**8.7019**	**7.1630**	**0.0103**		**0.5271**	**0.5271**		**0.4849**	**0.4849**		**1,057.7028**	**1,057.7028**	**0.3241**		**1,065.8047**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0329	0.0243	0.2602	5.9000e-004	0.0559	4.6000e-004	0.0564	0.0148	4.3000e-004	0.0153		58.8120	58.8120	2.2300e-003		58.8678
Total	**0.0329**	**0.0243**	**0.2602**	**5.9000e-004**	**0.0559**	**4.6000e-004**	**0.0564**	**0.0148**	**4.3000e-004**	**0.0153**		**58.8120**	**58.8120**	**2.2300e-003**		**58.8678**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8376	8.7019	7.1630	0.0103		0.5271	0.5271		0.4849	0.4849	0.0000	1,057.7028	1,057.7028	0.3241		1,065.8047
Total	**0.8376**	**8.7019**	**7.1630**	**0.0103**		**0.5271**	**0.5271**		**0.4849**	**0.4849**	**0.0000**	**1,057.7028**	**1,057.7028**	**0.3241**		**1,065.8047**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0329	0.0243	0.2602	5.9000e-004	0.0559	4.6000e-004	0.0564	0.0148	4.3000e-004	0.0153		58.8120	58.8120	2.2300e-003		58.8678
Total	**0.0329**	**0.0243**	**0.2602**	**5.9000e-004**	**0.0559**	**4.6000e-004**	**0.0564**	**0.0148**	**4.3000e-004**	**0.0153**		**58.8120**	**58.8120**	**2.2300e-003**		**58.8678**

3.8 Demolition 2b - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2169	0.0000	2.2169	0.3357	0.0000	0.3357			0.0000			0.0000
Off-Road	3.4074	32.0480	22.5250	0.0429		1.7623	1.7623		1.6834	1.6834		4,266.0565	4,266.0565	0.9738		4,290.4023
Total	**3.4074**	**32.0480**	**22.5250**	**0.0429**	**2.2169**	**1.7623**	**3.9792**	**0.3357**	**1.6834**	**2.0191**		**4,266.0565**	**4,266.0565**	**0.9738**		**4,290.4023**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7629	23.1362	4.7758	0.0632	1.5356	0.1556	1.6912	0.4207	0.1489	0.5695		6,822.0503	6,822.0503	0.4054		6,832.1855
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0855	0.0632	0.6764	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		152.9111	152.9111	5.8000e-003		153.0562
Total	**0.8484**	**23.1993**	**5.4522**	**0.0647**	**1.6809**	**0.1568**	**1.8377**	**0.4592**	**0.1500**	**0.6092**		**6,974.9614**	**6,974.9614**	**0.4112**		**6,985.2417**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8646	0.0000	0.8646	0.1309	0.0000	0.1309			0.0000			0.0000
Off-Road	3.4074	32.0480	22.5250	0.0429		1.7623	1.7623		1.6834	1.6834	0.0000	4,266.0565	4,266.0565	0.9738		4,290.4023
Total	**3.4074**	**32.0480**	**22.5250**	**0.0429**	**0.8646**	**1.7623**	**2.6269**	**0.1309**	**1.6834**	**1.8143**	**0.0000**	**4,266.0565**	**4,266.0565**	**0.9738**		**4,290.4023**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7629	23.1362	4.7758	0.0632	1.5356	0.1556	1.6912	0.4207	0.1489	0.5695		6,822.0503	6,822.0503	0.4054		6,832.1855
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0855	0.0632	0.6764	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1100e-003	0.0397		152.9111	152.9111	5.8000e-003		153.0562
Total	**0.8484**	**23.1993**	**5.4522**	**0.0647**	**1.6809**	**0.1568**	**1.8377**	**0.4592**	**0.1500**	**0.6092**		**6,974.9614**	**6,974.9614**	**0.4112**		**6,985.2417**

3.9 Demolition 2c - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7712	0.0000	2.7712	0.4196	0.0000	0.4196			0.0000			0.0000
Off-Road	1.7739	18.5059	12.5946	0.0219		1.0192	1.0192		0.9376	0.9376		2,237.2725	2,237.2725	0.6855		2,254.4099
Total	**1.7739**	**18.5059**	**12.5946**	**0.0219**	**2.7712**	**1.0192**	**3.7903**	**0.4196**	**0.9376**	**1.3572**		**2,237.2725**	**2,237.2725**	**0.6855**		**2,254.4099**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3784	11.7936	2.4181	0.0299	0.6983	0.0724	0.7707	0.1913	0.0693	0.2606		3,224.1677	3,224.1677	0.2152		3,229.5468
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0486	0.5203	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6240	117.6240	4.4600e-003		117.7355
Total	**0.4442**	**11.8422**	**2.9384**	**0.0310**	**0.8100**	**0.0733**	**0.8834**	**0.2209**	**0.0701**	**0.2911**		**3,341.7917**	**3,341.7917**	**0.2196**		**3,347.2823**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0808	0.0000	1.0808	0.1636	0.0000	0.1636			0.0000			0.0000

