CALIFORNIA ENVIRONMENTAL QUALITY ACT
INITIAL STUDY

The Department of Toxic Substances Control (DTSC) has completed the following document for this project in accordance with the California Environmental Quality Act (CEQA) [Pub. Resources Code, div. 13, § 21000 et seq] and accompanying Guidelines [Cal. Code Regs., tit. 14, § 15000 et seq].

PROJECT INFORMATION

PROJECT TITLE: Proposed RCRA Corrective Action Remedy Selection for the Chemtrade Bay Point Facility		SITE CODING: 200168-48
PROJECT ADDRESS: 501 Nichols Road	CITY: Bay Point	COUNTY: Contra Costa
PROJECT SPONSOR: Chemtrade West US LLC	CONTACT: Stephen Thorn	PHONE: (973) 632-0057
APPROVAL ACTION UNDER CONSIDERATION BY DTSC: ☐ Initial Permit Issuance ☐ Permit Re-Issuance ☐ Permit Modification ☐ Closure Plan ☐ Removal Action Workplan ☐ Remedial Action Plan ☐ Interim Removal ☐ Regulations ☒ Corrective Measure Study/Statement of Basis ☐ Other (specify):		
STATUTORY AUTHORITY: ☒ California H&SC, Chap. 6.5 ☐ California H&SC, Chap. 6.8 ☐ Other (specify):		
DTSC PROGRAM/ADDRESS: Site Mitigation and Restoration Program 700 Heinz Avenue, Suite 200 Berkeley, California 94710	CONTACT: Nancy Tu Project Manager Nancy.Tu@dtsc.ca.gov	PHONE: (510) 540-3824

PROJECT DESCRIPTION:

The Department of Toxic Substances Control (DTSC) is proposing Corrective Measures for soil and groundwater at three areas of concern (AOCs) and Chemtrade Near Bay Area (NBA) at the 26-acre Chemtrade West US LLC (Chemtrade) Bay Point Works Facility (Proposed Project Site) located in Bay Point, California (refer to Figure 1 and Figure 2). The 26-acre Facility is adjacent to Suisun Bay about nine miles west of the Sacramento River and San Joaquin River confluence, which forms the Sacramento-San Joaquin Delta region. Coastal wetlands are located adjacent to the north, east, and west of the Proposed Project Site along with a railroad line traversing in an east-west direction adjacent to the south. The three AOCs and Chemtrade-NBA are described below:

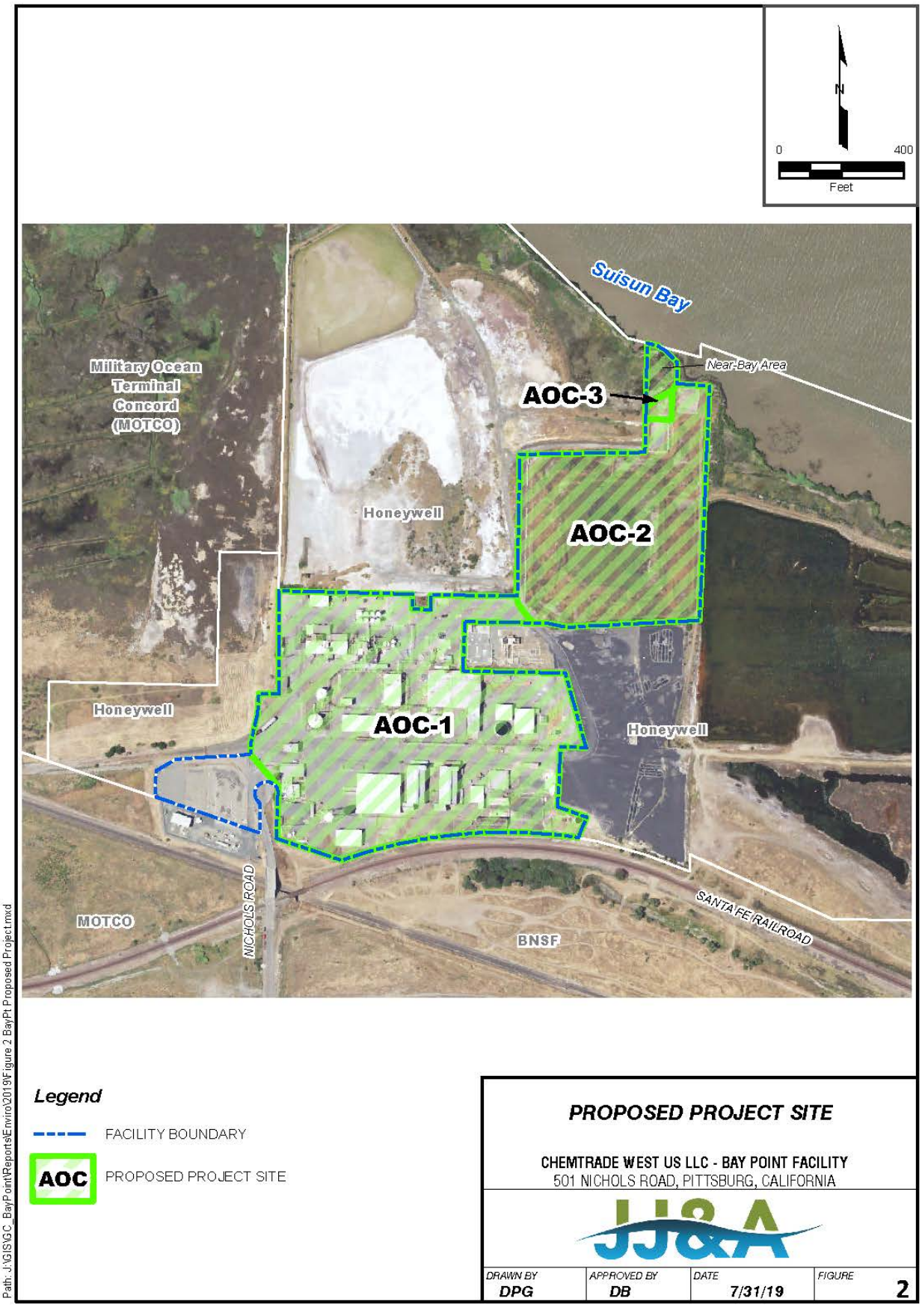
- AOC-1: the main (operations) portion of the Facility.
- AOC-2: the former wastewater treatment lagoon.
- AOC-3: the former caustic storage area.
- Chemtrade-NBA: small 0.35-acre tidal wetland north of AOC-3.

The proposed Corrective Measures would include the following activities to address low pH, elevated metals and volatile organic compounds (VOCs) in soil and groundwater at the Proposed Project Site:

- Construct subsurface hydraulic barrier walls with French drains around the western, eastern, and northern boundaries of the three AOCs with sections of permeable reactive barriers (PRBs) along the northern boundaries of the three AOCs to passively treat groundwater;
- Sample soil to define conditions near Suisun Bay in the northern portion of AOC-2 and AOC-3;
    - Remove soil if chemicals are present above cleanup levels,
    - Backfill with clean fill to create a Shoreline Clean Zone;
- Pave or re-pave approximately 1.4 acres of AOC-1;
- Construct a soil cap with an asphalt skirt over AOC-2 and a portion of AOC-3;

- Perform groundwater monitoring to confirm reductions in VOC concentrations by natural processes (Monitored Natural Attenuation) and effectiveness of the hydraulic barrier walls, PRBs and soil cover; and
- Restrict land uses by recording a Land Use Covenant (LUC).

Activities associated with the Corrective Measures would occur over an approximately 32-week period.


N
0
400
Feet
Suisun Bay
Near-Bay Area
Military Ocean Terminal Concord (MOTCO)
AOC-3
AOC-2
AOC-1
Honeywell
Honeywell
Honeywell
MOTCO
NICHOLS ROAD
BNSF
SANTA FE RAILROAD
Legend
FACILITY BOUNDARY
AOC
PROPOSED PROJECT SITE
PROPOSED PROJECT SITE
CHEMTRADE WEST US LLC - BAY POINT FACILITY
501 NICHOLS ROAD, PITTSBURG, CALIFORNIA
JJ&A
DRAWN BY DPG
APPROVED BY DB
DATE 7/31/19
FIGURE 2
Path: J:\GIS\GC_BayPoint\Reports\Enviro\2019\Figure 2 BayPt Proposed Project.mxd

BACKGROUND:

The Proposed Project Site was part of the larger former (approximately 260-acre) Nichols Chemical Company property, which manufactured primarily sulfuric acid from pyrite ore material starting in the early 1900s. Portions of the original Nichols Chemical Company property were acquired by various entities over time. In 1920, the original 260-acre property was sold to Allied-Chemical who produced sulfuric, nitric, and hydrofluoric acids; lead arsenate; ammonium hydroxide; organochlorine pesticides; organic solvents; various polymers; aluminum sulfate (alum); and molten sulfur transloading.

The United States Navy acquired 121 acres of the Allied-Chemical property to develop their "buffer zone" which was part of the former Concord Naval Weapons Station (CNWS) and is now Marine Ocean Terminal Concord (MOTCO). The MOTCO property is located adjacently west of the Proposed Project Site and MOTCO operations currently have associated land use restrictions. Please refer to the Land Use and Planning analysis (Section 11) for additional information.

In 1986, General Chemical Corporation (GCC) became the successor-owner of the 26-acre operating portion of the Allied-Chemical property, operating as GCC, then as General Chemical West (GC-West). GenTek Inc. (GenTek) created GC-West in 2003 in connection with its reorganization upon emerging from bankruptcy. The GC-West operations at the Proposed Project Site produced alum and chemically pure acids and etchants, blended and packaged solvents, and transloaded molten sulfur.

Allied-Chemical became Allied-Signal through a series of mergers. In 1999, following the Honeywell and Allied-Signal merger, Honeywell became the successor owner of the remaining 113 acres that surround the 26-acre Proposed Project Site adjacent to the north, west, and east.

In 2014, Chemtrade purchased GenTek and its subsidiaries including GC-West. In 2015, Chemtrade stopped all operations at the Proposed Project Site with the exception of alum production and molten sulfur transloading. In 2015, Chemtrade performed decontamination and partial demolition of the Proposed Project Site except for the alum plant and molten sulfur transloading areas. In 2016, Chemtrade completed decontamination and demolition of the RCRA hazardous waste management unit and DTSC approved the clean closure certification in 2017 (DTSC, 2017).

RCRA Corrective Action activities began in 1995 and included:

- Conducting investigations to identify the nature and extent of contamination and the environmental setting conditions;
- Conducting risk assessments to identify potential risks to human and ecological receptors (MWH, 2004; CH2M 2011, 2012; Terraphase, 2018);
- Implementing interim measures to address risks (Terraphase, 2011);
- Conducting studies to provide information on the feasibility of cleanup technologies and options; and
- Evaluating and selecting Corrective Measures (Terraphase, 2019a).

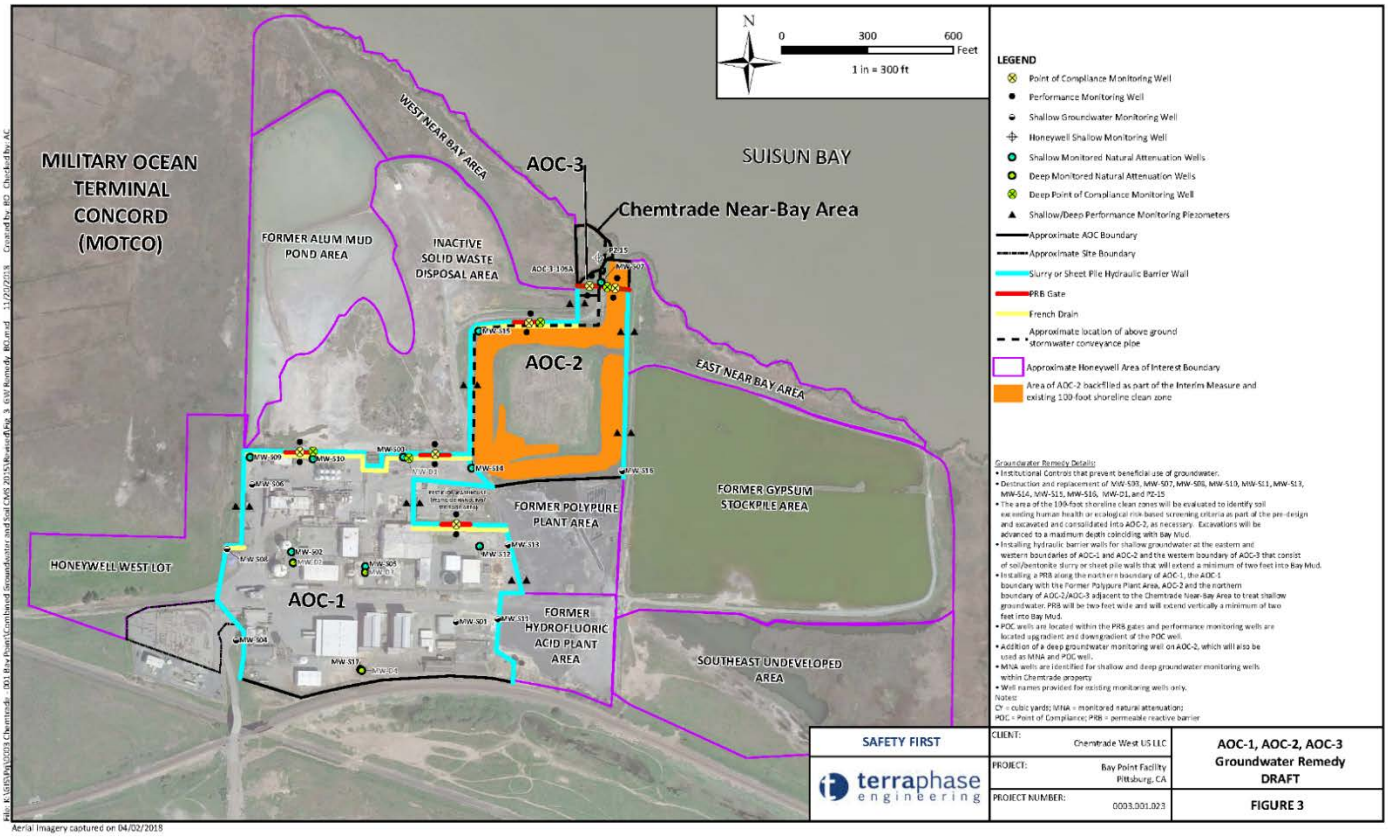
PROJECT ACTIVITIES:

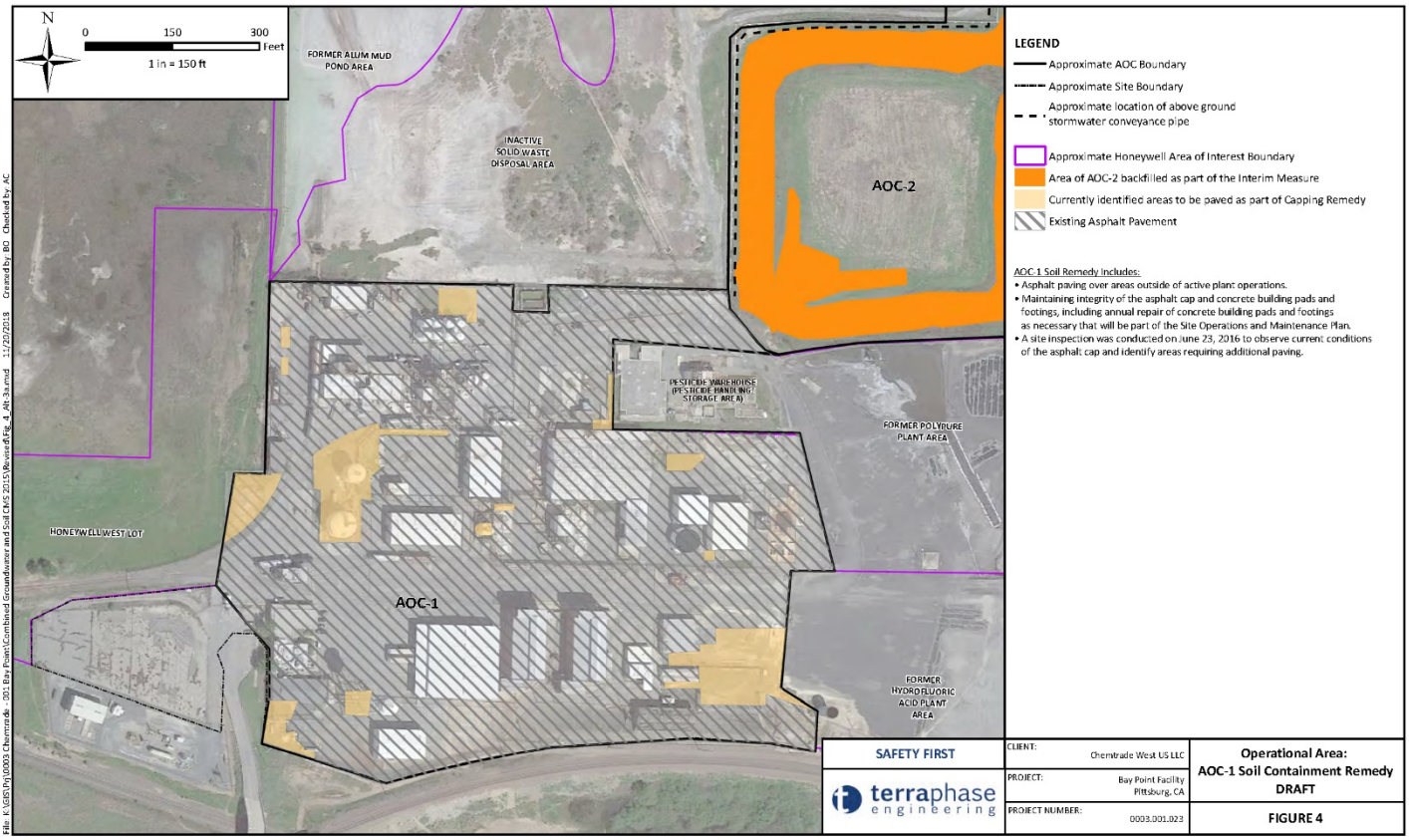
Based on the results of the CMS Report and the Statement of Basis, the following planned and contingency corrective measures were selected for each AOC. These corrective measures are protective of human health and the environment and are the most cost-effective options that meet the remedy decision factors. The corrective measures are designed to address soil and groundwater contamination and consist of the following components:

- AOC-1, AOC-2, and AOC-3 Groundwater (refer to Figure 3 below): Construct hydraulic barrier walls, construct passive PRB walls for groundwater treatment, implement monitored natural attenuation, implement performance groundwater monitoring, and establish land use restrictions.
- AOC-1 Soil (refer to Figure 4 below): Construct soil containment (cap) and establish land use restrictions.
- AOC-2 and AOC-3 (refer to Figure 5 below): Construct soil containment (cap), establish a shoreline clean zone, and establish land use restrictions.
- Chemtrade-NBA: Establish land use restrictions.

The current property owner (Chemtrade) will enter into a Land Use Covenant and Agreement with DTSC for the environmental restrictions listed in the CMS. The LUC will restrict the use of the property and remain with the land regardless of ownership. Future residential land use at the Proposed Project Site will be prohibited and re-zoning of any portion of the Proposed Project Site in the future would require an updated human health risk assessment. Any person may apply to DTSC for a written variance, or petition to remove any of the environmental restrictions, or terminate the LUC in its entirety. At that time, DTSC will evaluate the request to ensure the Site is protective of human health and the environment.

Details regarding the corrective measure activities to construct the hydraulic barrier walls, PRBs, caps, establish a Shoreline Clean Zone, and implement performance monitoring wells and piezometers are provided in the following sections.




N
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150
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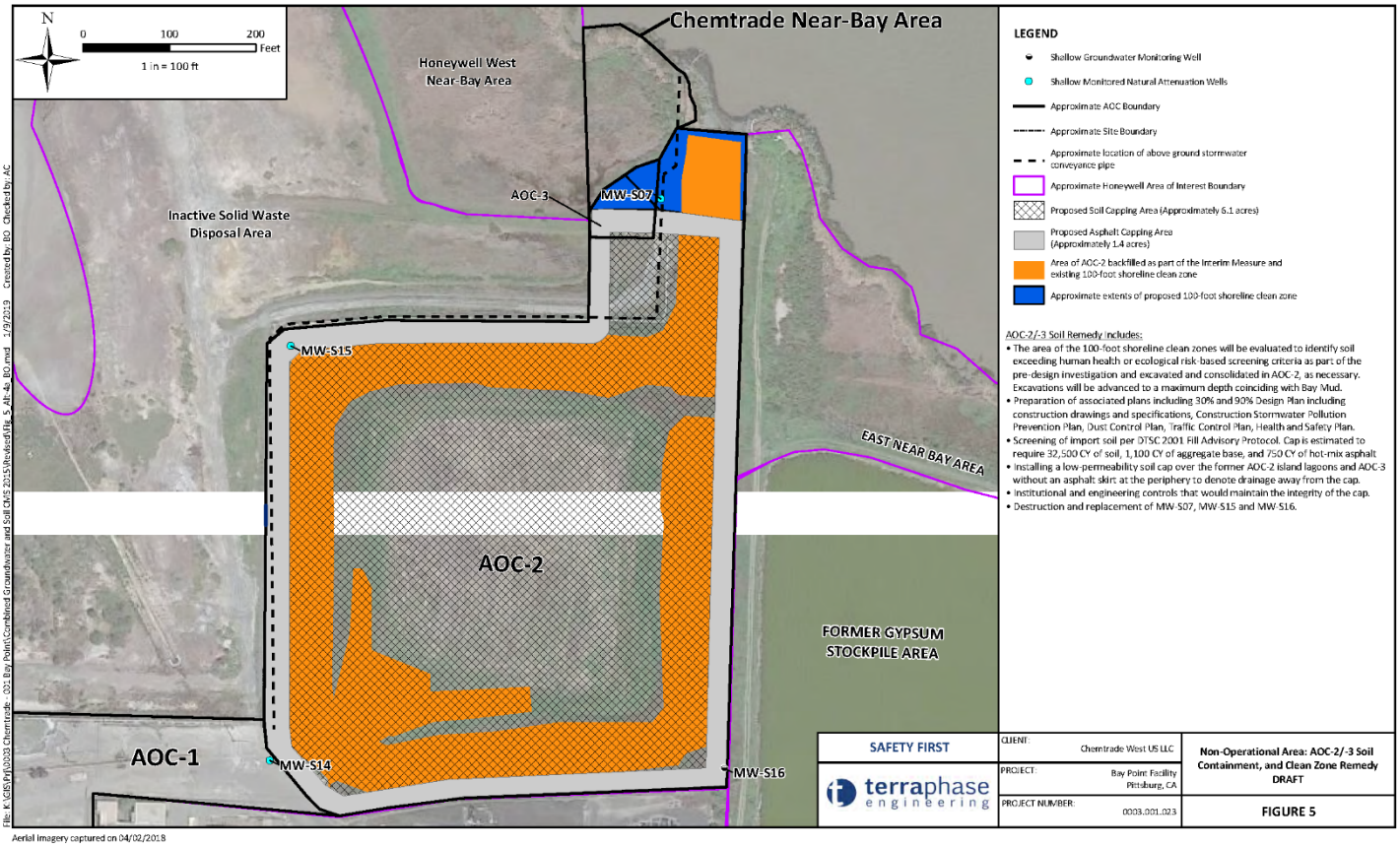
Feet
1 in = 150 ft
FORMER ALUM MUD POND AREA
INACTIVE SOLID WASTE DISPOSAL AREA
AOC-2
PESTICIDE WAREHOUSE (PESTICIDE HANDLING STORAGE AREA)
FORMER POLYDURE PLANT AREA
HONEYWELL WEST LOT
AOC-1
FORMER HYDROFLUORIC ACID PLANT AREA
LEGEND
Approximate AOC Boundary
Approximate Site Boundary
Approximate location of above ground stormwater conveyance pipe
Approximate Honeywell Area of Interest Boundary
Area of AOC-2 backfilled as part of the Interim Measure
Currently identified areas to be paved as part of Capping Remedy
Existing Asphalt Pavement
AOC-1 Soil Remedy Includes:
• Asphalt paving over areas outside of active plant operations.
• Maintaining integrity of the asphalt cap and concrete building pads and footings, including annual repair of concrete building pads and footings as necessary that will be part of the Site Operations and Maintenance Plan.
• A site inspection was conducted on June 23, 2016 to observe current conditions of the asphalt cap and identify areas requiring additional paving.
SAFETY FIRST
terraphase engineering
CLIENT: Chemtrade West US LLC
PROJECT: Bay Point Facility Pittsburg, CA
PROJECT NUMBER: 0003.001.023
Operational Area: AOC-1 Soil Containment Remedy DRAFT
FIGURE 4
File: K:\GIS\Fy19\0003 Chemtrade - 001 Bay Point\Combined Groundwater and Soil CMS 2015\Revised\Fig_4_Alt-3a.mxd 11/20/2018 Created by: BO Checked by: AC
Aerial imagery captured on 04/02/2018


N
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Feet
1 in = 100 ft
Chemtrade Near-Bay Area
Honeywell West Near-Bay Area
AOC-3
MW-S07
Inactive Solid Waste Disposal Area
MW-S15
EAST NEAR BAY AREA
AOC-2
FORMER GYPSUM STOCKPILE AREA
AOC-1
MW-S14
MW-S16
LEGEND
Shallow Groundwater Monitoring Well
Shallow Monitored Natural Attenuation Wells
Approximate AOC Boundary
Approximate Site Boundary
Approximate location of above ground stormwater conveyance pipe
Approximate Honeywell Area of Interest Boundary
Proposed Soil Capping Area (Approximately 6.1 acres)
Proposed Asphalt Capping Area (Approximately 1.4 acres)
Area of AOC-2 backfilled as part of the Interim Measure and existing 100-foot shoreline clean zone
Approximate extents of proposed 100-foot shoreline clean zone
AOC-2/-3 Soil Remedy Includes:
• The area of the 100-foot shoreline clean zones will be evaluated to identify soil exceeding human health or ecological risk-based screening criteria as part of the pre-design investigation and excavated and consolidated in AOC-2, as necessary. Excavations will be advanced to a maximum depth coinciding with Bay Mud.
• Preparation of associated plans including 30% and 90% Design Plan including construction drawings and specifications, Construction Stormwater Pollution Prevention Plan, Dust Control Plan, Traffic Control Plan, Health and Safety Plan.
• Screening of import soil per DTSC 2001 Fill Advisory Protocol. Cap is estimated to require 32,500 CY of soil, 1,100 CY of aggregate base, and 750 CY of hot-mix asphalt
• Installing a low-permeability soil cap over the former AOC-2 island lagoons and AOC-3 without an asphalt skirt at the periphery to denote drainage away from the cap.
• Institutional and engineering controls that would maintain the integrity of the cap.
• Destruction and replacement of MW-S07, MW-S15 and MW-S16.
SAFETY FIRST
terraphase engineering
CLIENT: Chemtrade West US LLC
PROJECT: Bay Point Facility Pittsburg, CA
PROJECT NUMBER: 0003.001.023
Non-Operational Area: AOC-2/-3 Soil Containment, and Clean Zone Remedy DRAFT
FIGURE 5
File: K:\GIS\Fy19\0003 Chemtrade - 001 Bay Point\Combined Groundwater and Soil CMS 2015\Revised\Fig_5_Alt-4a_BO.mxd 1/9/2019 Created by: BO Checked by: AC
Aerial imagery captured on 04/02/2018

AOC-1, AOC-2, and AOC-3 Groundwater Planned Approach – Hydraulic Barrier Walls, PRBs, and Monitoring Wells/Piezometers

Approximately 5,000 linear feet (LF) of hydraulic barrier walls and 600 LF of PRBs would be constructed to a depth of approximately 10 feet below ground surface (ft-bgs). Approximately 1,700 LF of French drains would be constructed on the south side of the hydraulic barrier walls. Refer to Figure 3 above for proposed locations.

Trenching for the hydraulic barrier walls, PRBs, and French drains would remove approximately 670 tons of existing asphalt and aggregate base, which would be transported to an appropriate off-site recycling or disposal facility. In addition, approximately 4,400 tons of soil spoils from the trenching would be consolidated at AOC-2 under the soil cap and asphalt skirt to be constructed over AOC-2 and a portion of AOC-3.

Construction of the hydraulic barrier walls would require approximately 200 tons of dry bentonite. Construction of the PRB walls would require approximately 480 tons of gravel, 200 tons of zero-valent iron (ZVI) fillings, 60 tons of limestone, and 340 tons of compost. The sources of these materials are available in and in proximity to the San Francisco Bay Area.

French drains would be installed along the south side of the hydraulic barrier walls in select locations for approximately 1,700 LF to facilitate groundwater movement through the PRBs. Installation of French drains would require approximately 2,700 tons of clean import gravel.

The hydraulic barrier walls, PRB, and French drain footprints would be resurfaced to match the pre-existing conditions and surrounding surfaces including asphalt paving in AOC-1. Repaving of the trench alignments in AOC-1 would require approximately 170 tons of clean import aggregate base and 220 tons of hot-mix asphalt.

A groundwater monitoring well network consisting of some of the existing monitoring wells, 22 new monitoring wells, and 14 new piezometers would be used to confirm the effectiveness of the corrective measures. The wells and piezometers would be monitored and sampled to provide data on water levels, water flow, and/or water quality. The new monitoring wells and piezometers to be constructed (refer to Figure 3 above) would be installed in accordance with the Contra Costa County (CCC) Department of Environmental Health guidelines and permitting requirements, including on-site inspection. Shallow and deep well depths would be approximately 15 and 50 ft-bgs, respectively, with estimated 10-foot length well screens.

AOC-1 Soil Planned Approach – Cap

Approximately 1.4 acres at AOC-1 were identified as requiring paving or re-paving based on an inspection conducted on June 23, 2016 (refer to Figure 4 above). Prior to paving or repaving, an additional inspection of AOC-1 existing paved asphalt surfaces and concrete building pads and foundations would be conducted to identify any additional areas requiring paving and/or repair. Gravel bedding (i.e., ballast) previously used for the industrial railroad spur on the Proposed Project Site would not be paved over as part of this remedy.

Areas requiring paving would have vegetation cleared, if present, and be graded to create a smooth compacted surface. A layer of clean, imported aggregate base with a minimum 6-inch thickness would be placed on top of the graded area. A layer of asphalt pavement with a minimum thickness of 4 inches would be placed on top of the aggregate base and compacted.

Implementation of the paving or re-paving would require import of approximately 1,540 tons of clean aggregate base and 1,430 tons of hot-mix asphalt. The sources of hot-mix asphalt are available in and in proximity to the San Francisco Bay Area.

AOC-2 and AOC-3 Soil Planned Approach – Shoreline Clean Zone and Cap

The construction elements for the AOC-2 and AOC-3 soil remedy consist of the following components:

- soil sampling and, if warranted, soil removal with clean backfill in the 100-foot shoreline Clean Zone;
- Construction of a minimum 3-foot-thick, low-permeability soil cap encompassing AOC-2 and a portion of AOC-3; and
- Construction of an asphalt skirt surrounding the perimeter of the soil cap.

Soil samples would be collected from the 100-foot Shoreline Clean Zone for laboratory analyses (refer to Figure 5 above). If soil exceeding either the human health or ecological screening levels specified in the CMS Report is present, the impacted soil would be excavated and consolidated in AOC-2. Up to approximately 2,100 tons of soil may require removal and 2,400 tons of import fill may potentially be required for backfill. Following backfill, exposed soil will be vegetated to prevent erosion using an appropriate seed mix for the shoreline area.

The proposed AOC-2 soil cap would be installed over approximately 6.1 acres, surrounded by an asphalt skirt that would be approximately 30 feet wide and 1.4 acres in total area (refer to Figure 5 above). The cap would be constructed by placing a minimum of 3 feet of clean import fill and compacting to meet construction specifications. Import soil would be screened as specified in the Design Details memorandum (DTSC, 2001, Terraphase, 2019b). The 3 feet of clean fill would include the existing clean fill at the periphery of AOC-2, previously placed as part of the former lagoon removal action and backfill interim measure (Terraphase, 2011). The finished cover would have a minimum slope of 1% to facilitate drainage of storm water away from the cover and prevent ponding. Exposed soil on the cap will be vegetated to prevent erosion with an appropriate seed mix.

Construction of the soil cap would require import of approximately 52,000 tons of clean soil, 1,540 tons of clean aggregate base as a base layer for the asphalt skirt, and 1,430 tons of hot-mix asphalt for the surface of the asphalt skirt. The sources of import soil, aggregate, and hot-mix asphalt are available in and in proximity to the San Francisco Bay Area.

Schedule

Construction activities would take a total of approximately 32 weeks. The groundwater remedy for AOC-1, AOC-2, and AOC-3 and the AOC-1 cap would be implemented first, followed by the 100-foot shoreline Clean Zone excavation, if confirmed necessary. Following completion of these remedies and transport of all spoils and other soil to AOC-2, the AOC-2/AOC-3 soil cap and asphalt skirt would be constructed.

PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED:

While DTSC approves the overall remedy for the Site, other public agencies may be involved through permitting or consultation such as the State Water Resources Control Board, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, San Francisco Bay Regional Water Quality Control Board, San Francisco Bay Conservation and Development Commission, and Contra Costa County.

NATIVE AMERICAN CONSULTATION:

DTSC complied with the 2014 Assembly Bill 52 (AB52). DTSC provided written notification to tribes on the Tribal Consultation List from the Native American Heritage Commission (NAHC) regarding the Proposed Project on October 3, 2017. The notice included a brief project description, project location, and lead agency's contact information. DTSC received interest from two Tribal governments and began consultation within 30 days and prior to release of the CEQA document for the Proposed Project. The Cultural Resources Study (refer to Attachment B) was provided to the two Tribal government for review. One Tribal government concurred with the conclusions of the Cultural Resources Study, mainly that cultural resources are unlikely to be present at the Proposed Project Site. The second Tribal government has not responded but DTSC will continue to work with interested Tribal governments.

Based on the Proposed Project Site location, history, and absence of cultural resource findings during prior Site work, and the 2019 cultural resources study (refer to Attachment B), it is not likely that historical resources would be identified or impacted during corrective measures. However, if historical resources are discovered during corrective measures, then work would stop in that area until a qualified archaeologist or appropriately licensed professional can assess the significance of the find and, if necessary, develop appropriate response measures in consultation with the DTSC and other agencies and Native American representatives, as appropriate. Please refer to the Tribal Cultural Resources analysis (Section 18) for additional information.

REFERENCES USED:

California Department of Toxic Substances Control (DTSC). 2001. Information Advisory Clean Imported Fill Material. http://rfs-env.berkeley.edu/documents/DTSCSMP_FS_Cleanfill-Schools.pdf. October.

DTSC. 2017. Closure Certification for Hazardous Waste Facility Closure at Chemtrade West US LLC, Bay Point Works, Pittsburg, California, U.S. Environmental Protection Agency ID No:CAD009142290. https://www.hwmpenvirostor.dtsc.ca.gov/public/site_documents/5104969620/CW%20Final%20Closure%20Approval%20letter%2002212017.pdf. February 21.

CH2M Hill. 2011. Final Onshore Human Health and Ecological Risk Assessment, Honeywell Bay Point Site, Bay Point, California. Revised Final. Prepared for Honeywell International, Inc.. https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=07280164&doc_id=60252752. September 9.

CH2M Hill. 2012. Final Phase II Onshore Ecological Risk Assessment, Honeywell Bay Point Site, Bay Point, California. Prepared for Honeywell International, Inc. https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=07280164&doc_id=60272890. November 21.

LFR Inc./Jacobson & Associates Environmental, Inc. (LFR/JE). 2008. Technical Memorandum: Revised Corrective Measures Work Plan Supplement, General Chemical West, LLC, Bay Point Works Facility, 501 Nichols Road, Pittsburg, California. https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=80001606&doc_id=60266323. May 23.

MWH. 2004. Draft Baseline On-Site Human Health Risk Assessment and Risk Based Cleanup Levels Report, General Chemical Corporation Bay Point Works Facility, 501 Nichols Road, Pittsburg, CA. https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=07280164&doc_id=6008583. September 15.

Terraphase Engineering Inc. (Terraphase). 2011. AOC-2 Lagoon Backfill and Removal Action Interim Measures Work Plan. General Chemical, Bay Point Works Facility. 501 Nichols Road, Pittsburg, California. https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=80001606&doc_id=6027165. August 10.

Terraphase. 2018. Revised Chemtrade Near-Bay Ecological Risk Follow-Up Evaluation Technical Memorandum, Chemtrade Bay Point Facility, 501 Nichols Road, Pittsburg, California. https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=80001606&doc_id=60441233. February 9

Terraphase. 2019a. Draft Final Corrective Measures Study Report, Chemtrade West US LLC, Bay Point Facility, 501 Nichols Road, Pittsburg, California. https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=80001606&doc_id=6027666. January 31.

Terraphase. 2019b. Corrective Measures Study Recommended Remedial Action Alternative Design Details, Chemtrade West US LLC, Bay Point Facility, 501 Nichols Road, Pittsburg, California. https://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=80001606&doc_id=60458103. May 8.

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact," as indicated by the checklist beginning on page 15. Please see the checklist beginning on page 13 for additional information.

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

SUMMARY OF MITIGATION

DTSC has determined the following mitigation measure would be required beyond those incorporated as part of the Proposed Project to ensure that impacts would be less than significant. In order to minimize the impact of the project to biological resources, a biological mitigation monitoring plan will be completed and implemented prior to and during construction activities in collaboration with the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) (refer to the Biological Resources analysis (Section 4) for further discussion). The following mitigation measure (MM Bio-1) will be implemented:

- A qualified biologist shall conduct a Biological Resources Education Program briefing to all contractor and subcontractor personnel prior to any site entry. The qualified biologist shall train all personnel on the location of sensitive habitat, identification of all special status species, instructions of procedure when encountering one, and applicable environmental laws, statutes, ordinances. A fact sheet conveying this information will be prepared and distributed to the above-mentioned people and anyone else who may enter the project site. Upon completion of training, employees will sign a form stating that they attended the training and understand all the conservation and protection measures.
- If ground-disturbing activities are scheduled within the avian nesting season, a pre-construction clearance survey for nesting birds shall be conducted by a qualified biologist within three days prior to any ground disturbing activities to ensure that no nesting birds would be disturbed during construction. Nesting season generally extends from February 1 through August 31, but can vary from year to year, based upon seasonal weather conditions.
- The biologist conducting the clearance survey shall document a negative survey indicating that no impacts to active bird nests would occur. If an active avian nest is discovered during the 3-day pre-construction clearance survey, the nest location would be mapped and CDFW and USFWS contacted. Construction activities shall stay outside of a 100-foot buffer around the active nest (250-foot buffer for raptors). Additionally:
    - If special status avian species are identified during the pre-construction survey, a biological monitor shall be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, normal construction activities can occur. Pursuant to FGC section 3503, it is unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (birds of prey, such as hawks and owls) are protected under FGC 3503.5 which makes it unlawful to take, posses, or destroy their nest or eggs.
- A consultation with CDFW and/or USFWS (dependent on the species) shall be required prior to the removal of any raptor nest on the Proposed Project Site, if a raptor nest is determined to be located on Site during the pre-construction clearance survey.
- If a Western Pond Turtle is encountered, it will be relocated by a qualified biologist into the adjacent marsh off-site in accordance with CDFW Scientific Collecting permit procedures. The biologist will have a CDFW Scientific Collecting permit with authorization to handle and relocate any turtles encountered.

During ground-disturbing activities:

- Equipment and personnel shall be limited to the areas where vegetation has been cleared and not venture into heavily vegetated areas of the Site or adjacent land.
- Excavation and haul equipment shall be confined to the access routes, designated staging areas in paved locations, and designated construction areas.
- Project-related vehicular traffic within the project area will observe a 15-mph limit or less.
- Equipment decontamination shall be located within the designated staging area, away from wetland habitat and Suisun Bay.
- All construction work shall occur during the daytime.
- Site personnel shall thoroughly inspect the work area and adjacent habitat areas, prior to the initiation of work each day, to determine if special status species are present in these areas. If a special status species (as listed above) or nest is observed within the work area (or within 500 feet of the work area), then work shall not be initiated or shall be stopped immediately; a qualified biologist shall be contacted and conduct a site visit to confirm the presence of a special status species or nest. The qualified biologist would notify CDFW and USFWS within 1 business day and no work shall commence until the special status species leaves the work area on its own volition. If the special status species does not leave the work area or if a nest is present within the work area (or within 500 feet of the work area of nesting birds), work shall not be reinitiated until CDFW and USFWS are contacted and determine the best course to proceed with work activities.

DETERMINATION

On the basis of this initial evaluation:

☐	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☒	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☐	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

CERTIFICATION

I hereby certify that the statements furnished above and in the attached documentation, present the data and information required for this initial study evaluation to the best of my ability and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.

Preparer's Signature	Date
	10/17/19

Preparer's Name	Preparer's Title	Phone #
Nancy Tu	Project Manager	(510) 540-3824

Branch Chief Signature	Date
	10/17/2019

Branch Chief Name	Branch Chief Title	Phone #
Julie Pettijohn, MPH, CIH	Environmental Program Manager I	(510) 540-3843

EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL IMPACT ANALYSIS

1. AESTHETICS				
Except as provided in Public Resources Code Section 21099, would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

California Scenic Highway Program

The Scenic Highway Program allows county and city governments to apply to the California Department of Transportation (Caltrans) to establish a scenic corridor protection program which was created by the Legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment.

Contra Costa County 2005 General Plan

The Community Identity and Urban Design section within the Contra Costa County General Plan Land Use Element contains the following policies related to visual character:

3-16: Community appearance shall be upgraded by encouraging redevelopment, where appropriate, to replace inappropriate uses.

3-18: Flexibility in the design of projects shall be encouraged in order to enhance scenic qualities and provide for a varied development pattern.

The Contra Costa County General Plan Land Use Element contains the following policies related to visual character for the Bay Point Area:

3-78: The following policies shall guide development in the Bay Point area:

(d) Achieve and maintain a healthy environment for people and wildlife that minimizes health hazards and disruptions caused by the production, storage, transport, and disposal of toxic materials.

The Contra Costa County General Plan Open Space Element contains policies that regulate visual resources in the project vicinity. Scenic resources are classified as scenic waterways or scenic ridgelines. In the project vicinity, scenic waterways include Suisun Bay, located to the west-northwest, and Sacramento River, located east-northeast. The General Plan Open Space Element does not contain any goals or policies relevant to the proposed project.

ENVIRONMENTAL SETTING (BASELINE):

The Proposed Project Site is located adjacent to Suisun Bay in unincorporated CCC and zoned for Heavy Industrial use. The Proposed Project Site is located on the south edge of the Sacramento-San Joaquin River/Delta Shoreline, which is identified as a scenic waterway. The nearest scenic vista, as designated in the CCC 2005-2020 General Plan, is a scenic ridge approximately five miles to the south/southwest.

The Proposed Project Site is an industrial facility that has been operating for over 100 years. Visible features and the Proposed Project Site are consistent with industrial manufacturing operations. The areas surrounding the Proposed Project Site include coastal wetlands located adjacent to the north, east, and west along with primarily open spaces to the south beyond a railroad line traversing in an east-west direction adjacent to the Site.

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The significance determination in this visual analysis is based on consideration of: (1) the extent of change related to visibility of the Proposed Project Site from key public vantage points; (2) the degree of visual contrast and compatibility in scale and character between project activities and the existing surroundings; (3) conformance of the proposed project with public policies regarding visual and urban design quality; and (4) potential adverse effects on scenic vistas and scenic resources.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

No project-specific environmental studies related to aesthetic resources were prepared for the proposed project. However, the methodology employed for assessing potential aesthetic impacts involved considering the existing viewshed and the project activities that have the potential to change the project-area visual character.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

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

Impact Analysis:

The Proposed Project would construct corrective measures to address impacted soil and groundwater including installation of hydraulic barriers and PRBs, soil sampling, potential soil excavation and backfill, grading, asphalt paving, and construction of a soil cap with asphalt skirt. No new above ground structures or modifications to existing structures would occur with implementation of the Proposed Project. Therefore, no adverse effects on the view of the nearest scenic ridge or waterway local vantage points would occur. The nearest scenic vista is five miles away to the south/southwest. Temporary construction activities at the Proposed Project Site would occur for approximately 32 weeks, beginning in late December 2019 and ending in August 2020. The short-term construction activities would not result in any long-term adverse effects to a scenic vista.

Conclusion:

Components of the proposed corrective measures and the short-term construction activities would not have the potential to substantially affect the view of a scenic ridge or waterway. Therefore, there would be a less-than-significant impact.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

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

Impact Analysis:

The nearest roadway to the Proposed Project Site that is officially designated as a California State Scenic Highway is a section of Interstate 680 (I-680), located over 10 miles to the west from the Site. The nearest roadway to the Proposed Project Site that is identified as eligible for California State Scenic Highway Program

is a segment of State Route 4 (SR-4), located approximately 11 miles to the east in Antioch (CalTrans, 2018). There are no views of the Proposed Project Site from these sections of I-680 or SR-4.

The CCC Scenic Routes Plan identifies the sections of I-680 and SR-4 described above as Scenic Highways. In addition, a 1.8-mile section of Port Chicago Highway and a short section of Willow Pass Road that connects Port Chicago Highway to SR-4 are identified as Scenic Routes. The stretch of SR-4 that extends approximately 20 miles from Bay Point to Hercules, California, is also identified as a Scenic Highway (CCC, 2005). The Proposed Project Site is not visible from these roadways.

The Proposed Project Site has been used for heavily industrial purposes for over a century and currently is used for ongoing heavy industrial uses. No scenic resources would be damaged with implementation of the proposed corrective measures.

Conclusion:

Scenic resources (e.g., trees, rock outcroppings, historic buildings) would not be disturbed or damaged through implementation of proposed corrective measures. Implementation of the proposed project would not result in any impacts to scenic resources.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impact Analysis:

Publicly accessible vantage points of the Proposed Project Site include the furthest northern section of Nichols Road and from on Suisun Bay (such as from a boat). Coastal wetlands are located adjacent to the north, east, and west of the Proposed Project Site. A railroad line traverses in an east-west direction adjacent to the south which serves industrial operations at the Proposed Project Site and the surrounding area. The Proposed Project Site and adjacent properties have been used for industrial chemical manufacturing for over 100 years and the visual character of the Proposed Project Site and adjacent properties reflects the long-term heavy industrial uses.

Construction activities would occur for approximately 32 weeks at the Proposed Project Site beginning in late December 2019 and ending in August 2020. The short-term, temporary construction activities would be visually similar to other industrial activities currently occurring at the Proposed Project Site.

Implementation of the proposed corrective measures would not alter the visual character or quality of the Proposed Project Site. Specifically, corrective measures involving the capping of exposed contaminated soil and debris and construction of hydraulic barriers and PRBs would be located subsurface and would not be visible from offsite locations. In addition, the proposed project would vegetate exposed soil on the cap with an appropriate seed mix which would improve the overall visual character by replacing the built environment with a natural environment.

Conclusion:

Based on the temporary nature of the construction activities and the overall improved end-state of the Proposed Project Site, no impact related to substantially degrading the existing visual character or quality of public views of the Proposed Project Site would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

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

Impact Analysis:

The Proposed Project activities would be conducted during daytime hours with the potential for some work to occur after sunset. The proposed project would not require any night-shift or swing-shift work. The nearest sensitive receptor (i.e., residences) is located over ½ mile from the Proposed Project Site. Any nighttime lighting used during construction activities would be occasional and limited to a relatively small work area and would not introduce any new temporary or permanent sources of substantial light or glare that would adversely affect daytime or nighttime views in the area.

Conclusion:

Project activities would not require nor introduce a new temporary or permanent source of substantial light or glare that would adversely affect views in the project area. Therefore, implementation of the proposed corrective measures would result in no impact.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

California Department of Transportation. 2018. California Scenic Highway Program. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/ (Accessed November 2018).

Contra Costa County (CCC). 2005 (Reprint 2010). General Plan. http://www.contracosta.ca.gov/4732/General-Plan (Accessed June 2019).

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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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 or conversion of forest land to non-forest use?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

No laws, ordinances, regulations, or standards protecting agriculture or forestry resources are applicable to the Proposed Project.

ENVIRONMENTAL SETTING (BASELINE):

The Proposed Project Site is not located in or near any agricultural or forestry resources. The Proposed Project Site has been used continuously since the early 1900s for chemical production and has active manufacturing operations of alum production and molten sulfur transloading operations.

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of agriculture or forestry resource effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Based on the lack of agricultural or forestry resources in or near the Proposed Project Site, no environmental studies relating to agriculture or forestry resources were prepared for the Proposed Project.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

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?

Impact Analysis:

The closest designated Farmland is approximately 4.5 miles from the Proposed Project Site (DRLP, 2018). Project-related activities would remain within the Proposed Project Site boundaries. Therefore, no impact to designated Farmland would occur.

Conclusion:

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

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

Impact Analysis:

The Proposed Project Site is designated as Non-Williamson Act Land by the California Department of Conservation, Division of Land Resource Protection, and CCC Williamson Act FY 2012/2013 map (DLRP, 2013). Therefore, project-related activities would not conflict with any Williamson Act contracts. The Proposed Project Site is zoned as Heavy Industrial and would not conflict with any existing agricultural zoning. No impact would occur.

Conclusion:

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Impact Analysis:

There is no land with existing zoning of forest land or timberland within the Proposed Project Site. Proposed Project-related activities would not conflict with existing zoning or cause rezoning of forest land or timberland, as none exists within the Proposed Project Site boundaries. Therefore, there would be no impact to forest land or timberland.

Conclusion:

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

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

Impact Analysis:

There are no forests or timberland on or near the Proposed Project Site and the Proposed Project would not convert any land to forest or timberland (CCC, 2005). Therefore, there would be no impact.

Conclusion:

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

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

Impact Analysis:

The Proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or agricultural land. Therefore, there would be no impact.

Conclusion:

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

California Department of Conservation, Division of Land Resource Protection (DLRP). 2018. Contra Costa County Important Farmland 2016 ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/con16.pdf (Accessed November 2018)

DLRP. 2013. Contra Costa County Williamson Act FY 2012/2013. ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Contra_Costa_12_13_WA.pdf (Accessed November 2018)

CCC. 2005 (Reprint 2010). General Plan, Land Use Element Map. http://www.co.contra-costa.ca.us/DocumentCenter/View/30949/Land-Use-Element-Map?bidId= (Accessed November 2018).

3. AIR QUALITY				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

The Bay Area Air Quality Management District (BAAQMD) published a revised CEQA Guidelines and Thresholds of Significance guidance in 2017. The purpose of the guidelines is to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the San Francisco Bay Area Air Basin. The BAAQMD guidelines provide BAAQMD-recommended procedures for evaluating potential air quality impacts during the environmental review process consistent with CEQA requirements (BAAQMD, 2017b). In this section, air quality is evaluated against numbers set forth in the BAAQMD guidance.

ENVIRONMENTAL SETTING (BASELINE):

The Climatological Subregion (subregion) for the Proposed Project Site extends from Rodeo in the southwest to Vallejo in the northwest, and from Brentwood in the southeast to Fairfield in the northeast. The subregion comprises the only sea level gap between San Francisco Bay and the Central Valley.

Temperatures in the subregion range from a mean minimum temperature of approximately 38 degrees Fahrenheit (°F) in the winter to a mean maximum of 90°F in the summer. Prevailing winds in the Carquinez Strait are comprised of marine air flow from the west. Annual average wind speeds are 8 to 10 miles per hour (mph), although afternoon wind speeds of 15 to 20 mph are common. When changes in atmospheric conditions result in a shift in wind direction, more polluted air is carried from the east through the Strait into the subregion. These periods of high pressure in the subregion are usually characterized by low wind speed, higher temperatures, and minimal precipitation.

Many industrial facilities, including chemical plants and refineries that generate emissions, are located within the subregion. Although pollution levels in the subregion are often reduced due to prevailing marine winds from the west, operations at these industrial facilities can result in short-term elevated emissions of pollutants, making buffer zones around the facilities important. Receptors residing downwind of these facilities may be more exposed to pollutants for longer periods than receptors residing elsewhere (BAAQMD, 2017a).

The Bay Area is in attainment for National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for the following pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, and sulfates. The Bay Area is in non-attainment for fine particulate matter less than 2.5 microns in size ($PM_{2.5}$) and ozone with respect to both NAAQS and CAAQS. In addition, the Bay Area is in non-attainment with respect to the CAAQS for respirable particulate matter less than 10 microns in size (PM_{10}) (BAAQMD, 2019).

The Proposed Project Site is located within the San Francisco Bay Area, and the BAAQMD is primarily responsible for enforcing air quality standards, in accordance with standards set by the California Air Resources Board (CARB) and the United States Environmental Protection Agency.

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The 2017 BAAQMD CEQA Guidelines Thresholds of Significance for average daily air emissions are shown in Table 3.1 below. If project-related average daily emissions are below these thresholds, the impacts are considered less than significant, even if peak days have emissions over the thresholds.

TABLE 3.1

THRESHOLDS OF SIGNIFICANCE FOR CONSTRUCTION-RELATED CRITERIA AIR POLLUTANTS AND PRECURSORS

Criteria Pollutant or Precursor	Average Daily Emissions Threshold of Significance (pounds/day)
ROG	54
NOx	54
PM_{10}[1]	82
$PM_{2.5}$[1]	54

Notes:
[1] Applies to construction exhaust emissions only.
NOx = nitrogen oxide
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROG = reactive organic gases

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

California Emissions Estimator Model ® (CalEEMod, Version 2016.3.2) was run to determine if project-related air emissions exceed BAAQMD CEQA Air Quality Guidelines. The CalEEMod results are summarized in Table B-1, and the model basis information is summarized in Table B-2 and B-3 (refer to Attachment A). Complete CalEEMod Input and Output is provided in Attachment A. The following construction equipment was considered in modeling air emissions:

- On-road trucks (worker transportation),
- Forklifts,
- Loaders,
- Pavers,
- Rollers,
- Excavators,
- Grader,
- Rubber tire dozer,
- Backhoes, and
- Generator.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

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

Impact Analysis:

Construction-related activities would result in emissions of ozone precursors (NOx and reactive organic gases [ROG]), particulates (PM_{10} and $PM_{2.5}$), air toxics, and greenhouse gases (project-related greenhouse gas emissions are analyzed separately in Section 8 of this Initial Study/Negative Declaration). Emissions for construction activities associated with implementing the proposed corrective measures were performed in accordance with the May 2017 BAAQMD CEQA Air Quality Guidelines, using the California Emissions Estimator Model ® (CalEEMod, Version 2016.3.2) and the results are shown in Table 3.2 below. The CalEEMod Input and Output model results are provided in Attachment A.

TABLE 3.2

THRESHOLDS OF SIGNIFICANCE FOR CONSTRUCTION-RELATED CRITERIA AIR POLLUTANTS AND PRECURSORS

Criteria Pollutant or Precursor	BAAQMD Average Daily Emissions Threshold of Significance (lb/day)	Estimated Unmitigated Proposed Project Maximum Daily Emissions (lb/day)	Is Threshold of Significance Exceeded?
ROG	54	2.99	NO
NOx	54	53.81	NO
PM_{10}	82	9.54	NO
$PM_{2.5}$	54	4.74	NO

Notes:
Lb = pounds
NOx = nitrogen oxide
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROG = reactive organic gases

As shown in Table 3.2, project-related construction activities would generate air emissions below 2017 BAAQMD CEQA Thresholds of Significance for construction impacts.

The proposed project would also require the preparation and implementation of a Dust Control Plan to ensure the construction activities would comply with the BAAQMD Regulation 6 requirements for PM_{10} and visible dust emissions. Specifically, the proposed project would include best management practices (BMPs) that would conform to the BAAQMD CEQA Guidelines to reduce emissions from construction equipment which include:

- Using alternative fueled construction equipment when available,
- Minimizing idling time to a maximum of 5 minutes,
- Maintaining properly tuned equipment, and
- Limiting the hours of operation of heavy duty equipment and/or the amount of equipment in use.

In addition, the following measures may be implemented to reduce the emissions from heavy duty trucks, as appropriate.

- Using cleaner fueled vehicles, when available;
- Using particulate traps and catalytic oxidizers, when available; and/or
- Choosing a haul route that provides the maximum buffer to sensitive receptors (e.g., pre-schools, nursing homes).

Conclusion:

The CalEEMod results indicate that the project-related emissions would be below the 2017 BAAQMD CEQA thresholds for construction projects. The short-term construction activities of the proposed project and implementation of appropriate and feasible control strategies (e.g., dust control plan, BMPs) would not conflict with or obstruct implementation of the Bay Area 2017 Clean Air Plan. Therefore, project impacts are considered less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

b. Result in 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.

Impact Analysis:

The Proposed Project Site is non-attainment for ozone, PM_{10}, and $PM_{2.5}$ (BAAQMD, 2019). As shown in Table 3.2 above, the Proposed Project-related emissions of these pollutants would not exceed any of the thresholds of significance established in the 2017 BAAQMD CEQA Guidelines.

Conclusion:

Construction activities associated with implementing the proposed project would generate emissions of non-attainment pollutants that are below the thresholds of significance identified in the 2017 BAAQMD CEQA Guidelines. Therefore, implementation of the proposed project would result in a less-than-significant impact to the net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

c. Expose sensitive receptors to substantial pollutant concentrations?

Impact Analysis:

The California Air Resources Board (CARB) defines sensitive receptors as children, elderly, asthmatics, or others who are at a heightened risk of negative health outcomes due to exposure to air pollution. For the purposes of this analysis, the locations where these populations can typically congregate (e.g., schools, hospitals) are considered sensitive receptor locations. Corrective measures associated with implementing the proposed project would take place in an area zoned for Heavy Industrial use and the closest sensitive receptors (Rio Vista Elementary School and Riverview Middle School) are located 1.5 miles to the southeast of the Proposed Project Site.

The BAAQMD 2017 CEQA Guidelines also includes thresholds of significance for cancer and non-cancer risks. The BAAQMD guidelines identify the zone of influence for construction-related cancer and non-cancer risks within 1,000 feet. Rio Vista Elementary School and Riverview Middle School are 4,600 and 4,900 feet, respectively, from the Proposed Project Site.

Conclusion:

Schools, daycare facilities, nursing homes, and hospitals are located a distance of one-mile or more from the Proposed Project Site There would be no impact based on the nature of the work to be performed and proximity of sensitive receptors.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact Analysis:

Implementation of proposed corrective measures have the potential to generate odors during the operation of construction equipment, such as those experienced from diesel engine exhaust. The closest receptor of odors are residences located approximately ½ mile to the southeast of the Proposed Project Site. This

distance is considered sufficient to eliminate the ability for a resident to discern an odor originating from the Proposed Project Site (i.e., diesel exhaust fumes) from the overall air space.

Conclusion:

Project-related odors during construction activities would not be discernable by the closest receptors (i.e., residences) because of the distance between them and the Proposed Project Site. Therefore, implementation of the corrective measures would not result in other emissions that could adversely affect a substantial number of people.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

Bay Area Air Quality Management District (BAAQMD). 2017a. Final 2017 Clean Air Plan. April 19.

BAAQMD. 2017b. California Environmental Quality Act Air Quality Guidelines. May.

BAAQMD. 2019. Air Quality Standards and Attainment Status. http://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status (Accessed February 6).

4. BIOLOGICAL RESOURCES				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
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, U.S. Fish and Wildlife Service, or NOAA Fisheries?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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?	☐	☒	☐	☐
e) 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?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

Applicable statutes and regulations to the Proposed Project include:

Federal Endangered Species Act (ESA): (16 United States Code (USC) § 1531-1544, 50 Code of Federal Regulations (CFR) Part 17). The Federal ESA provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found.

Federal Migratory Bird Treaty Act (MBTA): (16 USC § 703-712, 50 CFR Part 21). The MBTA makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid Federal permit.

California Endangered Species Act (CESA): (Fish and Game Code (FGC) chapter 1.5, sections 2050-2115.5, California Code of Regulations (CCR), title 14, chapter 6, § 783.0-787.9). CESA protects or preserves all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation.
CESA states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved.

Additionally, the California FGC § 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird; and § 3513 prohibits the take or possession of any migratory nongame bird or part there of as designated in the MBTA. Any birds in the orders Falconiformes or Strigiformes (birds of prey, such as hawks and owls) are protected under FGC 3503.5, which makes it unlawful to take, posses, or destroy their nest or eggs.

ENVIRONMENTAL SETTING (BASELINE):

The Proposed Project Site is bounded by Suisun Bay to the north. Lands adjacent to the northwest and northeast portion of the AOC-2/AOC-3 area and west of AOC-1 are identified as CCC Wetlands (California Regional Water Quality Control Board, 2017). Additional CCC Wetlands are located on Honeywell and MOTCO properties west and east of the Site. There are no wetlands on the Proposed Project Site (MWH, 2003; LSA, 2011).

Previous reconnaissance-level biological resources surveys conducted in 2003 and 2011 which identified potential biological resources within two miles of the Proposed Project Site (MWH 2003 and LSA 2011). Biological resources potentially located in the Proposed Project area included 33 species identified as State or Federal special species of concern, threatened, fully protected, or on the watch list and 19 of the 33 species were presumed absent (refer to Table 4.1 below). An updated desktop review of special status wildlife with the potential to occur on and near the Proposed Project Site was performed in 2019 confirming the prior work and conclusions. Specifically, the updated desktop review confirmed special status wildlife with the potential to occur on or near the Proposed Project Site based on review of information from the following sources: species occurrence records within a two-mile radius of the Proposed Project Site were gathered from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) and United States Fish and Wildlife Service (USFWS) IPaC tool (CDFW, 2019 and USFWS, 2019).

The recent CNDDB search also confirms that no sightings of red-legged frogs have occurred north of Highway 4. This is consistent with the prior USFWS communications confirming that red-legged frogs are not considered present north of Highway 4 or at the (former) wastewater treatment unit (WWTU) (MWH, 2003). The Salt Marsh Harvest Mouse has been identified within 1,500 feet of the Proposed Project Site in a pickleweed marsh to the west (LSA, 2011). However, there is no suitable pickleweed habitat on or within 300 feet of the Proposed Project Site. Accordingly, the salt-marsh harvest mouse is presumed to be absent.

The prior field surveys identified twelve special status bird species (i.e., tricolored blackbird, golden eagle, short-eared owl, burrowing owl, northern harrier, American peregrine falcon, saltmarsh common yellowthroat, white-tailed kite, California black rail, Suisun song bird, California Ridgeway's rail, and California least tern) to be present or their presence could not be ruled out based on the absence of suitable habitat, even though some of these species' habitat is marginal at the Proposed Project Site.

The Western Pond Turtle was previously observed within the former wastewater treatment lagoon at AOC-2. However, there have been no observations of the Western Pond Turtle at AOC-2 since the former wastewater treatment lagoon removal action and backfill interim measure was performed in 2013-2014.

TABLE 4.1

BIOLOGICAL RESOURCES POTENTIALLY LOCATED IN THE PROPOSED PROJECT AREA

Common Name	Scientific Name	Status	Presumed Absent?
San Joaquin spearscale	*Atriplex joaquiniana*	Rare Plant Rank 1B.2	Yes
Big tarplant	*Blepharizonia plumose*	Rare Plant Rank 1B.1	Yes
Congdon's tarplant	*Centromadia parryi ssp. Congdonii*	Rare Plant Rank 1B.2	Yes
Bolander's water-hemlock	*Cicuta maculate var. bolanderi*	Rare Plant Rank 2.1	Yes
Robust Monardella	*Monardella villosa var. globose*	Rare Plant Rank 1B.1	Yes
Antioch Dunes evening-primose	*Oenotherea deltoids ssp. howelii*	Federally Endangered, California Endangered, Rare Plant Rank 1B.1	Yes
Soft bird's-beak	*Cordylanthus mollis ssp. Mollis*	Federally Endangered, California Rare Species, Rare Plant Rank 1B.2	Yes
Carquinez goldenbush	*Isocoma argute*	Rare Plant Rank 1B.1	Yes
Delta mudwort	*Limosella subulata*	Rare Plant Rank 2.1	Yes

Contra Costa goldfields	*Lasthenia conjugens*	Federally Endangered, Rare Plant Rank 1B.1	Yes
Delta tule pea	*Lathyrus jepsonii var, jepsonii*	Rare Plant Rank 1B.2	Yes
Mason's lileaopsis	*Lilaeopsis masonii*	California Rare Species, Rare Plant Rank 1B.1	Yes
Suisun Marsh aster	*Symphyotrichum lentum*	Rare Plant Rank 1B.2	Yes
Sacramento splittail	*Pogonichthys macrolepidotus*	Species of Special Concern	Yes
California tiger salamander	*Ambystoma californiense*	Federally Threatened, California Threatened, Species of Special Concern	Yes
California red-legged frog	*Rana draytonii*	Federally Threatened, Species of Special Concern	Yes
Western Pond turtle	*Emys marmorata*	Species of Special Concern	No
Alameda whipsnake	*Masticophis lateralis euryxanthus*	Federally Threatened, California Threatened	Yes
Giant garter snake	*Thamnophis gigas*	Federally Threatened, California Threatened	Yes
Tricolored blackbird	*Agelaius tricolor*	Species of Special Concern	No
Golden Eagle	*Aquila chrysaetos*	Fully Protected Species	No
Short-eared owl	*Asio flammeus*	Species of Special Concern	No
Burrowing owl	*Athene cunicularia*	Species of Special Concern	No
Northern harrier	*Circus caneus*	Species of Special Concern	No
American peregrine falcon	*Falco peregrinus anaturn*	Fully Protected Species	No
Saltmarsh common yellowthroat	*Geothlypis trichas sinuosa*	Species of Special Concern	No
White-tailed kite	*Elanus leucurus*	Fully Protected Species	No
California black rail	*Laterallus jamaicensis coturniculus*	California Threatened, Fully Protected Species	No
Suisun song sparrow	*Melospiza melodia maxillaris*	Species of Special Concern	No
California clapper rail	*Rallus longirostris obsoletus*	Federally Endangered, California Endangered, Fully Protected Species	No
California least tern	*Sternula antillarum browni*	Federally Endangered, California Endangered, Fully Protected Species	No
Pallid bats	*Antrozous pallidus*	Species of Special Concern	Yes
Salt-marsh harvest mouse	*Reithrodontomys raviventris*	Fully Protected Species	Yes

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of biological resource effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

As discussed above, previous reconnaissance-level biological resources surveys conducted in 2003 and 2011 identified potential biological resources within two miles of the Proposed Project Site (MWH 2003 and LSA 2011). An updated desktop review of special status wildlife with the potential to occur on and near the Proposed Project Site was performed in 2019 confirmed the prior work and conclusions. The desktop review was based on review of information from the following sources: species occurrence records within a two-mile radius of the Proposed Project Site were gathered from the CDFW, California Natural Diversity Database (CNDDB) and United States Fish and Wildlife Service (USFWS) IPaC tool (CDFW, 2019 and USFWS, 2019).

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

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?

Impact Analysis:

Industrial activities surrounding the Proposed Project Site and other activities in the general project vicinity has reduced or, in some cases, eliminated connectivity to undisturbed natural habitats in the area. However, some animals adapted to these types of conditions and are expected to traverse the Proposed Project Site such as raptors (e.g., red-tailed hawk, Cooper's hawk, sharp-shinned hawk) and other birds protected by the MBTA and California FGC Code. Raptors and other birds may use the Proposed Project Site and surrounding areas for foraging because the presence of ruderal vegetation indicates the potential for common prey species (e.g., California ground squirrels, pocket gophers, insects). As such, these species were not presumed absent from the Site (LSA, 2011). Areas surrounding the Proposed Project Site could also be used for nesting. Implementation of proposed corrective measures would result in limited direct disturbance of biological habitat on the Proposed Project Site. However, construction activities also have the potential to impact nearby habitat for locally nesting raptors or migratory birds. Implementation of Mitigation Measure (MM) Bio-1 would ensure impacts to nesting and foraging birds remain at less-than-significant levels. The presence of the Western Pond Turtle is unlikely, however MM Bio-1 will also be considerate of the potential for a Western Pond Turtle occurrence in the AOC-2/AOC-3 area.

MM Bio-1:

Prior to any ground disturbing activities:

- A qualified biologist shall conduct a Biological Resources Education Program briefing to all contractor and subcontractor personnel prior to any site entry. The qualified biologist shall train all personnel on the location of sensitive habitat, identification of all special status species, instructions of procedure when encountering one, and applicable environmental laws, statutes, ordinances, (e.g., FGC, MBTA, and United States Fish and Wildlife (USFW) Code). A fact sheet conveying this information will be prepared and distributed to the above-mentioned people and anyone else who may enter the project site. Upon completion of training, employees will sign a form stating that they attended the training and understand all the conservation and protection measures.
- If ground-disturbing activities are scheduled within the avian nesting season, a pre-construction clearance survey for nesting birds shall be conducted by a qualified biologist within three days prior to any ground disturbing activities to ensure that no nesting birds would be disturbed during construction. Nesting season generally extends from February 1 through August 31, but can vary from year to year, based upon seasonal weather conditions.
- The biologist conducting the clearance survey shall document a negative survey indicating that no impacts to active bird nests would occur. If an active avian nest is discovered during the 3-day pre-construction clearance survey, the nest location would be mapped and CDFW and USFWS contacted. Construction activities shall stay outside of a 100-foot buffer around the active nest (250-foot buffer for raptors). Additionally:
    - If special status avian species are identified during the pre-construction survey, a biological monitor shall be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, normal construction activities can occur. Pursuant to FGC section 3503, it is unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (birds of prey, such as hawks and owls) are protected under FGC 3503.5 which makes it unlawful to take, posses, or destroy their nest or eggs (CDFW, 1971).
- A consultation with CDFW and/or USFWS (dependent on the species) shall be required prior to the removal of any raptor nest on the Proposed Project Site, if a raptor nest is determined to be located on Site during the pre-construction clearance survey.

- If a Western Pond Turtle is encountered, it will be relocated by a qualified biologist into the adjacent marsh off-site in accordance with CDFW Scientific Collecting permit procedures. The biologist will have a CDFW Scientific Collecting permit with authorization to handle and relocate any turtles encountered

During ground disturbing activities:

- Equipment and personnel shall be limited to the areas where vegetation has been cleared and not venture into heavily vegetated areas of the Site or adjacent land.
- Excavation and haul equipment shall be confined to the access routes, designated staging areas in paved locations, and designated construction areas.
- Project-related vehicular traffic within the project area will observe a 15-mph limit or less.
- Equipment decontamination shall be located within the designated staging area, away from wetland habitat and Suisun Bay.
- All construction work shall occur during the daytime.
- Site personnel shall thoroughly inspect the work area and adjacent habitat areas, prior to the initiation of work each day, to determine if special status species are present in these areas. If a special status species (as listed above) or nest is observed within the work area (or within 500 feet of the work area), then work shall not be initiated or shall be stopped immediately; a qualified biologist shall be contacted and conduct a site visit to confirm the presence of a special status species or nest. The qualified biologist would notify California Department of Fish and Wildlife (CDFW) and USFWS within 1 business day and no work shall commence until the special status species leaves the work area on its own volition. If the special status species does not leave the work area or if a nest is present within the work area (or within 500 feet of the work area of nesting birds), work shall not be reinitiated until CDFW and USFWS are contacted and determine the best course to proceed with work activities.

Conclusion:

Raptors and other birds have the potential to use the Proposed Project Site and surrounding areas as foraging habitat and/or nesting. During implementation of proposed corrective measures, nearby habitat for locally nesting raptors or migratory birds could be impacted. Implementation of recommended MM Bio-1 would ensure impacts to nesting and foraging birds remain at less-than-significant levels.

☐ Potentially Significant Impact

☒ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☐ No Impact

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 US Fish and Wildlife Service?

Impact Analysis:

Contra Costa County Wetlands are located adjacent to the northwest and northeast portions of the Proposed Project Site nearest AOC-2/AOC-3 and west of AOC-1; however, there are no wetlands on the Proposed Project Site itself. Additionally, the northernmost portion of AOC-2 is bounded by Suisun Bay and a former timber dam constructed for a former WWTU is located at this bay front location. The WWTU was backfilled in 2014 as a DTSC-approved interim measure. As part of that interim measure, the timber was left in place and clean soil and rock were placed behind the timber after contaminated soil was removed.

Construction activities would not occur in any wetland habitats and would only occur on the Proposed Project Site. Construction and haul equipment along with workers would also be confined to defined access routes, designated staging areas, and designated construction areas. Additionally, no in-water work would occur at the Suisun Bay interface. Based on the approach for conducting corrective measures onsite, no impacts would occur to any riparian habitat or other sensitive natural community identified in local regional plans, policies, regulations, or by the CDFW, or USFWS.

Conclusion:

Wetlands are not located on the Proposed Project Site and implementation of corrective measures would not impact any nearby, offsite wetlands. Therefore, proposed corrective measures would not have the potential to effect on any riparian habitat or other sensitive natural community.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact Analysis:

Construction activities would not occur in any wetland areas and would only occur on the Proposed Project Site. Construction and haul equipment along with workers would also be confined to defined access routes, designated staging areas, and designated construction areas. Additionally, no in-water work would occur at the Suisun Bay interface.

The corrective measures include construction of a hydraulic barrier wall and PRBs which would have an effect on groundwater flow patterns in the shallow zone (upper 15-foot), as designed. The groundwater will flow through the PRBs, which acts like a filter to remove contaminates in the groundwater. The system would improve the quality of groundwater migrating from the Proposed Project Site to adjacent wetlands and would, thus, have a positive outcome.

Conclusion:

Wetlands are not located on the Proposed Project Site and implementation of corrective measures would not impact any nearby, offsite wetlands. Based on the approach for conducting corrective measures onsite, no impacts would occur to any wetlands identified by the CDFW or USFWS. Therefore, proposed corrective measures would not have the potential to affect any state or federally protected wetlands.

☐ Potentially Significant Impact

☐ Less Than Significant With 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?

Impact Analysis:

The Proposed Project Site and contiguous properties were determined to be outside the boundary of the Inventory Area studied for the East CCC Habitat Conservation Plan (EECCHCP, 2006).

Based on the temporary nature and duration of the corrective measures and the location of work areas, which are on an industrial site, the proposed project would not have the potential to 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.

This is based on the temporary nature and duration of the work and the work areas, which are on an industrial site. Based on habitat observations from previous surveys, there is the potential for twelve special status bird species to nest in the surrounding properties near the Proposed Project Site. The Proposed Project would include MM Bio-1 to address short-term disturbance, as identified in Section 4(a). Once completed, the Proposed Project would result in a similar quality and area of habitat as is currently present at the Proposed Project Site.

Conclusion:

There is the potential for twelve special status bird species to nest in the surrounding properties near the Proposed Project Site. Implementation of recommended MM Bio-1 would ensure impacts to nesting and foraging birds remain at less-than-significant levels. Once completed, the Proposed Project would result in a similar quality and area of habitat as is currently present at the Proposed Project Site.

☐ Potentially Significant Impact

☒ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☐ No Impact

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

Impact Analysis:

There are no biological resources on the Proposed Project Site that are protected by local policies or ordinances.

Conclusion:

Implementation of the proposed corrective measures would not conflict with any local polices or ordinances for the purposes of protecting biological resources.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

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?

Impact Analysis:

The Proposed Project Site is not located in any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The closest conservation planning areas to the Proposed Project Site include the East CCC Habitat Conservancy planning area and Bay Delta Conservation Plan area which are both located within ½ mile to the east (DWR, 2013 and EECCHCP, 2006)). The Proposed Project is not in conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Conclusion:

The proposed corrective measures would not have the potential to conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

California Department of Fish and Wildlife (CDFW). 1971. FGC 3503. http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=3503.&lawCode=FGC (Accessed November 2018).

CDFW. 2019. California Natural Diversity Database (CNDDB). February. https://www.wildlife.ca.gov /Data/CNDDB February 2019 (Accessed November 2018).

California Department of Water Resources (DWR). 2013. Bay Delta Conservation Plan. December. http://www.baydeltaconservationplan.com (Accessed November 2018).

California Regional Water Quality Control Board, San Francisco Bay Region. 2017. San Francisco Bay Basin (Region 2) Water Quality Control Plan. 2017. https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html. May.

East Contra Costa County Habitat Conservation Plan Association (EECCHCP). 2006. East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan. October.

LSA Associates, Inc. 2011. Biological Evaluation, Area of Concern 2. March.

MWH. 2003. Biological Characterization of the General Chemical Corporation's Bay Point Works Facility Waste Water Treatment Unit. August.

San Francisco Regional Water Quality Control Board. 2010. San Francisco Water Quality Protection Plan. May.

Terraphase Engineering Inc. (Terraphase). 2011. AOC-2 Lagoon Backfill and Removal Action Interim Measures Work Plan. General Chemical, Bay Point Works Facility. 501 Nichols Road, Pittsburg, California. August 10.

U.S. Fish and Wildlife Service. 2019. Information for Planning and Consultation. https://ecos.fws.gov/ipac/location/FE4PMUV7LJFKZAMKSYDM4KAJDE/resources

5. CULTURAL RESOURCES				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

The definition of historical resources can be found in PRC §21084.1 and 14 CCR § 15064.5. Unique archaeological resources are defined in PRC § 21083.2 and 14 CCR § 15064.5. Tribal cultural resources are defined in PRC Div. 13 Section 21074.

California Assembly Bill 52 (AB52) specifies that any project for which a Notice of Preparation, Notice of Mitigated Negative Declaration or Notice of Negative Declaration is filed on or after July 1, 2015, the Lead agency must provide formal notification within 14 days of determining that an application for a project is complete or of a decision to undertake a project to the designated contact or tribal representative of the affiliated California Native American tribes. The tribe that is traditionally and culturally affiliated to the geographic area where a project is located must have requested that the lead agency in question provide notification to the tribe (PRC 21081.3.1). Please refer to Section 18, Tribal Cultural Resources, of this Initial Study for additional discussion.

If remains are found on Site, the County Coroner will make the determination of origin and disposition, pursuant to Public Resources Code (PRC) § 5097.98. If the remains are determined to be Native American, the Coroner would notify the NAHC (per Health and Safety Code (HSC) 7050.5(c)) The NAHC would identify and notify the person(s) who might be the most likely descendent, who would make recommendations for the appropriate and dignified treatment of the remains (PRC Div. 5 section 5097.98). The descendants shall complete their inspection and make recommendations for treatment within 48 hours of being granted access to the Site (CEQA Guidelines, CCR section 15064.5(e); HSC section 7050.5).

ENVIRONMENTAL SETTING (BASELINE):

There are approximately 600 archaeological Sites within CCC that have been recorded with the Archaeological Inventory Report, Northwest Information Center (NWIC) at California State University Sonoma (CCCCD, 2005). However, the Archaeological Inventory Report indicates the Proposed Project Site is in a largely urbanized area excluded from the archeological sensitivity survey. In March 2019 LSA conducted a cultural resources study to update and confirm if archeological or historical resources are present at the Proposed Project Site (refer to Attachment B). The study included background research for a 0.25-mile radius of the Proposed Project Site at the NWIC, and a review of archival maps, aerial photographs, and the results of the Sacred Lands File (SLF) search request from the Native American Heritage Commission (NAHC) in Sacramento. The cultural resources study also included a pedestrian field survey at the AOC-2 and AOC-3 portion of the Proposed Project Site (where ground-disturbing activities would occur) in 10 meter transects over exposed soils. The background research and pedestrian field survey did not identify any cultural resources within the Proposed Project Site. The AOC-2 and AOC-3 area is the location of prior fill and an engineered wastewater management lagoon. This area was subject to cut and fill disturbance from the early 20th century until 2014. Prior fill and an engineered wastewater management lagoon were located at AOC-2 and AOC-3. This area was subject to cut and fill disturbance from the early 20th century until 2014.

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

To be eligible for the California Register, a prehistoric or historic-period property must be significant at the local, state, and/or federal level under one or more of the following four criteria:

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

A resource eligible for the California Register must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

In March 2019, LSA conducted a cultural resources study to update a previous study and determine whether if archeological or historical resources are present at the Proposed Project Site (refer to Attachment B). The study included background research for a 0.25-mile radius of the Proposed Project Site at the NWIC, and a review of archival maps, aerial photographs, and the results of the SLF search request from the NAHC in Sacramento. The cultural resources study also included a pedestrian field survey at the AOC-2 and AOC-3 portion of the Proposed Project Site (where ground-disturbing activities would occur) in 10 meter transects over exposed soils.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

a. Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?

Impact Analysis:

Historical resources, as defined by 14 CCR section 15064.5, have not been identified at the Proposed Project Site. The Proposed Project Site has been used continuously for over 100 years for chemical production and has active manufacturing operations of alum production and molten sulfur transloading operations. Based on the Proposed Project Site location, history, and absence of resource findings during prior Site work, and the 2019 cultural resources study, it is not likely that historical resources would be identified or impacted. However, if historical resources are discovered during the Proposed Project activities, then ground disturbing activities within 25 feet would stop until a qualified archaeologist or appropriately licensed professional can assess the significance of the find and, if necessary, develop appropriate response measures in consultation with the DTSC, Chemtrade, and other agencies and Native American representatives, as appropriate.

Conclusion:

The Proposed Project would not include demolition, elimination, or manipulation of a historical resource. In addition, the finding of a historical resource during implementation of the corrective measures is unlikely based on the Proposed Project Site history and conditions, and absence of findings during prior onsite work. Therefore, the Proposed Project would not cause a substantial adverse change in the significance of a known historical resource.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

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

Impact Analysis:

Archaeological resources, as defined by 14 CCR section 15064.5, have not been identified at the Proposed Project Site. The Proposed Project Site has been used continuously for more than 100 years for chemical production and has active manufacturing operations of alum production and molten sulfur transloading operations. Based on the Proposed Project Site location, history, and absence of resource findings during prior onsite work, and the 2019 cultural resources study, it is not likely that archaeological resources would be identified or impacted. In addition, there is are no unique geologic feature at the Site and the presence of

a unique paleontological resource in the Proposed Project work area is unlikely. This is because work would primarily occur in the upper 15 feet, which is primarily comprised of reworked fill material (placed during the earlier years of facility construction). However, if archaeological resources are discovered during the Proposed Project activities, then ground disturbing activities within 25 feet would stop until a qualified archaeologist or appropriately licensed professional can assess the significance of the find and, if necessary, develop appropriate response measures in consultation with the DTSC, Chemtrade, and other agencies and Native American representatives.

Conclusion:

The Proposed Project would not include demolition, elimination, or manipulation of an archaeological resource. In addition, the finding of an archaeological resource during implementation of the corrective measures is unlikely based on the Proposed Project Site history and conditions, and absence of findings during prior onsite work. Therefore, the Proposed Project would not cause a substantial adverse change in the significance of a known archaeological resource.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

c. Disturb any human remains, including those interred outside of dedicated cemeteries?

Impact Analysis:

There are no known human remains on or near the Site and given the repeated disturbance of the Site and the surrounding area, and the findings of the cultural resource study, the potential for such remains to be present is considered extremely low. If human remains are encountered, the County Coroner would be immediately notified. No further ground disturbing activities shall occur within 25 feet of the work area until the County Coroner has made a determination of origin and disposition, pursuant to PRC § 5097.98. If the remains are determined to be Native American, the Coroner would notify the NAHC (per Health and Safety Code 7050.5(c)) and the County Coordinator of Indian Affairs.

Conclusion:

Implementation of corrective measures is not expected to encounter or disturb any human remains, including those interred outside of dedicated cemeteries. If human remains are encountered, procedures will be followed to prevent disturbing the remains and ensure compliance with applicable codes and regulations.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

Contra Costa County, Community Development Department (CCCCD) (formerly Department of Conservation and Development). 2005. Archaeological Inventory Report.

LSA. 2019. Cultural Resources Study for the Chemtrade Bay Point Project Site at 501 Nichols Road, Contra Costa County, California. April 12.

6. ENERGY				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

In 2015, Governor Brown signed Senate Bill 350 to codify climate, clean energy, and energy efficiency goals. The regulations focus on generating energy through renewable sources and increasing the energy efficiency of buildings.

ENVIRONMENTAL SETTING (BASELINE):

Electrical power and natural gas are provided to the Proposed Project Site by Pacific Gas and Electric Company (PG&E). PG&E obtains its energy supplies from power plants and natural gas fields in northern California and from energy purchased outside its service area and delivered through high voltage transmission lines.

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of energy resource effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Based on the lack of significant increase in energy demand from the Proposed Project Site, no environmental studies relating to energy resources were prepared for the Proposed Project.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

a. Result in potentially significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Analysis:

To implement the Proposed Project, it is expected that construction equipment (e.g., tractors, excavators, loaders, generators, trucks, light-duty vehicles) would use petroleum fuels (diesel and gasoline products) and would not use on-site electricity or natural gas sources. Implementation of the proposed corrective measures would occur over a short duration (32 weeks) and, therefore, the wasteful, inefficient, or unnecessary use of petroleum fuels would not occur. Construction contractors would use existing office space at the Proposed Project Site. Implementation of the proposed project would not result in adding any new facilities that would increase the demand for energy resources.

Conclusion:

The Proposed Project would not add new facilities that could increase the demand for energy resources. Construction activities would use equipment in accordance with manufacturer's specifications. Therefore, implementation of the proposed corrective measures would not result in a wasteful, inefficient, or unnecessary consumption of energy resources. In addition, implementation of proposed corrective measures would not result in a new permanent energy demand.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact Analysis:

In 2015, Governor Brown signed Senate Bill 350 to codify climate, clean energy, and energy efficiency goals. The regulations focus on generating energy through renewable sources and increasing the energy efficiency of buildings. Implementation of proposed corrective measures would not result in constructing any new buildings that would increase the demand for energy resources, renewable or otherwise.

Conclusion:

The Proposed Project would not construct new facilities or permanent structures and would not generate any new energy demands. Therefore, the Proposed Project would not conflict with or obstruct any state or local plan for renewable energy or energy efficiency.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

California Legislative Information. 2015. SB-350 Clean Energy and Pollution Reduction Act of 2015. October. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350 (Accessed November 2018).

7. GEOLOGY AND SOILS				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Directly or indirectly cause 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.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

No laws, ordinances, regulations, or standards protecting geological or soil resources are applicable to the Proposed Project.

ENVIRONMENTAL SETTING (BASELINE):

The Proposed Project Site is located in northern CCC in the Bay Area near the shore of Suisun Bay. Northern CCC is underlain by various unconsolidated sediments that overlie sedimentary bedrock units which outcrop in hills to the south of the Site (Dibblee, 1981). The Proposed Project Site is designated as Heavy Industrial with an active chemical manufacturing facility and has been used as such for over 100 years. The northern portion of the Site was constructed on fill that was placed on top of the native deposits. Data from prior Site work shows that fill material immediately underlies the northern portion of AOC-1 and the AOC-2 area and can extend to approximately 10 ft-bgs. An unconsolidated sediment classified as part of the Bay Mud Unit is present from the

northern half of AOC-1 to Suisun Bay and underlies the fill where present. The southern half of AOC-1 is underlain by alluvial deposits. The Bay Mud and alluvium deposits can extend to approximately 30 ft-bgs to 40 ft-bgs. Well-sorted micaceous sand (alluvium/estuarine sand) is encountered at an approximate depth of 40 ft-bgs and can extend to a depth of approximately 60 ft-bgs.

The presence of fossils in the Proposed Project work area is unlikely. No fossils have been previously observed during site activities which included the installation of shallow (10 – 20-foot depth range) and deep (50 – 55-foot depth range) monitoring wells and soil removal projects. The Proposed Project work would include the installation of deep monitoring wells, but the majority of the Proposed Project work would occur in the upper 15 feet, which is primarily comprised of reworked fill material (placed during the earlier years of facility construction), and the shallow and deeper sediments are of Holocene age, which are unlikely to contain scientifically significant fossils, as determined by DTSC for a near-by Site in the same setting (DTSC, 2011).

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of geological and soils resource effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Site lithology has been characterized through investigations completed as part of the Site investigations. Soil samples were also collected and characterized. Appendix G of the Corrective Measures Study provides the historical soil data tables (Terraphase, 2019).

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

a. Directly or indirectly cause 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.

Impact Analysis:

The Proposed Project Site is not located in an Alquist-Priolo Earthquake Fault Zone and a known earthquake fault does not cross the site (CGS, 2010). The nearest Alquist-Priolo Earthquake Fault Zone is located approximately 5 miles southwest of the Proposed Project Site. Site workers would be present for a short duration during Proposed Project activities (32 weeks) and therefore the potential for exposure to substantial risk of injury to people would be limited. In addition, the Proposed Project includes installation of subsurface features (barrier wall, permeable reactive barrier and monitoring wells) and a soil cover that would not expose people or structures to significant impacts from fault rupture associated effects.

Conclusion:

The Proposed Project Site is not identified as being in an Alquist-Priolo Earthquake Fault Zone and no known earthquake faults exist on the site; therefore, the risk of loss, injury, or death involving from onsite ruptures would not occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

ii) Strong seismic ground shaking?

Impact Analysis:

The Proposed Project Site is in a seismically active area and the site may be exposed to moderate to strong shaking in the event of an earthquake in the region (CGS, 2016).

Implementation of corrective measures would require the use of heavy equipment and would place numerous workers onsite. Site workers would be present for approximately 32 weeks; therefore, the potential for substantial risk or injury to people from seismic ground shaking would be limited. In addition, the Proposed Project includes installation of subsurface features (barrier wall, permeable reactive barrier and monitoring wells) and a soil cover that would not expose people or structures to significant impacts from strong seismic ground shaking if it were to occur.

Conclusion:

Even though the Proposed Project Site is in a seismically active area and the site may be exposed to moderate to strong shaking if an earthquake occurred, the Proposed Project activities would occur outdoors away from any structures. Therefore, the risk of loss, injury, or death from strong seismic ground shaking would be negligible.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

iii) Seismic-related ground failure, including liquefaction?

Impact Analysis:

The Proposed Project Site has a very high liquefaction susceptibility (Department of the Interior, 2006). Due to liquefaction, which generally occurs at depths shallower than 50 ft-bgs, soils may lose their ability to support structures. However, corrective measures would not involve building new structures.

Site workers would be present for the short project duration (32 weeks), therefore the potential for substantial risk or injury to people would be limited. In addition, the Proposed Project includes installation of subsurface features (barrier wall, permeable reactive barrier and monitoring wells) and a soil cover that would not expose people or structures to significant impacts from seismic-related ground failure, including liquefaction.

Conclusion:

Even though the Proposed Project Site is in a very high liquefaction susceptible area, corrective measures would not involve activities that would place buildings or people at risk of loss, injury, or death at significant risk if liquefaction.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

iv) Landslides?

Impact Analysis:

The potential for landslide hazards has been identified within the coastal ranges approximately one mile south of the Proposed Project Site (CGS, 2018). The Proposed Project would be performed on the flat coastal plain and there is little potential for substantial risk or injury from landslides.

Conclusion:

No landslide impacts from the coastal ranges south of the Proposed Site would occur relating to placing people or buildings at risk loss, injury, or death involving landslides.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

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

Impact Analysis:

The proposed AOC-1 asphalt cover would decrease the amount of potential soil erosion by preventing storm water runoff contact and water intrusion into the soil. The proposed AOC-2/AOC-3 area soil cap and asphalt skirt would be graded to direct runoff to onsite drainage features and seeded to reduce storm water runoff and soil erosion. In addition, the proposed project would obtain a grading permit from CCC before commencement of corrective measures.

Conclusion:

Design of the proposed corrective measures (i.e., asphalt cover, soil cap, seeding) would limit the potential for soil erosion or loss of topsoil on the Proposed Project Site. Impacts related to soil erosion and loss of topsoil would be less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

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?

Impact Analysis:

The Proposed Project Site is flat with very little relief therefore the potential for slope instability, lateral spreading, or collapse are minimal. The soils beneath the Proposed Project Site would not be subject to subsidence because corrective measures would not involve the removal of groundwater.

In addition, remediation of the Proposed Project Site would not involve any activities that could result in liquefaction of existing onsite soils or imported soils (process by which saturated, unconsolidated soil or sand is converted into a suspension during an earthquake). This is because the vibrations associated with the proposed work are incapable of approximating those necessary to cause liquefaction.

Conclusion:

Characteristics of existing soils on the Proposed Project Site and those to be imported for corrective measures would not be unstable or become unstable as a result of implementing the proposed project. This would be considered a less-than-significant impact.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

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

Impact Analysis:

Expansive soils are characterized by their ability to undergo volume change due to variations in moisture content. The Proposed Project Area is located on an area underlain by Bay Mud. Geotechnical studies of Bay Mud have found that this soil type exhibits expansive characteristics (Treadwell & Rollo, 2011). However, implementation of proposed corrective measures would not involve construction of new structures or facilities.

Engineering considerations have been incorporated into the design of the corrective measures including compaction of materials prior to asphalt paving.

Conclusion:

Proposed corrective measures would result in any new structures or facilities being placed on expansive soils. In addition, corrective measures have been engineered to consider compaction of materials prior to asphalt paving. Therefore, substantial risk to life or property from expansive soils would be less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

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?

Impact Analysis:

The proposed project activities would not require the use of septic tanks or alternative wastewater disposal systems nor involve construction of such new systems.

Conclusion:

The use or construction of septic tanks or alternative wastewater disposal systems are not part of the proposed corrective measures. No impact involving septic tanks or alternative wastewater disposal systems as a result of onsite soils would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

f. Directly or indirectly destroy a unique paleontological resources or site unique feature?

Impact Analysis:

The Proposed Project Site has been used continuously for chemical production and has active manufacturing operations of alum production and molten sulfur transloading operations. There are no unique geologic feature at the Site and the presence of a unique paleontological resource in the Proposed Project work area is unlikely. This is because work would primarily occur in the upper 15 feet, which is primarily comprised of reworked fill material (placed during the earlier years of facility construction). Additionally, the shallow and deeper zone monitoring wells to be installed would encounter sediments of Holocene age, which are unlikely to contain scientifically significant fossils, as determined by DTSC for a near-by Site in the same setting (DTSC, 2011). The Proposed Project is not expected to encounter or destroy any unique paleontological resources or geological features.

Conclusion:

There is no unique geologic feature at the Site and the presence of a unique paleontological resource in the Proposed Project work area is unlikely.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

Department of Toxic Substances Control. 2011. Modification of Environmental Remedy at the PG&E "Shell Pond and CBA Property" in Bay Point, California. Initial Study

California Department of Conservation, California Geological Survey (CGS). 2010. Fault Activity Map of California. http://maps.conservation.ca.gov/cgs/fam/(Accessed October 12, 2018).

CGS. 2016. Earthquake Shaking Potential for California. https://www.conservation.ca.gov/cgs/ publications/ms48 (Accessed November 2018).

CGS. 2018. Preliminary Seismic Hazard Zone Report for the Honker Bay 7.5 Minute Quadrangle, Contra Costa County, California. http://gmw.conservation.ca.gov/SHP/EZRIM/Reports/SHZR/Preliminary_SHZR_127_Honker_Bay.pdf (Accessed November 2018).

Department of the Interior, United States Geological Survey. 2006. Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California. https://pubs.usgs.gov/ of/2006/1037/ (Accessed November 2018).

Dibblee, T.W., Jr. 1981. Preliminary Geological Map of the Port of Chicago Quadrangle, Solano and Contra Costa Counties. USGS Open File Report, pp. 81-108.

International Conference of Building Officials. 1994. Uniform Building Code, Seventh Printing. May 1.

Terraphase. 2019. Draft Final Corrective Measures Study Report, Chemtrade West US LLC, Bay Point Facility, 501 Nichols Road, Pittsburg, California. January 31.

Treadwell & Rollo. 2011. Preliminary Geotechnical Investigation: Seawall Lot 337 – Mission Bay, San Francisco, California. September 8.

8. GREENHOUSE GAS EMISSIONS				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

The BAAQMD 2017 Air Quality Guidelines recommend that greenhouse gases (GHGs) for projects be quantified and that the lead agency should make a determination on the significance of construction-related GHG emissions. However, BAAQMD does not identify a standard to make this determination. BAAQMD has also set goals to achieve the Bay Area's implementation of Assembly Bill (AB) 32 pertaining to global warming (CARB, 2006). AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020, a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario.

ENVIRONMENTAL SETTING (BASELINE):

Greenhouse gases are global pollutants, unlike criteria air pollutants that are of regional or local concern. The largest anthropogenic source of GHGs is the combustion of fossil fuels, which results primarily in emissions of carbon dioxide (CO_2). Other GHGs include methane, nitrous oxide, fluorinated gases, ozone, and sulfur hexafluoride. To account for the differences of the warming effects of various GHGs, emissions are standardized into carbon dioxide equivalents (CO_2e).

A GHG emissions inventory is available for the San Francisco Bay Area Region for 2011 (BAAQMD, 2015). In 2011, approximately 86.6 million metric tons (MMT) CO_2e were attributable to the San Francisco Bay Area. Approximately 83.9 MMT CO_2e were emitted within the Bay Area, and 2.7 MMT CO_2e emitted from imported electricity.

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The BAAQMD CEQA Guidelines indicate that a lead agency should determine the significance of construction-related GHG emissions even though BAAQMD does not identify a standard to make such a determination. However, the BAAQMD CEQA Guidelines identify an operation-related maximum annual threshold of significance for land-use projects of 1,100 metric tons of CO_2e per year (BAAQMD, 2017).

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

California Emissions Estimator Model ® (CalEEMod, Version 2016.3.2) was run to identify project-related greenhouse gas emissions (BREEZE, 2017). The CalEEMod results are summarized in Table B-1, and the model basis information is summarized in Table B-2 and B-3 (refer to Attachment A). Complete CalEEMod Input and Output is provided in Attachment A.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

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

Impact Analysis:

Implementation of proposed corrective measures would generate GHG emissions through mobilization of construction equipment; onsite delivery of materials, equipment and supplies; offsite shipment of waste materials; onsite use of vehicles and heavy equipment; worker commutes to the Proposed Project Site; and demobilization activities. The CalEEMod was run to identify the potential greenhouse gas emissions generated by implementation of proposed corrective measures. Results of the model indicate that corrective measures would generate approximately 200 metric tons of CO_2e per year during the construction period (refer to Attachment A). Carbon dioxide equivalent, or CO_2e, is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO_2e signifies the amount of CO_2 which would have the equivalent global warming impact (Ecometrica 2012).

Although the BAAQMD CEQA Guidelines do not provide a construction-related threshold of significance for GHG emissions, construction-related CO_2e emissions were compared to operation-related maximum annual threshold of significance for land-use projects. Construction activities associated with implementation of corrective measures would generate approximately 200 metric tons of CO_2e per year. This amount of CO_2e falls below the BAAQMD CEQA Guidelines operation-related maximum annual threshold of significance for land-use projects of 1,100 metric tons of CO_2e per year.

In addition, the proposed project would implement the following basic construction BMPs recommended by the BAAQMD to reduce GHG emissions during construction activities.

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes, as required by the California airborne toxics control measure 13 CCR Section 2485. Clear signage regarding this practice shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

Other BMPs that may be implemented include:

- Use of local source(s) of backfill material that would minimize travel distance.
- Limiting equipment idle time.
- Carpooling and overnight stays at local hotels to reduce commuting distance.
- Use of local labor and subcontractors whenever practicable.

Conclusion:

The proposed project would not result in a new permanent stationary or non-stationary source of GHGs and construction-related GHG emissions would be short-term and temporary. In addition, the estimated CO_2e emissions from implementing the corrective measures (200 metric tons of CO_2e per year) would fall below BAAQMD CEQA Guidelines operation-related maximum annual threshold of significance for land-use projects (1,100 metric tons of CO_2e per year). Therefore, GHG emissions resulting from implementation of the proposed project are considered to have a less-than-significant impact on the environment.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

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

Impact Analysis:

The BAAQMD is responsible for regulating GHG emissions in the project area. The BAAQMD 2017 Air Quality Guidelines recommend that GHGs for projects be quantified; however, the guidelines do not identify a CEQA threshold of significance for construction-related GHG emissions. In addition, construction activities would not conflict with any goals set by the BAAQMD to achieve the Bay Area's implementation of Assembly Bill 32 pertaining to global warming (CARB, 2006).

Conclusion:

The operation of construction equipment during implementation of corrective measures at the Proposed Project Site would be short-term and temporary and would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. All corrective measures would be performed in compliance with the BAAQMD rules and polices. No impact related to conflict with a GHG reduction plan would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

Bay Area Air Quality Management District (BAAQMD). 2015. Bay Area Emissions Inventory Summary Report: Greenhouse Gases, Base Year 2011. January.

BAAQMD. 2017. California Environmental Quality Act Air Quality Guidelines. December.

BREEZE Software. 2017. California Emissions Estimator Model ®, Version 2016.3.2. http://www.caleemod.com/ (Accessed February 2019).

California Air Resources Board. 2006. Assembly Bill No. 32. September 27.

Contra Costa County. 2008. Municipal Climate Action Plan. December.

Ecometrica 2012. Greenhouse Gases, CO_2, CO_2e, and Carbon: What Do All These Terms Mean? August 2012. Matthew Brander

9. HAZARDS AND HAZARDOUS MATERIALS				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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 or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

Federal laws and regulations: Resource Conservation and Recovery Act (RCRA) Title 42 United States Code and 40 Code Federal Regulations (CFR) Parts 260-279. More specifically, hazardous waste generators are governed by 40 CFR part 262, subpart E and transporters of hazardous waste governed by 40 CFR part 263. RCRA gives EPA the authority to control hazardous waste from the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid waste. The U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration regulates the transport of hazardous materials through Title 49 of the Code of Federal Regulations, Subchapter C.

State laws and regulations: Hazardous Waste Control Law (Health and Safety Code (HSC) Chapter 6.5) and 22 California Code of Regulations (CCR). The law establishes regulations and incentives which ensure that the generators of hazardous waste employ technology and management practices for the safe handling, treatment, recycling, and destruction of their hazardous wastes prior to disposal. Article 6 of HSC Chapter 6.5 discusses the transportation of hazardous waste. California Vehicle Code: Divisions 2, 6, 12, 13, 14, 15 also apply to transportation of hazardous materials.

ENVIRONMENTAL SETTING (BASELINE):

RCRA investigation activities performed since 1995 identified the presence of chemicals in onsite soil and groundwater from historical operations (Terraphase, 2019). Evaluations of potential risks to human health and ecological receptors from chemicals in onsite soil and groundwater were performed and identified the following:

- concentrations of metals in soil that present risks for humans exposed to surface soil, including commercial/industrial worker exposures (less than 3 feet bgs);
- concentrations of metals in soil that present risks for construction workers exposed to surface and deeper soil (greater than 3 feet bgs);
- concentrations of metals in groundwater that present risks to construction workers who may come into contact with groundwater during subsurface work;
- organic chemical (vinyl chloride) in groundwater that exceeds an RWQCB Environmental Screening Level for vapor intrusion for commercial/industrial workers at in AOC-1; and
- concentrations of metals in AOC-2 soil that present risks to ecological receptors if they come into contact with the soil.

Human health and ecological risk assessments are summarized in the Corrective Measures Study (Terraphase, 2019).

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of hazards and hazardous materials effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance**.**

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Human health and ecological risk assessments performed for the Proposed Project Site are summarized in the Corrective Measures Study (Terraphase, 2019).

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

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

Impact Analysis:

Hazardous materials used during implementation of corrective measures would include fuels and oils for standard operation of construction equipment. Proper storage and disposal, the use of BMPs, and compliance with applicable laws and regulations governing the management of hazardous materials and hazardous waste would minimize potential impacts associated with the use of such materials. Construction activities are estimated to occur over a 32-week period during use and transport of hazardous materials, and management and/or transport of waste generated would occur.

Corrective measures would involve the removal of approximately 6,500 tons of contaminated soil which would be placed in AOC-2 prior to installation of the soil cap and asphalt skirt. The 6,500 tons of contaminated soil includes 4,200 tons from the barrier walls, PRBs, and French drains and potentially an estimated volume of 2,100 tons of contaminated soil from the 100-foot Shoreline Clean-Zone, which would be based on soil sampling results.

Corrective measures also include the excavation and offsite transport of the following materials associated with the hydraulic barrier wall, PRB, and French drain construction:

- approximately 70 tons of hazardous waste soil for offsite disposal; and
- approximately 670 tons of nonhazardous asphalt and base rock for offsite recycling or disposal.

Materials requiring offsite disposal would be profiled to determine whether it is hazardous or non-hazardous. The contaminated soils would be transported and disposed of at an appropriate permitted hazardous waste

disposal facility in compliance with federal and state laws and regulations. The hazardous waste landfills being considered for soils include:

- Clean Harbors Landfill in Buttonwillow, California;
- US Ecology Landfill in Beatty, Nevada; and
- US Ecology Landfill in Grand View, Idaho.

Corrective measures that result in materials that can be recycled would transported to the Bay Area Concrete Recycling facility located in Hayward, California. For non-hazardous wastes needing to be removed and managed offsite would be transported to the Keller Canyon Landfill in Pittsburg, California.

The routine management, storage, and transport of materials would be consistent with all applicable federal and state laws. The proposed project would also implement a Transportation and Traffic Control Management Plan (TTCMP) prior to the start of offsite transport of the impacted material. The TTCMP includes, among others, a description of the characteristics of the waste to be transported (i.e., the soils and sediments), the destination of the waste, the transportation mode and routes, and, traffic control and loading procedures. Any storage of hazardous or impacted materials would occur in a designated material-handling area with secondary containment. Accidental releases of hazardous or remediation materials would be minimized through the implementation of a Storm water Pollution Prevention Plan (SWPPP), and with enhanced spill response training for construction workers. In addition, the proposed project would implement a Health and Safety Plan (HASP) which would describe, in detail, how potential for exposures would be minimized for all personnel who enter the Proposed Project Site and how migration of contaminated materials beyond the area would be prevented.

Conclusion:

The adherence to the TTCMP, SWPPP, standard practices, and disposal of contaminated soils at appropriate waste facilities, implementation of corrective measures would not a create a significant hazard to the public or the environment throughout the routine transport, use, or disposal of hazardous materials. Project-related impacts would be less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

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?

Impact Analysis:

Implementation of corrective measures at the Proposed Project Site have the potential to release hazardous materials into the environment during removal, management, and/or transport of contaminated soils; from an accidental release of fuel, oil, or maintenance chemicals from construction equipment; and/or from dust generated during construction activities.

The probability that hazardous materials would accidently escape to the environment during transportation is considered low because hazardous materials would not be transported to the Proposed Project Site and only two truckloads are estimated for the offsite transport of hazardous waste soil. The probability for accidental release during transport would be further minimized through the implementation of the TTCMP. The TTCMP would coordinate major transportation components of the corrective measures including procedures to follow for the delivery of waste to a landfill and addressing traffic management in sensitive locations (e.g., schools, community center, library).

During construction activities, potential spills or releases of hazardous materials would be minimized through the following:

- Preparation and implementation of a SWPPP;
- Preparation and implementation of a HASP including requirements for workers and other construction management components such as dust and off-Site migration control; and

- Workers undertake training for all construction activities involving work in proximity to potentially contaminated soils in accordance with California Occupational Safety and Health Administration standards, contained in Title 8 of the CCR.
- Establishment and implementation of health and safety provisions for monitoring exposure to construction workers, procedures to be undertaken in the event that previously unreported contamination is discovered, and emergency procedures and responsible personnel.

Conclusion:

Corrective measures would be required to adhere to the requirements of hazardous waste management plans (i.e., HASP, SWPP, TTCMP) and to implement standard practices. Therefore, the proposed project potential to 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 would be less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

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

Impact Analysis:

There are no schools within one-quarter mile of the Proposed Project Site. The closest schools are located approximately 1 mile to the southeast (Rio Vista Elementary School and Riverview Middle School). In addition, the proposed project would implement a TTCMP, which would include addressing traffic management in sensitive locations (e.g., schools).

Conclusion:
Implementation of corrective measures at the Proposed Project Site would not occur within one-quarter mile of an existing or proposed school and the proposed project would implement a TTCMP that addresses the transportation of hazardous wastes near schools. Impacts to schools from implementation of the corrective measures are considered less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

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?

Impact Analysis:

The Proposed Project Site is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Conclusion:

The Proposed Project Site is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; therefore, no impact would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With 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 or excessive noise for people residing or working in the project area?

Impact Analysis:

The Proposed Project Site is not located within the boundaries of an airport land use plan. The closest airport to the site is Buchanan Field Airport which is located approximately 8.5 miles to the southwest in Concord, California.

Conclusion:

The proposed corrective measures would not occur in an area located within an airport land use plan nor within two miles of a public airport or public use airport. Therefore, implementation of the project would not result in a safety hazard or excessive noise for people residing or working in the project area.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

Impact Analysis:

An Emergency Response Plan and Emergency Evacuation Plan that meets all federal, state, and local requirements is currently implemented at the Proposed Project Site. In the event of an emergency during proposed corrective measures, the existing Chemtrade Bay Point Facility Emergency Response Plan and Emergency Evacuation Plan would be implemented to control and mitigate the emergency situation and evacuate the site, if needed.

The transportation of equipment and materials to and from the Proposed Project Site have the potential to impair implementation or interfere with the existing emergency response plan and/or evacuation plan. Specifically, trucks carrying equipment and materials could slow down the flow of traffic on public streets and potentially impede emergency response or evacuation efforts. A TTCMP would be implemented prior to construction activities as part of the corrective measures that includes a plan for project management to communicate directly with truck drivers. As a result, if an Emergency Response Plan or Emergency Evacuation Plan were to be implemented in response to an emergency, project management would be able to immediately suspend equipment and material transportation until the emergency response is completed or the evacuation order is lifted.

Conclusion:

The proposed project would implement a TTCMP that would allow for suspending construction activities that could impair implementation of an adopted emergency response plan or emergency evacuation plan. Impacts to an adopted emergency response plan or emergency evacuation plan are considered less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Impact Analysis:

The Proposed Project Site is not located in an area with environmental conditions conducive to wildland fires. The project site is in an area lacking dry vegetation such as marshes and wetlands. However, operation of construction equipment on the during corrective measures has the limited potential to spark a fire. However, construction activities would implement BMPs which address fire prevention methods such as:

- restricting vehicles from driving or parking on dry vegetation during fire sensitive times of the year; and
- wetting dry construction areas before commencing activities, and wetting throughout the day, as appropriate.

Conclusion:

Although construction equipment has a minimal potential to spark a fire during corrective measures, implementation of BMPS would substantially limit the potential for a wildland fire that exposes people or structures to a significant risk of loss, injury or death to occur. Impacts from wildland fires during implementation of the corrective measures are considered less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

References Used:

Terraphase. 2019. Draft Final Corrective Measures Study Report, Chemtrade West US LLC, Bay Point Facility, 501 Nichols Road, Pittsburg, California. January 31.

10. HYDROLOGY AND WATER QUALITY				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			☒	
(i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
(iii) 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; or	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

The State Water Resources Control Board and the Regional Water Quality Control Boards (collectively Water Boards) share authority to implement the Federal Clean Water Act (CWA, 33 U.S.C. §1251 et seq.) and California's Porter-Cologne Water Quality Control Act (California Water Code, Section 7). The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.

The Water Boards enforce waste discharge requirements through National Pollutant Discharge Elimination System (NPDES) permits. The Porter-Cologne Act mandates the Regional Water Board to develop, adopt and implement a Basin Plan for the Region. The Water Quality Control Plan for the San Francisco Bay Basin (SFB Basin Plan) is the master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the Region.

The following are also applicable:

- The State Board published a resolution (SWRCB Resolution No. 88-63, as revised by Resolution No. 2006-0008) adopting policy regarding sources of drinking water where exceptions are provided for waters meeting certain criteria.

- The U.S. Environmental Protection Agency promulgated numeric water quality criteria for priority toxic pollutants and other water quality standards provisions to be applied to inland surface waters, enclosed bays and estuaries in California (California Toxics Rule, CTRs).

- A California Stormwater Construction General Permit is required for construction projects disturbing more than 1 acre. The legally responsible person is required to electronically file permit registration documents consisting of a notice of intent, risk assessment, site map, SWPPP, annual fee, and signed certification statement through the State Water Board's Storm Water Multi-Application and Report Tracking System.

- A San Francisco Bay Conservation and Development Commission (BCDC) Permit is required for work on land within 100 feet of the mean high tide line (shoreline band).

ENVIRONMENTAL SETTING (BASELINE):

The Site is located in the Pittsburg Plain Groundwater Basin (California Regional Water Quality Control Board, 2017). Surface water bodies within a one-mile radius of the Proposed Project Site include Suisun Bay to the north, Nichols Creek to the west, and Honeywell alum and former gypsum ponds located to the north and east. Contra Costa County Wetlands are located west of AOC-1, west and east of the northern portion of AOC-2, and north of AOC-3. The Proposed Project Site does not include wetlands.

The Proposed Project Site is zoned Heavy Industrial and is mostly covered with asphalt and concrete. The Site has a storm water capture and conveyance system for discharge to Suisun Bay. Contaminated properties are located adjacent to the Proposed Project Site directly to the west, north, and east. There are additional contaminated areas located south of the Proposed Project Site on the southern side of the railroad tracks. These contaminated properties are not owned by Chemtrade.

Shallow brackish groundwater is encountered at the Proposed Project Site within the fill and Bay Mud Unit at depths ranging from approximately 1 to 6 ft-bgs. Groundwater levels become shallower the closer their distance is to Suisun Bay. A deeper groundwater zone is located below the Bay Mud Unit within the deep alluvium/estuarine sands encountered at approximately 40 ft-bgs.

Shallow groundwater generally flows to the north toward Suisun Bay. However, local conditions also strongly affect flow directions around the Proposed Project Site. Deeper groundwater generally flows northeastward towards Suisun Bay. Vertical groundwater generally flows directly downward, from shallow to deeper zone, although flows can occasionally occur upward.

Shallow groundwater at the Proposed Project Site is impacted primarily with metals and low pH along with localized occurrences of VOCs. Deeper groundwater at the Proposed Project Site is also impacted with occurrences of VOCs.

The Water Quality Control Plan for the San Francisco Bay Basin (SFB Basin Plan) identifies the future potential beneficial use of groundwater beneath the Proposed Project Site as municipal or domestic water supply, industrial, industrial process, and agriculture. However, shallow groundwater at the Proposed Project Site is not considered a viable source of drinking water due to high salinity, as measured by total dissolved solids concentrations, identified by the State Water Resources Control Board (SWRCB Resolution No. 88-63, as revised by Resolution No. 2006-0008).

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The State and Federal drinking water standards are called Maximum Contaminant Levels (MCLs). Shallow groundwater at the Proposed Project Site meets the drinking water exception criterion listed in SWRCB Resolution No. 88-63. However, cleanup goals for deep groundwater are based on the MCLs (Terraphase, 2019). As groundwater from the Proposed Project Site flows towards Suisun Bay (surface water), CTRs applies and were used in the evaluation of shallow groundwater in the CMS (Terraphase, 2019). The Facility will continue to comply with all provisions set forth in

an existing facility NPDES General Permit for Stormwater Discharges under the Industrial General Permit obtained from the Water Board.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

The hydrogeological conditions have been characterized through investigations completed as part of the Site investigations. Groundwater samples were also collected and characterized. Appendix I of the Corrective Measures Study provides the historical groundwater data tables (Terraphase, 2019).

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Impact Analysis:

The objectives of the proposed corrective measures include improving water quality conditions by constructing additional asphalt cover in AOC-1, a soil and asphalt cap in the AOC-2/AOC-3 area, hydraulic barrier walls, and PRB walls. The caps would reduce the infiltration of water through contaminated soil and, thus, decrease the potential for contaminants to migrate from soil to groundwater. The walls would isolate contaminated groundwater onsite, only allowing flow offsite to the north through PRB wall sections which would passively treat the groundwater to meet water quality objectives.

Construction activities during implementation of onsite corrective measures would not violate any water quality standards or water discharge requirements. A site-specific SWPPP would be prepared by a certified Qualified SWPPP Developer and implemented to ensure surface water bodies are not impacted during construction activities. Associated BMPs (e.g., such as wattles, drain inlet protection, etc.) would be implemented during construction to prevent runoff into surface water bodies.

A Qualified SWPPP Practitioner would conduct the visual and non-visual (sampling) monitoring to ensure the BMPs are effective for water protection and, if necessary, the Rain Event Action Plan (REAP) per SWRCB requirements. A REAP is prepared prior to a qualified rain event as part of a Risk Level 2 SWPPP to ensure that BMPs have been installed and are sufficient to protect surface water bodies. Furthermore, the REAP includes the procedures for identifying sample locations, methods and analyses to collect samples, and reporting of results to the SWRCB California Stormwater Multiple Applications and Report Tracking System (SMARTS).

After completion of construction activities, storm water runoff from the AOC-1 area would continue to be captured by the existing storm water conveyance system. Storm water runoff from the AOC-2 cap would be managed in accordance with all applicable laws and regulations along with updates and amendments to the existing facility NPDES General Permit for Stormwater Discharges under the Industrial General Permit, as needed. Storm water would not pond on the AOC-2 soil cap and asphalt skirt, and the runoff would be collected at sumps placed at designated locations along the perimeter of the cap and pumped to the existing aboveground storm water pipe for ultimate discharge to Suisun Bay.

Conclusion:

The proposed corrective measures are anticipated to improve surface water quality and groundwater quality and result in the overall reduction of contaminant mass permeating into surface and groundwater systems. Project activities would not violate any water quality standards, waste discharge requirements, or otherwise substantially degrade surface or groundwater quality. Impacts are considered to be less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impeded sustainable groundwater management of the basin?

Impact Analysis:

Groundwater would not be extracted as part of implementation of corrective measures. Contaminated groundwater beneath the site would remain isolated. The only offsite flow path for groundwater would be through PRBs that would passively treat the groundwater to meet water quality objectives. This would result in improving the overall groundwater quality.

Construction of asphalt paving in the AOC-1 area and construction of the soil cap and asphalt skirt at the AOC-2/AOC-3 area would result in a small reduction of groundwater recharge. However, implementation of the proposed corrective measures would not substantially interfere with the overall recharge of the Pittsburg Plain Groundwater Basin because the footprint of the proposed impervious surfaces (i.e., paving, cap, skirt) is very small compared to the overall groundwater basin.

Conclusion:

Implementation of corrective measures would not interfere substantially with groundwater recharge of the Pittsburg Plain Groundwater Basin. A less-than-significant impact is expected to occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) result in substantial erosion or siltation on or off-site;

Impact Analysis:

A large portion of AOC-1 is currently paved with asphalt and have storm water controls in place. Construction of the proposed asphalt cap in select areas of AOC-1 would not substantially increase the paved surface area of AOC-1, and the existing storm water controls on the Proposed Project Site are sufficient for the additional runoff.

Currently, AOC-2 and AOC-3 are unpaved and surface water (i.e., precipitation) infiltrates through the subsurface. Construction of the proposed soil cap and asphalt skirt on the AOC-2/AOC-3 area would affect the current drainage pattern slightly, but as intended by design to direct runoff to prevent ponding and infiltration. Storm water would not pond on the AOC-2 soil cap and asphalt skirt and the runoff from the cap would be collected at sumps placed at designated locations along the perimeter of the cap and pumped to the existing aboveground storm water pipe for ultimate discharge to Suisun Bay.

Runoff from the AOC-2 cap would be managed in accordance with all applicable laws and regulations, with updates and amendments to the existing facility NPDES General Permit for Storm water Discharges under the Industrial General Permit, as needed. Implementation of the SWPPP would ensure erosion or siltation does not occur on- or offsite during construction activities.

Conclusion:

Implementation of corrective measures would result in slight changes to onsite drainage patterns. However, corrective measures would not substantially alter the existing drainage pattern of the overall Proposed Project Site or project area in a manner which would result in substantial erosion or siltation on- or offsite. Consequently, impacts are considered to be less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or offsite;

Impact Analysis:

A large portion of AOC-1 is already paved with asphalt and storm water controls in operation. Construction of the asphalt cap in select areas of AOC-1 would increase the paved surface area of AOC-1 and increase runoff. However, the existing, operating storm water controls at the Proposed Project Site are sufficient to prevent flooding due to the increase in paved surface.

Currently, AOC-2 and AOC-3 are unpaved and surface water (i.e., precipitation) can infiltrate through the subsurface. The soil cap with asphalt skirt to be constructed at this area would be designed to direct storm water runoff so that ponding and flooding would not occur. Storm water would not pond on the AOC-2 soil cap and asphalt skirt and the runoff from the cap would be collected at sumps placed at designated locations along the perimeter of the cap and pumped to an existing aboveground storm water pipe for ultimate discharge to Suisun Bay.

Conclusion:

Although the proposed corrective measures would create minor alterations to existing drainage patterns on the Proposed Project Site, it would not substantially alter the rate or amount of surface runoff in a manner which would result in flooding on- or offsite. Impacts related to flooding are considered to be less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

(iii) create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or

Impact Analysis:

An aboveground storm water conveyance pipeline at the Proposed Project Site services the operating areas of AOC-1. Construction of an asphalt cap in select areas of AOC-1 would slightly increase the paved surface area of AOC-1. However, the increase in runoff would not exceed the capacity of existing storm water controls at AOC-1. The asphalt cap is designed to cover contaminated soil and would, therefore, reduce sources of polluted runoff.

In the AOC-2/AOC-3 area, some precipitation would infiltrate through the low-permeability soil cap. The soil cap and asphalt skirt would be graded to direct storm water runoff to the newly constructed drainage features consisting of sumps conveying water to the existing aboveground storm water pipeline running along the western portion of AOC-2 and eastern side of AOC-3 for discharge to Suisun Bay. This drainage system would be designed with adequate capacity for the runoff, even during wet years, and no exceedance of capacity is anticipated. The soil cap designed to cover contaminated soil and would, therefore, reduce potential sources of polluted runoff.

In addition, requirements of the SWPPP would be followed and associated BMPs would be implemented during construction activities to ensure activities would not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. BMPs can include structural BMPs such as silt fences, sedimentation ponds, erosion control blankets, and temporary or permanent seeding, while non-structural BMPs can include picking up trash and debris, sweeping up nearby sidewalks and streets, maintaining equipment, and training site staff on erosion and sediment control practices.

Conclusion:

Construction activities and implementation of proposed corrective measures would not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

(iv) impede or redirect flood flows?

Impact Analysis:

According to the FEMA Flood Map, the Proposed Project Site lies within a 100-year flood hazard area along the coastline of Suisun Bay (FEMA, 2018). However, the Proposed Project Site is located within open land along the coastline of Suisun Bay and the proposed corrective measures would not involve building any structures which could impede or redirect flood flows.

Conclusion:

Activities associated with proposed corrective measures would not construct any structures which could impede or redirect flood flows. Therefore, no impact would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Impact Analysis:

No occurrences of a seiche have been recorded in the San Francisco Bay Area (CCC 2005-2020 General Plan, Chapter 10). In addition, the Proposed Project Site is not located in an area at risk from tsunami inundation (CDC 2018). The Proposed Project Site is not susceptible to seiche inundation because there are no major landlocked bodies of water within or near the site.

Conclusion:
Implementation of proposed corrective measures would not occur in an area at risk to seiche or from tsunami inundation. Therefore, the potential for release of pollutants from the Proposed Project Site would not occur. No impact would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact Analysis:

The objectives of the proposed corrective measures include improving water quality conditions by constructing additional asphalt cover in AOC-1, a soil and asphalt cap in the AOC-2/AOC-3 area, hydraulic

barrier walls, and PRB walls. The caps would reduce the infiltration of water through contaminated soil and, thus, decrease the potential for contaminants to migrate from soil to groundwater. The walls would isolate contaminated groundwater onsite, only allowing flow offsite to the north through PRB wall sections which would passively treat the groundwater to meet water quality objectives, including those identified in the SFB Basin Plan (May 2017) or Pittsburg Plain Groundwater Basin Groundwater Management Plan (October 2012).

Conclusion:

Construction activities during implementation of site corrective measures would not violate any water quality standards or water discharge requirements identified in any water quality control plan or sustainable groundwater management plan.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

California Department of Conservation (CDC). 2018. Department of Conservation Tsunami Inundation Map, https://www.conservation.ca.gov/cgs/tsunami/maps. Accessed: February 20, 2019).

California Regional Water Quality Control Board, San Francisco Bay Region. 2017. San Francisco Bay Basin (Region 2) Water Quality Control Plan. 2017. https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html. May.

City of Pittsburg. 2012. Pittsburg Plain Groundwater Basin Groundwater Management Plan. http://apps.ci.pittsburg.ca.us/sirepub/cache/2/x12swr55zucdor55o55yphbq/28508570807201910293322 3.PDF. October.

Contra Costa County (CCC). 2005 (Reprint 2010). General Plan. http://www.co.contra-costa.ca.us/4732/General-Plan (Accessed November 2018).

Terraphase. 2019. Draft Final Corrective Measures Study Report, Chemtrade West US LLC, Bay Point Facility, 501 Nichols Road, Pittsburg, California. January 31.

United States Department of Homeland Security, FEMA, 2018. Flood Map Changes Viewer. Website: https://fema.maps.arcgis.com. Updated December 14, 2018. Accessed February 11, 2019.

11. LAND USE AND PLANNING				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

Contra Costa County (CCC) Code Title 8 - Zoning provides restrictions and regulations on land uses. The CCC 2005-2020 General Plan designates the land use of the Proposed Project Site as Heavy Industrial and designates the adjacent areas as Open Space.

The San Francisco Bay Conservation and Development Commission (BCDC) completed and adopted the San Francisco Bay Plan (Bay Plan) in 1968, under authority from the McAteer-Petris Act of 1965. The Bay Plan includes policies to guide future uses of the Bay and shoreline and the maps that apply these policies to the present Bay and shoreline.

ENVIRONMENTAL SETTING (BASELINE):

The CCC 2005-2020 General Plan designates the land use of the Proposed Project Site as Heavy Industrial and designates the adjacent areas as Open Space. Heavy Industrial land use designation allows for activities and operations that may be characterized by noise or other conditions requiring spatial separation from residential or commercial areas. The Proposed Project Site is currently a chemical manufacturing facility and the closest residential area is approximately ½ mile to the southeast. The Proposed Project Site and adjacent properties have been used for industrial chemical manufacturing for over 100 years. Coastal wetlands are located east and west of the adjacent properties. Railroad lines traverse in an east-west direction adjacent to the south which serves industrial operations at the Proposed Project Site and the surrounding area.

The Proposed Project Site is expected to remain zoned for Heavy Industrial use by CCC for the foreseeable future. Furthermore, future re-zoning to residential use is not anticipated because of the adjacent MOTCO, which is located west and northwest of AOC-1. MOTCO conducts munitions management and has defined an Explosive Safety Quantity Distance (ESQD) arc that prevents residential or sensitive land use within the arc boundary due to potential blast impacts. The ESQD arc boundary currently ends at the western edge of the Proposed Project Site. Based on May 2018 Chemtrade and MOTCO communications, residential or sensitive land uses (e.g., day care, hospital) on the Chemtrade property would still not be appropriate because of proximity to the arc and because potential future operational changes that could result in a temporary larger arc extending onto the Chemtrade property. The U.S. Army has confirmed that munitions management would continue at the MOTCO facility for the foreseeable future, therefore thereby requiring the ESQD arc to be maintained indefinitely (JE, 2006).

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of land use and planning resource effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Based on the lack of land use changes in or near the Proposed Project Site, no environmental studies relating to land use and planning were prepared for the Proposed Project.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

a. Physically divide an established community?

Impact Analysis:

There are no residential areas or developed community on the Proposed Project Site or located within ½ mile distance.

Conclusion:

Proposed corrective measures would not have the potential to physically divide an established community based on the distance between the Proposed Project Site and nearest developed community. No impact would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Impact Analysis:

A portion of the Proposed Project Site (AOC-2 and AOC-3) is within the jurisdiction of the BCDC. Land within 100 feet of the Suisun Bay mean high tide line (shoreline band) falls under the jurisdiction of BCDC. A permit from BCDC is required for corrective measures that would occur in the AOC-2 and AOC-3 area which include the potential shoreline Clean Zone excavation and backfill with clean imported fill, onsite waste consolidation, and soil cap with asphalt skirt construction. The project proponent would be required to obtain Administrative Permit with the BCDC prior to commencement of corrective measures and would be required to comply with all requirements of the permit.

Conclusion:

With receipt of an Administrative Permit with the BCDC prior to implementation of corrective measures, the proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Proposed Project Site adopted for avoiding or mitigating an environmental effect. No impact would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

Contra Costa County (CCC). 2005 (Reprint 2010). General Plan. http://www.co.contra-costa.ca.us/ 4732/General-Plan (Accessed November 2018).

Jacobson Environmental, Inc. (JE). 2006. Confirmation of ESQD Arc Email Communication; Jan Jacobson (Jacobson Environmental) to Gregory Kamrud (834th US Army Tran Bat/MOTCO. August 23

12. MINERAL RESOURCES				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

No laws, ordinances, regulations, or standards protecting mineral resources are applicable to the Proposed Project.

ENVIRONMENTAL SETTING (BASELINE):

The Proposed Project Site is located in northern CCC which is underlain by various unconsolidated estuarine and alluvial sediments that overlie sedimentary bedrock units (Dibblee, 1981). The Proposed Project Site is located in an unincorporated area of CCC which has been identified as Urban Land by the California Department of Conservation and has been designated as Heavy Industrial in the CCC 2005-2020 General Plan (CCC, 2005).

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of mineral resource effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Based on the lack of mineral resources in or near the Proposed Project Site, no environmental studies relating to mineral resources were prepared for the Proposed Project.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

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?

Impact Analysis:

The Proposed Project Site and surrounding area has been identified in the California Department of Conservation, Division of Mines and Geology 1986 Special Report (Special Report) 146 Part II as Mineral Resource Zone 1 (MRZ-1). Special Report 146 Part II notes that areas classified as MRZ-1 in the South San Francisco Bay Production-Consumption Region are underlain by quaternary alluvial sediments which contain too much clay and silt for use as aggregate. Areas classified as MRZ-1 are not likely to contain significant mineral deposits.

Conclusion:

The asphalt and soil cap would not prevent access to potential mineral resources if the Proposed Project Site and surrounding area are ever reclassified. Therefore, no impacts would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

b. 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?

Impact Analysis:

The Proposed Project Site is not located in an area that the CCC 2005-2020 General Plan has identified as a mineral resource area. The nearest mineral resource area identified in CCC is approximately 9 miles from the Proposed Project Site.

Conclusion:

The Proposed Project Site is not likely to contain significant mineral deposits and proposed corrective measures would not prevent access to mineral resources if the Proposed Project Site and surrounding area are ever reclassified. Therefore, no impacts would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

California Department of Conservation, Division of Mines and Geology. 1986. Mineral Land Classification: Aggregate Materials in the San Francisco – Monterey Bay Area, Special Report 146. ftp://ftp.conservation.ca.gov/pub/dmg/pubs/sr/SR_146-1/SR_146-1_Text.pdf (Accessed November 2018).

Contra Costa County (CCC). 2005 (Reprint 2010). General Plan. http://www.co.contra-costa.ca.us/ 4732/General-Plan (Accessed November 2018).

Dibblee, T.W., Jr. 1981. Preliminary Geological Map of the Port of Chicago Quadrangle, Solano and Contra Costa Counties. USGS Open File Report, pp. 81-108.

13. NOISE				
Would the project result in:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) For a project located within the vicinity of a private airstrip or 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?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

The Noise Element of the Contra Costa County General Plan discusses the County's goal to improve the overall environment in the County by reducing annoying and physically harmful levels of noise for existing and future residents, and for all land uses. According to the County's adopted Land Use Compatibility Standards for Community Noise Environments, environments with ambient noise levels of up to 60 dBA Ldn are considered "normally acceptable" for new residential development.

In addition, the CCC 2005–2020 General Plan includes the following policy relating to noise:

> Policy 11-8: Construction activities shall be concentrated during the hours of the day that are not noise-sensitive for adjacent land uses and should be commissioned to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods.

The CCC Ordinance Code does not have a specific noise ordinance, but the Code addresses impacts that are due to construction noise under the Grading Ordinance (Section 716-8.1008). The grading ordinance states that operations shall be controlled to prevent nuisances to public and private ownerships because of dust, drainage, removal of natural support of land and structures, encroachment, noise, and/or vibration.

ENVIRONMENTAL SETTING (BASELINE):

The Proposed Project Site is an active manufacturing operation for alum production and molten sulfur transloading and is located in an unincorporated area of CCC currently zoned as Heavy Industrial. Heavy Industrial designation allows operations that may be characterized by noise or other conditions requiring spatial separation. Existing ambient noise in the area of the Proposed Project Site includes industrial activity to the south, vehicle trips along nearby roads (e.g., Highway 4, Port Chicago Highway), motorized boats on Suisun Bay, and train traffic.

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

For purposes of this analysis, noise effects may be considered significant if project activities would result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Proposed Project Site in excess of CCC noise level standard of 60 dBA, or result in generation of excessive groundborne vibration or groundborne noise levels.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

The Federal Highway Administration (FHWA) developed the Roadway Construction Noise Model (RCNM), which has become the industry-accepted standard model for calculating construction noise levels at specific receptor locations. Model inputs include the type and number of pieces of heavy construction equipment, their usage factors, distance to a receptor, and estimated shielding reduction (if any). The noise modeling for the proposed corrective measures were analyzed according to default construction equipment list from the air quality impact analysis for the Proposed Project. To reflect a conservative analysis, a reasonable worst-case scenario was modeled, assuming that each piece of modeled equipment would operate simultaneously at a reasonable distance from one another at the nearest possible locations to each modeled receptor. The modeled receptor locations represent the closest existing sensitive receptors to the Proposed Project Site.

The County uses Ldn for regulating noise levels throughout CCC. Ldn is the average equivalent sound level over a 24-hour period, with a penalty added for noise during the nighttime hours of 10:00 p.m. to 7:00 a.m. During the nighttime period, 10 dB is added to take into account the decrease in community background noise between the hours of 10:00 p.m. to 7:00 a.m. However, construction activities associated with implementing the proposed corrective measures would occur only during daytime hours and would not be subject to the noise penalty applied to Ldn. Therefore, this analysis uses Leq, the equivalent continuous sound level in decibels measured over a stated period of time (typically one hour), for the purposes of measuring project-generated noise.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would result in:

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact Analysis:

The Proposed Project would use heavy equipment for the AOC-1 asphalt paving, soil removal in the 100-foot Shoreline Clean Zone, AOC-2/AOC-3 area soil and asphalt cap construction, and construction of the hydraulic barrier walls, French drains, and PRB walls, and construction of performance monitoring wells and piezometer. In addition, trucks would be used to transport materials to the Proposed Project Site and to remove wastes for offsite management.

Corrective measures would occur over 32 weeks during daytime hours which meet the CCC General Plan requirement for construction activities to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods (Policy 11-8).

CCC uses Ldn for regulating noise levels in the County. However, construction activities associated with implementing the proposed corrective measures would occur only during daytime hours and would not be subject to the noise penalty applied to Ldn. Therefore, this analysis uses Leq for the purposes of measuring noise generated during construction activities and is considered relevant and appropriate. Leq is the equivalent continuous sound level in decibels, equivalent to the total sound energy measured over a stated period of time (typically one hour).

The Proposed Project Site is located approximately ½ mile (2,800 feet) from the nearest noise sensitive receptor (i.e., residence). Using the RCNM, noise levels generated by the loudest construction equipment anticipated to be used for corrective measures (i.e., paver, loader, excavator) at the Proposed Project Site are predicted to be 38.8 Leq dBA at 2,800 feet (closest distance between the Proposed Project Site and nearest residence) (FHWA 2006) (refer to Attachment C). Based on this predicted noise level, temporary noise levels during construction activities are not anticipated to be noticed at any nearby receptors (e.g., residences).

Conclusion:

The Proposed Project would meet the CCC General Plan policy requirement that construction activities shall be concentrated during the hours of the day. In addition, noise levels generated during construction activities would be indiscernible from the existing ambient noise levels (noise contours shown in the CCC General

Plan Noise Element) because of the distance to the nearest noise receptor (e.g., residence). Therefore, the Proposed Project would have a less than significant impact.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

b. Generation of excessive groundborne vibration or groundborne noise levels?

Impact Analysis:

Implementation of proposed corrective measures would require the use of heavy construction equipment (i.e., paver, loader, excavator) at the Proposed Project Site. Groundborne vibration and noise generated by the use of these heavy construction equipment would not be felt at the nearest receptor (i.e., residence) because the distance (2,800 feet) would substantially attenuate vibration and noise.

Conclusion:

Construction equipment used during proposed corrective measures would not generate excessive groundborne vibration or noise felt at the nearest receptor. No impact would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

c. For a project located within the vicinity of a private airstrip or 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?

Impact Analysis:

The Proposed Project Site is not located within an airport land use plan, vicinity of a private airstrip, or within two miles of a public airport or public use airport. Buchanan Airport, located approximately 8.5 miles southwest of the Proposed Project Site, is the closest public airport.

Conclusion:
The proposed corrective measures would not the potential to expose people residing or working in the project area to excessive noise levels generated by a nearby airport or airfield. No impact would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

Contra Costa County. 2005 (Reprint 2010). General Plan. http://www.co.contra-costa.ca.us/4732/General-Plan (Accessed November 2018).

Federal Highway Administration (FHWA). February 15, 2006. Roadway Construction Noise Model. https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/ (Accessed July 2, 2019).

14. POPULATION AND HOUSING				
Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Induce substantial unplanned 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

No laws, ordinances, regulations, or standards protecting population and housing resources are applicable to the Proposed Project.

ENVIRONMENTAL SETTING (BASELINE):

The CCC 2005-2020 General plan designates the Proposed Project Site as Heavy Industrial. The Proposed Project Site currently operates alum production and molten sulfur transloading. No housing development is currently located or proposed to be located at or near the Proposed Project Site.

The Proposed Project Site is expected to remain zoned for Heavy Industrial use by CCC. Furthermore, future re-zoning to residential use is not anticipated because of the adjacent MOTCO (formerly the CNWS) located west and northwest of AOC-1. MOTCO conducts munitions management and has defined an ESQD arc that prevents residential or sensitive land use within the arc boundary due to potential blast impacts. The ESQD arc boundary currently ends at the western edge of the Proposed Project Site property line. Based on May 2, 2018 Chemtrade and MOTCO communications, residential or sensitive land uses (e.g., day care, hospital) on the Chemtrade property would still not be appropriate due to the proximity to the arc, as well as potential operational changes that could result in a temporary larger arc extending onto the Chemtrade property (JJ&A, 2018). The U.S. Army confirmed that munitions management would continue at the MOTCO facility for the foreseeable future thereby requiring the ESQD arc to be maintained indefinitely.

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of population and housing resource effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Based on the ESQD arc over or near the Proposed Project Site, no environmental studies relating to population and housing resources were prepared for the Proposed Project.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

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

Impact Analysis:

Implementation of the proposed corrective measures are intended to clean up contaminated soils at the Proposed Project Site. Remediation of contaminated soils would not allow for increased population growth, such as new

housing construction, because of the existing heavy industrial operations at the site would not change and the adjacent MOTCO would prohibit nearby population growth.

Conclusion:

The Proposed Project would not have the potential to induce substantial unplanned population growth in the area, either directly or indirectly.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact Analysis:
Implementation of the proposed corrective measures are intended to clean up contaminated soils at the Proposed Project Site. Remediation of contaminated soils would not require removing any existing people or housing.

Conclusion:
The Proposed Project would not have the potential to displace substantial numbers of existing people or housing.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

Contra Costa County. 2005 (Reprint 2010). General Plan. http://www.co.contra-costa.ca.us/ 4732/General-Plan (Accessed November 2018).

Jacobson James and Associates, Inc. (JJ&A), 2018. Email Regarding: May 2, 2018 Onsite meeting between MOTCO personnel (Travis D. Wetzler and Gregory J. Kamrud), Chemtrade (Bob Stout) and JJ&A (Jan Jacobson).

15. PUBLIC SERVICES				
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:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

No laws, ordinances, regulations, or standards protecting public services resources are applicable to the Proposed Project.

ENVIRONMENTAL SETTING (BASELINE):

The Proposed Project Site is designated as Heavy Industrial. There are no parks, hospitals, daycare centers, libraries, or police stations located within one mile of the Site.

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of public services resource effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Based on the less than significant impact of the Proposed Project Site to public services resources, no environmental studies relating to public services resources were prepared for the Proposed Project.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

Result in substantial adverse physical impacts associated with the provision of new or physically altered government 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:

Fire protection?

Impact Analysis:

The closest fire station to the Proposed Project Site is CCC Fire District Station #86 (Station #86), located at 3000 Willow Point Road in Bay Point (CCC, 2019). The drive distance between the Proposed Project Site and Station #86 is 3.1 miles. Potential demands on fire protection services may increase slightly during the construction period as a result of unforeseen events related to the scope of work. However, ongoing

adherence to procedures and practices identified in the Proposed Project's HASP would reduce the potential for incidents to occur that would require a fire district response.

Conclusion:

Ongoing adherence to procedures and practices identified in the Proposed Project's HASP would reduce the potential for incidents to occur that would require response from fire protection services. After completion of corrective measures, the Proposed Project would not cause an increase in demand on fire protection, as compared to the current demand.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

Police protection?

Impact Analysis:

The Proposed Project Site is located in the jurisdiction of the CCC Sheriff's Department. Potential demands on law enforcement or emergency response services could increase slightly during the construction period as a result of unforeseen events or circumstances. However, risks to human health and safety would be minimized through ongoing adherence to procedures and practices identified in the Proposed Project's HASP and existing onsite security measures (i.e., fencing, after-hours security guards) that would reduce opportunities for vandalism.

Conclusion:

Ongoing adherence to procedures and practices identified in the Proposed Project's HASP and existing onsite security measures would reduce the need for police protection services. After completion of corrective measures, the project would not cause an increase in demand on police protection, as compared to current demand.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

Schools?

Impact Analysis:

The closest schools to the Proposed Project Site include Rio Vista Elementary School and Riverview Middle School which are located 1 mile to the southeast. The Proposed Project would not result in an increase in population or associated increase in demand on these schools.

Conclusion:

Corrective measures would not create a demand for existing or new school facilities. No impact to school facilities would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

Parks?

Impact Analysis:

The nearest neighborhood park is Lynbrook Park, located approximately 2 miles southeast of the Proposed Project Site in a residential district, and the nearest regional park is Bay Point Regional Shoreline, located approximately ½ mile to the east of the Proposed Project Site and adjacent to McAvoy Harbor. The Proposed Project would not result in an increase in population or associated increase in demand on parks.

Conclusion:

Corrective measures would not create a demand for existing or new park facilities. No impact to park facilities would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

Other public facilities?

Impact Analysis:

The closest hospital to the Proposed Project Site is the John Muir Health, Concord Medical Center, located approximately 7 miles to the southwest at 2540 East Street in Concord. Construction activities could result in a slight increase in demands for services at the medical center. The potential for incidents requiring medical attention would be minimized through adherence with the proposed project's HASP.

Conclusion:

Ongoing adherence to procedures and practices identified in the Proposed Project's HASP would reduce the need for other public facilities and services. After corrective measures complete, the project would not cause an increase in demand on other public facilities and services, as compared to current demand.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

References Used:

Contra Costa County. 2019. Fire Protection District. https://www.cccfpd.org/ (Accessed February 19, 2019).

16. RECREATION				
	Potentially Significant Impact	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
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?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

No laws, ordinances, regulations, or standards protecting agriculture or forestry resources are applicable to the Proposed Project.

ENVIRONMENTAL SETTING (BASELINE):

The nearly 150-acre Bay Point Regional shoreline parkland (Parkland) is part of the East Bay Regional Park District and is located approximately ½ mile to the east of the Proposed Project Site. The Parkland is at the approximate midpoint of the San Francisco Bay Estuary and the Sacramento/San Joaquin River Delta and provides access to undeveloped open space and marsh habitat in an area surrounded by residential, military, and industrial development. The public can enjoy views of Suisun Bay and opportunities for hiking, birdwatching, shoreline fishing, nature study, and other recreational pastimes.

The California State Coastal Conservancy is leading the implementation of the San Francisco Bay Area Water Trail Plan (Water Trail Plan), a new regional access project. The Water Trail will be a network of access sites or trailheads that will enable people using non-motorized, small boats, or other beach able sail craft (e.g., kayaks, canoes, dragon boats, and windsurf boards) to safely enjoy single and multiple-day trips around San Francisco Bay. This regional trail has the potential to enhance Bay Area communities' connections to the Bay and create new linkages to existing shoreline, open space, and other regional trails, such as the Bay Trail. The Water Trail will include educational, stewardship, and outreach components (CSCC, 2019). A proposed launch site to the SF Bay Area Water Trail is located approximately ½ mile to the east of the Proposed Project Site.

The Delta de Anza Regional Trail (Trail) is located approximately 2 miles to the south of the Site. The Trail is a paved, multi-use hiking, bicycling, and equestrian trail currently spanning over 15 miles of a planned 25-mile length. When completed, the Trail will generally follow the East Bay Municipal Utility District's corridor and the Contra Costa Water District's canal. The Trail offers recreation opportunities and is an alternative transportation corridor connecting communities in central and eastern Contra Costa County. It also provides access to regional and community parks, many schools, and Los Medanos Community College (EBRPD, 2019).

The Great California Delta Trail is intended to link the San Francisco Bay Trail system and planned Sacramento River trails in Yolo and Sacramento counties to present and future trails in and around the Delta including Delta shorelines in Contra Costa, San Joaquin, Solano, Sacramento, and Yolo counties. The Great California Delta Trail is in the planning stages and proposed to have bicycle pathways located approximately ½ mile south of the Proposed Project Site (DPC, 2019).

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of recreational resource effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Based on the lack of impacts to recreational resources in or near the Proposed Project Site, no environmental studies relating to recreational resources were prepared for the Proposed Project.

IMPACT ANALYSES AND CONCLUSIONS:

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?

Impact Analysis:

The nearest neighborhood park is Lynbrook Park, located approximately 2 miles southeast of the Proposed Project Site in a residential district, and the nearest regional park is Bay Point Regional Shoreline, located approximately ½ mile to the east of the Proposed Project Site and adjacent to McAvoy Harbor. Implementation of proposed corrective measures would not directly increase the permanent resident population in the area because no habitable structures are planned as part of the project.

Conclusion:

The Proposed Project would not increase the use of existing neighborhood and regional parks, other recreational parks, or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated. No impact to the use of existing neighborhood and regional parks or other recreational facilities would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

b. Does the project include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact Analysis:

The Proposed Project Site does not contain any existing recreational facilities. Implementation of proposed corrective measures would not involve or require construction of any recreational facilities.

Conclusion:

The proposed project would not construct or cause the need for construction of additional recreational facilities. No impact to existing or need for additional recreational facilities would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

California State Coastal Conservancy (CSCC). 2019. San Francisco Bay Area Water Trail. https://scc.ca.gov/2010/07/30/san-francisco-bay-area-water-trail/ (Accessed June 2019).

Contra Costa County. 2005 (Reprint 2010). General Plan. http://www.co.contra-costa.ca.us/_4732/General-Plan (Accessed November 2018).

Delta Protection Commission (DPC). 2019. The Great California Delta Trail. http://delta.ca.gov/recreation/delta_trail/ (Accessed June 2019).

East Bay Regional Park District (EBRPD). 2019. Delta de Anza Regional Trail. https://www.ebparks.org/parks/trails/delta_deanza/default.htm (Accessed June 2019).

17. TRANSPORTATION				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

Federal laws and regulations: Resource Conservation and Recovery Act (RCRA) Title 42 United States Code Subtitle C and 40 Code Federal Regulations (CFR) Parts 260-279. More specifically, transporters of hazardous waste are governed by 40 CFR part 263. RCRA gives EPA the authority to control hazardous waste from the generation, transportation, treatment, storage, and disposal of hazardous waste. The U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration regulates the transport of hazardous materials through Title 49 of the Code of Federal Regulations, Subchapter C.

State laws and regulations: Hazardous Waste Control Law (Health and Safety Code (HSC) Chapter 6.5) and 22 California Code of Regulations (CCR). The law establishes regulations and incentives which ensure that the generators of hazardous waste employ technology and management practices for the safe handling, treatment, recycling, and destruction of their hazardous wastes prior to disposal. Article 6 of HSC Chapter 6.5 discusses the transportation of hazardous waste. California Vehicle Code: Divisions 2, 6, 12, 13, 14, 15 also apply to transportation of hazardous materials.

ENVIRONMENTAL SETTING (BASELINE):

Nichols Road provides the main access route into the Proposed Project Site. Nichols Road intersects with Port Chicago Highway one-third of a mile to the south.

Roads in the vicinity of the Proposed Project Site are not included in CCC's Congestion Management Program (CMP) network. State Route 4 (SR-4), approximately 1.7 miles to the south/southeast of the Proposed Project Site, is the nearest road that is part of the CMP network.

SR-4 westbound, between State Route 242 (SR-242) and Bailey Road, operates at Level of Service (LOS) F during the AM peak hours and LOS A during the PM peak hours. In contrast, SR-4 eastbound, between State Route 242 (SR-242) and Bailey Road, operates at Level of Service (LOS) A during the AM peak hours and LOS F during the PM peak hours (Contra Costa Transportation Authority, 2015 and 2017).

According to the CMPMP, 2017 traffic congestion on the CMP network overall has stayed stable, even as average speeds at a few monitoring locations showed significant reductions. The comparison of the intersection LOS between 2015 and 2017 monitoring periods shows the number of intersections operating in LOS A-D increased in AM peak hours but decreased in PM peak hours. The number of intersections operating at LOS E or worse decreased in AM peak hours but increased in PM peak hours.

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of transportation resource effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance. LOS has been the standard by which transportation impacts of major developments and changes to roads were measured. LOS was formally defined in the 1965 Highway Capacity Manual as a "qualitative measure of the effect of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating cost". It is better understood today that LOS does not accurately reflect vehicle travel as it only focuses on individual local intersections and roadway segments and not on the entire vehicle trip. In 2013, the State of California passed Senate Bill (SB) 743 which required the Office Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. LOS was replaced with Vehicle Miles Traveled (VMT) as "the most appropriate metric of a project's potential transportation impacts". VMT data are used primarily by transportation agencies, environmental agencies, and consultants to perform a variety of functions such as allocating resources, estimating vehicle emissions, computing energy consumption, and assessing traffic impacts.

Section 15064.3(b) of the CEQA Guidelines states the following:
(b) Criteria for Analyzing Transportation Impacts.

(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Based on the less than significant impact to transportation resources in or near the Proposed Project Site, no environmental studies relating to transportation resources were prepared for the Proposed Project.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?

Impact Analysis:

The proposed corrective measures would not affect public roadways in the long-term because these activities would not substantially affect the overall circulation system. The Proposed Project would add some traffic to

roadways during the 32-week construction period due to delivery of materials and supplies to the Site, removal of wastes from the Site, and workers traveling to and from the Site. The Proposed Project would not have any long-term effects on congestion levels.

During construction, periodic movement of heavy equipment would occur using Port Chicago Highway. It is anticipated that up to 2,280 vehicle trips would occur over the 32-week construction period. Implementation of corrective measures would result in up to approximately 12 heavy haul truck trips per day spread throughout the day (1,700 truckloads to import clean import soil, 120 truckloads to import aggregate base, and 80 truckloads for hot-mix asphalt divided by 160 days). The trucks would primarily enter and exit the Proposed Project Site at Nichols Road. As these trips would be intermittent, the corrective measures would not substantially increase the traffic on any public street system. It is anticipated that an Encroachment Permit with CCC-required Temporary Traffic Control Plan (to be addressed by the TTCMP in accordance with the 1994 guidance) may be required for the truck traffic to and from the Proposed Project Site. The permit will be to be obtained before commencement of remedy construction, if required. The timeline for permit processing is 3 to 5 weeks from the date of application submittal.

Prior to entering the Site, all haulers will demonstrate that their vehicles are properly registered, operational, and placarded in compliance with Federal, State and Local laws, for the type of material being transported. In addition, Chemtrade will require that all haulers provide transport in accordance with CCC Public Works and California Department of Transportation permitted transportation safety requirements. The Proposed Project would implement traffic congestion management by minimizing truck transport to off-peak hours, reducing the number of trucks per day, caravanning trucks to and from the site, and spacing out trucks leaving the site. Therefore, the Proposed Project is considered a less-than-significant impact in relation to congestion management.

The closest bike lane to the Proposed Project Site is approximately 1.5 miles to the east along Port Chicago Highway. The nearest bus line (Tri Delta Transit Route #389) is located ½ mile to the east in the nearest residential neighborhood. The temporary increase in truck traffic during implementation of corrective measures would not affect any program, plan, ordinance or policy relating to these transportation facilities.

Conclusion:

The proposed project would not incorporate any activities, short-term or long-term, that would have the ability to conflict with any program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities in the project area.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Impact Analysis:

Vehicle miles traveled (VMT) is a measure used in transportation planning for a variety of purposes. It measures the amount of travel for all vehicles in a geographic region over a given period of time, typically a one-year period. VMT is calculated by adding all the miles driven by all the cars and trucks on all the roadways in a region. This metric plays an integral role in the transportation planning, policy-making, and revenue estimation processes due to its ability to indicate travel demand and behavior. VMT may also be used to evaluate conformity assumptions, adjust travel demand forecasts, and identify pavement maintenance needs. Implementation of corrective measures would not generate additional long-term vehicle trips or change circulation patterns in the project area.

Conclusion:

The proposed corrective measures would not increase long-term vehicle miles traveled levels from/to the Proposed Project Site consistent with Section 15064.3(b) of the CEQA Guidelines. There would be no impact.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

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

Impact Analysis:

The proposed project involves onsite corrective measures to address soil and groundwater contamination. The proposed corrective measures would not contain a design feature or incompatible use that would substantially increase traffic hazards because the activities would not alter the public roadways system. The current intersection at Port Chicago Highway and Nichols Road is stop controlled for safe traffic movements to/from the Proposed Project Site and this condition would not change.

Conclusion:

Implementation of the corrective measures would not include any design features or incompatible uses which would substantially increase hazards. No impacts related to increased hazards due to a geometric design feature or incompatible uses would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

d. Result in inadequate emergency access?

Impact Analysis:

The proposed corrective measures would not affect emergency access to/from the Proposed Project Site in the long-term because these activities would not substantially change the overall circulation system on- and offsite. In addition, all construction equipment would be located and stored onsite and would not have the potential to block access roads.

Conclusion:

Emergency access to/from the Proposed Project Site would not change with implementation of corrective measures. No impacts related to inadequate emergency access would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

Contra Costa Transportation Authority. 2015. Congestion Monitoring Program Final Draft Monitoring Reports. December.

Contra Costa Transportation Authority. 2017. Congestion Monitoring Program Final Draft Monitoring Reports. August.

DTSC. 1994. Transportation Plan, Preparation Guidance for Site Remediation. https://www.dtsc.ca.gov/HazardousWaste/Transporters/upload/SMB_Transportation-Plan.pdf (Accessed February 2019).

18. TRIBAL CULTURAL RESOURCES				
Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.				
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:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
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), or	☐	☐	☒	☐
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.	☐	☐	☒	☐

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

Tribal cultural resources are defined in PRC Div. 13 Section 21074. California Assembly Bill 52 (AB52) specifies that any project for which a Notice of Preparation, Notice of Mitigated Negative Declaration or Notice of Negative Declaration is filed on or after July 1, 2015, the Lead agency must provide formal notification within 14 days of determining that an application for a project is complete or of a decision to undertake a project to the designated contact or tribal representative of the affiliated California Native American tribes. The tribe that is traditionally and culturally affiliated to the geographic area where a project is located must have requested that the lead agency in question provide notification to the tribe (PRC 21081.3.1).

If remains are found on Site, the County Coroner will make the determination of origin and disposition, pursuant to Public Resources Code (PRC) § 5097.98. If the remains are determined to be Native American, the Coroner would notify the NAHC (per Health and Safety Code 7050.5(c)) The NAHC would identify and notify the person(s) who might be the most likely descendent, who would make recommendations for the appropriate and dignified treatment of the remains (PRC Div. 5 section 5097.98). The descendants shall complete their inspection and make recommendations for treatment within 48 hours of being granted access to the Site (CEQA Guidelines, CCR section 15064.5(e); HSC section 7050.5).

ENVIRONMENTAL SETTING (BASELINE):

Approximately 600 archaeological Sites within CCC have been recorded with the Archaeological Inventory Report (Inventory Report), Northwest Information Center (NWIC), at Sonoma State University (CCC, 2005). However, the Inventory Report indicates the Proposed Project Site is in a largely urbanized area excluded from the archeological sensitivity survey. In March 2019, LSA conducted a cultural resources study to update and confirm if archeological or historical resources are present at the Proposed Project Site. The study included background research for a ¼ mile radius of the Proposed Project Site at the NWIC along with review of archival maps, of aerial photographs, and of results of the SLF search request from the NAHC in Sacramento. The cultural

resources study also included a pedestrian field survey at the AOC-2 and AOC-3 portion of the Proposed Project Site (where ground-disturbing activities would occur) in 10 meter transects over exposed soils.

The background research and pedestrian field survey did not identify any cultural resources within the Proposed Project Site. The AOC-2 and AOC-3 area is the location of prior fill and an engineered wastewater management lagoon. This area was subject to cut and fill disturbance from the early 20th century until 2014. Because of the previous disturbance from cut-and-fill operations and the lack of historic-period development, AOC-2 and AOC-3 have a low potential to contain archaeological deposits and/or human remains. Therefore, there is a low likelihood for proposed ground-disturbing activities to encounter and disturb intact archaeological deposits that may qualify as historical resources (PRC §21084.1), unique archaeological resources (PRC § 21083.2), and/or human remains interred outside of formal cemeteries (LSA 2019).

There are no known tribal cultural resources, as defined in PRC Div. 13 Section 21074, on the Proposed Project Site or in its immediate vicinity. The Proposed Project Site has been used continuously for over 100 years for chemical production and currently produces alum and transloads molten sulfur.

DTSC complied with the 2014 Assembly Bill 52 (AB52). DTSC provided written notification to tribes on the Tribal Consultation List from the NAHC regarding the Proposed Project on October 3, 2017. The notice included a brief project description, project location, and lead agency's contact information. DTSC received interest from two Tribal governments and began consultation within 30 days and prior to release of the CEQA document for the Proposed Project. The Cultural Resources Study (refer to Attachment B) was provided to the two Tribal government for review. One Tribal government concurred with the conclusions of the Cultural Resources Study, mainly that cultural resources are unlikely to be present at the Site. The second Tribal government has not responded but DTSC will continue to work with interested Tribal governments.

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

Tribal cultural resources are defined as either 1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources (California Register) or listed in a local register of historical resources or 2) a resource determined by the lead agency, in its discretion and supported by substantial evidence, is a tribal cultural resource (OPR, 2017).

To be eligible for the California Register, a prehistoric or historic-period property must be significant at the local, state, and/or federal level under one or more of the following four criteria:

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

A resource eligible for the California Register must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

In March 2019, LSA conducted a cultural resources study to update and confirm if archeological or historical resources are present at the Proposed Project Site (refer to Attachment B). The study included background research for a 0.25-mile radius of the Proposed Project Site at the NWIC, and a review of archival maps, aerial photographs, and the results of the SLF search request from the NAHC in Sacramento. The cultural resources study also included a pedestrian field survey at the AOC-2 and AOC-3 portion of the Proposed Project Site (where ground-disturbing activities would occur) in 10 meter transects over exposed soils.

IMPACT ANALYSES AND CONCLUSIONS:

a. 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:

i. 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), or

Impact Analysis:

There are no known tribal cultural resources, as defined in PRC Section 21074, on the Proposed Project Site or in its immediate vicinity. As described in the Baseline Environmental Conditions, the Proposed Project Site has been used continuously for over 100 years for chemical production and has active alum production and molten sulfur transloading operations. Based on the Proposed Project Site location, history, and absence of cultural resource findings during prior Site work, and the 2019 cultural resources study, it is not likely that historical resources would be identified or impacted during corrective measures. However, if tribal cultural resources are discovered during corrective measures, work would stop in that area until a qualified archaeologist or appropriately licensed professional can assess the significance of the find and, if necessary, develop appropriate response measures in consultation with the DTSC and other agencies and Native American representatives, as appropriate.

Specifically, in the event of discovery of human remains during ground-disturbing activities, work within 25 feet of the discovery shall stop immediately and the County Coroner shall be notified to determine its origin. The County Coroner would determine disposition within 48 hours. If the remains are Native American, the County Coroner would be responsible for contacting the NAHC within 24 hours. The NAHC would identify and notify the person(s) who might be the most likely descendent, who would make recommendations for the appropriate and dignified treatment of the remains (PRC Div. 5 section 5097.98). The descendants shall complete their inspection and make recommendations for treatment within 48 hours of being granted access to the Site (CEQA Guidelines, CCR section 15064.5(e); HSC section 7050.5).

In the event of discovery of potential cultural or archaeological resources, excavation activities would be immediately suspended in the immediate area and surrounding 25 feet along with contacting and informing the DTSC Project Manager [Nancy Tu at (510) 540-3824; Nancy.tu@dtsc.ca.gov]. After discussion with their Tribal Chairperson or respective Cultural Resources Managers or Tribal Historic Preservation Officers and in collaboration with DTSC (including the Office of Environmental Equity) and the property owner, any measures deemed necessary to record and/or protect the cultural or archaeological resource(s) would be implemented.

Conclusion:

The Proposed Project would not include the demolition, elimination, or manipulation of a known tribal cultural resource. In addition, the finding of an unknown tribal cultural resource during implementation of corrective measures is unlikely based on the site history and conditions and absence of findings during prior onsite work. However, the proposed project includes measures that would be implemented if discovery of unknown tribal cultural resource were uncovered during corrective measures. The proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource and impacts would be less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

ii. 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 Resource 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.

Impact Analysis:

There are no known tribal cultural resources, as defined in PRC Section 21074, on the Proposed Project Site or in its immediate vicinity. The Proposed Project Site is designated as Heavy Industrial with an active chemical manufacturing facility and has been used as such for over 100 years.

On October 3, 2017, the DTSC formally notified the six tribes identified in the NAHC listing. By December 11, 2017, two tribal Government responded or did not respond to the AB52 Consultation letter and requested consultation. Although the tribes did not identify any known tribal cultural resources that may be affected by the Proposed Project, the tribes did specify that there was potential for unknown tribal cultural resources to be affected during ground disturbance activities. Due to this, the tribes recommended a actions to reduce the potential for adverse effects to cultural resources that may be discovered during construction. The Proposed Project includes a standard operating procedure whereby all possible damages caused in the event of an unanticipated discovery can be avoided. Specifically, if tribal cultural resources are discovered during corrective measures, work would stop in that area until a qualified archaeologist or appropriately licensed professional can assess the significance of the find and, if necessary, develop appropriate response measures in consultation with the DTSC and other agencies and Native American representatives, as appropriate. No other tribes have responded with a request for consultation. As previously stated, the Proposed Project Site has been previously disturbed, the 2019 cultural resources study did not identify any cultural resources and no information regarding the presence of known tribal cultural resources has been provided to the DTSC from the contacted tribes or from cultural resource surveys or records.

Conclusion:

As no known tribal cultural resources occur at the Proposed Project Site or would be affected by the Proposed Project, and implementation of the contingency set forth in Section 18 (a)(i) would reduce impacts to unknown tribal cultural resources during excavation activities, impacts would be less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

References Used:

Contra Costa County (CCC). 2005 (Reprint 2010). General Plan. http://www.co.contra-costa.ca.us/ 4732/General-Plan (Accessed November 2018).

Governor's Office of Planning and Research (OPR). 2017. Technical Advisory, AB52 and Tribal Cultural Resources in CEQA. June 2017.

LSA. 2019. Cultural Resources Study for the Chemtrade Bay Point Project Site at 501 Nichols Road, Contra Costa County, California. April 12.

19. UTILITIES AND SERVICE SYSTEMS				
Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) 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?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

No laws, ordinances, regulations, or standards protecting utilities and service systems resources are applicable to the Proposed Project.

ENVIRONMENTAL SETTING (BASELINE):

Golden State Water Company (GSWC) serves Bay Point. Contra Costa Water District delivers some treated water to the GSWC from the Bollman Water Treatment Plant, which has a capacity of 75 million gallons per day and also delivers wholesale raw water to GSWC (via the Contra Costa Canal), which is then treated at GSWC's Hill Street Plant and distributed to Bay Point customers for municipal, agricultural, industrial, and landscape irrigation purposes.

Sanitary sewer service is provided by the Delta Diablo Sanitation District (DDSD). The DDSD owns and operates the system that collects, conveys, and treats wastewater for an estimated 184,000 residents and businesses in Bay Point, Antioch, and Pittsburg. The DDSD's only treatment plant and its recycled water facility are located in Antioch.

Routine facility operations-related solid waste collection and disposal is provided by two franchise haulers that serve Bay Point: Allied Waste/Pleasant Hill Bayshore Disposal and Garaventa Enterprises/Pittsburg Disposal. Residential and commercial solid waste collected by Allied Waste/Pleasant Hill Bayshore Disposal is taken to the Contra Costa Transfer and Recovery Station in unincorporated Martinez then disposed of at the Keller Canyon Landfill which is located in unincorporated Pittsburg in CCC (CCC, 2010).

Storm water within the AOC-1 area is collected via a storm water collection trench system that feeds into an aboveground storm water conveyance pipe adjacent to AOC-2 for discharge to Suisun Bay, as permitted by an NPDES General Permit for Storm Water Discharges Associated with Industrial Activities.

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of utilities and service systems resource effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Based on the less than significant impacts to utilities and service systems resources in or near the Proposed Project Site, no environmental studies relating to utilities and service systems resources were prepared for the Proposed Project.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities the construction or relocation of which could cause significant environmental effects?

Impact Analysis:

Proposed corrective measures would not create the need for or result in the construction of new or expanded water or wastewater treatment, electric power, natural gas, or telecommunications facilities.

The construction of the soil cap and asphalt skirt at AOC-2 and a portion of AOC-3 would affect the current drainage pattern slightly; however, the intended design would direct runoff to prevent ponding and percolation. Runoff from the cap would be collected at sumps placed at designated locations along the perimeter of the cap and pumped to an existing aboveground storm water pipe for ultimate discharge to Suisun Bay. Runoff from the AOC-2/AOC-3 area would be managed in accordance with all applicable laws and regulations with updates and amendments to the existing facility NPDES General Permit for Storm water Discharges under the Industrial General Permit, as needed. In addition, the construction of the new storm water drainage features would be performed in accordance with the Construction SWPPP.

Conclusion:

Activities associated with the proposed project would not require new or expanded water or wastewater treatment, electric power, natural gas, or telecommunications facilities. In addition, construction of the new storm water drainage features in the AOC-2/AOC-3 area would be designed to improve onsite drainage conditions. Impacts to these facilities would be less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Impact Analysis:

Implementation of corrective measures would require approximately 32 weeks to complete. The primary source of water required during construction activities would be supplied by the existing onsite non-potable fire protection water system. If needed, additional water would be transported to the Proposed Project Site by water trucks.

Conclusion:

Sufficient water supplies from existing entitlements and resources onsite are available to serve the needs of corrective measures during the anticipated 32-week construction period. The corrective measures would not create

long-term, future demand for water supply beyond existing conditions. Impacts to water supplies would be less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

c. 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?

Impact Analysis:

Implementation of corrective measures would not generate wastewater that would require a wastewater treatment provider. Wastewater generated during equipment decontamination activities would be containerized, profiled, and disposed at an appropriate offsite facility.

Conclusion:

Construction activities associated with remediation of the Proposed Project Site would not create a demand for wastewater treatment at any wastewater treatment provider. No impact to a wastewater treatment provider would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Impact Analysis:

Solid waste associated with corrective measures would comprise of approximately 70 tons of contaminated soil and 670 tons of asphalt/base rock. Contaminated soil would be transported to an appropriate facility for disposal based on final waste characterization results. Facilities considered for disposal of contaminated soil include:

- Clean Harbors Landfill in Buttonwillow, California;
- US Ecology Landfill in Beatty, Nevada;
- US Ecology Landfill in Grand View, Idaho; and
- Keller Canyon in Pittsburg, California.

Each of these facilities have sufficient permitted capacity to receive the anticipated 70 tons of contaminated soil; however, the capacity to accept would be confirmed in advance of transport to a facility.

The asphalt/base rock material may be suitable for recycling. If the asphalt/base rock material is not suitable for recycling, it would be shipped to Buttonwillow which has sufficient permitted capacity.

Conclusion:

Solid waste generated by corrective measures would be served by a landfill with sufficient permitted capacity to accept the contaminated soil and asphalt/base rock. A less-than-significant impact would occur to solid waste facilities.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Impact Analysis:

Implementation of corrective measures would generate approximately 70 tons of contaminated soil and 670 tons of asphalt/base rock. Disposal of contaminated soil and asphalt/base rock would comply with all federal, state, and local statues and regulations related to solid waste including, but not limited to: characterization, storage, labeling, transport, and disposal.

Conclusion:

Disposal of contaminated soil and asphalt/base rock would comply with all federal, state, and local statues and regulations related to solid waste. Therefore, no impacts related to compliance with federal, state, and local management and reduction statutes and regulations related to solid waste would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

References Used:

Contra Costa County. 2005 (Reprint 2010). General Plan. http://www.co.contra-costa.ca.us/ 4732/General-Plan (Accessed November 2018).

20. WILDFIRE				
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):

No laws, ordinances, regulations, or standards protecting wildfire resources are applicable to the Proposed Project.

ENVIRONMENTAL SETTING (BASELINE):

State Responsibility Areas are boundaries adopted by the Board of Forestry and Fire Protection and are areas where the California Department of Forestry and Fire (CAL FIRE) has a financial responsibility for fire suppression and prevention. Review of the California State Responsibility Area Viewer and the Contra Costa County Fire Hazard Severity Zone Maps for State Responsibility Area and Local Responsibility Area indicate the Proposed Project Site is not located in a Very High Hazard Severity Zone (VHFHSZ) but is located in a Local Responsibility Area. The closest State Responsibility Area is located ¾ mile south of the Proposed Project Site (CAL FIRE 2011). The closest area classified as a VHFHSZ is located 8 miles south of the Proposed Project Site (CAL FIRE 2009).

APPLICABLE THRESHOLDS OF SIGNIFICANCE:

The list of wildfires resource effects that may be considered significant contained in Appendix G of the CEQA Guidelines (Environmental Checklist) was used to establish a threshold of significance.

ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Based on the less than significant impacts to wildfire resources in or near the Proposed Project Site, no environmental studies relating to wildfire resources were prepared for the Proposed Project.

IMPACT ANALYSES AND CONCLUSIONS:

Analysis as to whether or not project activities would:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

Impact Analysis:

Please refer to the analysis provided in Section 9(f) of this Initial Study.

Conclusion:

Please refer to the conclusion provided in Section 9(f) of this Initial Study.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Impact Analysis:

The Proposed Project Site is not located in an area with environmental conditions conducive to wildland fires. The project site is in an area lacking dry vegetation such as marshes and wetlands. However, operation of construction equipment on the during corrective measures has the limited potential to spark a fire. However, construction activities would implement BMPs which address fire prevention methods such as:

- restricting vehicles from driving or parking on dry vegetation during fire sensitive times of the year; and
- wetting dry construction areas before commencing activities, and wetting throughout the day, as appropriate.

Conclusion:

Although construction equipment has a minimal potential to spark a fire during corrective measures, implementation of BMPS would substantially limit the potential for a wildland fire that exposes people or structures to a significant risk of loss, injury or death to occur. Impacts from wildland fires during implementation of the corrective measures are considered less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Impact Analysis:

Implementation of corrective measures would not require the installation or maintenance of associated infrastructure (e.g., fuel breaks, emergency water sources, power lines, other utilities) that could exacerbate fire risk or could result in temporary or ongoing impacts to the environment. Corrective measures would require construction of temporary access roads of compacted clean soil or imported clean gravel to facilitate access to work areas. However, the temporary access roads would overall reduce wildfire risk during the implementation of corrective measures by incorporating soil or gravel.

Conclusion:

The proposed corrective measures would not install any infrastructure that could exacerbate fire risk or could result in temporary or ongoing impacts to the environment. No impact would occur.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☐ Less Than Significant Impact

☒ No Impact

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Impact Analysis:

Landslides tend to occur where slopes are steeper with higher relief. The Proposed Project Site is flat with very little relief. The proposed corrective measures would not significantly change the existing slope of the Proposed Project Site.

In addition, construction of the soil cap and asphalt skirt at AOC-2 and a portion of AOC-3 would affect the current drainage pattern slightly; however, the intended design would direct runoff to prevent ponding and percolation. Runoff from the cap would be collected at sumps placed at designated locations along the perimeter of the cap and pumped to an existing aboveground storm water pipe for ultimate discharge to Suisun Bay.

Conclusion:

The proposed corrective measures would not create steep slopes or disturb any landslide-prone areas. In addition, proposed corrective measures would not expose people or structures to risk from uncontrolled storm water runoff. These impacts are considered less than significant.

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact

☐ No Impact

References Used:

California Department of Forestry and Fire (CAL FIRE), 2011. Contra Costa County Fire Hazard Severity Zone Maps for State Responsibility Area. November. http://www.fire.ca.gov/fire_prevention/fhsz_maps_contracosta (Accessed February 6, 2019).

Cal Fire, 2009. Contra Costa Fire Hazard Severity Maps for Local Responsibility Area. January. http://www.fire.ca.gov/fire_prevention/fhsz_maps_contracosta (Accessed February 6, 2019).

21. MANDATORY FINDINGS OF SIGNIFICANCE

Based on evidence provided in this Initial Study, DTSC makes the following findings:

a. The project does not have the potential to substantially 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, substantially 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.

b. The project does not have impacts that are individually limited but cumulatively considerable. ("Cumulatively considerable" means that the incremental effects of an individual 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.)

c. The project does not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

Authority: Public Resources Code 21083, 21094.5.5
Reference: Public Resources Code Sections 21094.5 and 21094.5.5

Attachment A – Air Quality

TABLE B-1
CalEEMod Unmitigated Construction Emission Estimates Summary
Draft CEQA Initial Study
Chemtrade Bay Point Proposed Project
Pittsburg, California

		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
		tons/year										MT/year					
2019 ANNUAL TOTALS (tons/year unmitigated construction on- and off-Site)		0.00607	0.1144	0.0465	0.00028	0.0104	0.00264	0.01300	0.00278	0.00244	0.00516	0.00	27.0755	27.0755	0.00207	0.0000	27.1272
2020 ANNUAL TOTALS (tons/year unmitigated construction on- and off-Site)		0.1087	1.6800	1.0026	0.00395	0.0884	0.0482	0.1366	0.0274	0.0450	0.0724	0.0000	371.0259	371.0259	0.0429	0.0000	372.0978
		lbs/day															
2019 MAXIMUM[1,2] (lbs/day unmitigated construction on- and off-Site)		1.0177	19.2095	7.8076	0.0469	1.7945	0.4403	2.2348	0.4689	0.4074	0.8762	0.0000	4955.8504	4955.8504	0.3832	0.00	4965.4306
2020 MAXIMUM[1,3] (lbs/day unmitigated construction on- and off-Site)		2.9892	53.8052	27.6999	0.1351	8.2663	1.3815	9.5405	3.5719	1.2874	4.7442	0.00	14124.6471	14124.6471	1.2885	0.00	14156.8593
2019 Construction Emission Estimates Detail (lbs/day unmitigated)																	
Phase 1 - Site Preparation (Active Days: 12)																	
	Unmitigated Construction On-Site	0.5527	5.1940	4.6911	0.00616	0.0000	0.3773	0.3773	0.0000	0.3472	0.3472	N/A	610.1827	610.1827	0.1931	N/A	615.0091
	Unmitigated Construction Off-Site	0.4650	14.0156	3.1166	0.0407	1.7945	0.0629	1.8575	0.4689	0.0602	0.5291	N/A	4345.6677	4345.6677	0.1902	N/A	4350.4215
2020 Construction Emission Estimates Detail (lbs/day unmitigated)																	
Phase 1 - Site Preparation (Active Days: 13)																	
	Unmitigated Construction On-Site	0.4975	4.7002	4.6402	0.00616	0.0000	0.3265	0.3265	0.0000	0.3003	0.3003	N/A	596.8302	596.8302	0.1930	N/A	601.6558
	Unmitigated Construction Off-Site	0.4271	12.9711	2.9958	0.0402	1.6793	0.0501	1.7294	0.4406	0.0480	0.4885	N/A	4292.1939	4292.1939	0.1869	N/A	4296.8652
Phase 2 - HBW and PRB construction (Active Days: 30)																	
	Unmitigated Construction On-Site	1.0341	9.6352	10.0353	0.0151	N/A	0.6075	0.6075	N/A	0.5746	0.5746	N/A	1446.6178	1446.6178	0.3015	N/A	1454.1540
	Unmitigated Construction Off-Site	0.0496	0.4426	0.3419	0.00203	0.1127	0.00213	0.1148	0.0302	0.00202	0.0322	N/A	211.7369	211.7369	0.00781	N/A	211.9322
Phase 3 - AOC-1 Cap Paving (Active Days: 10)																	
	Unmitigated Construction On-Site	1.3566	14.0656	14.6521	0.0228	N/A	0.7528	0.7528	N/A	0.6926	0.6926	N/A	2,207.7334	2,207.7334	0.7140	N/A	2,225.5841
	Unmitigated Construction Off-Site	0.2014	4.8002	1.4053	0.0157	0.4724	0.0191	0.4914	0.1283	0.0182	0.1466	N/A	1669.1851	1669.1851	0.0709	N/A	1670.9582
Phase 4 - Performance Monitoring Well/ Piezometer Installations (Active Days: 20)																	
	Unmitigated Construction On-Site	0.2775	3.5223	2.0808	0.00940	N/A	0.1015	0.1015	N/A	0.0934	0.0934	N/A	909.8069	909.8069	0.2943	N/A	917.1631
	Unmitigated Construction Off-Site	0.0458	0.9858	0.3264	0.00282	0.0935	0.00319	0.0967	0.0253	0.00305	0.0283	N/A	298.5190	298.5190	0.0161	N/A	298.9216
Phase 5 - Hauling Hazardous Waste (Active Days: 1)																	
	Unmitigated Construction On-Site	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	N/A	0.0000
	Unmitigated Construction Off-Site	0.08373	25.9108	5.7493	0.0881	2.2161	0.1130	2.3291	0.6070	0.1081	0.7152	N/A	9422.0465	9422.0465	0.3499	N/A	9430.7939
Phase 6 - AOC-2/3 Clean Zone Excavation (Active Days: 5)																	
	Unmitigated Construction On-Site	0.4900	4.8253	6.5356	0.0103	N/A	0.2337	0.2337	N/A	0.2150	0.2150	N/A	1,000.2368	1,000.2368	0.3235	N/A	1,008.3243
	Unmitigated Construction Off-Site	0.1830	7.7168	1.5143	0.00852	0.0605	0.00642	0.0669	0.0164	0.00614	0.0225	N/A	905.9270	905.9270	0.1474	N/A	909.6131
Phase 7 - Cap Installation - AOC-2/3 (Active Days: 40)																	
	Unmitigated Construction On-Site	1.8710	17.7224	19.7662	0.0296	N/A	1.0694	1.0694	N/A	0.9996	0.9996	N/A	2,856.8812	2,856.8812	0.7576	N/A	2,875.8201
	Unmitigated Construction Off-Site	1.1182	36.0828	7.9338	0.1054	2.5311	0.1306	2.6617	0.6928	0.1249	0.8177	N/A	11267.7659	11267.7659	0.5309	N/A	11281.0392
Phase 8 - Grading for Cap Skirt (Active Days: 5)																	
	Unmitigated Construction On-Site	2.4288	26.3859	16.0530	0.0297	8.1431	1.2734	9.4165	3.5393	1.1716	4.7108	N/A	2,872.4851	2,872.4851	0.9290	N/A	2,895.7106
	Unmitigated Construction Off-Site	0.0552	0.0390	0.3780	0.00114	0.1232	0.0008	0.1240	0.0327	0.00074	0.0334	N/A	113.4098	113.4098	0.00277	N/A	113.4792
Phase 9 - Cap Skirt Paving - AOC-2/3 and Paving AOC-1 (Active Days: 10)																	
	Unmitigated Construction On-Site	1.3566	14.0656	14.6521	0.0228	N/A	0.7528	0.7528	N/A	0.6926	0.6926	N/A	2,207.7334	2,207.7334	0.7140	N/A	2,225.5841
	Unmitigated Construction Off-Site	0.2050	4.9192	1.4310	0.0161	0.4811	0.0195	0.5006	0.1307	0.0187	0.1494	N/A	1708.0795	1708.0795	0.0726	N/A	1709.8952

Notes:
[1] Winter Calculations provided maximum emissions estimates
[2] Based on Phase 1 activities, as only Phase 1 activities occur in 2019
[3] Based on the 2020 phase of activities that results in maximum estimated emissions
Basis of 2020 Maximum Values

AOC = Area of Concern
Bio-CO2 = biological carbon dioxide sources
Nbio-CO2 = nonbiological carbon dioxide sources
CH4 = methane
CO2 = carbon dioxide
CO2e = carbon dioxide equivalent
HBW = hydraulic barrier wall
lbs/day = pounds per day
MT/year = metric tons per year
N/A = not applicable
N20 = nitrous oxide
NOx = nitrogen oxide
PRB = permeable reactive barrier
PM = particulate matter
ROG = reactive organic gases
SO2 = sulfur dioxide

TABLE B-2
PROPOSED PROJECT BASIS FOR CalEEMod
Draft CEQA Initial Study
Chemtrade Bay Point Proposed Project
Pittsburg, California

Phase 1 - Site Preparation (Active Days: 25)	On Road Truck Travel (VMT): 27,200 miles On Road Worker Transportation: 2,160 miles
	Off Road Equipment:
	2 Forklifts Operating at 89 Horsepower at 0.20 load factor for 8 hours per day
	1 Loader operating at 97 Horsepower at 0.37 load factor for 8 hours per day
Phase 2 - HBW and PRB construction (Active Days: 30)	On Road Truck Travel (VMT): 1050 miles On Road Worker Transportation: 3240 miles
	Off Road Equipment:
	2 Forklifts Operating at 89 Horsepower at 0.20 load factor for 6 hours per day
	1 Generator operating at 85 Horsepower at 0.74 load factor for 8 hours per day
	2 Loaders/Backhoes operating at 97 Horsepower at 0.37 load factor for 8 hours per day
Phase 3 - Grading and Paving AOC-1 (Active Days: 10)	On Road Truck Travel (VMT): 4000 miles On Road Worker Transportation: 1620 miles
	Off Road Equipment:
	2 Pavers operating at 130 Horsepower at 0.42 load factor for 8 hours per day
	2 Paving equipment operating at 132 Horsepower at 0.36 load factor for 8 hours per day
	2 Rollers operating at 80 Horsepower at 0.38 load factor for 8 hours per day
Phase 5 - Hauling Hazardous Waste (Active Days: 1)	On Road Truck Travel (VMT): 2540 miles
Phase 7 - Cap Installation - AOC-2/3 (Active Days: 40)	On Road Truck Travel (VMT): 112,200 miles On Road Worker Transportation: 4320 miles
	3 Forklifts Operating at 89 Horsepower at 0.20 load factor for 8 hours per day
	2 Excavators operating at 158 Horsepower at 0.38 load factor for 8 hours per day
	1 Generator operating at 85 Horsepower at 0.74 load factor for 8 hours per day
	3 Loaders/Backhoes operating at 97 Horsepower at 0.37 load factor for 8 hours per day
Phase 8 - Grading AOC-2/3 (Active Days: 5)	On Road Worker Transportation: 810 miles
	Grading 10 acres for Paving
	1 Excavator operating at 158 Horsepower at 0.38 load factor for 8 hours per day
	1 Grader operating at 187 Horsepower at 0.41 load factor for 8 hours per day
	1 Rubber Tire Dozer operating at 247 Horsepower at 0.40 for 8 hours per day
	3 Loaders/Backhoes operating at 97 Horsepower at 0.37 load factor for 8 hours per day
Phase 9 - Asphalt Skirt Paving - AOC-2/3 (Active Days: 10)	On Road Truck Travel (VMT): 4100 miles On Road Worker Transportation: 1620 miles
	Off Road Equipment:
	2 Pavers operating at 130 Horsepower at 0.42 load factor for 8 hours per day
	2 Paving equipment operating at 132 Horsepower at 0.36 load factor for 8 hours per day
	2 Rollers operating at 80 Horsepower at 0.38 load factor for 8 hours per day

AOC = Area of Concern
HBW = hydraulic barrier wall
PRB = permeable reactive barrier
VMT = vehicle miles traveled

TABLE B-3
PROPOSED PROJECT PHASE, EQUIPMENT AND TRIP MILEAGE DETAIL FOR CalEEMod
Draft CEQA Initial Study
Chemtrade Bay Point Proposed Project
Pittsburg, California

Project Phase	Phase Length			Equipment		Trips					
						Worker Trips			Truck (Haul) Trips		
	Start Date	End Date	Number of days	Off-Road Equipment Type	Amount	Worker Transport Trips (per day)	Worker Transport Trip Length (miles)	Worker Transport Total[1] (miles)	Truck Travel Trips	Truck Trips Length (miles)	Truck Travel Total[2] (miles)
1 Site Preparation Materials Import & Stockpile	12/16/2019	1/17/2020	25	Forklifts	2	8	10.8	2160	544	50	27200
2 HBW and PRB construction AOCs 1-3	1/20/2020	2/28/2020	30	Forklifts	2	10[3]	10.8	3240	21	50	1050
				Generator Sets	1						
				Tractors/Loaders/ Backhoes	2						
3 Asphalt Cap Grading and Paving AOC-1	1/20/2020	1/31/2020	10	Pavers	2	15	10.8	1620	80	50	4000
				Paving Equipment	2						
				Rollers	2						
4 Performance Monitoring Well / Piezometer Installations	3/2/2020	3/27/2020	20	Hollow Stem Auger Drill Rig	1	5[3]	10.8	1080	80	15	1200
5 Hauling Hazardous Waste	3/27/2020	3/27/2020	1	N/A		0	0	N/A	4	635	2540
6 Clean Zone Excavation AOC-2/3	3/30/2020	4/3/2020	5	Excavators	2	5	10.8	270	406	.25	101.5
7 Clean Zone Backfill and Soil Cap Installation AOC-2/-3	4/6/2020	5/29/2020	40	Excavators	2	10[3]	10.8	4320	3400	33	112,200
				Forklifts	3						
				Generator Sets	1						
				Tractors/Loaders/ Backhoes	3						
8 Asphalt Skirt Grading AOC-2/3	6/1/2020	6/5/2020	5	Excavators	1	15	10.8	810	0	0	0
				Graders	1						
				Rubber Tired Dozers	1						
				Tractors/Loaders/ Backhoes	3						
9 Asphalt Skirt Paving AOC-2/3	6/8/2020	6/19/2020	10	Pavers	2	15	10.8	1620	82	50	4100
				Paving Equipment	2						
				Rollers	2						

AOC = Area of Concern
HBW = hydraulic barrier wall
PRB = permeable reactive barrier

[1]Worker Travel Total = Worker Transport Trips*Worker Transport Trip Length* Number of Days
[2]Truck Travel Total = Truck Travel Trips * Truck Trip Length
[3]Non Default values used

Chemtrade

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	8.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project is construction only and construction area is 8 acres.

Construction Phase - Construction dates follow contractors estimates for each phase

Off-road Equipment - ..

Off-road Equipment - Performing excavation using excavators

Off-road Equipment - Cap installation will not require cranes or welders.

Off-road Equipment - Cap installation will not require cranes nor welders

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Hauling Hazardous Waste to disposal facility

Off-road Equipment - Proposed equipment

Off-road Equipment -

Off-road Equipment - Site prep and material import will use 2 forklifts

Trips and VMT - Site preparation includes hauling all offsite materials except the Clean Import Fill which will be done during the Cap Install. Hauling during excavation will be onsite and ~0.25 miles.

Grading - Areas that require grading are 7.5 acres total, thus 20 acres is a conservative estimate for all grading work

Land Use Change -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	25.00
tblConstructionPhase	NumDays	230.00	30.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	230.00	40.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	20.00	10.00
tblGrading	AcresOfGrading	2.50	10.00
tblLandUse	LotAcreage	0.00	8.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	15.00
tblTripsAndVMT	HaulingTripLength	20.00	635.00
tblTripsAndVMT	HaulingTripLength	20.00	0.25
tblTripsAndVMT	HaulingTripLength	20.00	33.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	544.00
tblTripsAndVMT	HaulingTripNumber	0.00	21.00
tblTripsAndVMT	HaulingTripNumber	0.00	80.00
tblTripsAndVMT	HaulingTripNumber	0.00	80.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	406.00
tblTripsAndVMT	HaulingTripNumber	0.00	3,400.00
tblTripsAndVMT	HaulingTripNumber	0.00	82.00

tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	3.00	5.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00

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					
2019	6.0700e-003	0.1144	0.0465	2.8000e-004	0.0104	2.6400e-003	0.0130	2.7100e-003	2.4400e-003	5.1600e-003	0.0000	27.0755	27.0755	2.0700e-003	0.0000	27.1272
2020	0.1087	1.6800	1.0026	3.9500e-003	0.0884	0.0482	0.1366	0.0274	0.0450	0.0724	0.0000	371.0259	371.0259	0.0429	0.0000	372.0978
Maximum	**0.1087**	**1.6800**	**1.0026**	**3.9500e-003**	**0.0884**	**0.0482**	**0.1366**	**0.0274**	**0.0450**	**0.0724**	**0.0000**	**371.0259**	**371.0259**	**0.0429**	**0.0000**	**372.0978**

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					
2019	6.0700e-003	0.1144	0.0465	2.8000e-004	0.0104	2.6400e-003	0.0130	2.7100e-003	2.4400e-003	5.1600e-003	0.0000	27.0755	27.0755	2.0700e-003	0.0000	27.1272
2020	0.1087	1.6800	1.0026	3.9500e-003	0.0884	0.0482	0.1366	0.0274	0.0450	0.0724	0.0000	371.0258	371.0258	0.0429	0.0000	372.0976
Maximum	**0.1087**	**1.6800**	**1.0026**	**3.9500e-003**	**0.0884**	**0.0482**	**0.1366**	**0.0274**	**0.0450**	**0.0724**	**0.0000**	**371.0258**	**371.0258**	**0.0429**	**0.0000**	**372.0976**

	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	12-16-2019	3-15-2020	0.4996	0.4996
2	3-16-2020	6-15-2020	1.2358	1.2358
3	6-16-2020	9-15-2020	0.0291	0.0291
		Highest	1.2358	1.2358

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	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
Mobile	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
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

2.2 Overall Operational

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	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
Mobile	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
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

	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**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	26.2910
Total	**26.2910**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	12/16/2019	1/17/2020	5	25	Mobilization and Site Preparation, Import and Stockpile Materials for Construction (excluding soil for AOC-2/3 cap)
2	HBW and PRB construction	Building Construction	1/20/2020	2/28/2020	5	30	Hydrualic Barrier Wall, French Drain and PRB installation- Performance Moitoring Well and Piezometer Installation
3	AOC-1 Cap Paving	Paving	1/20/2020	1/31/2020	5	10	AOC-1 Cap Installation
4	Performance Monitoring Well / Piezometer Installations	Trenching	3/2/2020	3/27/2020	5	20	
5	Hauling Hazardous Waste	Site Preparation	3/27/2020	3/27/2020	5	1	
6	AOC-2/-3 Clean Zone Excavation	Trenching	3/30/2020	4/3/2020	5	5	Excavating 100ft Clean Zone
7	Cap Installation - AOC-2/-3	Building Construction	4/6/2020	5/29/2020	5	40	AOC-2/-3 Cap installation
8	Grading for Cap Skirt	Grading	6/1/2020	6/5/2020	5	5	
9	Cap skirt paving -AOC-2/3 and Paving AOC-1	Paving	6/8/2020	6/19/2020	5	10	Asphault Skirt Installation and paving 1.6 acres in AOC-1

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Forklifts	2	8.00	89	0.20
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
HBW and PRB construction	Forklifts	2	6.00	89	0.20
HBW and PRB construction	Generator Sets	1	8.00	84	0.74

HBW and PRB construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
AOC-1 Cap Paving	Pavers	2	8.00	130	0.42
AOC-1 Cap Paving	Paving Equipment	2	8.00	132	0.36
AOC-1 Cap Paving	Rollers	2	8.00	80	0.38
Performance Monitoring Well / Piezometer Installations	Bore/Drill Rigs	1	8.00	221	0.50
Hauling Hazardous Waste	Rubber Tired Dozers	0	8.00	247	0.40
Hauling Hazardous Waste	Tractors/Loaders/Backhoes	0	8.00	97	0.37
AOC-2/-3 Clean Zone Excavation	Excavators	2	8.00	158	0.38
Cap Installation - AOC-2/-3	Cranes	0	7.00	231	0.29
Cap Installation - AOC-2/-3	Excavators	2	8.00	158	0.38
Cap Installation - AOC-2/-3	Forklifts	3	8.00	89	0.20
Cap Installation - AOC-2/-3	Generator Sets	1	8.00	84	0.74
Cap Installation - AOC-2/-3	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Cap Installation - AOC-2/-3	Welders	0	8.00	46	0.45
Grading for Cap Skirt	Excavators	1	8.00	158	0.38
Grading for Cap Skirt	Graders	1	8.00	187	0.41
Grading for Cap Skirt	Rubber Tired Dozers	1	8.00	247	0.40
Grading for Cap Skirt	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Cap skirt paving -AOC-2/3 and Paving AOC-1	Cement and Mortar Mixers	0		9	0.56
Cap skirt paving -AOC-2/3 and Paving AOC-1	Pavers	2	8.00	130	0.42
Cap skirt paving -AOC-2/3 and Paving AOC-1	Paving Equipment	2	8.00	132	0.36
Cap skirt paving -AOC-2/3 and Paving AOC-1	Rollers	2	8.00	80	0.38
Cap skirt paving -AOC-2/3 and Paving AOC-1	Tractors/Loaders/Backhoes	0		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
Site Preparation	3	8.00	0.00	544.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT
HBW and PRB construction	5	10.00	0.00	21.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT
AOC-1 Cap Paving	6	15.00	0.00	80.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT
Performance Monitoring Well / Piez	1	5.00	0.00	80.00	10.80	7.30	15.00	LD_Mix	HDT_Mix	HHDT
Hauling Hazardous Waste	0	0.00	0.00	4.00	10.80	7.30	635.00	LD_Mix	HDT_Mix	HHDT
AOC-2/-3 Clean Zone Excavation	2	5.00	0.00	406.00	10.80	7.30	0.25	LD_Mix	HDT_Mix	HHDT
Cap Installation - AOC-2/-3	9	10.00	0.00	3,400.00	10.80	7.30	33.00	LD_Mix	HDT_Mix	HHDT
Grading for Cap Skirt	6	15.00	0.00	0.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT
Cap skirt paving - AOC-2/3 and Paving A	6	15.00	0.00	82.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3200e-003	0.0312	0.0282	4.0000e-005		2.2600e-003	2.2600e-003		2.0800e-003	2.0800e-003	0.0000	3.3213	3.3213	1.0500e-003	0.0000	3.3476
Total	**3.3200e-003**	**0.0312**	**0.0282**	**4.0000e-005**	**0.0000**	**2.2600e-003**	**2.2600e-003**	**0.0000**	**2.0800e-003**	**2.0800e-003**	**0.0000**	**3.3213**	**3.3213**	**1.0500e-003**	**0.0000**	**3.3476**

3.2 Site Preparation - 2019

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	2.5800e-003	0.0831	0.0170	2.4000e-004	9.9800e-003	3.7000e-004	0.0104	2.6100e-003	3.6000e-004	2.9700e-003	0.0000	23.4111	23.4111	1.0100e-003	0.0000	23.4364
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	1.7000e-004	1.3000e-004	1.3100e-003	0.0000	3.8000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3431	0.3431	1.0000e-005	0.0000	0.3433
Total	**2.7500e-003**	**0.0832**	**0.0183**	**2.4000e-004**	**0.0104**	**3.7000e-004**	**0.0107**	**2.7100e-003**	**3.6000e-004**	**3.0700e-003**	**0.0000**	**23.7542**	**23.7542**	**1.0200e-003**	**0.0000**	**23.7797**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3200e-003	0.0312	0.0282	4.0000e-005		2.2600e-003	2.2600e-003		2.0800e-003	2.0800e-003	0.0000	3.3213	3.3213	1.0500e-003	0.0000	3.3476
Total	**3.3200e-003**	**0.0312**	**0.0282**	**4.0000e-005**	**0.0000**	**2.2600e-003**	**2.2600e-003**	**0.0000**	**2.0800e-003**	**2.0800e-003**	**0.0000**	**3.3213**	**3.3213**	**1.0500e-003**	**0.0000**	**3.3476**

3.2 Site Preparation - 2019

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	2.5800e-003	0.0831	0.0170	2.4000e-004	9.9800e-003	3.7000e-004	0.0104	2.6100e-003	3.6000e-004	2.9700e-003	0.0000	23.4111	23.4111	1.0100e-003	0.0000	23.4364
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	1.7000e-004	1.3000e-004	1.3100e-003	0.0000	3.8000e-004	0.0000	3.8000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3431	0.3431	1.0000e-005	0.0000	0.3433
Total	**2.7500e-003**	**0.0832**	**0.0183**	**2.4000e-004**	**0.0104**	**3.7000e-004**	**0.0107**	**2.7100e-003**	**3.6000e-004**	**3.0700e-003**	**0.0000**	**23.7542**	**23.7542**	**1.0200e-003**	**0.0000**	**23.7797**

3.2 Site Preparation - 2020

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2300e-003	0.0306	0.0302	4.0000e-005		2.1200e-003	2.1200e-003		1.9500e-003	1.9500e-003	0.0000	3.5193	3.5193	1.1400e-003	0.0000	3.5478
Total	**3.2300e-003**	**0.0306**	**0.0302**	**4.0000e-005**	**0.0000**	**2.1200e-003**	**2.1200e-003**	**0.0000**	**1.9500e-003**	**1.9500e-003**	**0.0000**	**3.5193**	**3.5193**	**1.1400e-003**	**0.0000**	**3.5478**

3.2 Site Preparation - 2020

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	2.5700e-003	0.0833	0.0179	2.6000e-004	0.0101	3.2000e-004	0.0104	2.6500e-003	3.1000e-004	2.9600e-003	0.0000	25.0595	25.0595	1.0800e-003	0.0000	25.0864
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	1.7000e-004	1.2000e-004	1.2800e-003	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3600	0.3600	1.0000e-005	0.0000	0.3602
Total	**2.7400e-003**	**0.0835**	**0.0192**	**2.6000e-004**	**0.0105**	**3.2000e-004**	**0.0108**	**2.7600e-003**	**3.1000e-004**	**3.0700e-003**	**0.0000**	**25.4195**	**25.4195**	**1.0900e-003**	**0.0000**	**25.4466**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2300e-003	0.0306	0.0302	4.0000e-005		2.1200e-003	2.1200e-003		1.9500e-003	1.9500e-003	0.0000	3.5193	3.5193	1.1400e-003	0.0000	3.5478
Total	**3.2300e-003**	**0.0306**	**0.0302**	**4.0000e-005**	**0.0000**	**2.1200e-003**	**2.1200e-003**	**0.0000**	**1.9500e-003**	**1.9500e-003**	**0.0000**	**3.5193**	**3.5193**	**1.1400e-003**	**0.0000**	**3.5478**

3.2 Site Preparation - 2020

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	2.5700e-003	0.0833	0.0179	2.6000e-004	0.0101	3.2000e-004	0.0104	2.6500e-003	3.1000e-004	2.9600e-003	0.0000	25.0595	25.0595	1.0800e-003	0.0000	25.0864
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	1.7000e-004	1.2000e-004	1.2800e-003	0.0000	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3600	0.3600	1.0000e-005	0.0000	0.3602
Total	**2.7400e-003**	**0.0835**	**0.0192**	**2.6000e-004**	**0.0105**	**3.2000e-004**	**0.0108**	**2.7600e-003**	**3.1000e-004**	**3.0700e-003**	**0.0000**	**25.4195**	**25.4195**	**1.0900e-003**	**0.0000**	**25.4466**

3.3 HBW and PRB construction - 2020

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	0.0155	0.1445	0.1505	2.3000e-004		9.1100e-003	9.1100e-003		8.6200e-003	8.6200e-003	0.0000	19.6852	19.6852	4.1000e-003	0.0000	19.7878
Total	**0.0155**	**0.1445**	**0.1505**	**2.3000e-004**		**9.1100e-003**	**9.1100e-003**		**8.6200e-003**	**8.6200e-003**	**0.0000**	**19.6852**	**19.6852**	**4.1000e-003**	**0.0000**	**19.7878**

3.3 HBW and PRB construction - 2020

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-004	6.1900e-003	1.3300e-003	2.0000e-005	4.4000e-004	2.0000e-005	4.7000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.8603	1.8603	8.0000e-005	0.0000	1.8623
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	5.0000e-004	3.6000e-004	3.6800e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0384	1.0384	3.0000e-005	0.0000	1.0391
Total	**6.9000e-004**	**6.5500e-003**	**5.0100e-003**	**3.0000e-005**	**1.6300e-003**	**3.0000e-005**	**1.6600e-003**	**4.4000e-004**	**3.0000e-005**	**4.6000e-004**	**0.0000**	**2.8988**	**2.8988**	**1.1000e-004**	**0.0000**	**2.9014**

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	0.0155	0.1445	0.1505	2.3000e-004		9.1100e-003	9.1100e-003		8.6200e-003	8.6200e-003	0.0000	19.6852	19.6852	4.1000e-003	0.0000	19.7878
Total	**0.0155**	**0.1445**	**0.1505**	**2.3000e-004**		**9.1100e-003**	**9.1100e-003**		**8.6200e-003**	**8.6200e-003**	**0.0000**	**19.6852**	**19.6852**	**4.1000e-003**	**0.0000**	**19.7878**

3.3 HBW and PRB construction - 2020

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-004	6.1900e-003	1.3300e-003	2.0000e-005	4.4000e-004	2.0000e-005	4.7000e-004	1.2000e-004	2.0000e-005	1.4000e-004	0.0000	1.8603	1.8603	8.0000e-005	0.0000	1.8623
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	5.0000e-004	3.6000e-004	3.6800e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.1900e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0384	1.0384	3.0000e-005	0.0000	1.0391
Total	**6.9000e-004**	**6.5500e-003**	**5.0100e-003**	**3.0000e-005**	**1.6300e-003**	**3.0000e-005**	**1.6600e-003**	**4.4000e-004**	**3.0000e-005**	**4.6000e-004**	**0.0000**	**2.8988**	**2.8988**	**1.1000e-004**	**0.0000**	**2.9014**

3.4 AOC-1 Cap Paving - 2020

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	6.7800e-003	0.0703	0.0733	1.1000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003	0.0000	10.0141	10.0141	3.2400e-003	0.0000	10.0951
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7800e-003**	**0.0703**	**0.0733**	**1.1000e-004**		**3.7600e-003**	**3.7600e-003**		**3.4600e-003**	**3.4600e-003**	**0.0000**	**10.0141**	**10.0141**	**3.2400e-003**	**0.0000**	**10.0951**

3.4 AOC-1 Cap Paving - 2020

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	7.3000e-004	0.0236	5.0500e-003	7.0000e-005	1.6900e-003	9.0000e-005	1.7800e-003	4.6000e-004	9.0000e-005	5.5000e-004	0.0000	7.0870	7.0870	3.0000e-004	0.0000	7.0946
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	2.5000e-004	1.8000e-004	1.8400e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5192	0.5192	1.0000e-005	0.0000	0.5195
Total	**9.8000e-004**	**0.0238**	**6.8900e-003**	**8.0000e-005**	**2.2800e-003**	**9.0000e-005**	**2.3800e-003**	**6.2000e-004**	**9.0000e-005**	**7.1000e-004**	**0.0000**	**7.6062**	**7.6062**	**3.1000e-004**	**0.0000**	**7.6141**

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	6.7800e-003	0.0703	0.0733	1.1000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003	0.0000	10.0141	10.0141	3.2400e-003	0.0000	10.0951
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7800e-003**	**0.0703**	**0.0733**	**1.1000e-004**		**3.7600e-003**	**3.7600e-003**		**3.4600e-003**	**3.4600e-003**	**0.0000**	**10.0141**	**10.0141**	**3.2400e-003**	**0.0000**	**10.0951**

3.4 AOC-1 Cap Paving - 2020

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	7.3000e-004	0.0236	5.0500e-003	7.0000e-005	1.6900e-003	9.0000e-005	1.7800e-003	4.6000e-004	9.0000e-005	5.5000e-004	0.0000	7.0870	7.0870	3.0000e-004	0.0000	7.0946
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	2.5000e-004	1.8000e-004	1.8400e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5192	0.5192	1.0000e-005	0.0000	0.5195
Total	**9.8000e-004**	**0.0238**	**6.8900e-003**	**8.0000e-005**	**2.2800e-003**	**9.0000e-005**	**2.3800e-003**	**6.2000e-004**	**9.0000e-005**	**7.1000e-004**	**0.0000**	**7.6062**	**7.6062**	**3.1000e-004**	**0.0000**	**7.6141**

3.5 Performance Monitoring Well / Piezometer Installations - 2020

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	2.7800e-003	0.0352	0.0208	9.0000e-005		1.0100e-003	1.0100e-003		9.3000e-004	9.3000e-004	0.0000	8.2536	8.2536	2.6700e-003	0.0000	8.3204
Total	**2.7800e-003**	**0.0352**	**0.0208**	**9.0000e-005**		**1.0100e-003**	**1.0100e-003**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**8.2536**	**8.2536**	**2.6700e-003**	**0.0000**	**8.3204**

3.5 Performance Monitoring Well / Piezometer Installations - 2020

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	2.7000e-004	9.7200e-003	1.9000e-003	2.0000e-005	5.1000e-004	3.0000e-005	5.4000e-004	1.4000e-004	3.0000e-005	1.7000e-004	0.0000	2.3953	2.3953	1.3000e-004	0.0000	2.3986
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	1.7000e-004	1.2000e-004	1.2300e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3461	0.3461	1.0000e-005	0.0000	0.3464
Total	**4.4000e-004**	**9.8400e-003**	**3.1300e-003**	**2.0000e-005**	**9.1000e-004**	**3.0000e-005**	**9.4000e-004**	**2.5000e-004**	**3.0000e-005**	**2.8000e-004**	**0.0000**	**2.7414**	**2.7414**	**1.4000e-004**	**0.0000**	**2.7449**

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	2.7800e-003	0.0352	0.0208	9.0000e-005		1.0100e-003	1.0100e-003		9.3000e-004	9.3000e-004	0.0000	8.2536	8.2536	2.6700e-003	0.0000	8.3204
Total	**2.7800e-003**	**0.0352**	**0.0208**	**9.0000e-005**		**1.0100e-003**	**1.0100e-003**		**9.3000e-004**	**9.3000e-004**	**0.0000**	**8.2536**	**8.2536**	**2.6700e-003**	**0.0000**	**8.3204**

3.5 Performance Monitoring Well / Piezometer Installations - 2020

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	2.7000e-004	9.7200e-003	1.9000e-003	2.0000e-005	5.1000e-004	3.0000e-005	5.4000e-004	1.4000e-004	3.0000e-005	1.7000e-004	0.0000	2.3953	2.3953	1.3000e-004	0.0000	2.3986
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	1.7000e-004	1.2000e-004	1.2300e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3461	0.3461	1.0000e-005	0.0000	0.3464
Total	**4.4000e-004**	**9.8400e-003**	**3.1300e-003**	**2.0000e-005**	**9.1000e-004**	**3.0000e-005**	**9.4000e-004**	**2.5000e-004**	**3.0000e-005**	**2.8000e-004**	**0.0000**	**2.7414**	**2.7414**	**1.4000e-004**	**0.0000**	**2.7449**

3.6 Hauling Hazardous Waste - 2020

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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	**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**

3.6 Hauling Hazardous Waste - 2020

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	4.2000e-004	0.0128	2.8900e-003	4.0000e-005	1.0700e-003	6.0000e-005	1.1300e-003	2.9000e-004	5.0000e-005	3.5000e-004	0.0000	4.2753	4.2753	1.6000e-004	0.0000	4.2792
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	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
Total	**4.2000e-004**	**0.0128**	**2.8900e-003**	**4.0000e-005**	**1.0700e-003**	**6.0000e-005**	**1.1300e-003**	**2.9000e-004**	**5.0000e-005**	**3.5000e-004**	**0.0000**	**4.2753**	**4.2753**	**1.6000e-004**	**0.0000**	**4.2792**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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	**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**

3.6 Hauling Hazardous Waste - 2020

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	4.2000e-004	0.0128	2.8900e-003	4.0000e-005	1.0700e-003	6.0000e-005	1.1300e-003	2.9000e-004	5.0000e-005	3.5000e-004	0.0000	4.2753	4.2753	1.6000e-004	0.0000	4.2792
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	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
Total	**4.2000e-004**	**0.0128**	**2.8900e-003**	**4.0000e-005**	**1.0700e-003**	**6.0000e-005**	**1.1300e-003**	**2.9000e-004**	**5.0000e-005**	**3.5000e-004**	**0.0000**	**4.2753**	**4.2753**	**1.6000e-004**	**0.0000**	**4.2792**

3.7 AOC-2/-3 Clean Zone Excavation - 2020

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	1.2200e-003	0.0121	0.0163	3.0000e-005		5.8000e-004	5.8000e-004		5.4000e-004	5.4000e-004	0.0000	2.2685	2.2685	7.3000e-004	0.0000	2.2868
Total	**1.2200e-003**	**0.0121**	**0.0163**	**3.0000e-005**		**5.8000e-004**	**5.8000e-004**		**5.4000e-004**	**5.4000e-004**	**0.0000**	**2.2685**	**2.2685**	**7.3000e-004**	**0.0000**	**2.2868**

3.7 AOC-2/-3 Clean Zone Excavation - 2020

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	3.8000e-004	0.0197	2.9000e-003	2.0000e-005	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	3.0000e-005	0.0000	2.1215	2.1215	3.1000e-004	0.0000	2.1293
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	3.0000e-005	3.1000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0865	0.0865	0.0000	0.0000	0.0866
Total	**4.2000e-004**	**0.0197**	**3.2100e-003**	**2.0000e-005**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**4.0000e-005**	**1.0000e-005**	**6.0000e-005**	**0.0000**	**2.2081**	**2.2081**	**3.1000e-004**	**0.0000**	**2.2158**

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	1.2200e-003	0.0121	0.0163	3.0000e-005		5.8000e-004	5.8000e-004		5.4000e-004	5.4000e-004	0.0000	2.2685	2.2685	7.3000e-004	0.0000	2.2868
Total	**1.2200e-003**	**0.0121**	**0.0163**	**3.0000e-005**		**5.8000e-004**	**5.8000e-004**		**5.4000e-004**	**5.4000e-004**	**0.0000**	**2.2685**	**2.2685**	**7.3000e-004**	**0.0000**	**2.2868**

3.7 AOC-2/-3 Clean Zone Excavation - 2020

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	3.8000e-004	0.0197	2.9000e-003	2.0000e-005	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	3.0000e-005	0.0000	2.1215	2.1215	3.1000e-004	0.0000	2.1293
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	3.0000e-005	3.1000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0865	0.0865	0.0000	0.0000	0.0866
Total	**4.2000e-004**	**0.0197**	**3.2100e-003**	**2.0000e-005**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**4.0000e-005**	**1.0000e-005**	**6.0000e-005**	**0.0000**	**2.2081**	**2.2081**	**3.1000e-004**	**0.0000**	**2.2158**

3.8 Cap Installation - AOC-2/-3 - 2020

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	0.0374	0.3545	0.3953	5.9000e-004		0.0214	0.0214		0.0200	0.0200	0.0000	51.8344	51.8344	0.0137	0.0000	52.1780
Total	**0.0374**	**0.3545**	**0.3953**	**5.9000e-004**		**0.0214**	**0.0214**		**0.0200**	**0.0200**	**0.0000**	**51.8344**	**51.8344**	**0.0137**	**0.0000**	**52.1780**

3.8 Cap Installation - AOC-2/-3 - 2020

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	0.0214	0.7157	0.1497	2.1100e-003	0.0474	2.5800e-003	0.0499	0.0130	2.4700e-003	0.0155	0.0000	204.3453	204.3453	9.4200e-003	0.0000	204.5807
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	6.6000e-004	4.7000e-004	4.9100e-003	2.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3846	1.3846	3.0000e-005	0.0000	1.3854
Total	**0.0221**	**0.7161**	**0.1546**	**2.1300e-003**	**0.0489**	**2.5900e-003**	**0.0515**	**0.0134**	**2.4800e-003**	**0.0159**	**0.0000**	**205.7299**	**205.7299**	**9.4500e-003**	**0.0000**	**205.9661**

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	0.0374	0.3545	0.3953	5.9000e-004		0.0214	0.0214		0.0200	0.0200	0.0000	51.8343	51.8343	0.0137	0.0000	52.1779
Total	**0.0374**	**0.3545**	**0.3953**	**5.9000e-004**		**0.0214**	**0.0214**		**0.0200**	**0.0200**	**0.0000**	**51.8343**	**51.8343**	**0.0137**	**0.0000**	**52.1779**

3.8 Cap Installation - AOC-2/-3 - 2020

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	0.0214	0.7157	0.1497	2.1100e-003	0.0474	2.5800e-003	0.0499	0.0130	2.4700e-003	0.0155	0.0000	204.3453	204.3453	9.4200e-003	0.0000	204.5807
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	6.6000e-004	4.7000e-004	4.9100e-003	2.0000e-005	1.5800e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3846	1.3846	3.0000e-005	0.0000	1.3854
Total	**0.0221**	**0.7161**	**0.1546**	**2.1300e-003**	**0.0489**	**2.5900e-003**	**0.0515**	**0.0134**	**2.4800e-003**	**0.0159**	**0.0000**	**205.7299**	**205.7299**	**9.4500e-003**	**0.0000**	**205.9661**

3.9 Grading for Cap Skirt - 2020

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					0.0204	0.0000	0.0204	8.8500e-003	0.0000	8.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0700e-003	0.0660	0.0401	7.0000e-005		3.1800e-003	3.1800e-003		2.9300e-003	2.9300e-003	0.0000	6.5147	6.5147	2.1100e-003	0.0000	6.5674
Total	**6.0700e-003**	**0.0660**	**0.0401**	**7.0000e-005**	**0.0204**	**3.1800e-003**	**0.0235**	**8.8500e-003**	**2.9300e-003**	**0.0118**	**0.0000**	**6.5147**	**6.5147**	**2.1100e-003**	**0.0000**	**6.5674**

3.9 Grading for Cap Skirt - 2020

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	1.2000e-004	9.0000e-005	9.2000e-004	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2596	0.2596	1.0000e-005	0.0000	0.2598
Total	**1.2000e-004**	**9.0000e-005**	**9.2000e-004**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2596**	**0.2596**	**1.0000e-005**	**0.0000**	**0.2598**

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					0.0204	0.0000	0.0204	8.8500e-003	0.0000	8.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0700e-003	0.0660	0.0401	7.0000e-005		3.1800e-003	3.1800e-003		2.9300e-003	2.9300e-003	0.0000	6.5147	6.5147	2.1100e-003	0.0000	6.5674
Total	**6.0700e-003**	**0.0660**	**0.0401**	**7.0000e-005**	**0.0204**	**3.1800e-003**	**0.0235**	**8.8500e-003**	**2.9300e-003**	**0.0118**	**0.0000**	**6.5147**	**6.5147**	**2.1100e-003**	**0.0000**	**6.5674**

3.9 Grading for Cap Skirt - 2020

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	1.2000e-004	9.0000e-005	9.2000e-004	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2596	0.2596	1.0000e-005	0.0000	0.2598
Total	**1.2000e-004**	**9.0000e-005**	**9.2000e-004**	**0.0000**	**3.0000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2596**	**0.2596**	**1.0000e-005**	**0.0000**	**0.2598**

3.10 Cap skirt paving -AOC-2/3 and Paving AOC-1 - 2020

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	6.7800e-003	0.0703	0.0733	1.1000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003	0.0000	10.0141	10.0141	3.2400e-003	0.0000	10.0951
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7800e-003**	**0.0703**	**0.0733**	**1.1000e-004**		**3.7600e-003**	**3.7600e-003**		**3.4600e-003**	**3.4600e-003**	**0.0000**	**10.0141**	**10.0141**	**3.2400e-003**	**0.0000**	**10.0951**

3.10 Cap skirt paving -AOC-2/3 and Paving AOC-1 - 2020

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	7.4000e-004	0.0242	5.1800e-003	7.0000e-005	1.7300e-003	9.0000e-005	1.8200e-003	4.8000e-004	9.0000e-005	5.6000e-004	0.0000	7.2641	7.2641	3.1000e-004	0.0000	7.2719
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	2.5000e-004	1.8000e-004	1.8400e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5192	0.5192	1.0000e-005	0.0000	0.5195
Total	**9.9000e-004**	**0.0243**	**7.0200e-003**	**8.0000e-005**	**2.3200e-003**	**9.0000e-005**	**2.4200e-003**	**6.4000e-004**	**9.0000e-005**	**7.2000e-004**	**0.0000**	**7.7833**	**7.7833**	**3.2000e-004**	**0.0000**	**7.7915**

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	6.7800e-003	0.0703	0.0733	1.1000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003	0.0000	10.0141	10.0141	3.2400e-003	0.0000	10.0951
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7800e-003**	**0.0703**	**0.0733**	**1.1000e-004**		**3.7600e-003**	**3.7600e-003**		**3.4600e-003**	**3.4600e-003**	**0.0000**	**10.0141**	**10.0141**	**3.2400e-003**	**0.0000**	**10.0951**

3.10 Cap skirt paving -AOC-2/3 and Paving AOC-1 - 2020

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	7.4000e-004	0.0242	5.1800e-003	7.0000e-005	1.7300e-003	9.0000e-005	1.8200e-003	4.8000e-004	9.0000e-005	5.6000e-004	0.0000	7.2641	7.2641	3.1000e-004	0.0000	7.2719
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	2.5000e-004	1.8000e-004	1.8400e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5192	0.5192	1.0000e-005	0.0000	0.5195
Total	**9.9000e-004**	**0.0243**	**7.0200e-003**	**8.0000e-005**	**2.3200e-003**	**9.0000e-005**	**2.4200e-003**	**6.4000e-004**	**9.0000e-005**	**7.2000e-004**	**0.0000**	**7.7833**	**7.7833**	**3.2000e-004**	**0.0000**	**7.7915**

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	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
Unmitigated	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	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
User Defined Industrial	0.573139	0.040894	0.193976	0.114604	0.017740	0.005371	0.017133	0.024527	0.002545	0.002442	0.005942	0.000877	0.000812

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	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
NaturalGas Unmitigated	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

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					
User Defined Industrial	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		**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**

5.2 Energy by Land Use - NaturalGas

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					
User Defined Industrial	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		**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**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	26.2910	0.0000	0.0000	26.2910

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Grassland	0 / 6.1	26.2910	0.0000	0.0000	26.2910
Total		**26.2910**	**0.0000**	**0.0000**	**26.2910**

Chemtrade

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	8.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project is construction only and construction area is 8 acres.

Construction Phase - Construction dates follow contractors estimates for each phase

Off-road Equipment - ..

Off-road Equipment - Performing excavation using excavators

Off-road Equipment - Cap installation will not require cranes or welders.

Off-road Equipment - Cap installation will not require cranes nor welders

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Hauling Hazardous Waste to disposal facility

Off-road Equipment - Proposed equipment

Off-road Equipment -

Off-road Equipment - Site prep and material import will use 2 forklifts

Trips and VMT - Site preparation includes hauling all offsite materials except the Clean Import Fill which will be done during the Cap Install. Hauling during excavation will be onsite and ~0.25 miles.

Grading - Areas that require grading are 7.5 acres total, thus 20 acres is a conservative estimate for all grading work

Land Use Change -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	25.00
tblConstructionPhase	NumDays	230.00	30.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	230.00	40.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	20.00	10.00
tblGrading	AcresOfGrading	2.50	10.00
tblLandUse	LotAcreage	0.00	8.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	15.00
tblTripsAndVMT	HaulingTripLength	20.00	635.00
tblTripsAndVMT	HaulingTripLength	20.00	0.25
tblTripsAndVMT	HaulingTripLength	20.00	33.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	544.00
tblTripsAndVMT	HaulingTripNumber	0.00	21.00
tblTripsAndVMT	HaulingTripNumber	0.00	80.00
tblTripsAndVMT	HaulingTripNumber	0.00	80.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	406.00
tblTripsAndVMT	HaulingTripNumber	0.00	3,400.00
tblTripsAndVMT	HaulingTripNumber	0.00	82.00

tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	3.00	5.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00

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					
2019	1.0106	18.6567	7.7360	0.0472	1.7945	0.4398	2.2343	0.4689	0.4068	0.8757	0.0000	4,991.9425	4,991.9425	0.3784	0.0000	5,001.4014
2020	2.9685	52.6125	27.3859	0.1362	8.2663	1.3813	9.5405	3.5719	1.2873	4.7442	0.0000	14,252.5830	14,252.5830	1.2707	0.0000	14,284.3507
Maximum	**2.9685**	**52.6125**	**27.3859**	**0.1362**	**8.2663**	**1.3813**	**9.5405**	**3.5719**	**1.2873**	**4.7442**	**0.0000**	**14,252.5830**	**14,252.5830**	**1.2707**	**0.0000**	**14,284.3507**

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					
2019	1.0106	18.6567	7.7360	0.0472	1.7945	0.4398	2.2343	0.4689	0.4068	0.8757	0.0000	4,991.9425	4,991.9425	0.3784	0.0000	5,001.4014
2020	2.9685	52.6125	27.3859	0.1362	8.2663	1.3813	9.5405	3.5719	1.2873	4.7442	0.0000	14,252.5830	14,252.5830	1.2707	0.0000	14,284.3507
Maximum	**2.9685**	**52.6125**	**27.3859**	**0.1362**	**8.2663**	**1.3813**	**9.5405**	**3.5719**	**1.2873**	**4.7442**	**0.0000**	**14,252.5830**	**14,252.5830**	**1.2707**	**0.0000**	**14,284.3507**

	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**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	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
Mobile	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	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	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
Mobile	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	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

	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	Site Preparation	Site Preparation	12/16/2019	1/17/2020	5	25	Mobilization and Site Preparation, Import and Stockpile Materials for Construction (excluding soil for AOC-2/3 cap)
2	HBW and PRB construction	Building Construction	1/20/2020	2/28/2020	5	30	Hydrualic Barrier Wall, French Drain and PRB installation- Performance Moitoring Well and Piezometer Installation
3	AOC-1 Cap Paving	Paving	1/20/2020	1/31/2020	5	10	AOC-1 Cap Installation
4	Performance Monitoring Well / Piezometer Installations	Trenching	3/2/2020	3/27/2020	5	20	
5	Hauling Hazardous Waste	Site Preparation	3/27/2020	3/27/2020	5	1	
6	AOC-2/-3 Clean Zone Excavation	Trenching	3/30/2020	4/3/2020	5	5	Excavating 100ft Clean Zone
7	Cap Installation - AOC-2/-3	Building Construction	4/6/2020	5/29/2020	5	40	AOC-2/-3 Cap installation
8	Grading for Cap Skirt	Grading	6/1/2020	6/5/2020	5	5	
9	Cap skirt paving -AOC-2/3 and Paving AOC-1	Paving	6/8/2020	6/19/2020	5	10	Asphault Skirt Installation and paving 1.6 acres in AOC-1

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Chemtrade - Bay Area AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Forklifts	2	8.00	89	0.20
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
HBW and PRB construction	Forklifts	2	6.00	89	0.20
HBW and PRB construction	Generator Sets	1	8.00	84	0.74
HBW and PRB construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
AOC-1 Cap Paving	Pavers	2	8.00	130	0.42
AOC-1 Cap Paving	Paving Equipment	2	8.00	132	0.36
AOC-1 Cap Paving	Rollers	2	8.00	80	0.38
Performance Monitoring Well / Piezometer Installations	Bore/Drill Rigs	1	8.00	221	0.50
Hauling Hazardous Waste	Rubber Tired Dozers	0	8.00	247	0.40
Hauling Hazardous Waste	Tractors/Loaders/Backhoes	0	8.00	97	0.37
AOC-2/-3 Clean Zone Excavation	Excavators	2	8.00	158	0.38
Cap Installation - AOC-2/-3	Cranes	0	7.00	231	0.29
Cap Installation - AOC-2/-3	Excavators	2	8.00	158	0.38
Cap Installation - AOC-2/-3	Forklifts	3	8.00	89	0.20
Cap Installation - AOC-2/-3	Generator Sets	1	8.00	84	0.74
Cap Installation - AOC-2/-3	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Cap Installation - AOC-2/-3	Welders	0	8.00	46	0.45
Grading for Cap Skirt	Excavators	1	8.00	158	0.38
Grading for Cap Skirt	Graders	1	8.00	187	0.41
Grading for Cap Skirt	Rubber Tired Dozers	1	8.00	247	0.40
Grading for Cap Skirt	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Cap skirt paving -AOC-2/3 and Paving AOC-1	Cement and Mortar Mixers	0		9	0.56
Cap skirt paving -AOC-2/3 and Paving AOC-1	Pavers	2	8.00	130	0.42

Cap skirt paving -AOC-2/3 and Paving AOC-1	Paving Equipment	2	8.00	132	0.36
Cap skirt paving -AOC-2/3 and Paving AOC-1	Rollers	2	8.00	80	0.38
Cap skirt paving -AOC-2/3 and Paving AOC-1	Tractors/Loaders/Backhoes	0		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
Site Preparation	3	8.00	0.00	544.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT
HBW and PRB construction	5	10.00	0.00	21.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT
AOC-1 Cap Paving	6	15.00	0.00	80.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT
Performance Monitoring Well / Piez	1	5.00	0.00	80.00	10.80	7.30	15.00	LD_Mix	HDT_Mix	HHDT
Hauling Hazardous Waste	0	0.00	0.00	4.00	10.80	7.30	635.00	LD_Mix	HDT_Mix	HHDT
AOC-2/-3 Clean Zone Excavation	2	5.00	0.00	406.00	10.80	7.30	0.25	LD_Mix	HDT_Mix	HHDT
Cap Installation - AOC-2/-3	9	10.00	0.00	3,400.00	10.80	7.30	33.00	LD_Mix	HDT_Mix	HHDT
Grading for Cap Skirt	6	15.00	0.00	0.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT
Cap skirt paving - AOC-2/3 and Paving A	6	15.00	0.00	82.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5527	5.1940	4.6911	6.1600e-003		0.3773	0.3773		0.3472	0.3472		610.1827	610.1827	0.1931		615.0091
Total	**0.5527**	**5.1940**	**4.6911**	**6.1600e-003**	**0.0000**	**0.3773**	**0.3773**	**0.0000**	**0.3472**	**0.3472**		**610.1827**	**610.1827**	**0.1931**		**615.0091**

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	0.4275	13.4437	2.8064	0.0404	1.7288	0.0620	1.7908	0.4514	0.0593	0.5107		4,313.9664	4,313.9664	0.1835		4,318.5539
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	0.0304	0.0191	0.2386	6.8000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.0000e-004	0.0178		67.7934	67.7934	1.8000e-003		67.8385
Total	**0.4579**	**13.4627**	**3.0449**	**0.0411**	**1.7945**	**0.0624**	**1.8569**	**0.4689**	**0.0597**	**0.5285**		**4,381.7598**	**4,381.7598**	**0.1853**		**4,386.3924**

3.2 Site Preparation - 2019

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5527	5.1940	4.6911	6.1600e-003		0.3773	0.3773		0.3472	0.3472	0.0000	610.1827	610.1827	0.1931		615.0091
Total	**0.5527**	**5.1940**	**4.6911**	**6.1600e-003**	**0.0000**	**0.3773**	**0.3773**	**0.0000**	**0.3472**	**0.3472**	**0.0000**	**610.1827**	**610.1827**	**0.1931**		**615.0091**

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	0.4275	13.4437	2.8064	0.0404	1.7288	0.0620	1.7908	0.4514	0.0593	0.5107		4,313.9664	4,313.9664	0.1835		4,318.5539
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	0.0304	0.0191	0.2386	6.8000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.0000e-004	0.0178		67.7934	67.7934	1.8000e-003		67.8385
Total	**0.4579**	**13.4627**	**3.0449**	**0.0411**	**1.7945**	**0.0624**	**1.8569**	**0.4689**	**0.0597**	**0.5285**		**4,381.7598**	**4,381.7598**	**0.1853**		**4,386.3924**

3.2 Site Preparation - 2020

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4975	4.7002	4.6402	6.1600e-003		0.3265	0.3265		0.3003	0.3003		596.8302	596.8302	0.1930		601.6558
Total	**0.4975**	**4.7002**	**4.6402**	**6.1600e-003**	**0.0000**	**0.3265**	**0.3265**	**0.0000**	**0.3003**	**0.3003**		**596.8302**	**596.8302**	**0.1930**		**601.6558**

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	0.3930	12.4487	2.7231	0.0399	1.6136	0.0494	1.6629	0.4231	0.0472	0.4704		4,262.8037	4,262.8037	0.1809		4,267.3257
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	0.0278	0.0168	0.2146	6.6000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		65.6621	65.6621	1.5800e-003		65.7017
Total	**0.4209**	**12.4655**	**2.9377**	**0.0405**	**1.6793**	**0.0498**	**1.7291**	**0.4406**	**0.0476**	**0.4882**		**4,328.4658**	**4,328.4658**	**0.1825**		**4,333.0274**

3.2 Site Preparation - 2020

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4975	4.7002	4.6402	6.1600e-003		0.3265	0.3265		0.3003	0.3003	0.0000	596.8302	596.8302	0.1930		601.6558
Total	**0.4975**	**4.7002**	**4.6402**	**6.1600e-003**	**0.0000**	**0.3265**	**0.3265**	**0.0000**	**0.3003**	**0.3003**	**0.0000**	**596.8302**	**596.8302**	**0.1930**		**601.6558**

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	0.3930	12.4487	2.7231	0.0399	1.6136	0.0494	1.6629	0.4231	0.0472	0.4704		4,262.8037	4,262.8037	0.1809		4,267.3257
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	0.0278	0.0168	0.2146	6.6000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		65.6621	65.6621	1.5800e-003		65.7017
Total	**0.4209**	**12.4655**	**2.9377**	**0.0405**	**1.6793**	**0.0498**	**1.7291**	**0.4406**	**0.0476**	**0.4882**		**4,328.4658**	**4,328.4658**	**0.1825**		**4,333.0274**

3.3 HBW and PRB construction - 2020

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	1.0341	9.6352	10.0353	0.0151		0.6075	0.6075		0.5746	0.5746		1,446.6178	1,446.6178	0.3015		1,454.1540
Total	**1.0341**	**9.6352**	**10.0353**	**0.0151**		**0.6075**	**0.6075**		**0.5746**	**0.5746**		**1,446.6178**	**1,446.6178**	**0.3015**		**1,454.1540**

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	0.0126	0.4005	0.0876	1.2800e-003	0.0306	1.5900e-003	0.0321	8.3700e-003	1.5200e-003	9.8900e-003		137.1306	137.1306	5.8200e-003		137.2761
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	0.0348	0.0210	0.2683	8.2000e-004	0.0822	5.3000e-004	0.0827	0.0218	4.9000e-004	0.0223		82.0777	82.0777	1.9800e-003		82.1271
Total	**0.0474**	**0.4215**	**0.3559**	**2.1000e-003**	**0.1127**	**2.1200e-003**	**0.1148**	**0.0302**	**2.0100e-003**	**0.0322**		**219.2083**	**219.2083**	**7.8000e-003**		**219.4032**

3.3 HBW and PRB construction - 2020

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	1.0341	9.6352	10.0353	0.0151		0.6075	0.6075		0.5746	0.5746	0.0000	1,446.6178	1,446.6178	0.3015		1,454.1540
Total	**1.0341**	**9.6352**	**10.0353**	**0.0151**		**0.6075**	**0.6075**		**0.5746**	**0.5746**	**0.0000**	**1,446.6178**	**1,446.6178**	**0.3015**		**1,454.1540**

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	0.0126	0.4005	0.0876	1.2800e-003	0.0306	1.5900e-003	0.0321	8.3700e-003	1.5200e-003	9.8900e-003		137.1306	137.1306	5.8200e-003		137.2761
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	0.0348	0.0210	0.2683	8.2000e-004	0.0822	5.3000e-004	0.0827	0.0218	4.9000e-004	0.0223		82.0777	82.0777	1.9800e-003		82.1271
Total	**0.0474**	**0.4215**	**0.3559**	**2.1000e-003**	**0.1127**	**2.1200e-003**	**0.1148**	**0.0302**	**2.0100e-003**	**0.0322**		**219.2083**	**219.2083**	**7.8000e-003**		**219.4032**

3.4 AOC-1 Cap Paving - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

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	0.1445	4.5767	1.0011	0.0147	0.3491	0.0182	0.3673	0.0957	0.0174	0.1130		1,567.2072	1,567.2072	0.0665		1,568.8697
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	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.1966**	**4.6083**	**1.4036**	**0.0159**	**0.4724**	**0.0190**	**0.4913**	**0.1283**	**0.0181**	**0.1464**		**1,690.3237**	**1,690.3237**	**0.0695**		**1,692.0604**

3.4 AOC-1 Cap Paving - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

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	0.1445	4.5767	1.0011	0.0147	0.3491	0.0182	0.3673	0.0957	0.0174	0.1130		1,567.2072	1,567.2072	0.0665		1,568.8697
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	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.1966**	**4.6083**	**1.4036**	**0.0159**	**0.4724**	**0.0190**	**0.4913**	**0.1283**	**0.0181**	**0.1464**		**1,690.3237**	**1,690.3237**	**0.0695**		**1,692.0604**

3.5 Performance Monitoring Well / Piezometer Installations - 2020

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	0.2775	3.5223	2.0808	9.4000e-003		0.1015	0.1015		0.0934	0.0934		909.8069	909.8069	0.2943		917.1631
Total	**0.2775**	**3.5223**	**2.0808**	**9.4000e-003**		**0.1015**	**0.1015**		**0.0934**	**0.0934**		**909.8069**	**909.8069**	**0.2943**		**917.1631**

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	0.0265	0.9554	0.1822	2.4900e-003	0.0524	2.8600e-003	0.0553	0.0144	2.7300e-003	0.0171		266.4317	266.4317	0.0143		266.7897
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	0.0174	0.0105	0.1342	4.1000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		41.0388	41.0388	9.9000e-004		41.0636
Total	**0.0439**	**0.9659**	**0.3164**	**2.9000e-003**	**0.0935**	**3.1300e-003**	**0.0966**	**0.0253**	**2.9800e-003**	**0.0282**		**307.4706**	**307.4706**	**0.0153**		**307.8533**

3.5 Performance Monitoring Well / Piezometer Installations - 2020

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	0.2775	3.5223	2.0808	9.4000e-003		0.1015	0.1015		0.0934	0.0934	0.0000	909.8069	909.8069	0.2943		917.1631
Total	**0.2775**	**3.5223**	**2.0808**	**9.4000e-003**		**0.1015**	**0.1015**		**0.0934**	**0.0934**	**0.0000**	**909.8069**	**909.8069**	**0.2943**		**917.1631**

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	0.0265	0.9554	0.1822	2.4900e-003	0.0524	2.8600e-003	0.0553	0.0144	2.7300e-003	0.0171		266.4317	266.4317	0.0143		266.7897
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	0.0174	0.0105	0.1342	4.1000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		41.0388	41.0388	9.9000e-004		41.0636
Total	**0.0439**	**0.9659**	**0.3164**	**2.9000e-003**	**0.0935**	**3.1300e-003**	**0.0966**	**0.0253**	**2.9800e-003**	**0.0282**		**307.4706**	**307.4706**	**0.0153**		**307.8533**

3.6 Hauling Hazardous Waste - 2020

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	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	**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**

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	0.8375	24.5688	5.8211	0.0881	2.2161	0.1130	2.3290	0.6070	0.1081	0.7151		9,427.7625	9,427.7625	0.3497		9,436.5038
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	0.0000	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	**0.8375**	**24.5688**	**5.8211**	**0.0881**	**2.2161**	**0.1130**	**2.3290**	**0.6070**	**0.1081**	**0.7151**		**9,427.7625**	**9,427.7625**	**0.3497**		**9,436.5038**

3.6 Hauling Hazardous Waste - 2020

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	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	**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**

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	0.8375	24.5688	5.8211	0.0881	2.2161	0.1130	2.3290	0.6070	0.1081	0.7151		9,427.7625	9,427.7625	0.3497		9,436.5038
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	0.0000	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	**0.8375**	**24.5688**	**5.8211**	**0.0881**	**2.2161**	**0.1130**	**2.3290**	**0.6070**	**0.1081**	**0.7151**		**9,427.7625**	**9,427.7625**	**0.3497**		**9,436.5038**

3.7 AOC-2/-3 Clean Zone Excavation - 2020

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	0.4900	4.8253	6.5356	0.0103		0.2337	0.2337		0.2150	0.2150		1,000.2368	1,000.2368	0.3235		1,008.3243
Total	**0.4900**	**4.8253**	**6.5356**	**0.0103**		**0.2337**	**0.2337**		**0.2150**	**0.2150**		**1,000.2368**	**1,000.2368**	**0.3235**		**1,008.3243**

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	0.1456	7.9896	0.9762	9.2200e-003	0.0194	4.8300e-003	0.0243	5.4700e-003	4.6200e-003	0.0101		984.1583	984.1583	0.1288		987.3771
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	0.0174	0.0105	0.1342	4.1000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		41.0388	41.0388	9.9000e-004		41.0636
Total	**0.1630**	**8.0001**	**1.1104**	**9.6300e-003**	**0.0605**	**5.1000e-003**	**0.0656**	**0.0164**	**4.8700e-003**	**0.0212**		**1,025.1971**	**1,025.1971**	**0.1297**		**1,028.4406**

3.7 AOC-2/-3 Clean Zone Excavation - 2020

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	0.4900	4.8253	6.5356	0.0103		0.2337	0.2337		0.2150	0.2150	0.0000	1,000.2368	1,000.2368	0.3235		1,008.3243
Total	**0.4900**	**4.8253**	**6.5356**	**0.0103**		**0.2337**	**0.2337**		**0.2150**	**0.2150**	**0.0000**	**1,000.2368**	**1,000.2368**	**0.3235**		**1,008.3243**

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	0.1456	7.9896	0.9762	9.2200e-003	0.0194	4.8300e-003	0.0243	5.4700e-003	4.6200e-003	0.0101		984.1583	984.1583	0.1288		987.3771
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	0.0174	0.0105	0.1342	4.1000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		41.0388	41.0388	9.9000e-004		41.0636
Total	**0.1630**	**8.0001**	**1.1104**	**9.6300e-003**	**0.0605**	**5.1000e-003**	**0.0656**	**0.0164**	**4.8700e-003**	**0.0212**		**1,025.1971**	**1,025.1971**	**0.1297**		**1,028.4406**

3.8 Cap Installation - AOC-2/-3 - 2020

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	1.8710	17.7224	19.7662	0.0296		1.0694	1.0694		0.9996	0.9996		2,856.8812	2,856.8812	0.7576		2,875.8201
Total	**1.8710**	**17.7224**	**19.7662**	**0.0296**		**1.0694**	**1.0694**		**0.9996**	**0.9996**		**2,856.8812**	**2,856.8812**	**0.7576**		**2,875.8201**

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	1.0628	34.8691	7.3515	0.1058	2.4490	0.1287	2.5776	0.6710	0.1231	0.7941		11,313.6241	11,313.6241	0.5112		11,326.4035
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	0.0348	0.0210	0.2683	8.2000e-004	0.0822	5.3000e-004	0.0827	0.0218	4.9000e-004	0.0223		82.0777	82.0777	1.9800e-003		82.1271
Total	**1.0975**	**34.8902**	**7.6198**	**0.1066**	**2.5311**	**0.1292**	**2.6603**	**0.6928**	**0.1236**	**0.8164**		**11,395.7017**	**11,395.7017**	**0.5132**		**11,408.5306**

3.8 Cap Installation - AOC-2/-3 - 2020

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	1.8710	17.7224	19.7662	0.0296		1.0694	1.0694		0.9996	0.9996	0.0000	2,856.8812	2,856.8812	0.7576		2,875.8201
Total	**1.8710**	**17.7224**	**19.7662**	**0.0296**		**1.0694**	**1.0694**		**0.9996**	**0.9996**	**0.0000**	**2,856.8812**	**2,856.8812**	**0.7576**		**2,875.8201**

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	1.0628	34.8691	7.3515	0.1058	2.4490	0.1287	2.5776	0.6710	0.1231	0.7941		11,313.6241	11,313.6241	0.5112		11,326.4035
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	0.0348	0.0210	0.2683	8.2000e-004	0.0822	5.3000e-004	0.0827	0.0218	4.9000e-004	0.0223		82.0777	82.0777	1.9800e-003		82.1271
Total	**1.0975**	**34.8902**	**7.6198**	**0.1066**	**2.5311**	**0.1292**	**2.6603**	**0.6928**	**0.1236**	**0.8164**		**11,395.7017**	**11,395.7017**	**0.5132**		**11,408.5306**

3.9 Grading for Cap Skirt - 2020

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					8.1431	0.0000	8.1431	3.5393	0.0000	3.5393			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**8.1431**	**1.2734**	**9.4165**	**3.5393**	**1.1716**	**4.7108**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

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	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0521**	**0.0316**	**0.4025**	**1.2400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**123.1165**	**123.1165**	**2.9700e-003**		**123.1907**

3.9 Grading for Cap Skirt - 2020

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					8.1431	0.0000	8.1431	3.5393	0.0000	3.5393			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**8.1431**	**1.2734**	**9.4165**	**3.5393**	**1.1716**	**4.7108**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

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	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.0521**	**0.0316**	**0.4025**	**1.2400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**123.1165**	**123.1165**	**2.9700e-003**		**123.1907**

3.10 Cap skirt paving -AOC-2/3 and Paving AOC-1 - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

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	0.1481	4.6912	1.0262	0.0150	0.3579	0.0186	0.3765	0.0981	0.0178	0.1158		1,606.3874	1,606.3874	0.0682		1,608.0915
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	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.2003**	**4.7227**	**1.4286**	**0.0163**	**0.4811**	**0.0194**	**0.5005**	**0.1307**	**0.0185**	**0.1493**		**1,729.5039**	**1,729.5039**	**0.0711**		**1,731.2821**

3.10 Cap skirt paving -AOC-2/3 and Paving AOC-1 - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

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	0.1481	4.6912	1.0262	0.0150	0.3579	0.0186	0.3765	0.0981	0.0178	0.1158		1,606.3874	1,606.3874	0.0682		1,608.0915
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	0.0521	0.0316	0.4025	1.2400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		123.1165	123.1165	2.9700e-003		123.1907
Total	**0.2003**	**4.7227**	**1.4286**	**0.0163**	**0.4811**	**0.0194**	**0.5005**	**0.1307**	**0.0185**	**0.1493**		**1,729.5039**	**1,729.5039**	**0.0711**		**1,731.2821**

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	0.0000	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
Unmitigated	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	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
User Defined Industrial	0.573139	0.040894	0.193976	0.114604	0.017740	0.005371	0.017133	0.024527	0.002545	0.002442	0.005942	0.000877	0.000812

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	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
NaturalGas Unmitigated	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

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					
User Defined Industrial	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		**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**

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					
User Defined Industrial	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		**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**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

6.2 Area by SubCategory

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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

Chemtrade

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	8.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	5			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project is construction only and construction area is 8 acres.

Construction Phase - Construction dates follow contractors estimates for each phase

Off-road Equipment - ..

Off-road Equipment - Performing excavation using excavators

Off-road Equipment - Cap installation will not require cranes or welders.

Off-road Equipment - Cap installation will not require cranes nor welders

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Hauling Hazardous Waste to disposal facility

Off-road Equipment - Proposed equipment

Off-road Equipment -

Off-road Equipment - Site prep and material import will use 2 forklifts

Trips and VMT - Site preparation includes hauling all offsite materials except the Clean Import Fill which will be done during the Cap Install. Hauling during excavation will be onsite and ~0.25 miles.

Grading - Areas that require grading are 7.5 acres total, thus 20 acres is a conservative estimate for all grading work

Land Use Change -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	25.00
tblConstructionPhase	NumDays	230.00	30.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	230.00	40.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	20.00	10.00
tblGrading	AcresOfGrading	2.50	10.00
tblLandUse	LotAcreage	0.00	8.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	15.00
tblTripsAndVMT	HaulingTripLength	20.00	635.00
tblTripsAndVMT	HaulingTripLength	20.00	0.25
tblTripsAndVMT	HaulingTripLength	20.00	33.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	544.00
tblTripsAndVMT	HaulingTripNumber	0.00	21.00
tblTripsAndVMT	HaulingTripNumber	0.00	80.00
tblTripsAndVMT	HaulingTripNumber	0.00	80.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	406.00
tblTripsAndVMT	HaulingTripNumber	0.00	3,400.00
tblTripsAndVMT	HaulingTripNumber	0.00	82.00

tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	3.00	5.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00

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					
2019	1.0177	19.2095	7.8076	0.0469	1.7945	0.4403	2.2348	0.4689	0.4074	0.8762	0.0000	4,955.8504	4,955.8504	0.3832	0.0000	4,965.4306
2020	2.9892	53.8052	27.6999	0.1351	8.2663	1.3815	9.5405	3.5719	1.2874	4.7442	0.0000	14,124.6471	14,124.6471	1.2885	0.0000	14,156.8593
Maximum	**2.9892**	**53.8052**	**27.6999**	**0.1351**	**8.2663**	**1.3815**	**9.5405**	**3.5719**	**1.2874**	**4.7442**	**0.0000**	**14,124.6471**	**14,124.6471**	**1.2885**	**0.0000**	**14,156.8593**

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					
2019	1.0177	19.2095	7.8076	0.0469	1.7945	0.4403	2.2348	0.4689	0.4074	0.8762	0.0000	4,955.8504	4,955.8504	0.3832	0.0000	4,965.4306
2020	2.9892	53.8052	27.6999	0.1351	8.2663	1.3815	9.5405	3.5719	1.2874	4.7442	0.0000	14,124.6471	14,124.6471	1.2885	0.0000	14,156.8593
Maximum	**2.9892**	**53.8052**	**27.6999**	**0.1351**	**8.2663**	**1.3815**	**9.5405**	**3.5719**	**1.2874**	**4.7442**	**0.0000**	**14,124.6471**	**14,124.6471**	**1.2885**	**0.0000**	**14,156.8593**

	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**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	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
Mobile	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	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	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
Mobile	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	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

	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	Site Preparation	Site Preparation	12/16/2019	1/17/2020	5	25	Mobilization and Site Preparation, Import and Stockpile Materials for Construction (excluding soil for AOC-2/3 cap)
2	HBW and PRB construction	Building Construction	1/20/2020	2/28/2020	5	30	Hydrualic Barrier Wall, French Drain and PRB installation- Performance Moitoring Well and Piezometer Installation
3	AOC-1 Cap Paving	Paving	1/20/2020	1/31/2020	5	10	AOC-1 Cap Installation
4	Performance Monitoring Well / Piezometer Installations	Trenching	3/2/2020	3/27/2020	5	20	
5	Hauling Hazardous Waste	Site Preparation	3/27/2020	3/27/2020	5	1	
6	AOC-2/-3 Clean Zone Excavation	Trenching	3/30/2020	4/3/2020	5	5	Excavating 100ft Clean Zone
7	Cap Installation - AOC-2/-3	Building Construction	4/6/2020	5/29/2020	5	40	AOC-2/-3 Cap installation
8	Grading for Cap Skirt	Grading	6/1/2020	6/5/2020	5	5	
9	Cap skirt paving -AOC-2/3 and Paving AOC-1	Paving	6/8/2020	6/19/2020	5	10	Asphault Skirt Installation and paving 1.6 acres in AOC-1

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Chemtrade - Bay Area AQMD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Forklifts	2	8.00	89	0.20
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
HBW and PRB construction	Forklifts	2	6.00	89	0.20
HBW and PRB construction	Generator Sets	1	8.00	84	0.74
HBW and PRB construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
AOC-1 Cap Paving	Pavers	2	8.00	130	0.42
AOC-1 Cap Paving	Paving Equipment	2	8.00	132	0.36
AOC-1 Cap Paving	Rollers	2	8.00	80	0.38
Performance Monitoring Well / Piezometer Installations	Bore/Drill Rigs	1	8.00	221	0.50
Hauling Hazardous Waste	Rubber Tired Dozers	0	8.00	247	0.40
Hauling Hazardous Waste	Tractors/Loaders/Backhoes	0	8.00	97	0.37
AOC-2/-3 Clean Zone Excavation	Excavators	2	8.00	158	0.38
Cap Installation - AOC-2/-3	Cranes	0	7.00	231	0.29
Cap Installation - AOC-2/-3	Excavators	2	8.00	158	0.38
Cap Installation - AOC-2/-3	Forklifts	3	8.00	89	0.20
Cap Installation - AOC-2/-3	Generator Sets	1	8.00	84	0.74
Cap Installation - AOC-2/-3	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Cap Installation - AOC-2/-3	Welders	0	8.00	46	0.45
Grading for Cap Skirt	Excavators	1	8.00	158	0.38
Grading for Cap Skirt	Graders	1	8.00	187	0.41
Grading for Cap Skirt	Rubber Tired Dozers	1	8.00	247	0.40
Grading for Cap Skirt	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Cap skirt paving -AOC-2/3 and Paving AOC-1	Cement and Mortar Mixers	0		9	0.56
Cap skirt paving -AOC-2/3 and Paving AOC-1	Pavers	2	8.00	130	0.42

Cap skirt paving -AOC-2/3 and Paving AOC-1	Paving Equipment	2	8.00	132	0.36
Cap skirt paving -AOC-2/3 and Paving AOC-1	Rollers	2	8.00	80	0.38
Cap skirt paving -AOC-2/3 and Paving AOC-1	Tractors/Loaders/Backhoes	0		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
Site Preparation	3	8.00	0.00	544.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT
HBW and PRB construction	5	10.00	0.00	21.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT
AOC-1 Cap Paving	6	15.00	0.00	80.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT
Performance Monitoring Well / Piez	1	5.00	0.00	80.00	10.80	7.30	15.00	LD_Mix	HDT_Mix	HHDT
Hauling Hazardous Waste	0	0.00	0.00	4.00	10.80	7.30	635.00	LD_Mix	HDT_Mix	HHDT
AOC-2/-3 Clean Zone Excavation	2	5.00	0.00	406.00	10.80	7.30	0.25	LD_Mix	HDT_Mix	HHDT
Cap Installation - AOC-2/-3	9	10.00	0.00	3,400.00	10.80	7.30	33.00	LD_Mix	HDT_Mix	HHDT
Grading for Cap Skirt	6	15.00	0.00	0.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT
Cap skirt paving - AOC-2/3 and Paving A	6	15.00	0.00	82.00	10.80	7.30	50.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5527	5.1940	4.6911	6.1600e-003		0.3773	0.3773		0.3472	0.3472		610.1827	610.1827	0.1931		615.0091
Total	**0.5527**	**5.1940**	**4.6911**	**6.1600e-003**	**0.0000**	**0.3773**	**0.3773**	**0.0000**	**0.3472**	**0.3472**		**610.1827**	**610.1827**	**0.1931**		**615.0091**

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	0.4328	13.9920	2.8913	0.0401	1.7288	0.0625	1.7913	0.4514	0.0598	0.5112		4,283.2172	4,283.2172	0.1885		4,287.9286
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	0.0322	0.0236	0.2252	6.3000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.0000e-004	0.0178		62.4506	62.4506	1.7000e-003		62.4930
Total	**0.4650**	**14.0156**	**3.1166**	**0.0407**	**1.7945**	**0.0629**	**1.8575**	**0.4689**	**0.0602**	**0.5291**		**4,345.6677**	**4,345.6677**	**0.1902**		**4,350.4215**

3.2 Site Preparation - 2019

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5527	5.1940	4.6911	6.1600e-003		0.3773	0.3773		0.3472	0.3472	0.0000	610.1827	610.1827	0.1931		615.0091
Total	**0.5527**	**5.1940**	**4.6911**	**6.1600e-003**	**0.0000**	**0.3773**	**0.3773**	**0.0000**	**0.3472**	**0.3472**	**0.0000**	**610.1827**	**610.1827**	**0.1931**		**615.0091**

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	0.4328	13.9920	2.8913	0.0401	1.7288	0.0625	1.7913	0.4514	0.0598	0.5112		4,283.2172	4,283.2172	0.1885		4,287.9286
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	0.0322	0.0236	0.2252	6.3000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.0000e-004	0.0178		62.4506	62.4506	1.7000e-003		62.4930
Total	**0.4650**	**14.0156**	**3.1166**	**0.0407**	**1.7945**	**0.0629**	**1.8575**	**0.4689**	**0.0602**	**0.5291**		**4,345.6677**	**4,345.6677**	**0.1902**		**4,350.4215**

3.2 Site Preparation - 2020

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4975	4.7002	4.6402	6.1600e-003		0.3265	0.3265		0.3003	0.3003		596.8302	596.8302	0.1930		601.6558
Total	**0.4975**	**4.7002**	**4.6402**	**6.1600e-003**	**0.0000**	**0.3265**	**0.3265**	**0.0000**	**0.3003**	**0.3003**		**596.8302**	**596.8302**	**0.1930**		**601.6558**

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	0.3977	12.9503	2.7942	0.0396	1.6136	0.0497	1.6633	0.4231	0.0476	0.4707		4,231.7087	4,231.7087	0.1854		4,236.3430
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	0.0294	0.0208	0.2016	6.1000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		60.4852	60.4852	1.4800e-003		60.5222
Total	**0.4271**	**12.9711**	**2.9958**	**0.0402**	**1.6793**	**0.0501**	**1.7294**	**0.4406**	**0.0480**	**0.4885**		**4,292.1939**	**4,292.1939**	**0.1869**		**4,296.8652**

3.2 Site Preparation - 2020

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4975	4.7002	4.6402	6.1600e-003		0.3265	0.3265		0.3003	0.3003	0.0000	596.8302	596.8302	0.1930		601.6558
Total	**0.4975**	**4.7002**	**4.6402**	**6.1600e-003**	**0.0000**	**0.3265**	**0.3265**	**0.0000**	**0.3003**	**0.3003**	**0.0000**	**596.8302**	**596.8302**	**0.1930**		**601.6558**

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	0.3977	12.9503	2.7942	0.0396	1.6136	0.0497	1.6633	0.4231	0.0476	0.4707		4,231.7087	4,231.7087	0.1854		4,236.3430
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	0.0294	0.0208	0.2016	6.1000e-004	0.0657	4.3000e-004	0.0661	0.0174	3.9000e-004	0.0178		60.4852	60.4852	1.4800e-003		60.5222
Total	**0.4271**	**12.9711**	**2.9958**	**0.0402**	**1.6793**	**0.0501**	**1.7294**	**0.4406**	**0.0480**	**0.4885**		**4,292.1939**	**4,292.1939**	**0.1869**		**4,296.8652**

3.3 HBW and PRB construction - 2020

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	1.0341	9.6352	10.0353	0.0151		0.6075	0.6075		0.5746	0.5746		1,446.6178	1,446.6178	0.3015		1,454.1540
Total	**1.0341**	**9.6352**	**10.0353**	**0.0151**		**0.6075**	**0.6075**		**0.5746**	**0.5746**		**1,446.6178**	**1,446.6178**	**0.3015**		**1,454.1540**

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	0.0128	0.4166	0.0899	1.2700e-003	0.0306	1.6000e-003	0.0322	8.3700e-003	1.5300e-003	9.9000e-003		136.1303	136.1303	5.9600e-003		136.2794
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	0.0368	0.0260	0.2520	7.6000e-004	0.0822	5.3000e-004	0.0827	0.0218	4.9000e-004	0.0223		75.6065	75.6065	1.8500e-003		75.6528
Total	**0.0496**	**0.4426**	**0.3419**	**2.0300e-003**	**0.1127**	**2.1300e-003**	**0.1148**	**0.0302**	**2.0200e-003**	**0.0322**		**211.7369**	**211.7369**	**7.8100e-003**		**211.9322**

3.3 HBW and PRB construction - 2020

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	1.0341	9.6352	10.0353	0.0151		0.6075	0.6075		0.5746	0.5746	0.0000	1,446.6178	1,446.6178	0.3015		1,454.1540
Total	**1.0341**	**9.6352**	**10.0353**	**0.0151**		**0.6075**	**0.6075**		**0.5746**	**0.5746**	**0.0000**	**1,446.6178**	**1,446.6178**	**0.3015**		**1,454.1540**

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	0.0128	0.4166	0.0899	1.2700e-003	0.0306	1.6000e-003	0.0322	8.3700e-003	1.5300e-003	9.9000e-003		136.1303	136.1303	5.9600e-003		136.2794
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	0.0368	0.0260	0.2520	7.6000e-004	0.0822	5.3000e-004	0.0827	0.0218	4.9000e-004	0.0223		75.6065	75.6065	1.8500e-003		75.6528
Total	**0.0496**	**0.4426**	**0.3419**	**2.0300e-003**	**0.1127**	**2.1300e-003**	**0.1148**	**0.0302**	**2.0200e-003**	**0.0322**		**211.7369**	**211.7369**	**7.8100e-003**		**211.9322**

3.4 AOC-1 Cap Paving - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

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	0.1462	4.7612	1.0273	0.0146	0.3491	0.0183	0.3674	0.0957	0.0175	0.1131		1,555.7753	1,555.7753	0.0682		1,557.4791
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	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.2014**	**4.8002**	**1.4053**	**0.0157**	**0.4724**	**0.0191**	**0.4914**	**0.1283**	**0.0182**	**0.1466**		**1,669.1851**	**1,669.1851**	**0.0709**		**1,670.9582**

3.4 AOC-1 Cap Paving - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

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	0.1462	4.7612	1.0273	0.0146	0.3491	0.0183	0.3674	0.0957	0.0175	0.1131		1,555.7753	1,555.7753	0.0682		1,557.4791
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	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.2014**	**4.8002**	**1.4053**	**0.0157**	**0.4724**	**0.0191**	**0.4914**	**0.1283**	**0.0182**	**0.1466**		**1,669.1851**	**1,669.1851**	**0.0709**		**1,670.9582**

3.5 Performance Monitoring Well / Piezometer Installations - 2020

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	0.2775	3.5223	2.0808	9.4000e-003		0.1015	0.1015		0.0934	0.0934		909.8069	909.8069	0.2943		917.1631
Total	**0.2775**	**3.5223**	**2.0808**	**9.4000e-003**		**0.1015**	**0.1015**		**0.0934**	**0.0934**		**909.8069**	**909.8069**	**0.2943**		**917.1631**

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	0.0274	0.9728	0.2004	2.4400e-003	0.0524	2.9200e-003	0.0554	0.0144	2.8000e-003	0.0172		260.7157	260.7157	0.0152		261.0953
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	0.0184	0.0130	0.1260	3.8000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		37.8033	37.8033	9.2000e-004		37.8264
Total	**0.0458**	**0.9858**	**0.3264**	**2.8200e-003**	**0.0935**	**3.1900e-003**	**0.0967**	**0.0253**	**3.0500e-003**	**0.0283**		**298.5190**	**298.5190**	**0.0161**		**298.9216**

3.5 Performance Monitoring Well / Piezometer Installations - 2020

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	0.2775	3.5223	2.0808	9.4000e-003		0.1015	0.1015		0.0934	0.0934	0.0000	909.8069	909.8069	0.2943		917.1631
Total	**0.2775**	**3.5223**	**2.0808**	**9.4000e-003**		**0.1015**	**0.1015**		**0.0934**	**0.0934**	**0.0000**	**909.8069**	**909.8069**	**0.2943**		**917.1631**

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	0.0274	0.9728	0.2004	2.4400e-003	0.0524	2.9200e-003	0.0554	0.0144	2.8000e-003	0.0172		260.7157	260.7157	0.0152		261.0953
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	0.0184	0.0130	0.1260	3.8000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		37.8033	37.8033	9.2000e-004		37.8264
Total	**0.0458**	**0.9858**	**0.3264**	**2.8200e-003**	**0.0935**	**3.1900e-003**	**0.0967**	**0.0253**	**3.0500e-003**	**0.0283**		**298.5190**	**298.5190**	**0.0161**		**298.9216**

3.6 Hauling Hazardous Waste - 2020

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	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	**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**

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	0.8373	25.9108	5.7493	0.0881	2.2161	0.1130	2.3291	0.6070	0.1081	0.7152		9,422.0465	9,422.0465	0.3499		9,430.7939
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	0.0000	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	**0.8373**	**25.9108**	**5.7493**	**0.0881**	**2.2161**	**0.1130**	**2.3291**	**0.6070**	**0.1081**	**0.7152**		**9,422.0465**	**9,422.0465**	**0.3499**		**9,430.7939**

3.6 Hauling Hazardous Waste - 2020

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	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	**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**

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	0.8373	25.9108	5.7493	0.0881	2.2161	0.1130	2.3291	0.6070	0.1081	0.7152		9,422.0465	9,422.0465	0.3499		9,430.7939
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	0.0000	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	**0.8373**	**25.9108**	**5.7493**	**0.0881**	**2.2161**	**0.1130**	**2.3291**	**0.6070**	**0.1081**	**0.7152**		**9,422.0465**	**9,422.0465**	**0.3499**		**9,430.7939**

3.7 AOC-2/-3 Clean Zone Excavation - 2020

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	0.4900	4.8253	6.5356	0.0103		0.2337	0.2337		0.2150	0.2150		1,000.2368	1,000.2368	0.3235		1,008.3243
Total	**0.4900**	**4.8253**	**6.5356**	**0.0103**		**0.2337**	**0.2337**		**0.2150**	**0.2150**		**1,000.2368**	**1,000.2368**	**0.3235**		**1,008.3243**

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	0.1646	7.7038	1.3883	8.1400e-003	0.0194	6.1500e-003	0.0256	5.4700e-003	5.8900e-003	0.0114		868.1237	868.1237	0.1465		871.7867
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	0.0184	0.0130	0.1260	3.8000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		37.8033	37.8033	9.2000e-004		37.8264
Total	**0.1830**	**7.7168**	**1.5143**	**8.5200e-003**	**0.0605**	**6.4200e-003**	**0.0669**	**0.0164**	**6.1400e-003**	**0.0225**		**905.9270**	**905.9270**	**0.1474**		**909.6131**

3.7 AOC-2/-3 Clean Zone Excavation - 2020

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	0.4900	4.8253	6.5356	0.0103		0.2337	0.2337		0.2150	0.2150	0.0000	1,000.2368	1,000.2368	0.3235		1,008.3243
Total	**0.4900**	**4.8253**	**6.5356**	**0.0103**		**0.2337**	**0.2337**		**0.2150**	**0.2150**	**0.0000**	**1,000.2368**	**1,000.2368**	**0.3235**		**1,008.3243**

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	0.1646	7.7038	1.3883	8.1400e-003	0.0194	6.1500e-003	0.0256	5.4700e-003	5.8900e-003	0.0114		868.1237	868.1237	0.1465		871.7867
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	0.0184	0.0130	0.1260	3.8000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		37.8033	37.8033	9.2000e-004		37.8264
Total	**0.1830**	**7.7168**	**1.5143**	**8.5200e-003**	**0.0605**	**6.4200e-003**	**0.0669**	**0.0164**	**6.1400e-003**	**0.0225**		**905.9270**	**905.9270**	**0.1474**		**909.6131**

3.8 Cap Installation - AOC-2/-3 - 2020

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	1.8710	17.7224	19.7662	0.0296		1.0694	1.0694		0.9996	0.9996		2,856.8812	2,856.8812	0.7576		2,875.8201
Total	**1.8710**	**17.7224**	**19.7662**	**0.0296**		**1.0694**	**1.0694**		**0.9996**	**0.9996**		**2,856.8812**	**2,856.8812**	**0.7576**		**2,875.8201**

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	1.0815	36.0568	7.6818	0.1047	2.4490	0.1300	2.5790	0.6710	0.1244	0.7954		11,192.1593	11,192.1593	0.5291		11,205.3865
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	0.0368	0.0260	0.2520	7.6000e-004	0.0822	5.3000e-004	0.0827	0.0218	4.9000e-004	0.0223		75.6065	75.6065	1.8500e-003		75.6528
Total	**1.1182**	**36.0828**	**7.9338**	**0.1054**	**2.5311**	**0.1306**	**2.6617**	**0.6928**	**0.1249**	**0.8177**		**11,267.7659**	**11,267.7659**	**0.5309**		**11,281.0392**

3.8 Cap Installation - AOC-2/-3 - 2020

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	1.8710	17.7224	19.7662	0.0296		1.0694	1.0694		0.9996	0.9996	0.0000	2,856.8812	2,856.8812	0.7576		2,875.8201
Total	**1.8710**	**17.7224**	**19.7662**	**0.0296**		**1.0694**	**1.0694**		**0.9996**	**0.9996**	**0.0000**	**2,856.8812**	**2,856.8812**	**0.7576**		**2,875.8201**

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	1.0815	36.0568	7.6818	0.1047	2.4490	0.1300	2.5790	0.6710	0.1244	0.7954		11,192.1593	11,192.1593	0.5291		11,205.3865
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	0.0368	0.0260	0.2520	7.6000e-004	0.0822	5.3000e-004	0.0827	0.0218	4.9000e-004	0.0223		75.6065	75.6065	1.8500e-003		75.6528
Total	**1.1182**	**36.0828**	**7.9338**	**0.1054**	**2.5311**	**0.1306**	**2.6617**	**0.6928**	**0.1249**	**0.8177**		**11,267.7659**	**11,267.7659**	**0.5309**		**11,281.0392**

3.9 Grading for Cap Skirt - 2020

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					8.1431	0.0000	8.1431	3.5393	0.0000	3.5393			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**8.1431**	**1.2734**	**9.4165**	**3.5393**	**1.1716**	**4.7108**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

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	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0552**	**0.0390**	**0.3780**	**1.1400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**113.4098**	**113.4098**	**2.7700e-003**		**113.4792**

3.9 Grading for Cap Skirt - 2020

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					8.1431	0.0000	8.1431	3.5393	0.0000	3.5393			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**8.1431**	**1.2734**	**9.4165**	**3.5393**	**1.1716**	**4.7108**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

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	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.0552**	**0.0390**	**0.3780**	**1.1400e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**113.4098**	**113.4098**	**2.7700e-003**		**113.4792**

3.10 Cap skirt paving -AOC-2/3 and Paving AOC-1 - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

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	0.1499	4.8802	1.0530	0.0149	0.3579	0.0187	0.3766	0.0981	0.0179	0.1160		1,594.6696	1,594.6696	0.0699		1,596.4160
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	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.2050**	**4.9192**	**1.4310**	**0.0161**	**0.4811**	**0.0195**	**0.5006**	**0.1307**	**0.0187**	**0.1494**		**1,708.0795**	**1,708.0795**	**0.0726**		**1,709.8952**

3.10 Cap skirt paving -AOC-2/3 and Paving AOC-1 - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

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	0.1499	4.8802	1.0530	0.0149	0.3579	0.0187	0.3766	0.0981	0.0179	0.1160		1,594.6696	1,594.6696	0.0699		1,596.4160
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	0.0552	0.0390	0.3780	1.1400e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		113.4098	113.4098	2.7700e-003		113.4792
Total	**0.2050**	**4.9192**	**1.4310**	**0.0161**	**0.4811**	**0.0195**	**0.5006**	**0.1307**	**0.0187**	**0.1494**		**1,708.0795**	**1,708.0795**	**0.0726**		**1,709.8952**

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	0.0000	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
Unmitigated	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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	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
User Defined Industrial	0.573139	0.040894	0.193976	0.114604	0.017740	0.005371	0.017133	0.024527	0.002545	0.002442	0.005942	0.000877	0.000812

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	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
NaturalGas Unmitigated	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

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					
User Defined Industrial	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		**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**

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					
User Defined Industrial	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		**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**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

6.2 Area by SubCategory

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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

Attachment B- Cultural Resources

CARLSBAD
FRESNO
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

April 12, 2019

Daren Roth
Senior Project Geologist
Terraphase Engineering Inc.
1404 Franklin Street, Suite 600
Oakland, California 94612

Subject: Cultural Resources Study for the Chemtrade Bay Point Project Site at 501 Nichols Road, Contra Costa County, California (LSA #TER1902)

Dear Mr. Roth:

LSA prepared this study to meet the requirements of the California Environmental Quality Act (CEQA) and its implementing regulations (California Code of Regulations, Title 14, Section 15000 et seq.). The purpose of the study was to: (1) identify cultural resources that may meet the CEQA definition of a historical resource (California Public Resources Code [PRC] §21084.1) or unique archaeological resource (PRC §21083.2), and that may be impacted by the proposed project; (2) identify human remains, including those interred outside of formal cemeteries; and (3) recommend mitigation, additional study, or consultation outreach that may be required to address potential impacts to such resources and/or remains. LSA Archaeologist/Senior Cultural Resources Manager Lora Holland, M.A., RPA 989173, conducted the study and prepared this technical study report.

LSA conducted background research and a field survey for this study. The methods and results of these tasks are described below, followed by recommendations.

PROJECT DESCRIPTION AND LOCATION

The project site is located at 501 Nichols Road in unincorporated Contra Costa County, California, in Section 4 of Township 2 North, Range 1 West of the Mount Diablo Base Line and Meridian, as depicted on the United States Geological Survey (USGS) *Honker Bay, Calif*., 7.5-minute topographic quadrangle (Figures 1 and 2). The project site is located within the northeastern portion of the Chemtrade property, a heavy industrial area adjacent to Suisun Bay. The site is flat, and soils consist of Joice muck and Antioch loam at 2 to 9 percent slopes (Natural Resources Conservation Service 2019).

Based on chemicals detected in the soil and groundwater within the Chemtrade property, the project proposes the excavation of contaminated soils within two areas of the property, Area of Concern 2 and Area of Concern 3 (AOC 2 and AOC 3) (Figure 3). AOC 2 is an approximately 10.5-acre area that served as a wastewater discharge lagoon. From July 2013 through February 2014, approximately 6,000 tons of contaminated soils and sediment was removed and backfilled with 60,000 tons of clean fill. AOC 3 consists of a 0.5-acre area located north of AOC 2 that formerly

included a caustic storage tank. In 2014, 294 tons of soil was excavated and disposed of at an offsite location.

BACKGROUND RESEARCH

LSA conducted archival and background research to identify cultural resources within and near the project site. The background research consisted of a records search at the Northwest Information Center at Sonoma State University (NWIC); a review of the Sacred Lands File (SLF) at the Native American Heritage Commission (NAHC) in Sacramento; and a review of archival maps and aerial photographs. The results of these tasks are summarized below.

Records Search

On March 13, 2019, LSA Archaeologist/Senior Cultural Resources Manager Lora Holland, M.A., RPA 989173 conducted a records search of the project site and a 0.25-mile radius at the NWIC (NWIC File #18-1732). The NWIC, an affiliate of the State of California Office of Historic Preservation, is the official state repository of cultural resources records and reports for Contra Costa County. As part of the records search, LSA reviewed the following local and State of California inventories:

- *California Inventory of Historic Resources* (California Department of Parks and Recreation 1976);
- *Five Views: An Ethnic Historic Site Survey for California* (California Office of Historic Preservation 1988);
- *California Points of Historical Interest* (California Office of Historic Preservation 1992);
- *California Historical Landmarks* (California Office of Historic Preservation 1996); and
- *Directory of Properties in the Historic Property Data File* (California Office of Historic Preservation April 5, 2012). The directory also includes the listings of the National Register, National Historic Landmarks, the California Register, California Historical Landmarks, and California Points of Historical Interest.

Results

The records search did not identify any previous cultural resources studies or precontact or historic-period cultural resources within the project site. One historic-period deposit (P-07-000403) is located within a 0.25-mile radius. This resource consists of remnants of the Getty Oil Company (1930-1970) and pre-1900 structural and household debris. No National Register Status Code has been assigned to this resource, indicating that it has not been evaluated for its eligibility for inclusion in either the National Register of Historic Places or the California Register of Historical Resources.

Archival Map and Aerial Photograph Review

LSA reviewed historical maps and historical aerial photographs for the presence of historic-period buildings and/or structures within the project site to assess the potential for historic-period archaeological deposits (Table A).

Table A: Archival Map and Aerial Photograph Review

Map/Photograph	Results
1908 *Antioch* USGS topographic quadrangle (1:62,500)	This map depicts the project site as marshland.
1953 *Honker Bay, Calif.* 7.5-minute USGS topographic quadrangle (1:24,000)	This map depicts two engineered lagoons within the project site.
1958 *Aerial Photograph (NETRonline 2019)*	This photograph depicts engineered "d" shaped lagoons with a slough to Suisun Bay.
1966 *Aerial Photograph (NETRonline 2019)*	There is no change from the 1958 photograph.
1968 *Aerial Photograph (NETRonline 2019)*	There is no change from the 1966 photograph.

The map and aerial photograph review indicates that the project site, specifically the areas of proposed excavation (AOC 2 and AOC 3), consists of lagoons engineered by cut-and-fill operations throughout the 20th century. The maps and aerial photographs did not depict historic-period occupation of the area, indicating a low potential for historic-period deposits (e.g., artifact-filled features, such as wells or privies) within the project site.

NAHC Sacred Lands File Review

On March 22, 2019, LSA submitted a request to the NAHC to review its SLF to determine the potential presence of Native American cultural resources that might be impacted by the proposed project. The NAHC maintains the SLF database and is the official State repository of Native American sacred site location records in California.

Results

On April 8, 2019, NAHC Associate Governmental Program Analyst, Gayle Totton, responded in a letter sent to LSA via email that *"A record search of the Native American Heritage Commission Sacred Lands File was completed for the information you have submitted…. The results were negative."* The NAHC's response letter is attached to this report.

FIELD SURVEY

LSA Archaeologist/Senior Cultural Resources Manager Lora Holland, M.A., RPA 989173 conducted a field survey of the proposed areas of excavation (i.e., AOC 2 and AOC 3) on March 19, 2019. The survey of AOC 2 and AOC 3 was conducted in pedestrian transects in a zigzag pattern at 10 meter intervals. All exposed soils were inspected for precontact archaeological materials (e.g., stone tools and lithic debitage, ground stone), historic-period artifacts (e.g., metal, glass, ceramics), and soil

discoloration that might indicate the presence of archaeological cultural resources. Visibility was obscured by annual grasses, which covered approximately 75 percent of the ground surface.

Results

The field survey did not identify any cultural resources within the project site. Although the majority of the ground surface was obscured, areas of exposed ground surface (approximately 25 percent of the total area) appeared to be disturbed fill, attributed to the excavation and fill operations from the early 20th century through 2014.

SUMMARY AND RECOMMENDATIONS

The background research and field survey did not identify any cultural resources within the project site. The proposed areas of excavation, AOC 2 and AOC 3, consist of engineered lagoons subject to continuous cut and fill from the early 20th century through 2014. Due to the previous disturbance from cut-and-fill operations and the lack of historic-period development, the proposed areas of excavation have a low potential to contain archaeological deposits and/or human remains. Therefore, there is a low likelihood for project excavation to encounter and disturb intact archaeological deposits that may qualify as historical resources (PRC §21084.1), unique archaeological resources (PRC § 21083.2), and/or human remains interred outside of formal cemeteries.

Although the project has a low likelihood of encountering intact archaeological deposits or human remains during excavation, that possibility cannot be entirely discounted. Recommendations are provided below in the event that unanticipated archaeological finds are made during project excavation.

Accidental Discovery

If unknown precontact or historic-period archaeological materials are encountered during project activities, all work in the immediate vicinity of the find shall halt until a qualified archaeologist can evaluate the find and make recommendations. Cultural resources materials may include precontact resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock, as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified archaeologist determines that the discovery represents a potentially significant cultural resource, additional investigations should be required to mitigate adverse impacts from project implementation. These additional studies may include, but are not limited to, recordation, archaeological excavation, or significance evaluation.

The applicant should inform its contractor(s) of the sensitivity of the project site for archaeological deposits, and include the following directive in the appropriate contract documents:

> *"The subsurface of the construction site may contain archaeological deposits. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist shall assess the situation, consult with agencies as appropriate, and*

make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological deposits can include, but are not limited to, shellfish remains; bones, including human remains; flakes of, and tools made from, obsidian, chert, and basalt; mortars and pestles; historical trash deposits containing glass, ceramics, and metal artifacts; and structural remains, including foundations and wells."

Human Remains

If human remains are uncovered, work within 25 feet of the discovery should be redirected and the Contra Costa County Coroner notified immediately. At the same time, the project archaeologist should assess the situation and consult with agencies, as appropriate. Project personnel should not collect or move any human remains or associated materials. If the human remains are of Native American origin, the Coroner must notify the NAHC within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. Work within 25 feet of the discovery can resume only after the MLD has inspected the site, provided recommendations, and the remains and associated grave goods removed from the site by a qualified archaeologist in consultation with the MLD.

Please do not hesitate to contact me if you have any questions.

Sincerely,

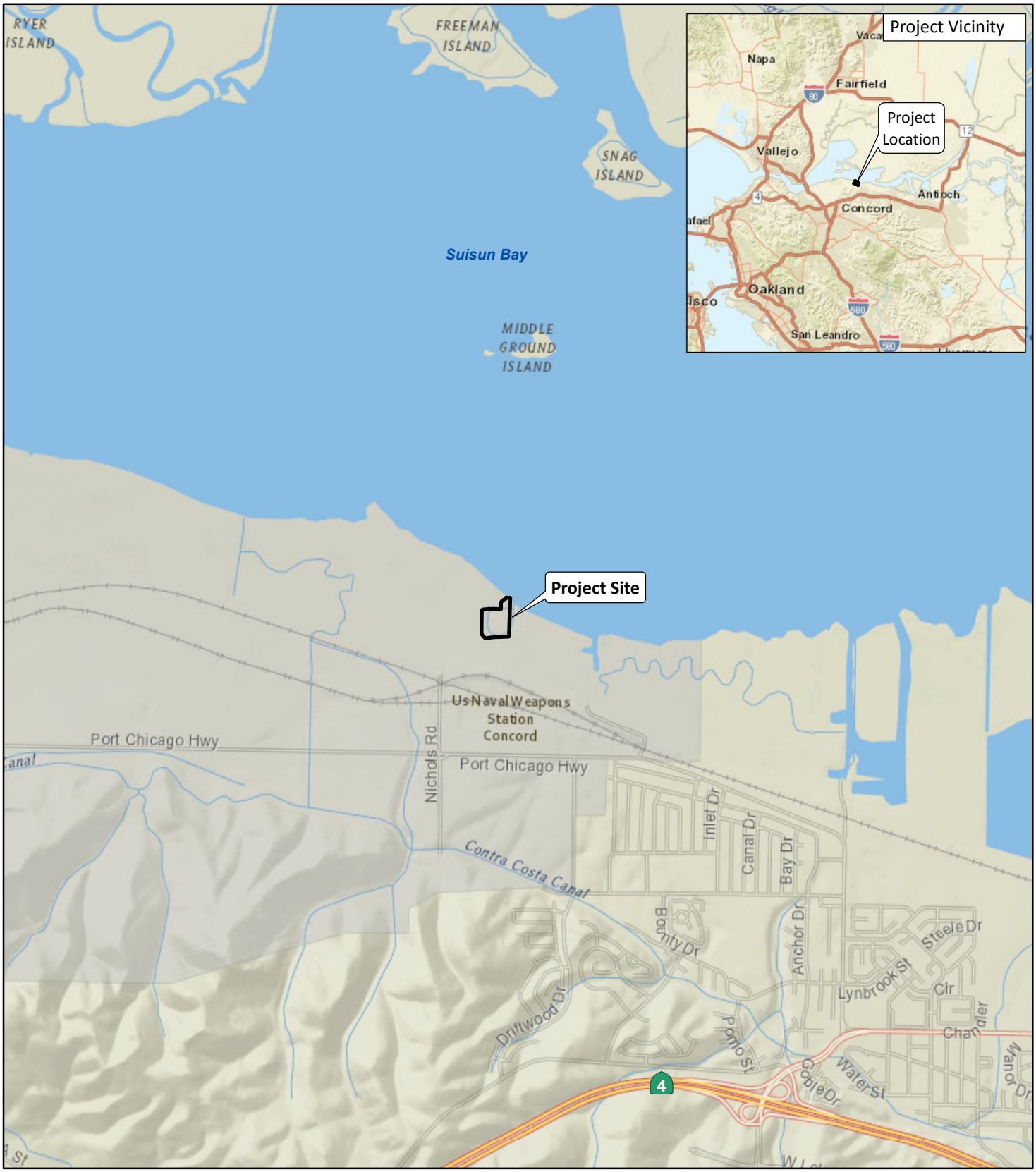
LSA Associates, Inc.

Lora Holland
Senior Cultural Resources Manager

Attachment: Project Figures

Figure 1: Regional Location and Project Site
Figure 2: Project Site
Figure 3: Areas of Excavation

NAHC Sacred Lands File Response



LSA

FIGURE 1

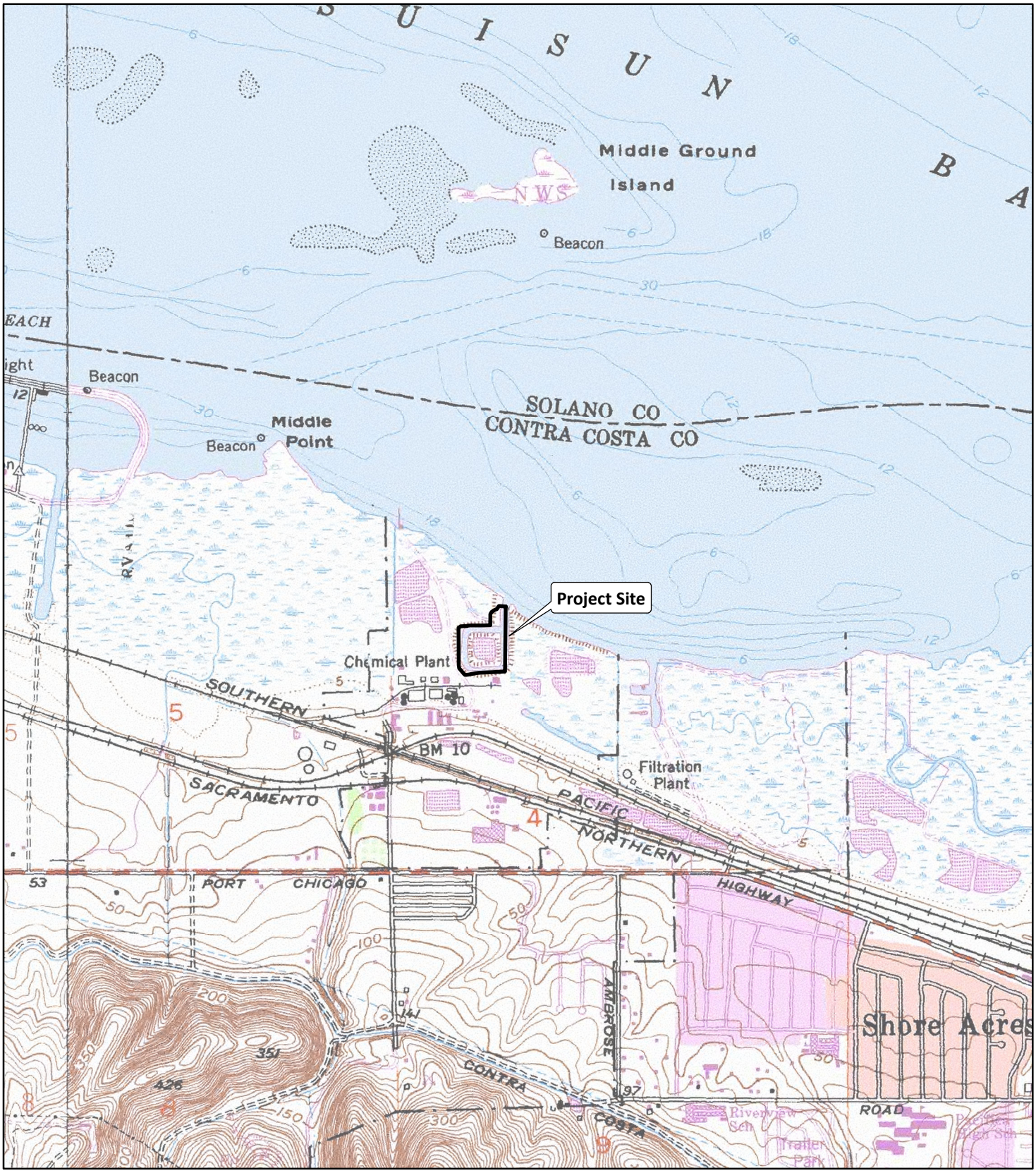
N

0 0.25 0.5
MILES

Chemtrade Bay Point Facility
Pittsburg, Contra Costa County, California
Regional Location

SOURCE: National Geographic (c)2019; Esri Streets (c)2019.

I:\TER1902\GIS\Maps\Cultural\Report\Figure 1_Regional Location.mxd (4/3/2019)



LSA

FIGURE 2

N

0 1000 2000
FEET

Chemtrade Bay Point Facility
Pittsburg, Contra Costa County, California
Project Site

SOURCE: USGS 7.5-minute Topo Quads - *Honker Bay, Calif.* (1980).

I:\TER1902\GIS\Maps\Cultural\Report\Figure 2_Project Site.mxd (4/3/2019)

LSA

LEGEND

Project Site

Excavation Area

FIGURE 3

N

0 250 500

FEET

Chemtrade Bay Point Facility
Pittsburg, Contra Costa County, California

Area of Proposed Excavation

SOURCE: USDA NAIP Aerial Imagery (05/2016).

I:\TER1902\GIS\Maps\Cultural\Report\Figure 3_Area of Proposed Excavation.mxd (4/3/2019)

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov

April 8, 2019

Lora Holland
LSA

VIA Email to: lora.holland@lsa.net

RE: **Chemtrade Bay Point Facility Project**, City of Pittsburg; Honker Bay USGS Quadrangle, Contra Costa County, California.

Dear Ms. Holland:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton

Gayle Totton, B.S., M.A., Ph.D.
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Contra Costa County
4/8/2019

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
789 Canada Road
Woodside, CA, 94062
Phone: (650) 851 - 7489
Fax: (650) 332-1526
amahmutsuntribal@gmail.com
Costanoan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA, 95024
Phone: (831) 637 - 4238
ams@indiancanyon.org
Costanoan

Muwekma Ohlone Indian Tribe of the SF Bay Area
Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 232
Castro Valley, CA, 94546
Phone: (408) 464 - 2892
cnijmeh@muwekma.org
Costanoan

North Valley Yokuts Tribe
Katherine Erolinda Perez, Chairperson
P.O. Box 717
Linden, CA, 95236
Phone: (209) 887 - 3415
canutes@verizon.net
Costanoan
Northern Valley Yokut

The Ohlone Indian Tribe
Andrew Galvan,
P.O. Box 3388
Fremont, CA, 94539
Phone: (510) 882 - 0527
Fax: (510) 687-9393
chochenyo@AOL.com
Bay Miwok
Ohlone
Patwin
Plains Miwok

Wilton Rancheria
Raymond Hitchcock, Chairperson
9728 Kent Street
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
Fax: (916) 683-6015
rhitchcock@wiltonrancheria-nsn.gov
Miwok

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Chemtrade Bay Point Facility Project, Contra Costa County.

Attachment C - Noise

Project-Generated Construction Source Noise Prediction Model

General Chemical Project

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (Leq dBA)
Threshold*	776	50.0
	50	73.8
	80	69.7
	150	64.3
	200	61.8
	250	59.8
	275	59.0
	350	56.9
	400	55.8
	450	54.7
	500	53.8
	550	53.0
	600	52.2
	2800	38.8

Assumptions:	Reference Emission Noise Levels (Lmax) at 50 feet1	Usage Factor1
Paver	68	0.5
Loader	69	0.4
Excavator	71	0.4
Ground Type	Hard	
Ground Factor	0.00	

Predicted Noise Level 2	Leq dBA at 50 feet2
Dozer	72.0
Loader	65.0
Excavator	67.0

Combined Predicted Noise Level (Leq dBA at 50 feet)
73.8

Sources:

1 Obtained from the FHWA Roadway Construction Noise Model, January 2006.

2 Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006.

Leq(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

Attachment D – Mitigation Monitoring and Reporting Program

Proposed RCRA Corrective Action Remedy Selection for the Chemtrade Bay Point Facility

MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

The California Department of Toxic Substances Control (DTSC) prepared an initial study (IS) in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.; California Code of Regulations Title 14 Section 15000 et seq. [CEQA Guidelines]). The IS evaluates the potential significant environmental impacts associated with the proposed RCRA Corrective Action Remedy Selection for the Chemtrade Bay Point Facility.

For every potential impact, the IS prescribes mitigation capable of reducing these impacts to less-than-significant levels. The IS concludes two potential impacts pertaining to the following Initial Study Biological Resources items:

> 4a) 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, U.S. Fish and Wildlife Service, or NOAA Fisheries?
>
> 4d) 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?

The Initial Study findings indicated the Proposed Project impacts with respect to items 4a and 4d are less than significant with mitigation incorporated. Section 21081.6 of the California Public Resources Code requires a public agency to adopt a reporting or monitoring program at the time of approval for changes to the project that it has adopted and incorporated into the project. The program must be designed to avoid, mitigate, or minimize significant effects on the physical environment. These conditions are also referred to as mitigation measures. This mitigation monitoring and reporting program (MMRP) is to be used by DTSC to ensure that adopted mitigation measures identified in the IS are implemented and that implementation is documented.

Definitions:

Responsible Entity: Identifies the entity responsible for complying with the requirements and conditions of the mitigation measure.

Monitoring Responsibility: DTSC is responsible for ensuring these mitigation measures are implemented. The DTSC, at their discretion, may delegate implementation responsibility or portions thereof to qualified consultants or contractors. However, DTSC still maintains overall responsibility for implementation of mitigation adopted or incorporated into the project.

Compliance: The column describes how compliance with the mitigation measure will be achieved, monitored, and/or reported.

Mitigation Measure Bio-1 Component	Timeline	Responsible Entity	Monitoring Responsibility	How Compliance is Achieved, Monitored and/or Reported
A qualified biologist shall conduct a Biological Resources Education Program briefing to all contractor and subcontractor personnel prior to any site entry. The qualified biologist shall train all personnel on the location of sensitive habitat, identification of all special status species, instructions of procedure when encountering one, and applicable environmental laws, statutes, ordinances, [e.g., Fish and Game Code (FGC), Migratory Bird Treaty Act (MBTA), and United States Fish and Wildlife Code]. A fact sheet conveying this information will be prepared and distributed to the above-mentioned people and anyone else who may enter the project site. Upon completion of training, employees will sign a form stating that they attended the training and understand all the conservation and protection measures.	Prior to any ground-disturbing activities, and prior to personnel entry to site.	Chemtrade West US LLC	DTSC	-Training and documentation: forms signed by personnel who attended training. -Fact sheet
If ground-disturbing activities are scheduled within the avian nesting season, a pre-construction clearance survey for nesting birds shall be conducted by a qualified biologist within three days prior to any ground-disturbing activities to ensure that no nesting birds would be disturbed during construction. Nesting season generally extends from February 1 through August 31, but can vary from year to year, based upon seasonal weather conditions.	Three days prior to any ground-disturbing activities during the nesting season.	Chemtrade West US LLC	DTSC	Documentation of a pre-construction clearance survey completed by a qualified biologist.
The biologist conducting the clearance survey shall document a negative survey indicating that no impacts to active bird nests would occur. If an active avian nest is discovered during the 3-day pre-construction clearance survey, the nest location would be mapped and California Department of Fish and Wildlife (CDFW) and United States Fish and Wildlife Service (USFWS) contacted. Construction activities shall stay outside of a 100-foot buffer around the active nest (250-foot buffer for raptors).	Three days prior to any ground-disturbing activities.	Chemtrade West US LLC	DTSC	-Documentation of a negative survey, OR -Written documentation of the CDFW and USFWS notification (including name, email, phone number), and photos of delineated buffer zone.
If special status avian species are identified during the pre-construction survey, a biological monitor shall be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, normal construction activities can occur. Pursuant to FGC section 3503, it is unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (birds of prey, such as hawks and owls) are protected under FGC 3503.5 which makes it unlawful to take, posses, or destroy their nest or eggs (CDFW, 1971).	Prior and during ground-disturbing activities.	Chemtrade West US LLC	DTSC	Buffer area delineation with physical demarcation for field crew to observe. Documentation (field notes and photographs) by the biological monitor.
A consultation with CDFW and/or USFWS (dependent on the species) shall be required prior to the removal of any raptor nest on the Proposed Project Site, if a raptor nest is determined to be located on Site during the pre-construction clearance survey.	Prior to ground-disturbing activities.	Chemtrade West US LLC	DTSC	Documentation of consultation with CDFW and/or USFWS personnel (including name, email, telephone number)

Mitigation Measure Bio-1 Component	Timeline	Responsible Entity	Monitoring Responsibility	How Compliance is Achieved, Monitored and/or Reported
If a Western Pond Turtle is encountered, it will be relocated by a qualified biologist into the adjacent marsh off-site in accordance with CDFW Scientific Collecting permit procedures. The biologist will have a CDFW Scientific Collecting permit with authorization to handle and relocate any turtles encountered.	Prior and during ground-disturbing activities.	Chemtrade West US LLC	DTSC	Photographs and field notes from a biologist with a CDFW Scientific Collecting Permit, and a copy of the permit.
Equipment and personnel shall be limited to the areas where vegetation has been cleared and not venture into heavily vegetated areas of the Site or adjacent land. Excavation and haul equipment shall be confined to the access routes, designated staging areas in paved locations, and designated construction areas. Project-related vehicular traffic within the project area will observe a 15-mph, or lower, limit. Equipment decontamination shall be performed within the designated staging area, away from wetland habitat and Suisun Bay. All construction work shall occur during the daytime.	During ground-disturbing activities; daily.	Chemtrade West US LLC	DTSC	- Daily pre-work tailgate meetings. - Visual observation and documentation in daily field notes of any deviations with corrective actions noted.
Site personnel shall thoroughly inspect the work area prior to the initiation of work each day. In addition, personnel shall inspect adjacent habitat areas within 500 feet of the work area for active nests, prior to the initiation of work each day. If no special status species or active nests are present in these areas, no further action is required. No work shall commence if a special status species or active nest is observed within the work area, or if an active nest is observed within a radius of 500 feet for California Clapper Rail or California Black Rail, 250 feet for raptors, or 100 feet for other birds. In these conditions, a qualified biologist shall be contacted and conduct a site visit to confirm the presence of a special status species or nest. The qualified biologist would notify California Department of Fish and Wildlife (CDFW) and USFWS within 1 business day and no work shall commence until the special status species leaves the work area on its own volition. If the special status species does not leave the work area or if an active nest is present within the work area (or the identified specific radius ranges above) work shall not be reinitiated until CDFW and USFWS are contacted, as required by the prior qualified biologist prior notification, and determine the best course to proceed with work activities.	During ground-disturbing activities: prior to the initiation of work each day, and upon observation of a special status species.	Chemtrade West US LLC	DTSC	- Daily field notes; photographs as appropriate. - Qualified biologist site visit and findings field notes; photographs as appropriate. - CDFW and USFWS notification documentation. - Qualified biologist documentation of stop-work period and written clearance to reinitiate work.