Off-Road	1.7739	18.5059	12.5946	0.0219		1.0192	1.0192		0.9376	0.9376	0.0000	2,237.2725	2,237.2725	0.6855		2,254.4099
Total	**1.7739**	**18.5059**	**12.5946**	**0.0219**	**1.0808**	**1.0192**	**2.0999**	**0.1636**	**0.9376**	**1.1013**	**0.0000**	**2,237.2725**	**2,237.2725**	**0.6855**		**2,254.4099**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3784	11.7936	2.4181	0.0299	0.6983	0.0724	0.7707	0.1913	0.0693	0.2606		3,224.1677	3,224.1677	0.2152		3,229.5468
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0486	0.5203	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6240	117.6240	4.4600e-003		117.7355
Total	**0.4442**	**11.8422**	**2.9384**	**0.0310**	**0.8100**	**0.0733**	**0.8834**	**0.2209**	**0.0701**	**0.2911**		**3,341.7917**	**3,341.7917**	**0.2196**		**3,347.2823**

3.10 Demolition 2d - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8066	16.3133	12.2811	0.0180		1.0957	1.0957		1.0311	1.0311		1,802.7346	1,802.7346	0.4582		1,814.1885
Paving	0.0524					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8590**	**16.3133**	**12.2811**	**0.0180**		**1.0957**	**1.0957**		**1.0311**	**1.0311**		**1,802.7346**	**1,802.7346**	**0.4582**		**1,814.1885**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0486	0.5203	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6240	117.6240	4.4600e-003		117.7355
Total	**0.0658**	**0.0486**	**0.5203**	**1.1800e-003**	**0.1118**	**9.3000e-004**	**0.1127**	**0.0296**	**8.6000e-004**	**0.0305**		**117.6240**	**117.6240**	**4.4600e-003**		**117.7355**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8066	16.3133	12.2811	0.0180		1.0957	1.0957		1.0311	1.0311	0.0000	1,802.7346	1,802.7346	0.4582		1,814.1885
Paving	0.0524					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8590**	**16.3133**	**12.2811**	**0.0180**		**1.0957**	**1.0957**		**1.0311**	**1.0311**	**0.0000**	**1,802.7346**	**1,802.7346**	**0.4582**		**1,814.1885**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0486	0.5203	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6240	117.6240	4.4600e-003		117.7355
Total	**0.0658**	**0.0486**	**0.5203**	**1.1800e-003**	**0.1118**	**9.3000e-004**	**0.1127**	**0.0296**	**8.6000e-004**	**0.0305**		**117.6240**	**117.6240**	**4.4600e-003**		**117.7355**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0101	0.0549	0.1469	4.9000e-004	0.0399	5.7000e-004	0.0405	0.0107	5.4000e-004	0.0112		49.3971	49.3971	2.6000e-003		49.4622
Unmitigated	0.0101	0.0549	0.1469	4.9000e-004	0.0399	5.7000e-004	0.0405	0.0107	5.4000e-004	0.0112		49.3971	49.3971	2.6000e-003		49.4622

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	4.24	4.24	4.24	18,765	18,765
Parking Lot	0.00	0.00	0.00		
Total	4.24	4.24	4.24	18,765	18,765

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.548893	0.044275	0.199565	0.124385	0.017503	0.005874	0.020174	0.028962	0.001990	0.002015	0.004673	0.000702	0.000989
Parking Lot	0.548893	0.044275	0.199565	0.124385	0.017503	0.005874	0.020174	0.028962	0.001990	0.002015	0.004673	0.000702	0.000989

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.5200e-003	0.0138	0.0116	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.5357	16.5357	3.2000e-004	3.0000e-004	16.6340
NaturalGas Unmitigated	1.5200e-003	0.0138	0.0116	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.5357	16.5357	3.2000e-004	3.0000e-004	16.6340

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	140.553	1.5200e-003	0.0138	0.0116	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.5357	16.5357	3.2000e-004	3.0000e-004	16.6340

Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.5200e-003**	**0.0138**	**0.0116**	**8.0000e-005**		**1.0500e-003**	**1.0500e-003**		**1.0500e-003**	**1.0500e-003**		**16.5357**	**16.5357**	**3.2000e-004**	**3.0000e-004**	**16.6340**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	0.140553	1.5200e-003	0.0138	0.0116	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003		16.5357	16.5357	3.2000e-004	3.0000e-004	16.6340
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.5200e-003**	**0.0138**	**0.0116**	**8.0000e-005**		**1.0500e-003**	**1.0500e-003**		**1.0500e-003**	**1.0500e-003**		**16.5357**	**16.5357**	**3.2000e-004**	**3.0000e-004**	**16.6340**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0612	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2400e-003	1.2400e-003	0.0000		1.3200e-003
Unmitigated	0.0612	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2400e-003	1.2400e-003	0.0000		1.3200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.1900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0569					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2400e-003	1.2400e-003	0.0000		1.3200e-003
Total	**0.0612**	**1.0000e-005**	**5.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.2400e-003**	**1.2400e-003**	**0.0000**		**1.3200e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.1900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0569					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	5.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2400e-003	1.2400e-003	0.0000		1.3200e-003
Total	**0.0612**	**1.0000e-005**	**5.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.2400e-003**	**1.2400e-003**	**0.0000**		**1.3200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation