CALIFORNIA ENVIRONMENTAL QUALITY ACT
NEGATIVE DECLARATION

Department of Toxic Substances Control
Site Mitigation and Restoration Program - Cypress Office
5796 Corporate Avenue
Cypress, California 90630

Subject: ☒ DRAFT ☐ FINAL ☒ MITIGATED

Project Title: Former PureGro Facility Remedial Action Plan

State Clearinghouse No.:

Project Location: 1025 River Drive, Brawley, Imperial County, CA

County: Imperial

Project Description: The Project involves remediation of the former PureGro Facility property to meet commercial/industrial and residential risk-based criteria. Specifically, work would include targeted excavation on the property and within a residential buffer zone on the eastern border, landscaping of the southern border residential buffer zone, soil stockpile removal, placement of an engineered cover over the entire 11-acre site (i.e., site's entirety north of the southern fence line), establishment of institutional controls, and groundwater monitoring. Project construction activities are anticipated to occur over a 16-month period beginning in January 2020. There will be a 5-month hiatus in mid-2020 for a total of 11 months of active construction. The Project site is zoned as Light Manufacturing (M-1). The adjacent land uses include Light Manufacturing, Low-Density Residential, and a municipal airport.

Finding of Significant Effect on Environment: None with mitigation incorporated *(An Initial Study supporting this finding is attached.)*

Mitigation Measures: Yes (*See Appendix E, Mitigation, Monitoring, and Reporting Plan*)

Branch Chief's Signature		Date
A. Edward Morelan	Chief, Cypress Cleanup Branch	(714) 484-5440
Branch Chief - Name	Branch Chief - Title	Phone #

DRAFT INITIAL STUDY

Former PureGro Facility
Remedial Action Plan
Brawley, California

Prepared for:

California Department of Toxic Substances Control

5796 Corporate Avenue

Cypress, CA 90630

Contact:

Daniel Cordero

714.484.5428

November 2019

Prepared by:

ARCADIS Design & Consultancy for natural and built assets

Environmental Checklist

1.	**Project Title:**	Former PureGro Facility Remedial Action Plan
2.	**Lead Agency Name and Address:**	Department of Toxic Substances Control 5796 Corporate Avenue Cypress, CA 90630
3.	**Contact Person and Phone Number:**	Daniel Cordero 714.484.5428
4.	**Project Location:**	1025 River Drive, Brawley, Imperial County, CA 92227
5.	**Project Sponsor's Name and Address:**	Kim Jolitz, Project Manager Chevron Environmental Management Company 6001 Bollinger Canyon Road San Ramon, CA 94583 925.842.4707
6.	**General Plan Designation(s):**	M-1 Light Manufacturing
7.	**Zoning Designation(s):**	M-1 Light Manufacturing
8.	**Description of Project:**	The Project involves remediation of the former PureGro Facility property to meet commercial/industrial and residential risk-based criteria. Specifically, work would include targeted excavation on the property and within a residential buffer zone on the eastern border, landscaping of the southern border residential buffer zone, soil stockpile removal, placement of an engineered cover over the entire 11-acre site (i.e., site's entirety north of the southern fence line), establishment of institutional controls, and groundwater monitoring. Project construction activities are anticipated to occur over a 16-month period beginning in January 2020. There will be a 5-month hiatus in mid-2020 for a total of 11 months of active construction.
9.	**Surrounding Land Uses and Setting.**	The Project site is zoned as Light Manufacturing (M-1). The adjacent land uses include Light Manufacturing and Low-Density Residential, and a municipal airport.

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1. Environmental Factors Potentially Affected

The proposed Project could potentially affect the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor.

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

2. Project Description and Background

The Department of Toxic Substances Control (DTSC) oversees the environmental investigations and remedial activities of the Former PureGro Facility property (the Project site) in accordance with Imminent and Substantial Endangerment Determination and Consent Order I&SE-CO 03/04-009, issued March 2004. Therefore, DTSC has prepared this Initial Study (IS) to support the approval of the Draft Remedial Action Plan (RAP) for the Former PureGro Facility located in Brawley, Imperial County, California (the Project).

The Project site is located in the City of Brawley, Imperial County, California (Figure 1), and the property is owned by PureGro Company (PureGro). DTSC is proposing to approve a RAP for the Former PureGro Facility requiring compliance with the California Environmental Quality Act (CEQA).

The Project site occupies two adjoining parcels on the north side of River Drive and adjacent to (east of) the railroad line that runs through the northeastern part of Brawley (Figure 1). City of Brawley zoning maps show that both parcels are located within a Light Manufacturing Area (M-1) land use zone, which establishes industrial uses within an area in close proximity to residential zones (City of Brawley 2008a). The site is zoned and approved for light industrial use and will remain so in the future at the completion of the Project; no zoning changes are proposed. Properties to the north, west, northeast, northwest, and southwest of the Project site are also zoned as M-1; and properties to the east, south, and southeast are zoned as Low-Density Residential (City of Brawley 2017). Properties to the east are currently vacant lots, and properties to the southeast and south are primarily residential land use. The Brawley Municipal Airport is located approximately 700 feet to the north of the Project site (Figure 2).

Currently, the site is vacant, fenced, and relatively flat. A temporary stockpile of excavated soil was brought on site from the property to the east, placed within a second, internal fenced

enclosure, and covered with several layers of erosion control blanket material to provide stability and prevent dust generation until a final remedy is implemented. Chevron Environmental Management Company (CEMC) currently inspects and maintains the entire Project site annually and as needed, including the fences and stockpile. Maintenance activities include site-wide dust control measures, vegetation control, fence repair, signage, and graffiti abatement. Site dust control measures include annual application of dust suppressant to exposed soil surfaces of the site.

The Project involves remediation of the site to meet commercial/industrial and residential risk-based criteria. Specifically, work would include targeted excavation on the property and within a residential buffer zone on the eastern border, landscaping of the southern border residential buffer zone, soil stockpile removal, placement of an engineered cover over the entire 11-acre site (i.e., site's entirety north of the southern fence line), establishment of institutional controls, and groundwater monitoring. Project construction activities are anticipated to occur over a 16-month period beginning in January 2020. There will be a 5-month hiatus in mid-2020 for a total of 11 months of active construction.

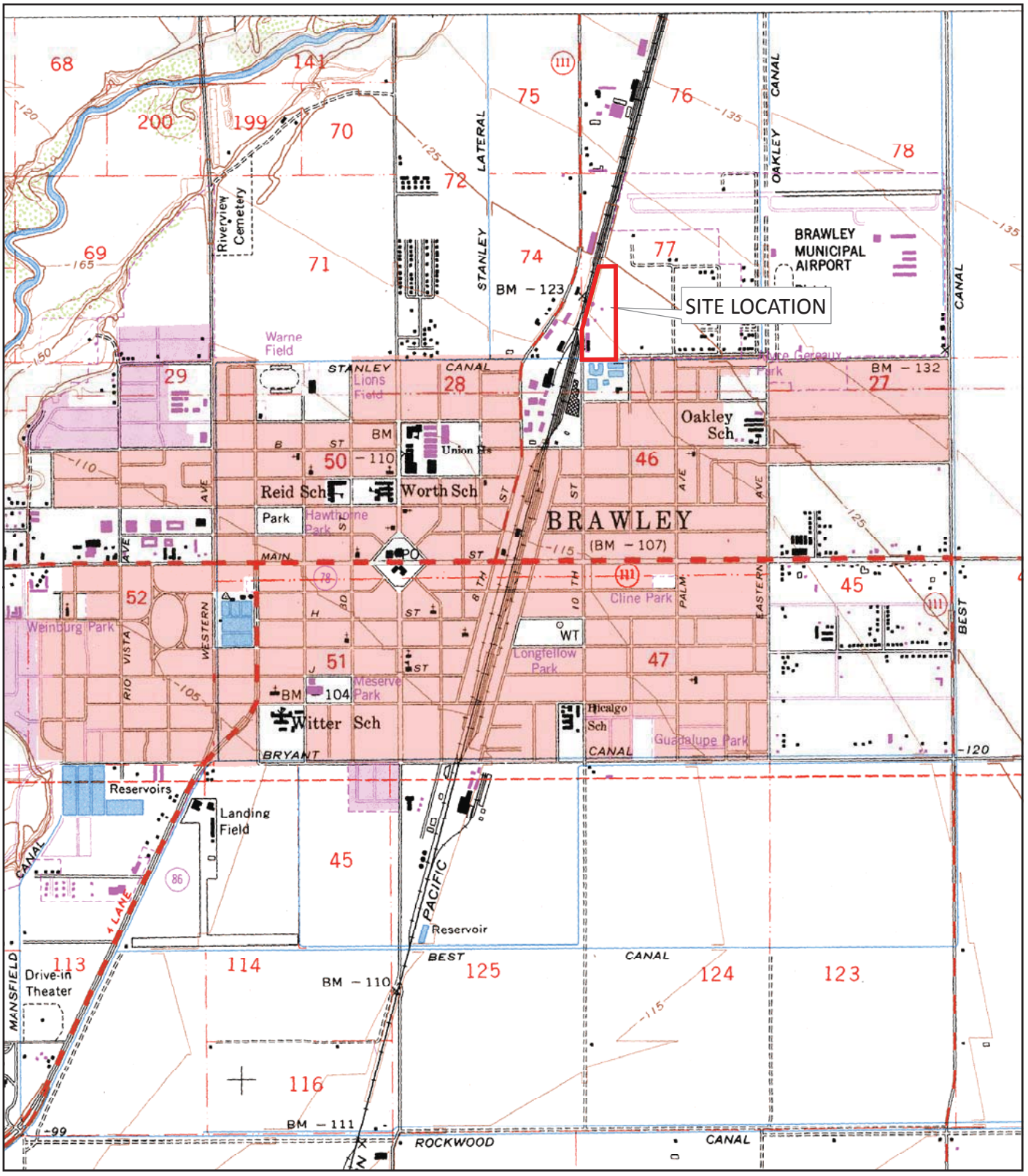

IMAGE COURTESY U.S. GEOLOGICAL SURVEY (1979)

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER PUREGRO FACILITY, BRAWLEY, CALIFORNIA
DRAFT INITIAL STUDY

SITE LOCATION

ARCADIS

FIGURE
1

CITY: DIV/GROUP: DB: LD: PIC: PM: TM: TR:
Project (Project #)
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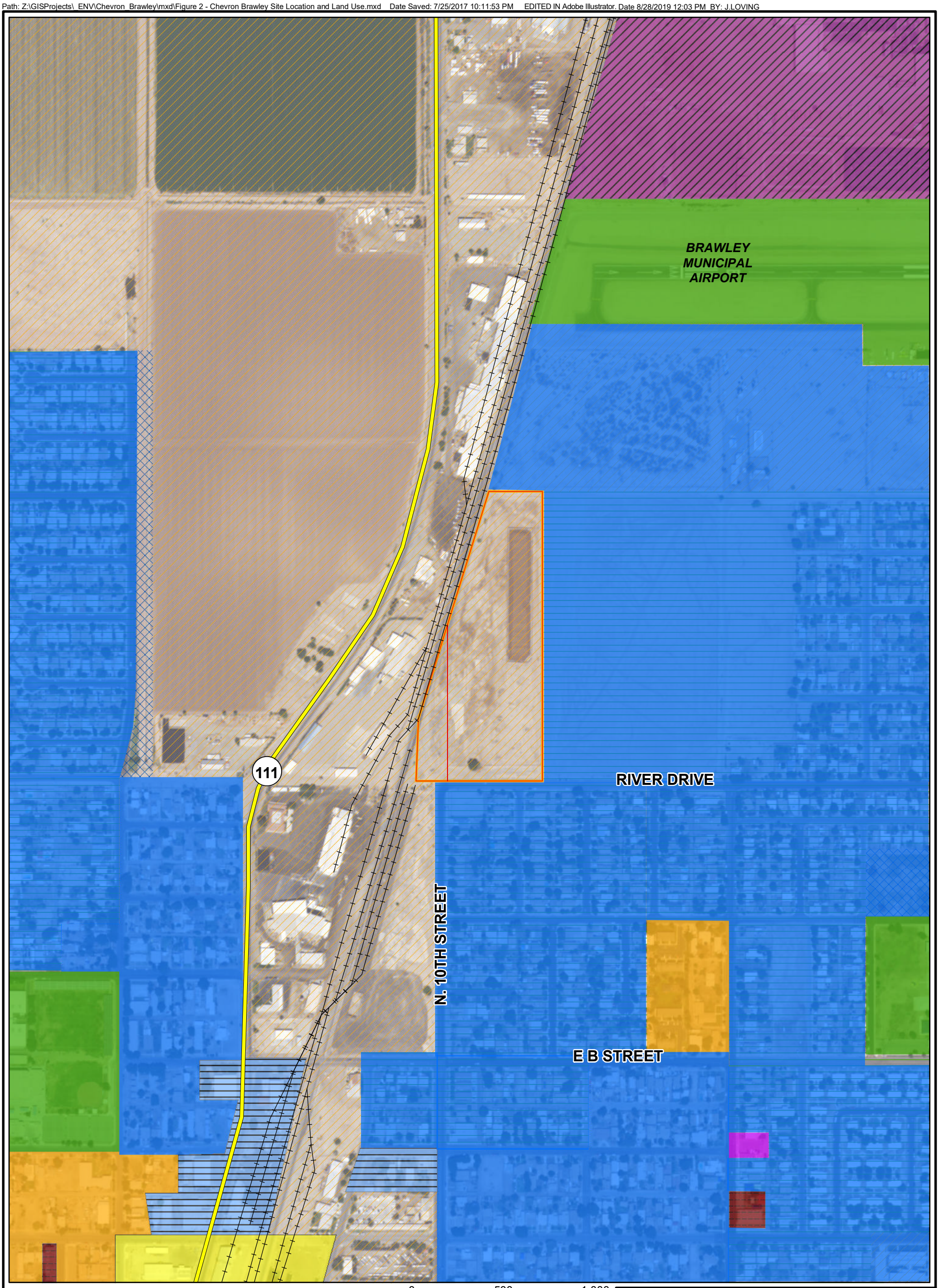
CITY:(CLEVELAND) DIV/GROUP:(ENV/GIS) DB:L.GREENE LD: PIC: PM: TM:
PROJECT: B0045434.0007.00008
Path: Z:\GISProjects_ENV\Chevron_Brawley\mxd\Figure 2 - Chevron Brawley Site Location and Land Use.mxd Date Saved: 7/25/2017 10:11:53 PM EDITED IN Adobe Illustrator. Date 8/28/2019 12:03 PM BY: J.LOVING



LEGEND

- STATE HIGHWAY
- UNION PACIFIC RAILROAD TRACKS
- APPROXIMATE PARCEL BOUNDARIES
- PROJECT AREA

ZONING DESIGNATIONS

- HEAVY MANUFACTURING
- LIGHT MANUFACTURING
- PUBLIC FACILITIES
- RECREATION
- MEDIUM COMMERCIAL
- NEIGHBORHOOD COMMERCIAL
- SERVICE AND PROFESSIONAL
- RESIDENTIAL LOW DENSITY
- RESIDENTIAL MEDIUM DENSITY
- PLANNED DEVELOPMENT

0 500 1,000

SCALE IN FEET

NOTES:
ZONING INFORMATION SOURCE:
City of Brawley Planning Department. 2014. City of Brawley Official Zoning Map. Updated October 2014. http://www.brawley-ca.gov/cms/kcfinder/upload/files/planning/Brawley_Zoning_with_SP_s_and_MU_Oct_2014_Update.pdf

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
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DRAFT INITIAL STUDY

SITE LOCATION AND LAND USE

ARCADIS

FIGURE
2

2.1 Site History and Background

The Project site was used to formulate, store, and distribute agricultural products (e.g. fertilizers and pesticides) from the 1940s to 2000. Facility operations were discontinued in December 2000, and most of the site improvements (including buildings, tanks, and some concrete pads) were demolished in 2001 (Gradient Engineers, Inc. 2003; DTSC 2004a, 2004b). The Pacific Guano Company was acquired by Union Oil Company of California (Unocal) in 1961 (it was renamed PureGro Company in 1967). The Unocal subsidiary operated the site from 1961 through 1993, when Crop Production Services (doing business as Western Farm Services) purchased the facility. In 2000, property ownership was transferred from Crop Production Services back to PureGro Company. In 2005, Chevron acquired Unocal and its assets, including previously closed legacy operations such as this site.

During its operational history, the Project site contained features such as a warehouse, lime sulfur plant, sulfur sludge pond, reactor areas, metal machine shop, hazardous waste storage area, grease pit, wash/rinse areas, liquid emulsion plant, underground and aboveground storage tanks, and an evaporation pond.

Remedial investigation (RI) activities, including property boundary and site surveys, stockpile sampling, and soil and groundwater sampling, were conducted between 2008 and 2014 (Arcadis 2014a). Sampling results and detailed site background information (including regional setting, geology, hydrogeology, and previous site assessments) are presented in the RI Report (Arcadis 2014a), which was approved by the DTSC in 2014.

Soil characterization performed at the Project site included the collection of 512 soil samples from 163 locations (Arcadis 2014a). In the RI Report (Arcadis 2014a), soil analytical results were screened against the comparison criteria established according to the current land designation and site use to identify site constituents of potential concern (COPCs). Soil COPCs are those that have at least one sample concentration detected above comparison criteria. These include:

- Organochlorine pesticides (OCPs): chlordane, dieldrin, methoxychlor, toxaphene, dichlorodiphenyldichloroethane (DDD), dichlorodiphenyldichloroethylene (DDE), and dichlorodiphenyltrichloroethane (DDT)
- Organophosphorus pesticides: disulfoton and pentachloronitrobenzene
- Volatile organic compounds (VOCs): ethylbenzene and m,p-xylenes
- Metals: arsenic and cadmium
- pH

The horizontal and lateral extents of the COPCs are delineated within the site boundaries and above the groundwater table. Soil COPCs exceedances are generally limited to the shallow subsurface (within the top 5 feet of soil; Arcadis 2019).

Groundwater characterization performed at the Project site has included the collection of 169 groundwater samples from 43 locations across the Project site (Arcadis 2019). Constituents in groundwater detected at concentrations above their comparison criteria include:

- DDT

- Total petroleum hydrocarbons - gasoline range organics
- Metals: iron and manganese
- Chloride
- Nitrate
- Sulfate
- Total dissolved solids (TDS)

While these constituents exhibited at least one detection in groundwater at concentrations above the screening levels, except for nitrate, most of them have a limited frequency of detections above screening levels and limited potential for off-site migration (Arcadis 2010).

2.2 Baseline Human Health Risk Assessment (Conditions Prior to Remediation)

To understand the potential risk to receptors, a conceptual site model (CSM) was developed as part of the Baseline Human Health Risk Assessment (BHHRA; Arcadis 2010). The CSM included review of the soil and groundwater conditions at the Project site, identification of COPCs and human receptors, and evaluation of migration and exposure pathways for human receptors potentially present on and near the Project site under current and future conditions. An exposure pathway is the link between a contaminant and a receptor (U.S. Environmental Protection Agency [USEPA] 1991). A complete exposure pathway is one where the stressor can be traced or expected to travel from the source to a receptor (USEPA OSWER 1997).

The following human receptors were evaluated under hypothetical current (i.e., soil remains relatively undisturbed; therefore, only surface soil was considered) and future (i.e., assuming soil to 10 feet could be excavated during construction activities and redistributed across the surface) site conditions:

- Current on-site trespasser receptor
- Current off-site child/adult resident receptor
- Future on-site commercial/industrial worker receptor
- Future on-site construction worker receptor
- Future off-site child/adult resident receptor

Potentially complete and significant exposure pathways evaluated in the BHHRA for on-site receptors include incidental soil ingestion, dermal contact with soil, and inhalation of airborne soil particulates. For off-site receptors, the only potentially complete and significant exposure pathway identified is inhalation of airborne soil particulates. Exposure to groundwater, surface runoff, and soil vapor were not considered in the BHHRA because no complete pathways were present for the hypothetical receptors considered. The City of Brawley requires all residences to use municipal water source, and domestic supply wells are not allowed. There is no evidence of domestic use of groundwater in the vicinity of the site; therefore, the exposure pathway is considered incomplete.

Project site data were used to estimate excess lifetime cancer risks and non-cancer hazard indices consistent with USEPA and State of California risk assessment guidelines. The key results of the BHHRA are summarized below in Table 1.

Table 1: Key Results of BHHRA

Receptor	Excess Lifetime Cancer Risk	Hazard Indices
Current Hypothetical Receptors		
On-site trespasser	4×10^{-5} (4 in 100,000)	2
Off-site resident	3×10^{-6} (3 in 1,000,000 child and adult)	0.2
Future Hypothetical Receptors		
On-site construction worker	1×10^{-5} 1 in 100,000	30
On-site commercial/industrial worker	8×10^{-5} 8 in 100,000	7
Off-site resident	2×10^{-6} (2 in 1,000,000 child and adult)	0.1

Although the excess lifetime cancer risk for all receptors evaluated exceed the California Environmental Protection Agency's (CalEPA; 1994) threshold of 1×10^{-6} (one in one million), the excess lifetime cancer risks are within the USEPA's (2003) acceptable risk range of 1×10^{-4} to 1×10^{-6} or one in 10 thousand to one in 1 million. Hazard indices for the hypothetical current and future off-site resident receptor are less than the CalEPA's (1994) and USEPA's (2003) threshold of 1 for non-cancer effects. Hazard indices for the on-site construction worker, commercial/industrial worker, and trespasser were above 1.

The main contributors to the excess lifetime cancer risk are dieldrin, arsenic, cadmium, and pentachloronitrobenzene. The main contributors to non-cancer hazard indices are disulfoton and phorate[1], which were only detected once each in the top 10 feet of soil at the site. Based on the 2010 BHHRA, the primary risk drivers at the Project site were dieldrin and cadmium[2]. The cadmium DTSC screening level was updated in 2019, and the maximum concentration observed

[1] Disulfoton and phorate both can impact the nervous system (ATSDR 1995 and 2011; USEPA 2001).

[2] Cadmium was only a risk driver for the current and future off-site resident.

on site is below the updated screening level. Therefore, the results of the 2010 BHHRA are conservative with respect to cadmium.

The BHHRA also evaluated lead and concluded that exposure to lead in on-site soils would not pose a significant hazard at the site (Arcadis 2010).

2.3 Ecological Scoping Assessment

The Ecological Scoping Assessment (ESA; Arcadis 2010) identified several site-related constituents (primarily, DDT, DDE, DDD, dieldrin, toxaphene, cadmium, perchlorate, total petroleum hydrocarbons, and VOCs) with potentially complete exposure pathways for soil on site; however, due to the absence of special-status species habitat and insufficient habitat to support populations of other ecological receptors (i.e., birds, wildlife), these potential exposure pathways are insignificant for ecological receptors. Groundwater, surface-water runoff, and soil vapor exposure pathways are incomplete at the Project site.

The Project site's surface is primarily denuded, with compacted soil and sparse vegetation. Maintenance of the current unvegetated condition continues to prevent the development of suitable habitat for ecological receptors (Arcadis 2019). A field check was completed by CEMC contractors in June 2019, and site conditions were reconfirmed as unsuitable habitat for ecological receptors. No sensitive or special-status species, burrowing animals, or habitat to support populations of other ecological receptors were observed. Project site maintenance (e.g., vegetation clearance, dust suppressant, fencing repairs) occurs annually and as needed, with the most recent site inspection and maintenance occurring in June 2019.

2.4 Remedial Action Objectives

Remedial action objectives (RAOs) define the standards used to mitigate potential risks identified for the Project site and to restore the Project site for commercial/industrial use (compatible with current M-1 zoning). According to the Consent Order (DTSC 2004a):

> *"The Remedial Action Objectives for the Site shall include: (a) Cleanup of hazardous substances in the soil, to risk-based levels. (b) Protection of flora and fauna, if necessary based on biological surveys and, if warranted, an ecological risk assessment."*

Based on the results of the 2010 BHHRA and ESA and the 2014 RI Report, additional RAOs were developed to serve as guidelines to screen remedial technologies and develop and evaluate remedial alternatives. The following RAOs for the site were established in the Feasibility Study (FS) Report (Arcadis 2017) and FS Report Addendum (Arcadis 2019):

- Remediate hazardous substances in the soil to levels that will be protective of human health and the environment. Hazardous substances are defined as impacted soil with COPC concentrations exceeding appropriate commercial/industrial screening levels.
- Protect flora and fauna, if necessary, based on biological surveys and, if warranted, conduct an ecological risk assessment.
- Protect groundwater on- and off-site by minimizing the transport of COPCs in compliance with the Porter Cologne Water Quality Control Act (Article 4, section 13263(g)).

- Remediate the Project site for future commercial/industrial use within a reasonable time frame.

2.5 Project Components

The proposed Project involves a set of remedial actions designed to eliminate or reduce the potential for future off-site residents and on-site construction workers, commercial/industrial workers, and trespassers to be exposed to COPC-containing soil. The project also is designed to minimize surface-water infiltration and migration of COPC-containing soil to uncontaminated media. Potential future on-site receptors will be protected via land use controls (LUCs). The remedy will effectively achieve all Remedial Action Objectives.

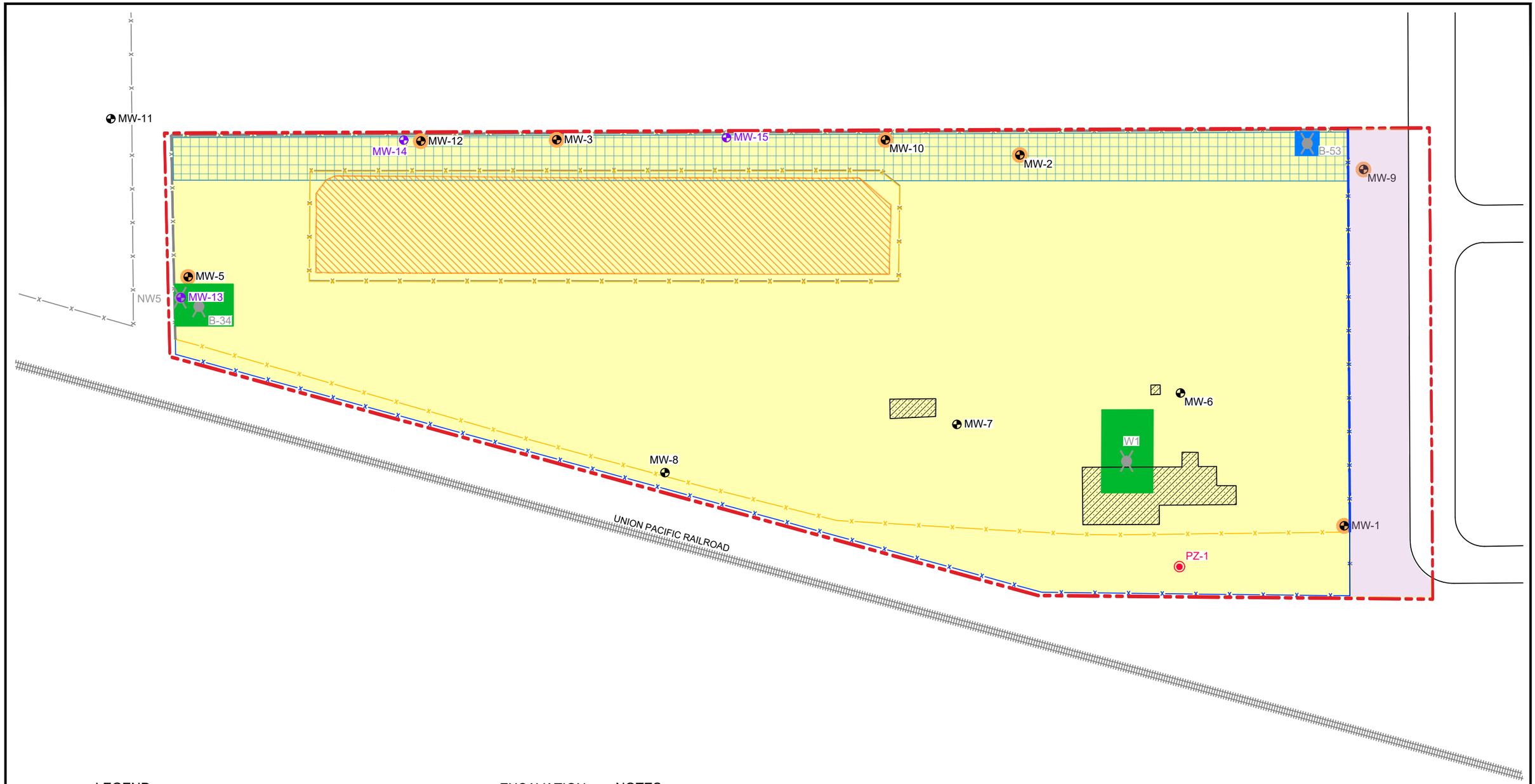
Implementation of the proposed Project includes several components, which are summarized below and depicted on Figure 3:

- Site preparation and mobilization
- Stockpile and concrete foundation removal
- Targeted soil excavation, creation of a 50-foot residential buffer zone on the eastern and southern borders of the Project site, and landscaping of the southern residential buffer. Upon completion, soil in the buffer zone will achieve residential risk-based criteria.
- Placement of an engineered cover that will cover the entire Project site (i.e., site's entirety north of the southern fence line). Upon completion, soil on the property that is not within the residential buffer zone will achieve commercial/industrial risk-based criteria.
- Establishment of institutional controls (e.g., LUCs)
- Completion of groundwater monitoring

Specifically, construction of the Project's primary and active remedial components will be completed in five phases. The Project is expected to begin in January 2020 and occur over the course of 16 months with a 5-month hiatus in mid-2020. Active construction will occur for approximately 11 months as summarized below. The approximately timing of each phase is summarized below in Table 2.

Table 2: Project Duration by Phase

Phase	Activities	Approximate Time Frame (5-day work week)	Approximate Number of Workers
I	Site Preparation and Mobilization	1 week	3
II	Stockpile and Concrete Foundation Removal	9 weeks	6
III	Targeted Excavations and Engineered Cover Installation	2 weeks - Excavation 28 weeks - Engineered Cover New Fence and Landscaping	21
IV	Monitoring Well Installation	1 week	6
V	Site Finalization and Demobilization	1 week	6
Total		**42 Weeks**	



LEGEND:

- MONITORING WELL
- EXISTING MONITORING WELL PROPOSED FOR ABANDONMENT
- PROPOSED MONITORING WELL
- PROPOSED UPGRADIENT PIEZOMETER
- TARGETED SOIL SAMPLE TO EXCAVATE
- EXISTING FENCE
- PROPOSED FENCE EXTENSION
- PROPOSED FENCE REMOVAL
- CONCRETE SLAB REMOVAL AREA
- STOCKPILE REMOVAL
- APPROXIMATE PROPERTY BOUNDARY PER DEED
- PROPOSED ENGINEERED COVER (SEE NOTE 4)
- EAST RESIDENTIAL BUFFER ZONE
- SOUTH RESIDENTIAL BUFFER ZONE WITH LANDSCAPING

EXCAVATION DEPTH:

- 4-FEET
- 3-FEET

NOTES:

1. BASEMAP PROVIDED BY GEOSYNTEC CONSULTANTS DATED AUGUST 2008. SITE FEATURES SURVEYED BY PSOMAS AND ASSOCIATES, JANUARY 1993.
2. CONCEPTUAL EXCAVATION LIMITS AND DEPTHS BASED ON CONSTITUENTS OF CONCERN EXCEEDANCES USING COMMERCIAL/INDUSTRIAL CRITERIA BASED ON AN EXCESS LIFETIME CANCER OF 1^{E-5} OR A NONCANCER HAZARD INDEX OF 1. MAXIMUM EXCAVATION DEPTH IS 4 FEET.
3. CONCEPTUAL LIMITS OF EXCAVATION ARE APPROXIMATE AND MAY CHANGE DUE TO FIELD CONSTRAINTS OR FOLLOWING PRE-EXCAVATION SAMPLE RESULTS. ENGINEERING DESIGN TO BE DETERMINED.
4. AFTER TARGETED EXCAVATION IS COMPLETE AND STOCKPILE REMOVED, A 1-FOOT MINIMUM ENGINEERED SOIL COVER WILL BE INSTALLED ACROSS THE ENTIRETY OF THE SITE NORTH OF THE SOUTHERN FENCE LINE.
5. EXCAVATION AREAS WILL BE BACKFILLED TO EXISTING GRADE PRIOR TO PLACING ENGINEERED COVER.
6. SOIL WITHIN THE RESIDENTIAL BUFFER ZONE WILL MEET RESIDENTIAL CRITERIA (1^{E-6}).

0 100’ 200’

GRAPHIC SCALE

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER PUREGRO FACILITY, BRAWLEY, CALIFORNIA
DRAFT INITIAL STUDY

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

CITY: SYRACUSE, NY DIV/GROUP: ENV/IMDV DB: K.GRIFFITH, K.DAVIS LD:(Opt) PIC:(Opt) PM: O.ENCELLE TM: N.FRANGIS LYR: ON=*;OFF=*REF*
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XREFS: RAP-TB-BL
IMAGES: aerial 100x.jpg

2.6 Site Preparation and Mobilization

Project site preparation will include pre-construction surveys, utility location, fence relocation, vegetation clearing and grubbing, dust monitoring and control, and removal of the two ornamental trees located at the current site entrance. Site preparation will also include construction of a stabilized site entrance and decontamination pad. Temporary sediment and erosion controls and stormwater controls will be installed as part of site preparation. Sediment and erosion controls will include, but will not be limited to, installation of:

- Entrance/outlet tire wash
- Straw wattles along perimeter of site
- Silt fencing along perimeter of site
- Ground tarping in equipment storage areas

The pre-construction survey will provide locations for the property boundary, marked utilities, residential buffer zones, design soil sampling, excavation extent, and other existing site features.

Underground Service Alert will be contacted before site work to identify the locations of utilities that enter the property. A third-party utility location company will conduct a utility survey of the Project site to locate underground utilities as necessary.

The existing fence on the west side of the Project site will be relocated to the western property boundary before construction. The fence surrounding the stockpile will be removed and may be recycled or reused as part of the proposed fence extension. Additionally, the existing chain link fence at the southern perimeter will be removed, repositioned 50 feet away from the road to account for the 50-foot-wide southern residential buffer zone, and replaced by a fence as specified in the landscaping design. The current southern chain-link fence may be recycled or reused as part of the proposed fence extension.

Seven of the existing groundwater monitoring wells located within the footprint of the engineered cover will be abandoned in accordance with applicable state and local well laws. As explained below, the wells will be replaced with new monitoring wells, as appropriate, along the site perimeter to monitor groundwater conditions following remedy construction.

To enable vehicle travel on-site with minimal soil disturbance, the on-site access road will be established in a horseshoe configuration to maintain trucks moving forward and reduce trucks and equipment backing up, where feasible. Trucks and equipment will only use the access road during construction. The road will consist of a non-woven geotextile fabric or similar materials with approximately 6 inches of crushed rock placed on top of the fabric. The access road will start at the site entrance and extend north parallel with the stockpile and will be watered first thing each morning and throughout the day as needed. Using the fabric and crushed rock will condition the road to reduce dust. An additional area will be installed for parking and support structures such as the job site office, break area, and portable toilets. Bulk water storage tanks will be located onsite alongside the access road to facilitate filling of the water trucks while allowing them to stay on the access road.

A stabilized construction entrance will be installed at the south entrance gate extending to River Drive. The entrance will have crushed stone placed atop a woven geotextile liner, or shaker

plates may be used. Excess dirt and debris on vehicles and tires will be removed before leaving the Project site. No night work will occur at the site, and no lighting will be installed.

2.7 Stockpile and Concrete Removal

Removal of the stockpile will involve excavation of approximately 15,000 cubic yards (cy) of soil, and approximately 215 cy of concrete foundation will also be removed. Stockpiled soil material and concrete will be direct loaded into trucks and trailers for off-site transportation to an appropriate waste disposal facility authorized to accept the materials. The location of the stockpile is shown on Figure 3.

Materials removed from the site will be deposited at one or more of the following landfill facilities:

Table 3: Landfill Facilities Available to Accept Site Materials

Facility	Location	Remaining Capacity	Landfill Type	Approximate Distance from Project Site	Operator	Materials Accepted
La Paz County Landfill	Parker, Arizona	100 million cubic yards	40 CFR 239 Subtitle D (Non-hazardous waste). Municipal Solid Waste Landfill	131 miles	Republic Services (Allied Waste Systems of Arizona)	Household residential waste, construction and demolition debris, tires, wastewater treatment plant sludge, friable and non-friable asbestos, other non-hazardous waste
Northwest Regional Landfill	Surprise, Arizona	142 million cubic yards	40 CFR 239 Subtitle D (Non-hazardous waste). Municipal Solid Waste Landfill	229 miles	Waste Management of Arizona	Municipal solid waste, asbestos, ash, petroleum contaminated soil, exploration and production waste, construction and demolition debris, yard waste, household waste
Painted Desert Landfill	Joseph City, Arizona	23 million cubic yards	40 CFR 239 Subtitle D (Non-hazardous waste).	452 miles	Waste Management of Arizona	Municipal solid waste, asbestos, ash, exploration and production waste, construction and

Facility	Location	Remaining Capacity	Landfill Type	Approximate Distance from Project Site	Operator	Materials Accepted
			Municipal Solid Waste Landfill			demolition debris, yard waste, household waste

2.8 Targeted Excavation and Residential Buffer

Targeted excavation will occur in two areas within the Project site. First, soil will be removed to create a 50-foot-wide residential buffer zone along the eastern and southern site boundaries to eliminate the direct contact exposure pathway for potential receptors to surface soil along those boundaries. The targeted excavation within the residential buffer zone will be performed so that soil concentrations for COPCs meet risk-based residential screening levels for a target excess lifetime cancer risk of one in a million and a non-cancer hazard index of 1 throughout the buffer zone (instead of commercial/industrial screening levels). The proposed area of excavation was delineated according to the existing dataset and delineation during sampling conducted from 2008 to 2014 as described in the RI Report (Arcadis 2014a).

Second, targeted excavation outside of the residential buffer will occur at locations where necessary to meet the risk-based commercial/industrial criteria and to remove arsenic above the regional background level. The excavation will extend vertically to where these criteria are met, or to a maximum depth of 4 feet below existing ground surface, and laterally to where these criteria are met. The areas proposed for targeted excavation were delineated according to the existing dataset and delineation during sampling conducted from 2008 to 2014 as described in the RI Report (Arcadis 2014a). Additional soil sampling will be implemented prior to the excavation to further delineate the lateral excavation limits (Arcadis 2019).

Excavated material will be either loaded onto trucks for off-site disposal to one of the three landfills described above, or temporarily stockpiled (only for duration of the remedial construction) in a central location for loading onto trucks for transportation to an appropriate waste disposal facility. Any material temporarily stockpiled on site will be covered with polyethylene (or similar) sheeting to protect the material from wind and contact with precipitation.

Once excavation is complete, the areas will be backfilled with clean, imported material. The source of the imported material, certification that the imported material is clean, and supporting analytical data will be submitted to DTSC for verification before placement.

After excavation and backfill activities are complete, excavation areas will be compacted to match existing ground surface slopes and grades. A lightweight demarcation geotextile fabric will be placed atop the existing soils and backfilled excavations prior to placement of the engineered cover. Additional clean backfill will be placed in low areas, and these areas will be graded to match the general drainage slope at the Project site.

2.9 Engineered Cover

The engineered cover will encompass the entire site north of the southern fence line (approximately 11 acres) as depicted on Figure 3. Once the targeted excavations are complete and backfilled, a 1-foot-thick engineered cover will be placed across the entire portion of the Project site that is north of the southern fence line to achieve a total of a 5-foot-thick layer of soil and engineered cover that achieves risk-based commercial/industrial screening levels. The engineered cover will consist of, from top to bottom: an erosion-resistant dust prevention cover layer (i.e., crushed stone), a non-woven separation geotextile fabric, a sand layer, and a demarcation geotextile fabric above existing grade. The sand and crushed gravel or other material imported to the Project site will be clean, erosion-resistant, and free of debris. The source of the imported material, certification that the imported material is clean, and supporting analytical data will be submitted to DTSC for verification before placement.

2.10 Landscaping

At the completion of targeted excavation and placement of the engineered cover, the southern residential buffer zone will be landscaped using native, drought-tolerant vegetation; rocks; and a sidewalk on the northern side of River Drive.

2.11 Land Use Controls and Institutional Controls

Institutional controls are required for sites that require long-term management relative to land use and other aspects of site maintenance, use, or reuse. For example, institutional controls include a variety of measures designed to prevent current and future property owners from taking actions that will expose potential receptors to unacceptable risk, interfere with effectiveness of the final remedial action, convert the Project site to an end use that is not consistent with the level of remediation, and/or allow COPCs to reach uncontaminated media. Institutional controls in the form of a LUC will protect human health by restricting activities and minimizing the potential for contact with COPC-impacted media. The LUC will maintain the use of the property to commercial or industrial purposes (i.e., no agricultural or residential activities or the operation of hospitals, schools, or day cares will be permitted), and it will require that the integrity of the engineered cover not be compromised during any future non-compatible uses or construction activities. It will also restrict use of the groundwater beneath the Project site to prohibit municipal (e.g., potable) use. The LUC will be recorded with the Imperial County Clerk-Recorder's Office. A soil management plan will also be prepared for the site.

Additional institutional controls may include signage alerting future users and construction/utility workers of the presence of the engineered cover and the geofabric that demarks its extent and prohibiting certain types of future heavy equipment use within the limits of the engineered cover.

Well Installation and Continued Groundwater Monitoring

New groundwater monitoring wells will be installed along the perimeter of the Project site, and all wells will be sampled and monitored. Results will be periodically reported to DTSC. These wells will be monitored to evaluate potential changes to groundwater quality at the site perimeter and off site. This monitoring will start following construction of the engineered cover and will be completed following the procedures outlined in the Remedial Design (RD).

3. Project Implementation

3.1 Traffic Control and Transportation Plan

Vehicles will enter the Project site through the constructed south entrance gate located on River Drive. Before off-site transport, trucks will be inspected to ensure that the payloads are adequately covered, the trucks and tires are cleaned of excess soil, proper placards are displayed when applicable, and the truck's manifest has been completed and signed. When necessary, a flag person will assist truck drivers so that they can safely merge onto River Drive and safely maneuver on the nearby neighborhood streets. Delivery of equipment and materials and off-hauling of materials would not occur during peak commute periods between 7:00 and 9:00 a.m. and between 5:00 and 7:00 p.m. Figure 4 illustrates the truck route that will be used for the duration of the Project.

The Project will require the use of trucks for the hauling of excavated soil off site and delivery of materials. Approximately 2,368 trucks will be required to implement the Project. The table below summarizes the anticipated number of trucks used during each phase of the proposed Project. The number of trucks required was calculated by estimating the amount of material required and the assumption that an 18-cy truck will be used.

Table 4: Estimated Number of Trucks Required by Phase

Phase	Activity	Duration (5-day week)	Truck
I	Site Preparation and Mobilization	1	1
II	Stockpile Removal	9	836
	Concrete Removal		15
III	Targeted Excavation	30	406
	Engineered Cover		1,000
	Landscaping Southern Buffer		83
	New Fence Installation		25
IV	Monitoring Well Installation	1	1
V	Site Finalization and Demobilization	1	1
	Total	**42**	**2,368**

Materials leaving the site will be transported following all necessary local, state, and federal regulations for the transportation of waste to Arizona. All of the waste is non-hazardous pursuant to federal Resource Conservation and Recovery Act (RCRA) standards. Arizona does not have its own state-specific classification system that would deviate from the federal RCRA designation (non-RCRA standards). Thus, all of the waste will be considered non-hazardous for purpose of disposal in Arizona. However, of the 16,515 cy of material being removed, approximately 500 cy could potentially be considered non-RCRA hazardous waste in California (California hazardous waste); therefore, compliance with 22 California Code of Regulations Division 4.5 for hazardous waste generation and temporary on-site storage will be required. Any container used for on-site storage will be properly labelled, and the waste will be transported off site for disposal within 90 days after its generation.

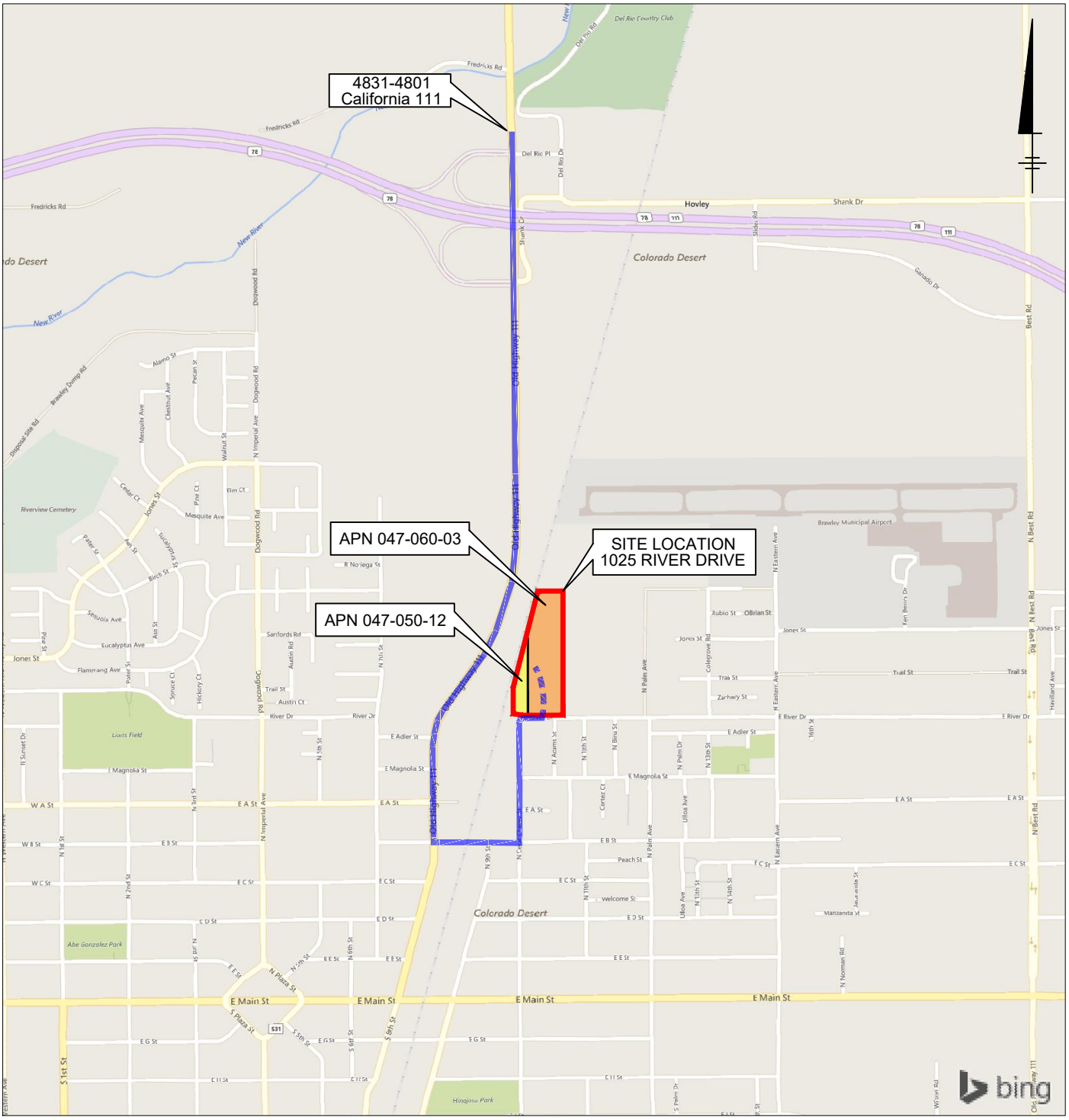
Land disposal restrictions will also be followed as necessary. Any shipment of non-hazardous waste in California will be transported under a non-hazardous waste manifest or bill of lading. The haul route will avoid transporting contaminated material through the nearby residential area (see below for description of anticipated safe route of travel to and from the Project site). Soils will be transported to a disposal facility that is approved and licensed to receive waste generated by the remedial construction activities. All trucks hauling materials from the Project site will be covered prior to leaving the site to ensure soil and debris are not released during transport.

Approximately 16,515 cy of soil, including the soil from the stockpile (approximately 15,000 cy), the soil from the targeted excavation (approximately 1,300 cy), and 215 cy of concrete will be removed from the Project site. All permitted disposal facilities operate a certified weigh station. As such, each truck will be weighed before offloading its payload. Each truck driver will be instructed to notify the site manager before leaving the Project site. Each truck driver will be provided with a non-hazardous waste manifest or bill of lading and the cellular phone number for the site manager. The site manager will be responsible for notifying DTSC and CEMC of any unforeseen incidents.

Approximately 24,220 cy of clean earthen fill, sand (or equivalent drainage material), and crushed stone will be brought to the Project site to construct the engineered cover and backfill the targeted excavations. Selection of the rock quarry supplying the sand and crushed stone will be completed as part of pre-construction planning activities.

Delivery and off-hauling of materials will use existing primary and secondary truck routes as shown on Figure 4. Trucks and equipment will only access the Project site as follows:

1. Trucks will enter/exit the site via River Drive.
2. Trucks will travel north/south on North Cesar Chavez Street.
3. Trucks will travel east/west on B Street.
4. Trucks will travel north/south on North 8th Street/Old Highway 111.
5. Trucks will enter/exit North 8th Street/Old Highway 111 via Highway 111/State Route 78.



0 1500' 3000'

APPROXIMATE SCALE

LEGEND

SITE LOCATION

TRUCK TRANSPORTATION ROUTE

APN = ASSESSORS PARCEL NUMBER

MAP IMAGE @ 2018 BING

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DRAFT INITIAL STUDY

TRUCK TRANSPORTATION ROUTE

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FIGURE
4

CITY: SAN RAFAEL, CA DIV/GROUP: ENVCAD DB: J. HARRIS
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3.2 Equipment Use

Equipment will be stored on site and will be used only when necessary. To the extent feasible, stationary equipment such as generators will be used and stored as far from River Drive as possible to reduce potential noise impacts on nearby residents. In addition, the following Imperial County Air Pollution Control District (ICAPCD) air quality guidelines will be implemented:

- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.
- Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use, to the extent feasible.

The ICAPCD's guidance on alternative fueled equipment is listed below. Where feasible, the Project will implement these measures to reduce air quality impacts:

- Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel-powered equipment.
- Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

3.3 Dust Control

During construction, dust levels will be suppressed and closely monitored. A site-specific Dust Control Plan was prepared for previous activities at the Project site (Arcadis 2014b). The Dust Control Plan will be revised to incorporate additional dust control activities that will be implemented during stockpile removal, targeted excavation, truck loading, and placement of the engineered cover. At a minimum, the Dust Control Plan will include the following:

- Dust will be suppressed by spraying or misting the soil handling areas and haul roads with water, chemical stabilizers, dust suppressants, or other suitable material if water does not sufficiently address dust generation.
- Two all-terrain watering trucks will be on-site at all times for general dust control and dust control during excavation at the stockpile and targeted excavations.
- Water trucks will be positioned at the excavation location and will apply water as the excavation progresses. Similarly, during targeted excavation, water trucks will water before and after excavation.
- All vehicles and equipment will use a singular, conditioned road as described in the Project Description (Section 2.1).
- Soil stockpiles will be immediately covered, and all stockpiles will be positioned on sheeting.
- All truck beds containing soil will be covered to minimize the potential for dust generation during transport.
- During soil disturbance (excavation of the stockpile, targeted excavation, and placement of the engineered cover) the area of soil disturbance will be the smallest possible to reduce the source of the dust.

- At the stockpile and targeted excavation sites, water will be applied before and after excavation.
- Water will be applied during placement of the engineered cover both before and after placement of the sand and crushed stone. If necessary, the sand and crushed stone will be watered prior to placement to reduce dust.
- Ground cover will be replaced in disturbed areas as quickly as possible.
- Vehicle speed for all construction vehicles will not exceed 15 miles per hour (mph) on any unpaved surface at the construction Project site. Vehicle's tires will be inspected before exiting the job site and washed, if necessary, to remove excess debris and soil.
- Airborne particulates will be monitored in compliance with all applicable regulations to verify and document the effectiveness of dust suppression measures. At a minimum, monitors will be placed at the perimeter of the property using an upwind/downwind sampling approach.
- If Visual Dust Emissions (dust emissions visual by the observer) reach 20 percent, work will be stopped until opacity decreases below 20 percent. Opacity will be tested using the Visual Determination of Opacity found in Appendix A of ICAPCD's Rule 800 General Requirements for Control of Fine Particle Matter (PM 10) (IAPCD 2012).
- During times of excessive wind that could generate unacceptable dust unrelated to site activities, work will be stopped temporarily until wind speeds decrease. An anemometer will be maintained on site to monitor real-time wind speeds. If wind speeds exceed 25 mph, earth moving activities such as grading or excavation will cease until wind speeds are below 25 mph.
- During construction, a noise barrier or blanket will be installed along the southern portion of the site along River Drive. The noise barrier or blanket will be up to 15 feet high and will help to contain dust and airborne particles during construction.

In addition to the site-specific dust control measures described above, all projects within the ICPACD jurisdiction must comply with the following, as applicable:

- All disturbed areas, including bulk material storage that is not being actively used, will be effectively stabilized, and visible emissions will be limited to no greater than 20 percent opacity for dust emissions using water, chemical stabilizers, dust suppressants, or other suitable material such as vegetative ground cover.
- All on-site and off-site unpaved roads will be effectively stabilized, and visible emissions will be limited to no greater than 20 percent opacity for dust emissions by paving, application of chemical stabilizers or dust suppressants, and/or watering.
- All unpaved traffic areas 1 acre or more with 75 or more average vehicle trips per day will be effectively stabilized, and visible emissions will be limited to no greater than 20 percent opacity for dust emissions by paving, application of chemical stabilizers or dust suppressants, and/or watering.
- The transport of bulk materials will be completely covered unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In

addition, the cargo compartments of all haul trucks are to be cleaned and/or washed at the delivery site after removal of bulk material.

- All track-out or carry-out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area.
- During movement, handling, or transfer, bulk material will be stabilized before handling or at points of transfer with application of sufficient water, chemical stabilizers or by sheltering or enclosing the operation and transfer line.
- The construction of any new unpaved road is prohibited within any area with a population of 500 or more unless the road meets the definition of a temporary unpaved road. Any temporary unpaved road will be effectively stabilized, and visible emissions will be limited to no greater than 20 percent opacity for dust emission by paving, application of chemical stabilizers or dust suppressants, and/or watering.

3.4 Stormwater and Erosion and Sediment Controls

Site-specific stormwater management measures will be described in detail in a separate, site-specific Storm Water Pollution Prevention Plan (SWPPP), which will also include improvements for the current site drainage in coordination with the grading plan. This SWPPP will be submitted to the California State Water Resources Control Board's Stormwater Multiple Application and Reporting Tracking System (SMARTS) along with a Notice of Intent for coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009-DWQ (Construction General Permit).

Sediment and erosion controls will include, but will not be limited to, installation of:

- Entrance/outlet tire wash
- Straw wattles along perimeter of site
- Silt fencing along perimeter of site
- Ground tarping equipment storage areas

To minimize sediment runoff, temporary stockpiles generated during construction will be placed on top of and covered with polyethylene (or similar) sheeting and will be covered as soon as possible. Additional measures may be implemented during construction as conditions require.

3.5 Spill Prevention and Vehicle Decontamination

Vehicles and construction equipment will be inspected daily to verify that there are no leaking fluids (e.g., oil, hydraulic, lubricant, or brake fluids) and that fuels and fluids are stored in proper, labelled containers with secondary containment if necessary. A chemical spill kit will be located on site during construction activities, and field personnel will be informed of its location. Observation of spills, leaking fluids, or improperly stored fluids will trigger the issuance of a "stop work" notice until the problem is resolved, including the removal of soil impacted by vehicle fluids. Leaking or damaged equipment will not be operated until it is repaired or replaced.

Equipment used to transport and manage impacted soil will be decontaminated in a prepared decontamination area before leaving the Project site. The equipment will be decontaminated by using brushes to remove visible soil, and all trucks will go through the tire wash when exiting the site.

3.6 Schedule

Project construction is expected to occur over the course of 16 months beginning in early 2020 and concluding by April 2021. There will be a 5-month hiatus, and active construction is expected to occur for approximately 11 months. The anticipated project schedule by Phase is presented in the table below.

Table 5: Anticipated Project Schedule by Phase

Phase	Activities	Approximate Timing
I	Site Preparation and Mobilization	January 6, 2020 – January 12, 2020
II	Stockpile Removal	January 13, 2020 – March 9, 2020
III	Targeted Excavation and Engineered Cover Installation	August 31, 2020 – March 9, 2021 (5-month hiatus from March 9, 2020 until August 31, 2020)
IV	Monitoring Well Installation	April 4, 2021 – April 9, 2021
V	Site Finalization and Demobilization	April 12, 2021 – April 16, 2021

3.7 Post-Construction Operations and Maintenance

The Operation and Maintenance (O&M) Plan will be submitted to DTSC following completion of the remedial construction. The O&M Plan will include the following requirements: the engineered cover will be monitored, results will be documented regularly, and any required repairs will be made at that time. The frequency of monitoring will be determined during remedial design. Following construction of the engineered cover, no vegetation will be present at the Project site other than in the landscaped area outside the fence at the southern edge of the Project site. Future weed abatement will be conducted periodically as needed to ensure that vegetation is not established within the cover materials. Long-term erosion control of the engineered cover is achieved using erosion-resistant drainage rock; therefore, no sediment contribution from the cover is anticipated. The drainage rock layer will be inspected regularly and maintained as needed.

The existing chain-link perimeter fence with locked gates will be repositioned, partially replaced, and expanded along the western extent to secure the Project site. At the completion of construction, the southern residential buffer zone will be landscaped. Following implementation, LUCs will be recorded with Imperial County Clerk to maintain the site use in compliance with the current zoning (M-1 Light Manufacturing) and to protect the integrity of the remedy and groundwater monitoring network.

After remediation is completed, CEMC will continue to undertake maintenance at the Project site, including maintaining the new perimeter fence and landscaping in the southern residential buffer

area. Although no construction is planned for the Project Site as of the date of this document, future use of the Project site cannot be predicted.

Environmental Checklist

I. Aesthetics

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
1.	**AESTHETICS—Would the project:**				
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 nonurbanized areas, substantially degrade 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 or other regulatory governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Environmental Setting

The Project site is located in an area of mixed uses and is zoned as light manufacturing. The adjacent land uses include light manufacturing to the west and residential to the south and east. The City of Brawley General Plan (2008) lists the Chocolate Mountains, the foothills of the Peninsular Range, the New River riparian corridor and general agricultural open space as scenic resources in the area. The Brawley General Plan states that specific scenic resources or unique features do not exist within or adjacent to the City limits. State Routes 98 and 111 pass through the City, but they have not been identified as state scenic highways (City of Brawley 2008).

The Project site is generally flat and unvegetated except for two large trees located at the entrance of the Project site. The Project site is bounded by a vacant lot to the east and railroad tracks to the west. River Drive borders the south, and vacant land adjacent to the airport bounds the Project site to the north. Public views of the Project site are limited from the residences on the south side of River Drive and from vehicles or pedestrians using River Drive. Currently, although the area is screened with fencing, views of the stockpile area can be seen from River Drive. Views of the Project site can be characterized as having low visual quality but are consistent with the surrounding industrial land use located to the west. Figures 5, 6, and 7 document existing public views of the Project site from River Drive.

There is no existing lighting at the Project site. Lights from the facilities located to the west of the Project site and from the Brawley Municipal Airport located to the north of the Project site, as well as streetlights and vehicle headlights, are the primary sources of light in the vicinity of the proposed Project.

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SOURCE: GOOGLE EARTH, 2019

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DRAFT INITIAL STUDY

VIEW FROM RIVER DRIVE WESTERN CORNER LOOKING NORTH

ARCADIS Design & Consultancy for natural and built assets

FIGURE
5

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VIEW FROM RIVER DRIVE LOOKING NORTH

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FIGURE
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DRAFT INITIAL STUDY

VIEW FROM RIVER DRIVE EASTERN CORNER LOOKING NORTH

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FIGURE
7

Discussion

a) No Impact.

There are no scenic vistas within the vicinity of the Project area, and the Project site is not part of a scenic vista. The Chocolate Mountains and New River areas are identified by the City of Brawley General Plan as scenic resources but are not visible from the Project site or from the public views of the Project site. Therefore, there will be no impacts on scenic vistas.

b) No Impact.

The Project site is not located within or along a designated scenic corridor, nor does it contain scenic resources (trees, rock outcroppings, or historic buildings) related to a scenic highway. State Route 78/111 Brawley Bypass is not a designated scenic highway according to the California Scenic Highway Mapping System (Caltrans 2019). According to the data from the cultural resources database search conducted for the Project, there are no historic buildings on the Project site (See Section V Cultural Resources for details).

The two ornamental trees located at the current entrance will be removed during construction, but these trees would not be considered a scenic resource. They are non-native, ornamental trees that are not part of a designated natural community or identified by the Brawley General Plan as a scenic resource.

c) Less than Significant Impact.

The Project site is located between the Union Pacific railroad line to the west and a vacant lot to the east. Because of the general lack of topography, public views of the Project site can be seen from vehicles or pedestrians on River Drive. The residences on the southern side of River Drive are also able to see the Project site. Currently, operation and maintenance at the Project site are visible along River Drive. During construction, additional equipment will be on site, but the Project site will be surrounded with a screened fence, which will reduce the views of equipment and construction. Public views of the Project site will be limited. However, some construction activities may be visible from River Drive during construction. While the view of the Project site will change during construction, the visual quality of the Project site will be similar to existing conditions. Some equipment and construction activities will be visible, but the screened fence will reduce the potential for significant degradation of existing visual character and quality of public views.

As described in the Project Description Section 1.10, the Project includes installation of landscaping on the southern residential buffer zone with native vegetation, rocks, and other materials to improve the overall visual character of the Project site and to improve the view from public viewpoints. Figure 8 provides a visual simulation of the view of the Project site showing the location of the engineered cover, residential buffer, and landscaped area. Figure 9 provides a visual simulation of the view of the Project site from River Drive. Overall, the proposed Project will improve the quality and character of the public views and views from the residences on the southern side of River Drive.

As described in Section XIII, Noise, Mitigation Measures NOI-01 includes installation of a noise barrier or blanket along River Drive to reduce the potential for noise impacts on sensitive receptors. The noise barrier will be visible along River Drive and would be a change in the visual characteristics of the site during construction. However, the noise barrier would only be installed during construction along River Drive and would represent a temporary change.

The view of the Project site during construction will change but would be considered temporary and would not result in a substantial degradation of the Project site's existing visual quality or character. Implementation of the proposed Project includes landscaping along the southern residential buffer zone along River Drive. Overall, because the visual quality and character of the Project site will improve upon completion of the Project, impacts related to the degradation of visual quality and character of the Project site would be less than significant.



CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
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BRAWLEY, CALIFORNIA

DRAFT INITIAL STUDY

BIRDSEYE VIEW WITH SIDEWALK

ARCADIS Design & Consultancy for natural and built assets

FIGURE
8

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BRAWLEY, CALIFORNIA

DRAFT INITIAL STUDY

STREET VIEW WITH SIDEWALK

ARCADIS Design & Consultancy for natural and built assets

FIGURE
9

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d) Less than Significant Impact.

Artificial light impacts are typically associated with light that occurs in the evening and overnight hours and may include streetlights, illuminated signage, vehicle headlights, or lights from residences and businesses. Glare is typically a daytime occurrence resulting from the reflection of sunlight or artificial light onto surfaces such as glass, metal, and other reflective materials.

There are no existing sources of light at the Project site, and no lighting is proposed for the Project site during or after construction. Existing lighting in the vicinity of the Project would result from surrounding land use, including the airport and illuminated commercial buildings to the west as well as from vehicle lights. There is one streetlight located at the intersection of River Drive and North Adams Street, near the southeastern corner of the Project site. During implementation of the remedial action, no lighting will be used, and no night work will be conducted. The proposed Project will not result in increased lighting during construction.

Heavy equipment has the potential to result in increased glare during construction. Sunlight or other artificial light could produce glare, but because the Project area would be fenced and screened, an increase in glare is expected to be minor and would not adversely affect day or nighttime views in the area.

Because the proposed Project would not introduce new lighting to the area and glare caused by construction equipment would be considered temporary and minor, impacts related to new sources of substantial light or glare would be less than significant.

Mitigation Measures: None required.

II. Agricultural Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
2. AGRICULTURE 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:				
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?	☐	☐	☐	☒

Environmental Setting

As described in the Project Description Section 1.0, the Project site occupies two adjoining parcels on the north side of River Drive and adjacent to (east of) the railroad line that runs through the northeast part of Brawley. City of Brawley zoning maps show that both parcels are located within a Light Manufacturing Area (M-1) land use zone along the rail corridor. The Project site is zoned and approved for commercial/industrial use and will remain so at the completion of the Project. Properties to the north, west, northeast, northwest, and southwest of the Project site are also zoned M-1; and properties to the east, south, and southeast are zoned as Low-Density Residential (City of Brawley 2017). Properties to the east are currently vacant lots, and properties to the southeast and south are primarily residential land use. The Brawley Municipal Airport is located approximately 700 feet to the north of the Project site. No farming or agricultural activities occur on the Project site.

- **Farmland of Statewide Importance**: "Farmland of Statewide Importance" is land similar to Prime Farmland but may have greater slopes or lower moisture supply.

- **Unique Farmland:** “Unique Farmland” is land that contains lesser quality soils used for sustained agricultural production. This land is usually irrigated but may include non-irrigated land.
- **Forest Land:** “Forest Land” is land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits (Public Resources Code [PRC] 12220[g]).
- **Timber Land:** “Timber Land” means land, other than land owned by the Federal Government and land designated as experimental Forest Land that is available for and capable of growing a crop of trees of any commercial species used to produce lumber and other forest products including Christmas trees. Commercial species will be determined by the board on a district basis after consultation with the district committees and others (PRC 4526).
- **Timber Land Production Zone:** “Timber Land Production Zone” or “TPZ” means an area that has been zoned pursuant to California Government Code (CGC) Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses (CGC 51104[g]).

According to the California Department of Conservation’s California Important Farmland Finder Tool (2019), the Project site is categorized as Other Land, defined as: *Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land* (California Department of Conservation 2019).

Discussion

a), e) No Impact.

No agricultural or forested land is located on site, and there is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance located on site. The California Department of Conservation’s California Important Farmland Finder tool identifies the Project site as Other Land. Remediation of the site would only occur on site and would not result in the conversion of farmland or forested lands on nearby sites. Therefore, there would be no conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

b) No Impact.

The site is not zoned for agricultural use. According to the City’s General Plan, there are no Williamson Act contracts within the City Limits (City of Brawley 2008); therefore, the Project would not conflict with existing zoning for agricultural use or with a Williamson Act contract.

c) No Impact.

The Project site is zoned Light Manufacturing according to the City of Brawley Zoning Map (City of Brawley 2017). Therefore, the Project would not conflict with existing zoning of Forest Land, Timber Land, or TPZ.

d) No Impact.

The Project site does not contain any Forest Lands and is designated as Other Land by the California Department of Conservation California Important Farmland Finder tool (accessed August 2019). Therefore, the Project would not result in the loss of Forest Land or conversion of Forest Land to non-forest use.

Mitigation Measures: None required.

III. Air Quality

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
3. AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under 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?	☐	☐	☒	☐

Environmental Setting

Project activities likely to create an impact include:

- Generation of emissions from construction equipment (e.g., trucks, bore/drill rigs, loaders), worker vehicles, and other construction activities
- Generation of emissions from transportation of excavated soil by trucks off site to a disposal facility and by trucks bringing stone and sand imported from local sources
- Generation of dust during stockpile removal, targeted excavation, cover installation, backfilling, grading, drilling, and transportation of material.

The proposed Project is located in the Salton Sea Air Basin (SSAB), which encompasses all of Imperial County and the majority of the western half of Riverside County to the north. The ICAPCD is responsible for managing air quality in Imperial County, which includes the southern half of the SSAB, where the proposed Project is located.

The USEPA has established National Ambient Air Quality Standards (NAAQS) for ozone (O_3), carbon monoxide (CO), particulate matter (both respirable [less than or equal to 10 microns in diameter; PM_{10}] and fine [equal to or less than 2.5 microns in diameter; $PM_{2.5}$]), nitrogen dioxide (NO_2), lead (Pb), and sulfur dioxide (SO_2). Similarly, the State of California has adopted standards known as the California Ambient Air Quality Standards (CAAQS) for the six federally recognized criteria pollutants as well as for the following additional pollutants: vinyl chloride, visibility reducing particles, hydrogen sulfide (H_2S), and sulfates. Air basins with individual criteria pollutant levels below the NAAQS or CAAQS are designated as being an “attainment” basin for each pollutant. If an individual criteria pollutant level exceeds the NAAQS or CAAQS, the air basin is designated as being a “non-attainment” basin for that pollutant.

Table 6 below shows the attainment status under both the NAAQS and the CAAQS for each criteria pollutant in the portion of Imperial County in which the proposed Project is located.

Table 6: Air Quality Standard Attainment Status – Imperial County

Pollutant	CAAQS	NAAQS
O_3	Non-attainment	Non-attainment
CO	Attainment	Unclassified/Attainment
PM_{10}	Non-attainment	Non-attainment
$PM_{2.5}$	Attainment	Non-attainment
NO_2	Attainment	Unclassified/Attainment
Pb	Attainment	Unclassified/Attainment
SO_2	Attainment	Attainment
Sulfates	Attainment	No Federal Standards
Vinyl Chloride	Unclassified	
H_2S	Unclassified	
Visibility Reducing Particles	Unclassified	

Source: CARB 2017

O_3 is not emitted directly into the environment, but is formed in the atmosphere by complex chemical reactions between ROG and NOX in the presence of sunlight. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue.

Particulate Matter refers to a wide range of solid or liquid particles in the atmosphere, including smoke, dust, aerosols, and metallic oxides. Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM_{10}. $PM_{2.5}$ includes a subgroup of finer particles that have an aerodynamic diameter of 2.5 micrometers or less. Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM_{10} is of concern because it bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. $PM_{2.5}$ poses an increased health risk because the particles can deposit deep in the lungs and contain substances that are particularly harmful to human health.

NO_2 is a reddish-brown gas that is a by-product of combustion processes. Aside from its contribution to ozone formation, nitrogen dioxide can increase the risk of acute and chronic respiratory disease and reduce visibility.

CO is an odorless, colorless gas. It is formed by the incomplete combustion of fuels. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease or anemia, as well as fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death.

SO_2 is a colorless acid gas with a pungent odor. It has potential to damage materials and it can have health effects at high concentrations. SO_2 can irritate lung tissue and increase the risk of acute and chronic respiratory disease.

The ICAPCD has promulgated significance thresholds, as detailed in ICAPCD's CEQA Air Quality Handbook (ICAPCD 2017a). to assist lead agencies in determining whether a proposed project would have a significant impact on air quality.

- Tier I: Any development with a potential to emit criteria pollutants below significance levels defined by the ICAPCD is called a "Tier I project." For Tier I projects, the project proponent should implement a set of standard control measures as required in ICAPCD Regulation VIII – Fugitive Dust Control Measures to reduce the air quality impact to an insignificant level. For a discussion of Project design features and measures to address reduction of air emissions, see Section VIII.
- Tier II: A "Tier II project" is one with emissions that exceed any of the thresholds (ICAPCD 2017a). Its impact is significant, and the project proponent should select and implement all feasible "discretionary" mitigation measures (also enumerated by the ICAPCD) in addition to the standard measures.

The ICAPCD has also established thresholds of significance for project construction.

Regardless of project Tier, all feasible standard measures specified by the ICAPCD for construction activities should be implemented at construction sites. Control measures are described in ICPACD Regulation VIII and the ICAPCD CEQA Air Quality Handbook and detailed in this report in the Dust Control section of the Project Description (Section 2.3).

A project would have a significant impact if it were to equal or exceeded the thresholds shown in Table 7 and/or did not apply Regulation VIII control measures.

Table 7: Significance Thresholds

Pollutant	Operations[1] (lbs/day)	Construction[2] (lbs/day)
ICAPCD CEQA		
NO_x	137	100
ROG	137	75
PM_{10}	150	150
$PM_{2.5}$	55[3]	55[4]
SO_x	150	150[4]
CO	550	550
Other		
Risk and Hazards[5]	Cancer Risk >10 in a million Non-cancer > 1.0 Hazard Index	

Notes:

1. Operational thresholds taken from Table 1, Thresholds of Significance for Project Operations of ICAPCD CEQA Air Quality Handbook for Tier I projects
2. Construction thresholds taken from Table 4, Thresholds of Significance for Construction Activities of ICAPCD CEQA Air Quality Handbook.
3. The ICAPCD most recent guidance (ICAPCD 2017b) includes a significance threshold for $PM_{2.5}$ operational related emissions of 550 lbs/day. However, ICAPCD staff believe that the document is in error and the appropriate

significance threshold should be 55 lbs/day (ICAPCD 2019). To be conservative, the lower value of 55 lbs/day was used for this evaluation.

4. The ICAPCD has not adopted a significance threshold for construction related emission of $PM_{2.5}$ or SO_x. In the absence of a construction threshold, the operational threshold was used for this evaluation.

5. The ICAPCD has not identified significance thresholds for risk and hazards. In the absence of these thresholds, the AB2588 District Prioritization Notification Levels for Imperial County were selected. The significance thresholds are also consistent with values used in other air districts including the Bay Area Air Quality Management District (BAAQMD) and the South Coast Air Quality Management District (SCAQMD).

Construction and operation emissions were estimated using the California Emission Estimator Model (CalEEMod; version 2016.3.1). Construction of the proposed Project is scheduled to begin in January 2020 and occur over a 16-month period with a 5-month temporary halt in mid-2020, ending in April 2021. Emissions calculations include estimates for construction equipment and vehicle emissions from workers commuting to and from the proposed Project site.

Approximately 926 haul trucks will be needed to transport removed excavated soil, concrete, and miscellaneous material from the Project site to a landfill (estimated 230 miles from the Project site); 20 haul trucks to transport cover material to the Project site from a San Diego distributor (estimated 125 miles from the Project site); 601 haul trucks to transport stone and gravel to the Project site from a local source within a 50-mile radius; and 821 haul trucks to transport poles, trees, sand, and general fill to the Project site from a local source within a 30-mile radius. To estimate criteria pollutant emissions within the ICAPCD, only haul truck miles traveled within the ICAPCD (up to 71 miles from the Project site) were considered. Haul routes will be along River Drive, N. Caesar Chavez, B Street, Old Highway 111, N. 8th Street, State Route 111, and State Route 78, and the routes would be at least 99 percent paved.. In addition, because the Project site is located within a residential town with fully paved roads, workers will travel along roads that are 100 percent paved.

Due to site grading, earth moving, and other types of soil disturbance, construction activities will result in the generation of fugitive dust that is primarily PM_{10} and lesser amounts of $PM_{2.5}$. A Dust Control Plan containing, at a minimum, the control measures identified in the Dust control section of the Project Description would be implemented to minimize emissions. Emissions of $PM_{2.5}$, NO_x, CO, ROG, and minor amounts of SO_x are also generated by fuel combustion in construction equipment and vehicles and by workers commuting to and from the proposed Project site in personal vehicles and are presented in Appendix A. Table 8 summarizes the estimated emissions anticipated for construction in pounds per day.

Table 8: Emissions from Construction Activities

Source	Location	Construction Emissions (lbs/day)					
		ROG	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Site Preparation and Mobilization	On site	0.504	5.61	3.74	0.0126	1.40	0.335
	Off site	0.0381	0.225	0.258	0.00118	0.477	0.0585
Stockpile Removal	On site	1.37	13.0	10.8	0.0259	0.601	0.529
	Off site	0.533	20.6	3.43	0.0929	46.1	5.15
Engineered Cover Implementation	On site	3.19	34.8	22.2	0.0501	1.54	1.41
	Off site	0.376	6.33	2.50	0.0281	30.8	3.37
Monitoring Well Installation	On site	0.258	3.02	2.07	9.43×10^{-3}	0.0917	0.0843
	Off site	0.0669	0.223	0.449	1.44×10^{-3}	0.511	0.0674

Site Finalization & Demobilization	On site	0.566	5.19	4.51	0.0114	0.232	0.214
	Off site	0.0648	0.136	0.435	9.50×10^{-4}	0.255	0.0389

Although no new employees are anticipated to be needed to operate the proposed Project, to be extremely conservative, four worker vehicle roundtrips per year and equipment associated with landscaping of the southern residential buffer portion of the proposed Project site has been assumed. Table 9 below summarizes the estimated emissions anticipated for operation of the proposed Project in pounds per day.

Table 9: Emissions from Operations

Activity	Operational Emissions (lbs/day)					
	ROG	Nox	CO	SO_2	PM_{10}	$PM_{2.5}$
Landscaping	1.10×10^{-4}	1.00×10^{-5}	1.20×10^{-3}	0	0	0
Mobile	5.50×10^{-4}	4.31×10^{-3}	4.98×10^{-3}	1.00×10^{-5}	0.229	0.0229

Discussion

a) Less than Significant Impact.

The proposed Project would not conflict with or obstruct implementation of the applicable air quality plan.

The Federal Clean Air Act of 1970 requires non-attainment regions to prepare and submit to the USEPA State Implementation Plans (SIPs) for attaining and maintaining the NAAQS. Similarly, the California Clean Air Act (CCAA) also requires that air quality regions that have failed to attain the CAAQS prepare SIPs demonstrating when and how these standards will be met.

The proposed Project is located in a region designated as being non-attainment for PM_{10}, $PM_{2.5}$ and 8-hour O_3. The SIPs prepared by the ICAPCD and in effect for the SSAB are the Imperial County 2018 Redesignation Request and Maintenance Plan for Particulate Matter Less than 10 Microns in Diameter (Adopted October 2018), the Imperial County 2017 State Implementation Plan for the 2008 8-Hour Ozone Standard, the Imperial County 2013 State Implementation Plan for the 2006 24-Hour PM2.5 Moderate Nonattainment Area (Adopted December 2014), and the Final 2009 Reasonably Available Control Technology State Implementation Plan (Adopted July 2010) (ICAPCD 2018; 2017b; 2014; 2010). Together, these plans constitute the Air Quality Attainment Plan (AQAP) for Imperial County. The AQAP includes the control measures, emission forecasts, plans, and programs required to bring the SSAB into attainment with federal and state air quality standards. In addition, the ICAPCD promulgates rules and regulations applicable to land use projects and is intended to ensure that those projects comply with the requirements of the SIP.

The proposed Project would generate emissions during construction and operations. Project construction emissions would be temporary and would only represent a small fraction of the regional emissions inventory included in the SIPs. In addition, the construction emissions for the proposed Project would be below the thresholds that ICAPCD has determined to be significant. Accordingly, project construction emissions would not represent a substantial contribution to the regional emissions budget. Furthermore, project construction equipment would be operated in compliance with applicable local, state, and federal regulations as outlined in the plan and related SIP. Operation of the proposed Project would not include stationary emission sources that would require a Permit to Operate (PTO) from the ICAPCD. Emissions produced by the proposed

Project would not conflict with or obstruct implementation of the applicable SIPs. Therefore, any potential impact would be less than significant.

The ICAPCD has identified significance thresholds for emissions resulting from both construction- and operations-related activities. To determine the significance of air quality impacts resulting from project construction and operations, emissions were compared to the ICAPCDs thresholds presented in Table 10.

Table 10: Emissions Summary

	Peak Daily Emissions (lbs/day)					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction	3.56	41.2	24.7	0.119	46.7	5.68
Significance Threshold	75	100	550	150	150	150
ICAPCD Impact?	No	No	No	No	No	No
Operations	6.6×10^{-4}	4.32×10^{-3}	6.18×10^{-3}	1.00×10^{-5}	0.229	0.0229
Significance Threshold	137	137	550	150	150	55
ICAPCD Impact?	No	No	No	No	No	No

Note: Peak daily emissions represent the maximum daily emission based on the schedule of the various activities as calculated by CalEEMod.

None of the pollutants were found to exceed the ICAPCD significance thresholds. Therefore, emission levels would not violate California or federal air quality standards or contribute substantially to an existing or projected air quality violation or impact human health, and impacts would be less than significant.

b) Less than Significant Impact.

Proposed Project operations would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

Most air emissions from this Project would be generated during construction with only a small quantity of emissions occurring during operation. The construction phase of the proposed Project may contribute to a net increase in one or more criteria pollutants as a result of point and non-point source emissions for which the region is in non-attainment under applicable federal and state ambient air quality standards. As noted above, the Imperial Valley is classified as non-attainment for federal and state PM_{10} standards. However, as shown in Table 10, construction emissions would be below the thresholds established by ICAPCD, and therefore would be less than cumulatively considerable.

As shown in Table 10, operational emissions did not exceed significance thresholds and thus would not cause localized exceedances or contribute cumulatively to existing exceedances of the state or federal ozone and PM_{10} standards. Therefore, the proposed Project would not result in cumulatively considerable contributions to air quality standard violations.

c) Less than Significant Impact

The proposed Project would not expose sensitive receptors to substantial pollutant concentrations.

A Health Risk Assessment (HRA) report, prepared for the proposed Project, to evaluate the potential for exposure to diesel particulate matter associated with use of construction equipment is provided in Appendix B. The HRA provides detailed methodology and modeling assumptions. The results of the HRA are summarized below. The potential for exposure to COPC-containing soil that would be disturbed during the project construction is discussed in the Hazards and Hazardous Material Section (IX).

The proposed Project would include use of off-road construction equipment and on-road vehicles that would generate emissions resulting from diesel combustion. Health risks evaluated in the HRA include cancer risks and non-cancer hazard indices from diesel particulate matter (DPM) generated during Project construction which were compared to risk thresholds levels for Imperial County under California's Air Toxics "Hot Spots" Information and Assessment Act (AB 2588). DPM was established as a toxic air contaminant in 1998 by the California Air Resources Board (CARB) based on the relationship between diesel exhaust exposure and lung cancer and other adverse health effects. Non-cancer health effects include premature death, hospitalization and emergency department visits for exacerbated chronic heart and lung disease, including asthma increased respiratory systems, and decreased lung function in children (CARB 2019). Health risks and hazards from the proposed Project during construction for the maximum exposed individual, including an age sensitivity factor to account for the most sensitive population, the inhalation cancer risk would be 8.7 in 1 million (compared to a threshold of 10 in a million), the maximum chronic hazard index would be 0.0077 (compared to a threshold of 1.0). The modeled health risks resulting from construction activities of the proposed Project are all below significance thresholds.

d) Less than Significant Impact.

The proposed Project would not create objectionable odors affecting a substantial number of people.

Construction of the proposed Project may result in the emission of odors due to diesel fuel exhaust from construction equipment; however, it is unlikely that these odors would affect a substantial number of people as the surrounding area is not densely populated and the construction would be temporary. Furthermore, the State of California requires that only ultra-low sulfur diesel be sold as highway diesel fuel, further reducing any potential odors associated with the use of diesel fuel during construction.

Naturally occurring asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. According to information provided by the Department of Conservation Division of Mines and Geology, the Project site is not located in an area where naturally occurring asbestos is present (United States Geological Survey [USGS] 2011).

Mitigation Measures: None required.

IV. Biological Resources

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
4.	**BIOLOGICAL RESOURCES— Would the project:**				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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 federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Environmental Setting

The Project site is dominated by compacted and primarily denuded soil with three concrete pads on the western side and does not provide suitable wildlife habitat. The Project site is located within the Colorado Desert region of the Sonoran Desert; however, habitats on and near the Project site have been substantially altered by industrial, commercial, and residential development. There are no environmentally sensitive areas or wetlands on site or within adjacent parcels. The Project site is bordered to the north by municipal land owned by the City of Brawley, to the east by unused residential land, to the south by urban residential developed land, and to the west by railroad tracks and light industry/heavy commercial development (Figure 2). The surrounding parcels do not provide suitable wildlife habitat, and the railroad tracks and developed areas as well as the surrounding chain-link fence limit wildlife movement through the Project site.

An off-site, concrete-lined drainage ditch is located alongside the western portion of the Project site parallel to the railroad tracks. The ditch is mostly filled with debris and ruderal vegetation, likely only receives runoff during precipitation events, and does not pond water for extended periods. The ditch does not discharge to any navigable water or tributary of a navigable water. There is limited vegetative cover on site where vegetation occurs composed primarily of small saltbush (*Atriplex sp.*) and Sahara mustard (*Brassica tournefortii*) shrubs.

There are two ornamental trees located at the entrance of the Project site off River Drive. These trees have the potential for nesting birds, provide the only suitable nesting bird habitat on site and will be removed during construction.

Discussion

a) Less than Significant with Mitigation Incorporation.

The Project site is heavily disturbed area and is surrounded by developed, residential, and light industrial areas. The Project site has been heavily disturbed and is currently enclosed by a chain-link fence. A nine-quadrangle California Natural Diversity Database (CNDDB; Appendix C) search was conducted for the Project site and surrounding areas to identify species recorded in the vicinity to identify any special-status species with potential to occur in the vicinity of the proposed Project. Those species with a state, federal, or local designation are included in the table below. Two ornamental trees present along the southern boundary of the Project site may support nesting migratory birds. The Project site is not located within designated critical habitat for threatened or endangered species (CNDDB 2019). Given the development and disturbance surrounding the Project site, the potential for presence of designated species under the Federal Endangered Species Act or California Endangered Species Act is low.

The CNDDB identified 11 special status species with potential to occur within the Project vicinity (table below). Nine of the 11 species are not anticipated to occur at the site due to the lack of suitable habitat. Although two of the species (the burrowing owl and the Palm Springs pocket mouse) may occur, the potential is low due to the limited habitat present on Site.

Because past disturbances at the Project site removed vegetation and habitats potentially suitable for special-status species, none are expected on site. As a result, the proposed Project is not anticipated to have a significant impact on candidate, sensitive, or special-status species identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS).

Table 11: Species with the Potential to Occur within the Project Vicinity

Species	Status	Habitat	Potential for Occurrence in the Project Area
Birds			
Short-eared owl (*Asio flammeus)*	CSC	Swamp lands, lowland meadows, irrigated fields	**Absent.** No suitable habitat is present within or adjacent to the Project site.
Burrowing owl (*Athene cunicularia*)	CSC	Open grasslands, deserts, and scrublands. Uses burrows made by California ground squirrels and other burrowing mammals.	**Low.** Project site is highly disturbed and surrounded by development. The stockpile does provide potentially suitable habitat for burrowing owl, but because no burrows are present and no California ground squirrels are present, occurrence potential of burrowing owl is low. The CNDDB does not identify known occurrences of burrowing owls at the Project site. The closest known occurrence of burrowing owls is approximately 1.14 miles to the southeast (CNDDB 2019)
California black rail (*Laterallus jamaicensis coturniculus*)	CT	Emergent wetland vegetation	**Absent.** No suitable habitat is present within or adjacent to the Project site.
Gila woodpecker (*Melanerpes uropygialis*)	CE	Cottonwoods and other desert riparian trees	**Absent.** No suitable habitat is present within or adjacent to the Project site.
Yuma Ridgway's rail (*Rallus obsoletus yumanensis*)	FE/CT/ CFP	Freshwater marshes, cattail stands	**Absent.** No suitable habitat is present within or adjacent to the Project site.
Mammals			
Western yellow bat (*Lasiurus xanthinus*)	CSC	Valley foothill riparian, desert riparian, and desert washes	**Absent.** No suitable habitat is present within or adjacent to the Project site.
Big free-tailed bat (*Nyctinomops macrotis*)	CSC	High cliffs or rocky outcrops for roosting	**Absent.** No suitable habitat is present within or adjacent to the Project site.
Palm Springs pocket mouse (*Perognathus longimembris bangsi*)	CSC	Desert riparian, desert scrub, and desert wash/sagebrush habitat	**Low.** Project site is highly disturbed and surrounded by development. CNDDB does indicate known occurrences within the vicinity of the Project site (CNDDB 2019). No preferred habitat occurs at the Project site.
Yuma hispid cotton rat (*Sigmodon hispidus eremicus*)	CSC	Wetlands and uplands along Colorado River	**Absent.** No suitable habitat is present within or adjacent to the Project site. There are no reported occurrences of this species within the Brawley USGS 7.5-minute quadrangle (CNDDB 2019).
Reptiles			
Flat-tailed horned lizard (*Phrynosoma mcallii*)	CSC	Desert washes and desert flats. Critical habitat element for this species is fine sand for the lizards to burrow.	**Absent.** No suitable habitat, including fine sand, is present within or adjacent to the Project site. There are no known occurrences of this species within the vicinity of the proposed Project. The closest known occurrence is approximately 3.6 miles from the site, at the junction of State Route 86 and 78 and is considered extirpated (CNDDB 2019)
Fish			
Razorback sucker (*Xyrauchen texanus*)	FE/CE/ CFP	Colorado River, spawns in areas of sand/gravel/rocks in shallow water	**Absent.** No suitable habitat is present within or adjacent to the Project site.

Source: CNDDB 2017

STATUS CODES

FE Federally Endangered
FT Federally Threatened
CE California Endangered
CT California Threatened
CSC California Species of Concern
CFP California Fully Protected

The existing vegetation within the Project site consists of two ornamental trees and few shrubs. The New River, located 1 mile northwest of the Project site, does not support fish and will not be impacted by the Project. The Project site does not provide habitat suitable for the movement of any native resident or migratory fish or special status wildlife species.

There are two trees at the entrance of the Project site that potentially provide suitable nesting habitat for birds. Because tree removal is currently planned as part of the Project, **Mitigation Measure BIO-01** would require tree removal to occur outside of nesting season (August through February), to the extent feasible. If tree removal is to occur during nesting season, **Mitigation Measure BIO-02** requires pre-construction surveys conducted by a qualified avian biologist be implemented. If active nests are identified, no tree removal will occur until young have fledged. A 200-foot buffer for passerines and a 500-foot buffer for raptors will be established around the trees. **Mitigation Measure BIO-02** would ensure that no active nests are present or would be impacted by Project activities.

The stockpile has potential to provide suitable habitat for western burrowing owl. Excavation of the stockpile could result in injury or death to burrowing owls if they were present. Implementation of **Mitigation Measure BIO-3 Preconstruction Burrowing Owl Survey and Burrowing Owl Protection** would ensure that no burrowing owls are present prior to excavation of the existing stockpile, and impacts would be less than significant

b) No Impact.

There are no streams, drainages, or riparian habitats present on the Project site. The New River, located more than 1 mile northwest of the Project site, is the closest surface water body. The Alamo River is located approximately 1.5 miles east of the Project site. Both the Alamo River and New River flow north and drain into the Salton Sea (California Department of Water Resources [CDWR] 1975). The CNDDB does not identify any sensitive communities on or within the vicinity of the Project site (CNDDB 2019). As a result, no impacts would occur to any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS.

c) No Impact.

According to the National Wetlands Inventory (USFWS 2019), there are no wetlands or other features potentially under Clean Water Act Section 404 jurisdiction present within the proposed Project site. Therefore, no impacts on federally protected wetlands would occur.

d) No Impact.

There is no natural habitat within the vicinity of the Project site that would attract the presence of migratory wildlife species, and there are no streams or drainages within the proposed Project area that would support migratory fish. Land uses in the vicinity of the proposed Project include residential, light industrial, agriculture, and the Brawley Municipal Airport. There are no established native wildlife nurseries within the vicinity of the proposed Project. Because there is no habitat to support migratory wildlife or fish within the proposed Project vicinity and no known native wildlife nurseries, the proposed Project would not interfere with the movement of native resident or migratory fish or wildlife, and there would be no impact.

E, f) No Impact.

The City of Brawley General Plan and the Imperial County General Plan identify policies associated with the protection of important plant communities and wildlife habitats, such as riparian areas, wildlife movement corridors, wetlands, and significant tree stands. The two trees located at the Project site entrance would not be considered a significant stand, and there are no other biological or aquatic resources on site. Therefore, the Project would not conflict with the Brawley General Plan or the Imperial County General Plan with regards to biological resources. The City of Brawley does not have a tree ordinance, heritage tree ordinance, or ordinances or policies related to biological resources (City of Brawley Municipal Code 2019).

There are no adopted Natural Community Conservation Plans (NCCP) or Habitat Conservation Plans (HCP) within the vicinity of the Project site. The Imperial Irrigation District (IID) is developing an NCCP and HCP, but this plan has not been adopted and would not apply to the Project or Project site (IID 2006). Therefore, the Project would not result in any conflicts with an adopted HCP or NCCP, and there would be no impact.

Mitigation Measures:

Mitigation Measure BIO-01 Tree Removal Outside of Nesting Season: The two trees located at the site entrance will be removed outside of the nesting season, between August and February.

Mitigation Measure BIO-02 Pre-construction Nesting Surveys and Buffers: If tree removal cannot occur outside the nesting season (between August and February), a qualified avian biologist will conduct nesting surveys before tree removal. If nests are observed, trees will not be removed until young have fledged. A 200-foot buffer will be established for passerine nests and a 500-foot buffer will be established for raptor nests. The buffers will remain until young have fledged.

Mitigation Measure BIO-03 Pre-construction Survey and Burrowing Owl Protection: Prior to stockpile removal, the stockpile area will be surveyed by a qualified biologist to ensure that there are no burrowing owls present. If any burrowing owls are present, the biologist will coordinate with the California Department of Fish and Wildlife to determine the appropriate next steps. If burrowing owls are present on site outside the nesting season (generally August through February), the owls shall be passively relocated by installation of one-way doors on the burrows. If construction activity will occur during the burrowing owl nesting season and active nests are present on site, a work-exclusion buffer zone shall be created around the nest to allow for the successful fledging of the burrowing owls. After fledging has occurred, the burrowing owls shall be passively relocated by installation of a one-way door on the burrow. If no active nests are observed, passive relocation of owls during the nesting season could occur in coordination with California Department of Fish and Wildlife.

V. Cultural Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES— Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Disturb any human remains, including those interred outside of formal cemeteries	☐	☒	☐	☐

Environmental Setting

The Project site was used to store, formulate, and distribute agricultural chemicals from the 1940s until 2000. During its operational history, the Project site contained features such as a warehouse, lime sulfur plant, sulfur sludge pond, reactor areas, metal machine shop, hazardous waste storage area, grease pit, wash/rinse areas, liquid emulsion plant, underground and aboveground storage tanks, and an evaporation pond. Facility operations were discontinued in December 2000, and the majority of site improvements (including buildings, tanks, and concrete pads) were demolished in 2001. Project site use before the 1940s is not known. The Project site has remained unused since 2000.

A cultural resources records search conducted by the South Coastal Information Center (SCIC) at San Diego State University, the regional branch of the California Historical Resources Information System, on September 18, 2017 identified one previously identified historical era (greater than 45 years old) cultural resource within a 1-mile radius of the Project area: P-13-008682. P-13-008682 is the Niland to Calexico Railroad that parallels the western boundary of the Project area. The resource does not include any portion of the Project site. In addition, the SCIC contains references to six historical addresses located within the 1-mile search radius. None of these addresses includes any portion of the Project site.

The SCIC records search further indicates that 21 cultural resource investigations have taken place within the 1-mile search radius. None of these investigations included any portion of the Project site.

Historical documentation was derived from a Preliminary Environmental Assessment of the site (Hart Crowser 1992). Hart Crowser (1992) reports that the PureGro facility operated between 1955 and the late 1970s for the purpose of mixing and distributing dry fertilizer. After the pesticide formulation process was discontinued, pesticide admixtures and finished products continued to be received and shipped by railroad and by truck from the site through 2000 (Arcadis 2014a).

When a project might affect an historical resource, the project proponent is required to conduct an assessment to determine whether the effect may be one that is significant. Consequently, it is necessary to determine the importance of resources that could be affected. The importance of a resource is measured in terms of criteria for inclusion on the California Register of Historical

Resources (CRHR; Title 14 CCR, §4852(a)) as listed below. A resource may be important if it meets any one of the criteria below, or if it is already listed on the CRHR or a local register of historical resources. An important historical resource is one which:

1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

2. Is associated with the lives of persons important to local, California, or national history.

3. Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of a master or possesses high artistic values.

4. Has yielded, or may be likely to yield, information important to the pre-history or history of the local area, California, or the nation.

In addition to meeting one or more of the above criteria, eligibility for the CRHR requires that a resource retains sufficient integrity to convey a sense of its significance or importance. Seven elements are considered key in considering a property's integrity: location, design, setting, materials, workmanship, feeling, and association.

The OHP advocates that all historical resources over 45 years old be recorded for inclusion in the OHP filing system (OHP 1995:2), although the use of professional judgment is urged in determining whether a resource warrants documentation.

Discussion

a) Less than Significant Impact.

Archeologist Brian Glenn, RPA conducted a cultural resources assessment survey of the surface of the Project site on September 21, 2017. Inspection included a series of parallel pedestrian transects spaced no greater than 15 meters (45.93 feet) apart. Inspection identified small amounts of modern trash throughout the Project site. The bulk of the reported buildings and facilities have left no surface indications.

Surface indications of historical era (greater than 45 years old) cultural resources were limited to an irregularly shaped concrete slab with maximum dimensions of 75 by 160 feet (CEMC Brawley #1; Glenn 2017), located in the southwestern portion of the Project site. Background research indicates that this was the location of a warehouse constructed between 1953 and 1957 based on historical USGS Brawley quadrangles and available historical imagery (former PureGro Facility Bldg. A). Two additional concrete slabs: 10 by 10 feet 75 feet east of the larger slab (former PureGro Emulsion Plant) and 25 by 50 feet (former PureGro Facility Bldg. E) 160 feet north-northeast of the former PureGro Facility Bldg. A slab were identified during the survey. These smaller slabs are later additions not illustrated on the 1976 historical maps, but illustrated on the 1979 map, as well as on a 1996 aerial image. Additional structural elements, including storage tanks north of the large slab, are visible on the 1996 imagery (a single tank is illustrated in 1976 and 1979), though no structural remains were identified during the survey. Based on additional available imagery, all structures had been removed by 2002. Review of modern imagery (Google Earth 2017) illustrate roughly 50-foot-diameter circular outlines at the tank locations.

The former PureGro property is the remnant of a facility that formulated, stored, and distributed agricultural products from 1940 until 2000. At the time the buildings and structures were

demolished in 2001, the property comprised a warehouse, machine shop, storage buildings, wash and rinse areas, and both underground and aboveground storage tanks. Only a few concrete foundations are extant on the property.

No evidence was uncovered that the former PureGro property in Brawley is associated with significant events or themes in local, regional, or national history. While the company is associated with the history of agricultural practices in Brawley and Imperial County, the PureGro facility was one of several fertilizer and pesticide manufacturers and distributors located in Brawley and its vicinity, and there is no information that the PureGro facility had an extraordinary influence or contribution to the development or economy of Brawley, Imperial County, or California. As such, the property is not eligible for CRHR listing under Criterion 1. Likewise, no information was uncovered that the property is associated with any significant persons at a local, regional, or national level. Therefore, the property is not eligible for CRHR listing under Criterion 2.

There are no extant aboveground buildings or structures on the site, and other than a few concrete slab foundations, no evidence of the facility that once stood there. As such, the property has lost its integrity of place, design, materials, workmanship, feeling, and association, and is not eligible for CRHR listing under Criterion 3. As the PureGro facility was a well-known facility that operated from the mid- to late twentieth century, there is little potential for the property to provide valuable, previously unknown information on some aspect of history. As such, the property is not eligible for CRHR listing under Criterion 4.

b) No Impact.

The California Native American Heritage Commission (NAHC) conducted a Sacred Lands File Search on August 23, 2017 for the Project area and surrounding region. The search was negative with no Native American resources identified in proximity to the Project site. No archaeological resources have been identified as a result of records search and survey of the Project site. Analysis of survey data has determined that no known or suspected CRHR-eligible archaeological resources are present.

c) Less than Significant Impact with Mitigation Incorporation.

Records search and survey provided no evidence of human remains, and none are expected to be present. However, there is some potential for ground-disturbing activities to disturb currently unknown human remains. Implementation of **Mitigation Measure CUL-01**, which includes measures promulgated under Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5 pertaining to the discovery of human remains, will be implemented in the event of unexpected discovery.

Mitigation Measures:

Mitigation Measure CUL-01 Unintended Discovery of Human Remains: In the event of unexpected discovery of human remains, the following standard measures, imposed under Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5 pertaining to the discovery of human remains, will be implemented:

- All work in the vicinity of the discovery will be halted until a qualified archeologist can evaluate the find(s) under Section 106 of the National Historic Preservation Act.

- The Imperial County Coroner will be contacted to determine that no investigation of the circumstances, manner, or cause of death is required and to recommend treatment and disposition of the human remains.
- If the Coroner determines the remains to be Native American, the Coroner will contact the NAHC within 24 hours.
- The applicant will retain a qualified archaeologist to provide adequate inspection, recommendations, and retrieval, if appropriate.
- The NAHC will identify the person or persons it believes to be the most likely descended from the deceased Native American and will contact such descendant in accordance with state law.
- The applicant will be responsible for ensuring that human remains and associated grave goods are reburied with appropriate dignity at a place and process suitable to the most likely descendent.

VI. Energy

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
6. Energy— Would the project:				
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?	☐	☐	☒	☐

Environmental Setting

The City prepared a draft Climate Action Plan (CAP) in 2015. The CAP examines community-wide sources of greenhouse gas (GHG) emissions and outlines strategies for reducing these emissions. The CAP identifies strategies to reduce the overall consumption of energy and reduce GHGs in the City of Brawley

The City of Brawley General Plan addresses energy use and efficiency in all elements by including goals and policies for improving energy efficiency and reducing waste. The General Plan seeks to reduce energy consumption through minimizing vehicle trips and approving land use patterns that support increased density in areas where there is infrastructure to support it; increased opportunities for transit, pedestrians, and bicycles; and through green building and land development conservation strategies.

Discussion

a, b) Less than Significant Impact.

The Project will occur over the course of 16 months beginning in January 2020 with a 5-month hiatus in mid-2020. Active construction will occur for approximately 11 months. During construction, fuel will be used to power heavy equipment, generators, trucks, and worker vehicles that will use fuels such as gasoline and diesel. The site currently does not have electricity, and no electricity will be used during construction. Table 12 below summarizes the anticipated fuel use for both vehicles and equipment during the construction period.

Table 12: Estimated Fuel Use for Vehicles and Equipment during Construction

Source	Fuel Used (gallons)
Diesel	
On-Road Construction Trips	82,961
Off-Road Construction Equipment	41,415
TOTAL	124,375
Gasoline	
On-Road Construction Trips	2,433

On-road mobile source fuel is based on trip lengths and trip rates as stated in the project description and fleet-average fuel consumption in gallons per mile from the California Air Resources Board Emissions Factor model (EMFAC) for Imperial County. Off-road mobile source fuel usage is based on brake specific fuel consumption (BSFC) rates in the OFFROAD 2011 statewide data sets as well as horsepower, usage hours, and load factors from CalEEMod. Details of the potential fuel calculations are provided in Appendix D.

Workers would be encouraged to carpool or use public transportation to the Project site, to the extent feasible. However, because workers are expected to be derived from the local area, worker fuel consumption would not be expected to be wasteful or inefficient, and workers would not be traveling a longer distance to the job site compared with other construction locations in the region.

The Brawley General Plan does not identify goals for fuel or electricity reductions related to construction projects or the use of equipment and therefore does not assign numerical thresholds for construction activities and fuel efficiency. However, the Project would not use fuels in an inefficient manner. As described in the Dust Control portion of the Project Description (Section 2.3), the Project will follow the ICAPCD's CEQA Air Quality Handbook guidelines that require projects to minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum, and will limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use. By following the ICAPCD's guidelines and using equipment only when necessary, the Project would not use fuels in a wasteful or inefficient manner and would not result in the unnecessary consumption of fuel.

Because the Project would use fuel as efficiently as possible, and no electricity would be used during construction, there would be no conflict with a state or local plan for energy efficiency and impacts would be less than significant.

Mitigation Measures: None required.

VII. Geology and Soils

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
7. GEOLOGY AND SOILS— Would the project:				
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 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 risks to life or property?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic features	☐	☐	☐	☒

Environmental Setting:

The Project site is located south of the Salton Sea within the Imperial Valley Groundwater Basin and the Colorado Basin geomorphic province. Geological deposits in the subsurface of the Imperial Valley primarily comprise lacustrine and alluvial deltaic deposits associated with ancient variations in Colorado River flow and include alluvial fan, braided stream, barrier beach, and lacustrine deposits derived from the Chocolate Mountains and the Peninsular Range of Baja California. Subsurface investigations indicate that the Project site is primarily underlain by lacustrine deposits generally consisting of silt and clay, with interbedded lenses of sand and gravel down to 55 feet below ground surface (bgs), which is the maximum depth of investigation (Arcadis 2014a).

According to USGS, the Project area is not located within a currently designated Alquist-Priolo Earthquake Fault Zone (USGS 2019). The Imperial Fault and Brawley Fault, located approximately 3 miles to the southwest and southeast of the Project site, respectively, are the

closest known earthquake faults as delineated on the Alquist-Priolo Earthquake Fault Zoning Map (California Department of Conservation 2019).

Discussion

a,i) No Impact.

The Project site is not located within the Alquist-Priolo Earthquake Fault Zone, and no active faults occur within the Project site. The Imperial Fault and Brawley Fault are the closest known faults delineated by the Alquist-Priolo Earthquake Fault Zoning Map (California Department of Conservation 2019). The Imperial Fault is located approximately 3.11 miles southeast of the Project site (California Department of Conservation California Geologic Survey 2019).

a,ii) No Impact.

The Project area is seismically active and could be subjected to seismic ground shaking in the event of an earthquake. The level of intensity will be determined by the magnitude and location of the earthquake. The Project involves the remediation of the Project site and does not entail construction of facilities that would be affected by ground shaking during an earthquake. Because there are no structures on site that would be subjected to strong seismic ground shaking, the risk of loss, injury, or death is less than significant.

a,iii) Less than Significant Impact.

Ground failure, including liquefaction, is associated with fine-grained, loosely packed sands and gravels that behave like liquid when subjected to ground shaking. Sandy or silty soils are generally more susceptible to liquefaction compared to clay or gravel soils. Two soil types occur at the Project site (USDA Web Soil Survey 2019). These soils are a mix of silty and clay soils and would have a moderate to low potential for liquefaction (see table below). In addition, the Brawley General Plan does not identify the Project site as having high potential for liquefaction. Because no structures would be constructed on site, and because of the low to moderate potential for the soils on site to be subjected to liquefaction, the risk of loss, injury, or death related to ground failure, including liquefaction would be less than significant.

Table 13: Soils on Site

Map Unit Symbol	Map Unit Name	Acres in Project Area
110	Holtville silty clay, wet	13.4
115	Imperial-Garber silty clay loams, wet, 0 to 2 percent sloes	1.7

a,iv) No Impact.

Landslides generally occur on slopes steeper than 15 percent or in areas where geologic conditions or soils are prone to instability. The Project site is generally flat with no significant topography change or slopes greater than 15 percent. Slope changes at the Project site are no greater than 5 percent (Google Earth 2019). Because of the lack of topographic elevation at the

Project site, there is no risk of landslides and there would be no risk of loss, injury, or death related to landslides.

b) Less than Significant Impact.

Project construction will include grading and earthmoving activities that could expose site soils to erosive forces of heavy winds, rainfall, or runoff and could result in the loss of topsoil. During construction, erosion will be controlled through implementation of best management practices (BMPs) and adherence to the SWPPP. Section X Hydrology and Water Quality provides details on SWPPP development and implementation of BMPs. With the implementation of BMPs identified in the project specific SWPPP, the Project will not result in substantial soil erosion or loss of topsoil, and impacts would be considered less than significant.

c) No Impact.

Soils within the Project site (Holtville silty clay, wet and Imperial-Garber silty clay loams, wet, 0 to 2 percent slopes) are not known to be unstable. The Brawley General Plan does not identify the soil within the Project area as subject to instability. The Project includes excavation of soil to approximately 4 feet bgs. Soil will be removed and deposited at an appropriate landfill and would not result in off-site instability. Excavation of the soil on the Project site, including removal of the temporary stockpile and targeted excavation areas, would be conducted to maintain site stability at all times. Because of the low potential of site soils for liquefaction and subsidence and the limited depth of excavation, project activities would not result in unstable soil on site or off site, and there would be no impact.

d) No Impact

The Project does not entail construction of facilities that would require compliance with the Uniform Building Code.

e) No Impact.

The proposed Project involves the excavation of soil and remediation of the Project site to meet risk-based criteria. The Project does not involve the use of septic tanks or alternative wastewater disposal systems.

f) No Impact.

A paleontological resources records search was conducted by the Paleontology Department of the San Diego Natural History Museum (SDNHM) on August 7, 2017 for the Project area and surrounding (1-mile radius) region. The records search identified fossil locations within the 1-mile search radius, their proximity to the Project area, and paleontological resource potential based on underlying geological units.

The SDNHM identified a single previously documented fossil locality within the 1-mile search radius: SDNHM 6259. The locality is within the footprint of SR-78, just less than 1 mile north-northwest of the Project area. The locality was identified within the Holocene deposits associated with ancient Lake Cahuilla and contained freshwater invertebrates (e.g., ostracods and snails). According to the SDNHM letter report, “Lake Cahuilla was a former freshwater lake that periodically occupied a major portion of the Salton Trough during late Pleistocene to Holocene time (approximately 37,000 to 240 years ago), depositing sediments that underlie the entire project site.” No paleontological resources have been previously identified within the Project area

(SDNHM 2017). Because no resources were identified within the Project vicinity and excavation would not extend below 4 feet bgs, no impacts on paleontological resources would occur.

Mitigation Measures: None required.

VIII. Greenhouse Gas Emissions

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
8. Greenhouse Gases—Would the project:				
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?	☐	☐	☒	☐

Environmental Setting

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of GHGs that contribute to global warming or global climate change have a broader global impact. Global warming is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the earth's atmosphere. The principal GHGs contributing to global warming are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated compounds. These gases allow visible and ultraviolet light from the sun to pass through the atmosphere, but they prevent heat from escaping back out into space. Global climate change resulting from global warming has the potential to impact sea level, water supply, agricultural resources, and natural wildlife habitats.

Anthropogenic (human generated) GHGs are primarily produced through the use of stationary and mobile engines running on fossil fuels (e.g., coal, gasoline, diesel, natural gas). GHG emissions can be reduced using alternative fuels and reduced reliance on fossil fuel energy and transportation.

Project activities likely to generate GHGs include:

- Use of construction equipment (e.g. trucks, bore/drill rigs, loaders), worker vehicles, and other construction activities
- Transportation of excavated soil by trucks off site to a disposal facility and by trucks bringing stone and other materials imported from local sources.

There will be no stationary sources of GHG emissions as part of this Project. Mobile sources of GHGs include construction equipment used for site grading and earth moving, haul trucks used to transport stone and materials to the Project site and to remove soil from the Project site, and vehicle emissions from workers commuting to and from the proposed Project site. Construction and operation GHG emissions were estimated using the CalEEMod (version 2016.3.1). Construction of the proposed Project is scheduled to begin in January 2020 and occur over a 16-month period with a 5-month temporary halt in mid-2020, ending in April 2021. Emissions calculations include estimates for construction equipment and vehicle emissions from workers commuting to and from the proposed Project site. GHGs contributed from the proposed Project include CO_2, CH_4, and N_2O. For purposes of analysis, both CH_4 and N_2O can be converted to an

equivalent amount of CO_2 (CO_2e) by multiplying the calculated levels of CH_4 and N_2O by a Global Warming Potential (GWP).

The ICAPCD has not established quantitative significance thresholds for the evaluation of GHG emissions for CEQA analysis. The South Coast Air Quality Management District (SCAQMD) published its Interim CEQA GHG Significance Thresholds for Stationary Sources, Rules, and Plans in 2008 (SCAQMD 2008). Consistent with the SCAQMD guidance, the recommended approach for residential/commercial projects is to compare GHG emissions to a screening value of 3,000 metric tons CO_2e per year (MT CO_2e/yr).

Many California air districts, including SCAQMD, also recommend that construction emissions associated with a project be amortized over the life of the project (typically 30 years) and added to the operational emissions. Therefore, modeled construction related GHG emissions associated with the Project are discussed first, then annual operational GHG emissions are totaled, and then construction emissions amortized over 30 years are added to the operational emissions.

For purposes of this analysis, in Imperial County, a significance threshold of 3,000 MT CO_2e will be used for both construction and operations. Table 14 summarizes the CalEEMod results for GHG emissions for construction and operation. Output from the CalEEMod runs are presented in Appendix A.

Table 14: Total Project Greenhouse Gas Emissions (metric tons/year)

Source	CO_2	CH_4	N_2O	CO_2e
2020 Construction	958	0.085	0.00	960
2021 Construction	239	0.047	0.00	241
Operation	0.14	2×10^{-5}	0.00	0.14

Discussion

a) Less Than Significant Impact.

Emission of GHGs during construction and over the long-term operation of the proposed Project would not result, either directly or indirectly, in levels that would exceed the significance threshold resulting in a cumulatively considerable contribution to a significant impact to the environment.

As shown in Table 14, the estimated CO_2e emissions from the construction of the proposed Project would be 960 metric tons in 2020 and 241 metric tons in 2021. The amortized construction emissions over a 30-year project timespan would be 40 MT CO_2e/yr. With the addition of the operational GHG emissions of 0.14 MT CO_2e/yr, the total emissions are 40.1 MT CO_2e/yr, which is below the screening GHG emission threshold of 3,000 MT CO_2e/yr.

b) Less Than Significant Impact.

The proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, this impact would be less than significant.

As discussed above, the proposed Project would not exceed the threshold of significance and therefore would not be expected to conflict with GHG reduction goals of the AB 32. The proposed Project would be subject to and comply with policies and measures in the AB 32 Scoping Plan that have been and will be implemented as regulations. The Scoping Plan sets forth GHG reduction measures such as the Low Carbon Fuel Standard, light and heavy-duty GHG standards, energy efficiency, and recycling and waste reduction. The proposed Project would be in compliance with all of the fuel and vehicle standards and would dispose of and recycle all project waste in the appropriate manner, as required by law. The proposed Project's GHG emissions would not exceed regional quantitative thresholds developed to comply with AB 32 and the California Climate Change Scoping Plan statewide reduction target. The proposed project would therefore not conflict with AB 32.

Mitigation Measures: None required.

IX. Hazards and Hazardous Materials

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
9.	**HAZARDS AND HAZARDOUS MATERIALS** **Would the project:**				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
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 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?	☐	☐	☐	☒

Environmental Setting:

The Project area, which is zoned for industrial land use (City of Brawley 2017), is a formerly developed property with no existing industrial structures. The Project site is adjacent to residential developments to the south and industrial or light manufacturing to the west. The Project site is bordered to the north by municipal land owned by the City of Brawley and to the east by unused residential land. The Project site is a former agricultural products storage, formulation, and distribution facility, which ceased operations in 2000. The Brawley Municipal Airport is located approximately 700 feet to the north of the Project site.

The Project site has been sampled and is identified as having potential contaminants such as OCPs, organophosphorous pesticides, VOCs, arsenic, and cadmium in soil and OCPs, total petroleum hydrocarbons (TPH), and nitrate in groundwater.

As described in the Project Description (Section 1.0), the Project site was formerly used to formulate, store, and distribute agricultural chemicals from 1940s to 2000. Between 2006 and 2017, soil and groundwater investigations took place for the Project site, and an FS was conducted to assess potential remedies for the Project site. Project site soils are contaminated with OCPs, organophosphorus pesticides, VOCs, and metals. The Project site groundwater is

contaminated by DDT, total petroleum hydrocarbons-gasoline range organics (TPH-GRO), metals (iron and manganese, chloride, nitrate, sulfate), and TDS. The site human health risk driver COCs are dieldrin and cadmium.

Query of the DTSC Envirostor database and the State Water Resources Control Board Geotracker did not reveal other potential hazardous sites within a 1-mile radius of the Project site (DTSC 2017; State Water Resources Control Board 2017.

Discussion

a, b) Less than Significant Impact with Mitigation Incorporation.

As described in Section 1.2 of the Project Description, the Baseline Human Health Risk Assessment (BHHRA; Arcadis 2010) analyzed the risk to potential receptors. The conceptual site model included review of the soil and groundwater conditions at the Project site, identification of COPCs and human receptors, and evaluation of migration and exposure pathways for human receptors potentially present on and near the Project site (as listed below) under current and future conditions.

- Current on-site trespasser receptor
- Current off-site child/adult resident receptor
- Future on-site commercial/industrial worker receptor
- Future on-site construction worker receptor
- Future off-site child/adult resident receptor

Potentially complete and significant exposure pathways evaluated in the BHHRA for on-site receptors include incidental soil ingestion, dermal contact with soil, and inhalation of airborne soil particulates.

All construction activities will be in accordance with applicable federal, state, and local health and safety regulations. These include, but are not limited to:

- Occupational Safety and Health Administration 29 Code of Federal Regulations (CFR) 1910.120 regulations applicable to hazardous waste site operations (Hazardous Waste Operations and Emergency Response [HAZWOPER])
- California Health and Safety Code Division 20, Chapters 6.5 and 6.8
- California Code of Regulations (CCR) Title 8, General Industry Safety Orders 5192
- Construction Industry Standards 29 CFR 1926
- CCR Title 22, Sections 66261.2 and 66261.3

During construction, soil handling will be performed using conventional earthwork equipment operated by a qualified, HAZWOPER-trained, experienced contractor licensed in California to perform hazardous substance removal actions. Contractors will be required to wear the appropriate personal protection equipment including, but not limited to, gloves, safety glasses, long sleeve shirts, long pants, steel-toed safety boots, Tyvek suits, and hardhats. **Mitigation Measure HAZ-01 Site Specific Health and Safety Plan (HASP)** will require the preparation of a HASP that will identify the potential risks for project related tasks and required measures to

reduce those risks. All construction personnel will be required to review the HASP and comply with all health and safety requirements, including the use of the appropriate personal protective equipment.

During construction, targeted excavation and transportation of materials could result in exposure if soil particles became airborne and left the project site during excavation or transportation. Implementation of the required ICAPCD dust control measure and **Mitigation Measure HAZ-02 Dust Control Plan** and **HAZ-03 Dust Concern Hotline** will reduce the potential for soil being excavated to become airborne. **Mitigation Measure HAZ-02 Dust Control Plan** will describe the site-specific dust control measures that will be implemented. In addition, **Mitigation Measure NOI-01 Noise Barrier or Blanket** (described in Section XIII Noise) includes installation of a 15-foot noise barrier or blanket which will further reduce the potential for airborne dust from leaving the Project site.

Materials excavated from the targeted excavation areas will be either directly loaded onto trucks or temporarily stockpiled on site. Implementation of **HAZ-02 Dust Control Plan** and **HAZ-03 Dust Concern Hotline** would ensure that impacts would be reduced to a less than significant. As described in the Project Description Section 2.1 and Section 2.3, trucks and equipment used to handle contaminated soil will be decontaminated before leaving the Project site.

Removal of the existing stockpile and concrete foundations will require removal of approximately 16,515 cy of non-hazardous waste. Waste would be off-hauled from the site and transported to one of the three landfills described in the Project Description. Soil would be sampled for disposal profiling before off-hauling and deposition in a landfill. Of the 16,515 cy of material being removed, approximately 500 cy could potentially be considered non-RCRA hazardous waste (California hazardous waste); therefore, compliance with the DTSC requirements for hazardous waste generation and temporary on-site storage will be required. Any container used for on-site storage will be properly labelled, and the waste will be transported off site for disposal within 90 days after its generation. Following the DTSC requirements for hazardous waste generation and storage will reduce the potential for a significant hazard to the public or environment to less than significant. All of the waste is non-hazardous pursuant to federal RCRA standards. Arizona does not have its own state-specific classification system that would deviate from the federal RCRA designation (non-RCRA standards). Thus, all of the waste will be considered non-hazardous for purpose of disposal in Arizona. Materials leaving the site will be transported following all necessary local, state, and federal regulations for the transportation of waste to Arizona. Trucks removing waste from the Project site will be required have the appropriate Department of Transportation, DTSC, and California Highway Patrol hazardous waste permit, when necessary. To reduce the potential for spillage, all trailers hauling waste will include gasket-sealed tailgates with airlocks and solid vinyl tarps that seal the trailers. All trucks will be inspected prior to leaving the Project site to ensure compliance.

Therefore, during construction, implementation of **Mitigation Measures HAZ-01 Site-Specific Health and Safety Plan, HAZ-02 Dust Control Plan and HAZ-03 Dust Concern Hotline** would reduce impacts on the public and environment to less than significant.

Implementation of the proposed Project will involve the use of heavy equipment, which will use gas, oils, solvents, and lubricants. Small amounts of these materials may be kept on site during construction and targeted excavation. Use, transport, and storage of these materials would be according to manufacturers' specifications including any secondary containment requirements.

Implementation of **Mitigation Measure HAZ-04 Spill Prevention Plan,** which would require the preparation of a spill prevention plan, would reduce the potential for the use of hazardous substances to create a significant hazard to the public or the environment and reduce impact to less than significant.

The Project would result in improved post-construction conditions that would protect on-site receptors after remediation is completed. As described in the RAP (Arcadis 2019), the targeted excavation within the residential buffer zone will be performed so that soil concentrations for COPCs meet risk-based residential screening levels for a target excess lifetime cancer risk of one in a million and a non-cancer hazard index of 1 throughout the buffer zone (instead of commercial/industrial screening levels) (Arcadis 2019).

The excavation and removal of surface and subsurface COPC-impacted soil from the targeted areas outside of the residential buffer zones will result in a site-wide cumulative cancer risk not to exceed one in 100 thousand and not to exceed a non-cancer hazard index of 1 for a post remediation commercial/industrial exposure scenario and includes the removal of arsenic above the regional background level (Arcadis 2019). Because the implementation of the Project would reduce long-term risk to on-site and off-site receptors, impacts would be less than significant.

c) Less than Significant Impact with Mitigation Incorporation.

No schools are located within 0.25 mile of the proposed Project site. However, three schools are located less than 1 mile from the proposed Project site:

- JW Oakley Elementary School, located at 1401 B Street, approximately 0.6 mile southeast of the Project site
- Barbara Worth Junior High School, located at 385 D Street, approximately 0.7 mile to the southwest of the Project site
- Brawley Union High School located at 480 N. Imperial Ave, approximately 0.8 mile to the southwest of the Project site

Work at the proposed Project site would not emit hazardous emissions or handle hazardous materials near these schools, but students walking from their homes adjacent to the Project site to school could come into contact with emissions or materials in the event of an upset during school commute hours. Implementation of **Mitigation Measure**, **HAZ-02, Mitigation Measure HAZ-03 and Mitigation Measure HAZ-04** will reduce the potential for students walking or bicycling to school from being exposed to potentially hazardous emissions or materials, and impacts would be less than significant.

d) Less than Significant Impact.

The Project site is listed on Envirostor under ID #13070097 with a status of Active State Response. The RAP prepared for the proposed Project identifies measures to remediate the Project site to commercial/industrial use standards. As described in the Project Description, approximately 16,300 cy of materials will be removed from the Project site as part of the proposed Project. By following the activities described in the Project Description, including excavation of COPC-impacted soils and placement of the engineered cover over the entire Project site, the proposed Project would not create a significant hazard to the public or the environment, and impacts would be less than significant.

e) Less than Significant Impact.

The Brawley Municipal Airport is located approximately 700 feet to the north of the proposed Project site. The Project is located within the compatibility area for the Brawley Municipal Airport (Imperial County Airport Land Commission. 1996). The Project site is located in Airport Zone D, which is indicated as "Other Airport Environs" (Imperial County 1996). Zone D is identified as negligible risk and does not have a requirement for open land. Implementation of the Project would not conflict with the Zone D designation.

f) Less than Significant Impact.

The City of Brawley General Plan outlines goals for public safety under the Public Safety and Noise Element. It provides specific response plans for flooding, seismic, and other geologic hazards; releases of hazardous and toxic materials; and fires. The Project will not conflict with any plans identified in the Public Safety and Noise Element. A site-specific emergency response plan will be prepared before beginning the Project. The Project will bring additional vehicles to the Project site, but all vehicles and equipment will be parked and stored on site and would therefore not impede with emergency response on River Road.

Because the proposed Project will not conflict with adopted plans and would not impede with emergency response or evacuation, impacts would be less than significant.

g) No Impact.

There is low risk of wildfire within the Project area because of development and lack of dense vegetation. The California Public Utilities Commission (CPUC) Fire Threat Maps do not show the City of Brawley as having an elevated or extreme fire threat (CPUC 2018). The Project site is located in a low-Fire Hazard area according to California Department of Forestry and Fire Protection (Cal Fire; 2007). Project activities require the use of fuels, oils, and solvents that have the potential to result in an unintended fire. However, all vegetation within the Project area will be removed, and all fuels used on site will be used and stored to according to manufacturers' recommendations, reducing the risk of these fuels to unintentionally start a fire. Because of the lack of dense vegetation at the Project site and in the vicinity, and proper use and storage of potentially combustible materials during construction, there would be no impact.

Mitigation Measures:

Mitigation Measure HAZ-01 Site-Specific Health and Safety Plan: A site-specific HASP will be prepared that will address identification of job hazards, hazard mitigation, safe work practices, and emergency response procedures. Project site personnel, contractors, and visitors will be required to review the HASP prior to beginning the work and will conduct the work in accordance with the HASP. The HASP will include measures required for safe work at the site and will identify the required personal protection equipment that must be worn by contractors. The HASP will be maintained on site and will be reviewed each day prior to the start of construction and the daily tailgate meeting. If necessary, the HASP will be updated if additional measures are required to protect workers during construction.

Mitigation Measure HAZ-02 Dust Control Plan: A Dust Control Plan will be implemented to describe dust prevention, monitoring, and mitigation methods and other BMPs and regulatory compliance measures that will be implemented to monitor, control, reduce, and mitigate dust generation during construction activities. The Dust Control Plan will, at a minimum, include all of

the measures described in the Project Description. As described in the Project Description Section 2.3, the following dust control measures will be implemented during construction:

- Dust will be suppressed by spraying or misting the soil handling areas and haul roads with water, chemical stabilizers, dust suppressants, or other suitable material if water does not sufficiently address dust generation.
- Two all-terrain watering trucks will be on-site at all times for general dust control and dust control during excavation at the stockpile and targeted excavations.
- Water trucks will be positioned at the excavation location and will apply water as the excavation progresses. Similarly, during targeted excavation, water trucks will water before and after excavation.
- All vehicles and equipment will use a singular, conditioned road as described in the Project Description (Page xiii).
- Soil stockpiles will be immediately covered, and all stockpiles will be positioned on sheeting.
- Truck beds containing soil will be covered to minimize the potential for dust generation during transport.
- During soil disturbance (excavation of the stockpile, targeted excavation, and placement of the engineered cover) the area of soil disturbance will be the smallest possible to reduce the source of the dust.
- At the stockpile and targeted excavation sites, water will be applied before and after excavation.
- Water will be applied during placement of the engineered cover both before and after placement of the sand and crushed stone. If necessary, the sand and crushed stone will be watered prior to placement to reduce dust.
- Ground cover will be replaced in disturbed areas as quickly as possible.
- Vehicle speed for all construction vehicles will not exceed 15 mph on any unpaved surface at the construction Project site. Vehicle's tires will be inspected before exiting the job site and washed, if necessary, to remove excess debris and soil.
- Airborne particulates will be monitored in compliance with all applicable regulations to verify and document the effectiveness of dust suppression measures. At a minimum, monitors will be placed at the perimeter of the property using an upwind/downwind sampling approach.
- If Visual Dust Emissions (dust emissions visual by the observer) reach 20 percent, work will be stopped until opacity decreases below 20 percent. Opacity will be tested using the Visual Determination of Opacity found in Appendix A of ICAPCD's Rule 800 General Requirements for Control of Fine Particle Matter (PM 10) (IAPCD 2012).
- During times of excessive wind that could generate unacceptable dust unrelated to site activities, work will be stopped temporarily until wind speeds decrease. An anemometer will be maintained on site to monitor real-time wind speeds. If wind speeds exceed 25 mph, earth moving activities such as grading or excavation will cease until wind speeds are below 25 mph.

- During construction, a noise barrier or blanket will be installed along the southern portion of the site along River Drive. The noise barrier will be up to 15 feet high and will help to contain dust and airborne particles during construction

In addition to the site-specific dust control measures described above, all projects within the ICPACD jurisdiction must comply with the following, as applicable:

- All disturbed areas, including bulk material storage that is not being actively used, will be effectively stabilized, and visible emissions will be limited to no greater than 20 percent opacity for dust emissions using water, chemical stabilizers, dust suppressants, or other suitable material such as vegetative ground cover.
- All on-site and off-site unpaved roads will be effectively stabilized, and visible emissions will be limited to no greater than 20 percent opacity for dust emissions by paving, application of chemical stabilizers or dust suppressants, and/or watering.
- All unpaved traffic areas 1 acre or more with 75 or more average vehicle trips per day will be effectively stabilized, and visible emissions will be limited to no greater than 20 percent opacity for dust emissions by paving, application of chemical stabilizers or dust suppressants, and/or watering.
- The transport of bulk materials will be completely covered unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartments of all haul trucks are to be cleaned and/or washed at the delivery site after removal of bulk material.
- All track-out or carry-out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area.
- During movement, handling, or transfer, bulk material will be stabilized before handling or at points of transfer with application of sufficient water, chemical stabilizers or by sheltering or enclosing the operation and transfer line.
- The construction of any new unpaved road is prohibited within any area with a population of 500 or more unless the road meets the definition of a temporary unpaved road. Any temporary unpaved road will be effectively stabilized, and visible emissions will be limited to no greater than 20 percent opacity for dust emission by paving, application of chemical stabilizers or dust suppressants, and/or watering.

Mitigation Measure HAZ-03 Dust Concern Hotline: A dedicated phone number and email address will be established to allow nearby residents to call and/or email the project team if there are concerns regarding dust. During periods of active work on-site, the phone line and email will be staffed and answered in real time or near real time. Response time for intake, assessment, and resolution is expected to be within 24 hours during active periods of field work. During inactive periods, the phone line will have a voicemail greeting but still be monitored every day, with response time expected to be within 48 hours. The phone number and email address will be distributed (e.g., websites, mailing, handout) to nearby residences, businesses, and organizations, and to JW Oakley Elementary School, Barbara Worth Junior High School, and Brawley Union High School. Calls and emails to the dust concern hotline will be logged and the question or concern forwarded to DTSC and the project team to evaluate for further action and

response as needed. The complaint will be investigated by the on-site project team, and if it's determined to be project related, the on-site team will apply different or additional dust control measures, as listed above. A summary of the concern/complaint, assessment, and outcomes will be reported to DTSC.

Mitigation Measure HAZ-04 Spill Prevention Plan: A Spill Prevention Plan will be prepared that will identify the measures to be taken to prevent spills and to contain spills should they occur during construction. Vehicles and construction equipment will be inspected daily to verify that there are no leaking fluids (e.g., oil, hydraulic, lubricant, or brake fluids) and that fuels and fluids are stored in proper, labelled containers with secondary containment if necessary. A chemical spill kit will be located on site during construction, and field personnel will be informed of its location. Observation of spills, leaking fluids, or improperly stored fluids will trigger the issuance of a "stop work" notice until the problem is resolved, including the removal of soil impacted by vehicle fluids. Leaking or damaged equipment will not be operated until it is repaired or replaced. The Spill Prevention Plan will include measures in the unlikely event of an accident including emergency actions, phone numbers for response and clean up, and procedures for handling spills. The Spill Prevention Plan will be provided to all drivers hauling materials to and from the Project site.

X. Hydrology and Water Quality

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
10. HYDROLOGY AND WATER QUALITY— Would the project:				
a) Violate any water quality standards or waste discharge requirement or otherwise degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that 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, in a manner that would result in substantial erosion of siltation on or off site?	☐	☐	☒	☐
i) result in a 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 off site	☐	☐	☒	☐
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?	☐	☐	☐	☒

Environmental Setting

Water for irrigation, domestic, municipal, and industrial use in the Imperial Valley is supplied by the Imperial Irrigation District (IID), which transports water from the Colorado River. Of the water transported by the IID, approximately 97 percent is used for agriculture in the Imperial Valley, 1 percent flows to industrial water users, and 2 percent is delivered to nine Imperial Valley cities, including the City of Brawley, that treat the water to drinking water standards (IID 2009). Residents in the IID service area who do not receive treated water service must obtain alternative water service for drinking and cooking from a state-approved provider (IID 2009), meaning that residents are not permitted to construct private wells for water supply. Well surveys conducted in 2008 and 2013 indicate that there is no evidence of domestic, municipal, or industrial uses of groundwater within 1 mile of the Project site, and no evidence of agricultural pumping has been encountered to date.

The New River located more than 1 mile northwest of the Project site, is the closest surface water body. The Alamo River is located approximately 1.5 miles east of the Project site. Both the Alamo River and New River flow north and drain into the Salton Sea (California Department of Water Resources [CDWR] 1975). The New and Alamo Rivers convey agricultural irrigation drainage water from farmlands in the Imperial Valley, surface water runoff, and lesser amounts of treated municipal and industrial wastewaters from the Imperial Valley. The flow in the New River also contains agricultural drainage, treated sewage, and industrial waste discharge from Mexicali, Mexico (California Regional Water Quality Control Board [RWQCB] 2006). Surface flow from the highly polluted New River negatively affects groundwater quality in the Imperial Valley Groundwater Basin (Setmire 1979).

The Project site lies within the Imperial Valley Groundwater Basin in the southern part of the Colorado River Hydrologic Region. Groundwater within the basin generally flows toward the axis of the Imperial Valley and then northwestward toward the Salton Sea (Montgomery Watson, Inc. 1995). Groundwater in the Brawley area generally flows to the north.

Groundwater is regionally stored in the mesas on the west side of the valley and East Mesa and in the sand dunes on the east side of the valley. Water movement through the valley floor is impeded by the fine-grained lacustrine sediment, which promotes accumulation of saline water at the surface (RWQCB 2006). Sources of groundwater recharge to the Imperial Valley are through irrigation return and leakage from unlined portions of regional canals, with substantially lesser inputs from basin underflow and recharge of precipitation (CDWR 1975).

The Water Quality Control Plan for the Colorado River Basin (RWQCB 2006) also supports that the fine-grained lake sediment in the central portion of Imperial Valley inhibits groundwater movement. Tile drain systems are used to dewater the sediment to a depth below the root zone of crops and to prevent the accumulation of saline water on the surface. Few wells have been drilled in the lacustrine sediment in the entire Imperial Valley planning area because the yield is poor, and the water is generally saline (RWQCB 2006).

Significant water quality variations are observed throughout the basin. Groundwater within the basin is described as generally saline (RWQCB 2006) and is unsuitable for domestic and irrigation purposes without treatment (CDWR 1975). In addition, concentrations of nitrate higher than the concentration recommended for drinking water are common in the region (Alward and Shatz 2009). In 1993, the USGS conducted a study of groundwater quality in the Imperial Valley to evaluate changes in groundwater quality with depth and to ascertain the possible influence of shallow, regional groundwater quality on the quality of water in the tile drain system (USGS 1993). Groundwater at all depths for the two USGS sampling locations (one located south of Brawley and one located in the northern portion of Imperial Valley) was characterized as a sodium chloride-type water with high TDS.

Groundwater at the Project site has been encountered between approximately 18 and 30 feet bgs from 2008 to 2018 and does not discharge to the surface on or near the Project site. The average calculated groundwater flow velocity at the Project site is approximately 10 feet per year. Groundwater data indicate a groundwater flow direction generally to the north-northeast in the direction of the New River (Arcadis 2014a).

The Project site has two areas with different magnitudes of horizontal hydraulic gradients: a relatively flat gradient on the southern third of the Project site and a steeper hydraulic gradient on

the northern two thirds of the Project site. This apparent morphology of the water table is likely a result of a freshwater source near the south side of the Project site. Groundwater elevations at the Project site have been declining over time, which could be associated with the lining of canals in the Imperial Valley, leading to a decrease in groundwater recharge (Lawrence Livermore National Laboratory 2008). Based on the available groundwater elevation data at the Project site, it appears that the hydraulic gradient directions and magnitudes have been consistent for at least the past six years, and the shallow groundwater throughout the Project site is interconnected.

Discussion

a) Less than Significant Impact.

Project activities include excavation of approximately 16,515 cy of soil and concrete; importing of approximately 24,220 cy of clean earthen fill, sand, and crushed stone; and grading and compacting across the site. As described in the Project Description Section 1.6, grading and compacting of the Project site would include a slope to match the general drainage present at the Project site. The design of the engineered cover will maintain stormwater quality standards for the Project site.

Because the Project site will include disturbance to greater than 1 acre, the Project is subject to the Construction General Permit for Stormwater during Construction (2009-0009-DWQ). The Construction General Permit requires preparation of a SWPPP and implementation of site-specific BMPs to prevent construction-related sediment from leaving the Project site. The site-specific SWPPP will also include improvements for the current site drainage in coordination with the grading plan. As described in the Project Description Section 2.4, the SWPPP will be submitted to the California State Water Resources Control Board's Stormwater Multiple Application and Reporting Tracking System (SMARTS) along with a Notice of Intent for coverage under the Construction General Permit.

The following sediment and erosion controls will be implemented during construction:

- Entrance/outlet tire wash
- Straw wattles along perimeter of site
- Silt fencing along perimeter of site
- Ground tarping equipment storage areas

To minimize sediment runoff, temporary stockpiles generated during construction will be placed on top of and covered with polyethylene (or similar) sheeting and will be covered as soon as possible. Additional measures may be implemented during construction as conditions require. Design of the engineered cover would include a slope to match the general drainage present at the Project site.

With the implementation of the BMPs listed above, preparation of a site-specific SWPPP and post-construction stormwater controls, the Project will not violate water quality standards or otherwise degrade surface water quality, and impacts would be less than significant.

As described in the Project Description Section 1.0, groundwater COPCs have a limited frequency of detections above screening levels and limited potential for off-site migration (Arcadis 2019). New groundwater monitoring wells will be installed along the perimeter of the site, and all

wells will be sampled and monitored with results being periodically reported to DTSC. Monitoring of these wells will be conducted to evaluate potential changes to groundwater quality at the site perimeter and off site. This monitoring will start following construction of the engineered cover and will be completed following the procedures outlined in the RD.

Implementation of the site-specific SWPPP and post-construction groundwater monitoring will maintain surface and groundwater quality at the site and impacts would be less than significant.

b, e) Less than Significant Impact.

Groundwater at the Project site has been detected at depths between 18 and 30 feet bgs and does not discharge near the Project site. In general, groundwater in the Imperial Valley is too deep for extraction and has too high salinity for use as potable water. Water used during construction will be either city water or commercially purchased water. Groundwater will not be extracted or used during construction.

As described in the Project Description Section 1.9, the engineered cover will be constructed from sand and crushed stone with geotextile fabric layer. Precipitation will fall onto the top layer of clean, imported, erosion-resistant crushed stone and will infiltrate into the clean imported sand layer. The cover will not be impervious and will not interfere with groundwater recharge.

c, i-iv) Less than Significant Impact.

The engineered cover will be permeable and will be designed with the slope to match the general drainage present at the site. Stormwater will infiltrate or flow across the cover. The cover will not be impervious and would not increase the amount of surface runoff in a matter that would result in flooding on site or off site. The SWPPP will identify site-specific stormwater BMPs to be implemented during construction to maintain stormwater from resulting in flooding on site or off site during construction.

During construction, the SWPPP will identify measures to maintain stormwater on site. The Project will not create or contribute runoff water exceeding the capacity for the Project site and will implement post-construction BMPs to prevent stormwater from leaving the Project site.

The Project is not located within a river or stream or within the floodplain of a river or stream and would not impede or redirect flood flows.

d) No Impact.

The Project site is not located in a tsunami zone. There are no large bodies of water that would create a seiche. Given the flat topography of the Project site, there are no areas that would be subjected to mudflow within the Project vicinity.

Mitigation Measures: None required.

XI. Land Use and Planning

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

Environmental Setting:

The Project site is zoned Light Manufacturing (M-1). Land use surrounding the Project site is shown on Figure 2. Residential developments occur to the south of the Project site, and the area to the east of the Project site is zoned Residential. Other light manufacturing occurs to the west and north. Beyond the immediate Project area, residential, commercial, and manufacturing land use occurs. The Brawley Municipal Airport occurs approximately 700 feet to the north of the Project site and is within the Airport Land Use Compatibility Plan Area. According to the Imperial County Airports Airport Land Use Compatibility Plan, the proposed Project falls within the Airport Zone D (Imperial County 1996).

Discussion

a) No Impact.

The Project site is currently zoned Light Manufacturing (M-1) and will remain zoned as M-1. Therefore, the Project will not physically divide or change the existing established land use, zoning, and nearby community.

b) No Impact.

The Project site is currently zoned Light Manufacturing (M-1) and will remain zoned as M-1. The proposed Project is located within Zone D for the Brawley Municipal Airport. According to the Airport Compatibility Plan (Imperial County 1996), there are no restrictions on land use. Remediation of the Project would not change or conflict with the identified land use within the Zone D area and would therefore not conflict with the Airport Compatibility Plan. Because there would be no change in zoning and land use or conflict with the Airport Compatibility Plan, the Project will not have an impact on a land use plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect.

Mitigation Measures: None required.

XII. Mineral Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
12. MINERAL RESOURCES—Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Environmental Setting:

According to the California Department of Conservation Well Finder tool, there are no minerals land classifications in the City of Brawley (California Department of Conservation 2019). There are no geothermal or mineral recovery plants within the City of Brawley (City of Brawley 2008).

Discussion

a,b) No Impact.

According to the City of Brawley General Plan and the Imperial County General Plan, there are no locally important mineral resources within the City of Brawley. The Project area does not contain known mineral resources of value and is not an oil- or gas-producing resource area according to the California Geologic Survey (2019). The Project involves remediation of the Project site, including the excavation of soils at targeted locations to approximately 4 feet bgs, and will not result in the loss of availability of known mineral resources, including mineral resources designated as locally important. Therefore, there will be no impacts on a known mineral resource that will be of value to the region or residents of the state, and there will be no loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, there will be no impact on mineral resources.

Mitigation Measures: None required.

XIII. Noise

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
13.	**NOISE—Would the project:**				
a)	Generation of 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 groundbourne vibration or groundborne noise levels?	☐	☒	☐	☐
c)	For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☐	☒

Characteristics of Noise

Sound is a physical disturbance in a medium, such as air, that is capable of being detected by the human ear. Sound waves in air are caused by variations in pressure above and below the static value of atmospheric pressure. Sound is measured in units of decibels (dB) on a logarithmic scale. The “pitch” (high or low) of the sound is a description of frequency, which is measured in Hertz (Hz). Most common environmental sounds are a composite of frequencies. A normal human ear can usually detect sounds within frequencies from 20 to 20,000 Hz. However, humans are most sensitive to frequencies in the range of 500 to 4,000 Hz.

Certain frequencies are given more “weight” during assessment because human hearing is not equally sensitive to all frequencies of sound. The A-weighted decibel (dBA) scale corresponds to the sensitivity range for human hearing. Noise levels capable of being heard by humans are measured in dBA. A noise level change of 3 dBA or less is barely perceptible to average human hearing. However, a 5 dBA change in noise level is clearly noticeable. A 10-dBA change is perceived as a doubling or halving of noise loudness, while a 20-dBA change is considered a “dramatic change” in loudness. Table 15 provides typical instantaneous noise levels of common activities in dBA.

Table 15: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock concert
Jet fly-over at 1,000 feet	100	
Gas lawn mower at 3 feet	90	
Diesel truck at 50 feet, at 50 mph	80	Food blender or garbage disposal at 3 feet
Noisy urban area, daytime gas lawn mower at 100 feet	70	Vacuum cleaner at 10 feet
Commercial area Heavy traffic at 300 feet	60	Normal speech at 3 feet
Quiet urban daytime	50	Large business office, dishwasher in next room
Quiet urban nighttime	40	Theater, large conference Room (background)
Quiet suburban nighttime	30	Library
Quiet rural nighttime	20	Bedroom at night
	10	Broadcast/Recording studio (background level)
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 1998

Sound from a source spreads out as it travels away from the source, and the sound pressure level diminishes with distance. Individual sound sources are considered “point sources” when the distance from the source is large compared to the size of the source (e.g., transformer banks, construction equipment, and turbines). Sound from a point source radiates hemispherically, which yields a 6-dB sound level reduction for each doubling of the distance from the source. If the sound source is long in one dimension, the source is considered a “line source” (i.e., roadways and railroads). Sound from a line source radiates cylindrically, which typically yields a 3-dB sound level reduction for each doubling of the distance from the source.

In addition to distance attenuation, the air absorbs a certain amount of sound energy, and atmospheric effects (wind, temperature, and precipitation), terrain, and vegetation also influence the sound propagation and attenuation over large distances from the source.

An individual’s sound exposure is a value based on a measurement of the noise that the individual experiences over a specified time interval. A sound level is a measurement of noise that occurs during a specified period. However, noise impact evaluations under CEQA are based on the project-related increases to the existing community noise levels. A continuous source of noise is rare for long periods and is typically not a characteristic of community noise. Rather, community noise refers to outdoor noise in the vicinity of a community.

A community noise environment varies continuously over time with respect to the contributing sources. Within a community, ambient noise levels gradually change throughout a typical day, and the changes can often be correlated to the increase and decrease of transportation noise or to the daytime/nighttime operation of stationary mechanical equipment. The variation in

community noise throughout a day is also due to the addition of short-duration single-event noise sources, such as aircraft, sirens, and various natural sources.

The metrics for evaluating the community noise environment are based on measurements of the noise levels over a period. These metrics are used to characterize and evaluate the cumulative noise impacts. The most common metrics for evaluating community noise are as follows:

- L_{eq}: The equivalent sound level, or the time-integrated continuous sound level, that represents the same sound energy as the varying sound levels, logarithmically averaged over a specified monitoring period.
- L_{max}: The instantaneous greatest noise level measured on a sound level meter during a designated time interval.
- L_{min}: The instantaneous lowest noise level measured on a sound level meter during a designated time interval.
- CNEL: The Community Noise Equivalent Level that represents a 24-hour A-weighted sound level average conducted from midnight to midnight, where sound levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dB weighting, and nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dB weighting.

These noise levels are typically evaluated at sensitive receptor locations to determine compliance with noise standards. Examples of sensitive receptors include residential land uses, schools, hospitals, and parks.

In addition to sound, construction activities also have the potential to create ground vibrations, depending on the kind of equipment and operations involved, and the distances between the construction activities and the nearest sensitive receptors. The effects of ground-borne vibrations generated from construction activities are typically imperceptible to most people located outside the immediate proximity of the construction. However, high-magnitude vibrations can result in damage to nearby structures within the immediate vicinity of the source.

For estimate of vibration impacts, the Federal Transit Administration (FTA) guidelines define vibration damage criterion involving considerable construction equipment operations. The purpose of this criterion is to avoid vibration damage. FTA guidelines state that a vibration level of 65 vibration decibels (VdB) is the threshold of perceptibility for humans. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads.

Environmental Setting

The Project site is located within an industrial land use zone of Brawley just south of the Brawley Municipal Airport. The primary source of ambient noise would be from vehicle and train traffic as well as from airport noise of planes taking off and landing. In general, noise at the Project site during daylight hours is between 30 and 70 dBA, which would be typical for an industrial area.

Sensitive receptors are located within 100 feet of the Project site. The residences located along River Drive are as close as 100 feet at the southern boundary of the Project site, and residences along North Palm Drive are at least 1,000 feet from the eastern boundary of the Project site.

Discussion

a) Less than Significant Impact with Mitigation Incorporation.

Construction of the Project will include the use of heavy machinery including excavators, dump trucks, and graders. The City of Brawley Noise Ordinance does not address construction noise, and the City of Brawley General Plan does not set numeric limits for construction noise. The General Plan addresses construction noise in Policy PSNE 8.1.2, which provides that construction noise is to be addressed through limits on construction hours (City of Brawley 2017). Table 16 summarizes the average noise levels of equipment that could be expected to be used during the Project.

Table 16: Typical Construction Equipment Noise Levels

Equipment	Noise Level (dBA) at 50 feet
Backhoe	80
Pump truck	82
Crane, mobile	85
Dozer	85
Excavator	85
Generator	82
Grader	85
Man lift	85
Loader	80
Roller	85
Scraper	85
Trucks	80-84

Source: Federal Highway Administration (FHWA) 2009

The noise prediction calculations of the construction equipment assume that the construction activities would operate for 8 hours per day, weekdays only. The proposed Project's construction operations would occur between the daytime hours of 7:30 a.m. and 6:00 p.m. While the City does not impose numeric noise limits for construction activity and construction hours would be limited to minimize disturbance, nearby residents nevertheless could experience a temporary disturbance from daytime construction noise. Because the work would occur within the allowable daytime construction timeframe, impacts would be less than significant. No additional mitigation is needed to achieve a less-than-significant level of impact; however, the following measures will be followed to further reduce this less-than-significant impact.

As described in the Project Description Section 2.3, the following ICAPCD air quality guidelines will be implemented:

- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.
- Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use, to the extent feasible.

As described in the Project Description, to enable vehicle travel on-site with minimal soil disturbance, the on-site access road will be established in a horseshoe configuration to maintain trucks moving forward and reduce backing where feasible. Trucks and equipment will only use the access road during construction. These measures will further support the reduction of equipment noise during construction.

To further reduce noise impacts on nearby sensitive receptors along River Drive, Mitigation Measure NOI-01 Noise Barrier or Blanket, Mitigation Measure NOI-02 Equipment Noise Control, Mitigation Measure NOI-03 Location of Equipment and Stationary Noise Sources and Mitigation Measure NOI-04 Noise Concern Hotline will be implemented.

b) Less than Significant Impact.

Removal of the stockpile, targeted excavation, and installation of the engineered cover will require heavy equipment such as bulldozers, excavators, and compactors. Ground vibration will also occur during use of heavy equipment for soil placement and compaction. The noise and ground vibration would be temporary during removal of the stockpile, targeted excavation, and installation of the cover.

According to the FTA guidelines, a vibration level of 65 VdB is the threshold of perceptibility for humans. For a significant impact to occur, vibration levels must exceed 75 VdB during infrequent events (FTA 2018). The vibration calculations are based on the FTA published vibration levels provided in Table 17.

Table 17: Vibration Source Levels for Typical Construction Equipment

Equipment	Vibration Level (VdB) at 25 feet	Peak Particle Velocity (PPV) (inches/second)
Large bulldozer	87	0.089
Loaded trucks	86	0.076
Small bulldozer	58	0.003

Source: FTA 2011

There are no adopted State or City of Brawley ground-borne vibration standards. Based on federal guidelines, the proposed project would result in a significant construction or operational vibration impact if it would exceed the FTA vibration impact criteria of 75 VdB.

Using vibration levels for typical construction equipment previously published in a noise and vibration impact assessment by the Federal Railroad Administration (FRA) in 2005, impacts from the closest residence (100 feet) were calculated. The following formulas were used:

$$PPV_{equip} = PPV_{ref} \times \left(\frac{25}{D}\right)^{1.5}$$

Where: PPV (equip) is the peak particle velocity in inches/second of the equipment adjusted for distance

PPV (ref) is the reference vibration level in inches/second at 25 feet

D is the distance from the equipment to the receiver

And: $L_V\,(D) = L_V\,(25ft) - 20\log\,(\frac{D}{25})$

Where: Lv (D) is the level in VdB at distance D

The construction activities associated with the proposed Project may occur as close as 100 feet to the residences located along River Drive. Possible sources of vibration would include excavators, dump trucks, and loaded trucks delivering to and off-hauling from the site. Vibration dissipates with distance. Using the above calculations and the highest potential vibration source, a large bulldozer with a VdB of 87 at 25 feet would have approximately 75 VdB at 100 feet which would not be a significant impact (FTA 2018). Table 18 summarizes the reduction in VdB with distance using the closest sensitive receptor at 100 feet from the southern fence line. Because of the distance from vibration sources, impacts related to vibration would be less than significant.

Mitigation Measure NOI-01 Noise Barrier or Blanket and NOI-03 Location of Equipment and Stationary Noise Sources would further reduce the less-than-significant vibration impacts on sensitive receptors.

Table 18: Vibration Impacts

Receptors 100 Feet from Project Site		
Equipment	**PPV (inches/second)**	**VdB**
Large bulldozer	0.011	75
Loaded Trucks	0.010	74
Small bulldozer	0.0004	46

FRA 2005

c) No Impact.

The proposed Project is located within 700 feet of the Brawley Municipal Airport and within Zone D of the Brawley Municipal Airport plan area (Imperial County 1996). Existing airport noise at the

proposed Project site results from planes landing and taking off and is estimated to be above 65dBA at the Project site. Work at the Project site is expected to occur over the course of 11 months and would not be expected to expose workers to excess noise levels.

Mitigation Measures:

Mitigation Measures NOI-1 Noise Barrier or Blanket: Temporary sound barriers would be installed along the southern boundary of the Project site. The final location and length of the wall should be determined in the final design phase of the Project, but at a minimum, the barrier will be designed to reduce noise impacts a minimum of 5 dBA.

Mitigation Measure NOI-2 Equipment Noise Control: Equipment and trucks used for project construction will employ the best available noise control techniques to the extent feasible. Jackhammers and other percussive equipment would be equipped with mufflers. Trucks and equipment would minimize the potential for backing and generating backing warning sounds to the extent feasible. Muffling equipment and reducing the potential for backing warnings would reduce temporary noise impacts on sensitive receptors to less than significant.

Mitigation Measures NOI-03 Location of Equipment and Stationary Noise Sources: Equipment and stationary noise sources will be located as far from adjacent noise sensitive receptors as reasonably possible and will be enclosed if feasible. Generators and other stationary equipment would be located as far from sensitive receptors as feasible. Only equipment necessary for construction of the project will be operated near sensitive receptors. Locating stationary equipment far away from sensitive receptors would reduce temporary construction noise to below 65 dBA for most equipment.

Mitigation Measure NOI-04 Noise Concern Hotline. A dedicated phone number and email address will be established to allow nearby residents to call and/or email the project team if there are concerns regarding project noise. During periods of active work on-site, the phone line and email will be staffed and answered in real time or near real time. Response time for intake, assessment, and resolution is expected to be within 24 hours during active periods of field work. During inactive periods, the phone line will have a voicemail greeting but still be monitored every day, with response time expected to be within 48 hours. The phone number and email address will be distributed (e.g., websites, mailing, handout) to nearby residences, businesses, and organizations. Calls and emails to the noise concern hotline will be logged and the question or concern forwarded to DTSC and the project team to evaluate for further action and response as needed. The complaint will be investigated by the on-site project team, and if it’s determined to be project related, the on-site team will apply different or additional noise control measures, as listed above. A summary of the concern/complaint, assessment, and outcomes will be reported to DTSC.

XIV. Population and Housing

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
14. POPULATION AND HOUSING— Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Environmental Setting

The City of Brawley is located in Imperial County and occupies approximately 8 square miles with a population of approximately 26,928 with 7,642 households (City of Brawley 2019a). According to the U.S. Census, the owner-occupied housing rate is 52.7 percent (U.S. Census 2018).

The Project site was used to formulate, store, and distribute agricultural chemicals and does not provide housing. The Project site is zoned Light Manufacturing (M-1), and no change in zoning is proposed. The Project will remain zoned Light Manufacturing at the completion of the Project.

Discussion:

a, b) No Impact.

The proposed Project involves remediation activities and does not involve construction of new homes or businesses or the extension of roads or other infrastructure. Work at the Project site is expected to occur over the course of approximately 16 months beginning in January 2020 with a 5-month hiatus in mid-2020. Active construction is expected to occur for 11 months and will employ a maximum of 21 workers during targeted excavation and installation of the engineered cover. Workers are expected to be derived from the local area and would not result in increased population growth in the area. It is possible that workers may temporarily relocate from outside of the local area, but the temporary relocation would not require construction of housing or result in a substantial population growth to the Brawley area.

There are no homes or residences on the Project site, and the Project would not displace any housing necessitating the construction of replacement housing. Because the Project does not include construction of housing, nor would it permanently relocate a significant number of workers, the Project would not result in direct or indirect substantial population growth.

Mitigation Measures: None required.

XV. Public Services

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
15. PUBLIC SERVICES— Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☒	☐
v) Other public facilities?	☐	☐	☐	☒

Environmental Setting

Fire:

The City of Brawley provides fire suppression, fire protection, and emergency medical services within the current city limits to both residential and commercial structures and to both citizens and employees in Brawley. Currently, the ratio of firefighters per population is lower than the recommended level (City of Brawley 2012b). For the General Plan year 2030, the city's future fire department demands will require an increase in facilities by a total of 47,964 additional square feet allocated between a new fire station and substations. In addition, three fire engines, three utility vehicles, one ladder truck, one rescue vehicle, one staff vehicle, and one command vehicle will be needed to meet standards for the projected 2030 population.

Brawley Fire Department Station No. 2 is located approximately 1.1 mile east of the Project site.

Police:

For incidents within the city limits, police services are provided by the Brawley Police Department. The Imperial County Sheriff's Department provides law enforcement in unincorporated areas. The California Highway Patrol provides traffic law enforcement along State Routes and unincorporated County Roads. The Brawley Police Department has 38 sworn officers and 15 non-sworn officers (City of Brawley 2012b). The Brawley Police Department has been able to maintain a 5-minute response time within the city and maintain a staff of four officers at all times (City of Brawley 2012b).

The Brawley Police Department is located approximately 1.2 miles southwest of the Project site.

Parks:

The City of Brawley manages more than 20 parks and recreational facilities within the city, including neighborhood parks, playing fields, senior centers, and public pools. Parks closest to the Project site are:

- **Alyce Gereaux Park**: located approximately 0.4 mile east of the Project site. This park offers basketball courts, a splash park, a multipurpose sports field, a playground, a picnic area, and restrooms.
- **Whittier Park**: Located approximately 0.6 mile southeast of the Project site. The park has six tennis courts, a baseball field, and a multipurpose sports field.
- **Volunteer Park:** is located approximately 0.7 mile to the west of the Project site. This is a large neighborhood park with ball fields, soccer fields, and a track.

Schools:

The Brawley Unified School District manages schools within the City of Brawley. Schools within the vicinity of the proposed Project are:

- JW Oakley Elementary School, located 0.6 mile southeast of the Project site.
- Barbara Worth Junior High School, located 0.7 mile to the southwest of the Project site.
- Brawley Union High School District, located 0.9 mile southwest of the Project site.

Other

The Brawley Municipal Airport is located approximately 700 feet to the north of the Project site. The airport functions mainly for local and agricultural purposes and supports single-engine aircraft and helicopters.

Discussion

a,i-v) Less Than Significant Impact.

The Project would occur over the course of 16 months, with a 5-month hiatus, and active construction will occur for approximately 11 months and will have a maximum of 21 workers on site. The Project will not physically alter government facilities or generate the need for new facilities. Work at the Project site could result in the need for police or fire protection in the unlikely event of an accident on the Project site. However, because of the short-term nature of the Project and the limited number of workers on the job site, there would be no need for increased police or fire protection facilities or personnel. The nearest police station is located at 351 Main Street, approximately 1.2 miles from the Project site. The nearest fire station is Fire Station 2, located at 1505 Jones Street, approximately 1.1 miles from the Project site. All existing response times and service ratios would be maintained and would be sufficient to supply police and fire services to the Project site in the event of an emergency.

The maximum number of workers on site is anticipated to be no more than 21, and workers are expected to be derived from the local area. While workers may temporarily relocate to the area for the Project, it is not expected to result in a substantial increase and would not result in additional school-aged children, such that additional school facilities or personnel would be required.

Workers on the Project could be expected to use recreation facilities, including parks, within the City of Brawley. However, because of the limited number of workers on site and because workers are expected to be derived from the local area, use of parks or recreation facilities is not expected to exceed the facilities' ability to support the minor increase in short-term use.

The Brawley Municipal Airport is located approximately 700 feet to the north of the Project site. The airport functions mainly for local and agricultural purposes. Because of the temporary nature of the Project, airport operations are not expected to be affected by the Project. The Project site is located within Zone D, with no restrictions on airport operations.

Mitigation Measures: None required.

XVI. Recreation

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
16.	**RECREATION—Would the project:**				
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☐	☐	☒	☐
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

Environmental Setting

The City of Brawley manages more than 20 parks and recreational facilities within the City, including neighborhood parks, playing fields, senior centers, and public pools. Existing facilities include 0.78 acre of mini parks, 31.44 acres of neighborhood parks, 90.55 acres of community parks, and five community centers (City of Brawley 2012b). The City of Brawley Service Area Plan indicates that, based on the projected population in Brawley by 2030, additional parks and community facilities would be needed to meet the needs of the expected population (City of Brawley 2012b). Parks within close vicinity of the Project site include:

- **Alyce Gereaux Park**: located approximately 0.4 mile east of the Project site. This park offers basketball courts, a splash park, a multipurpose sports field, a playground, a picnic area, and restrooms.
- **Whittier Park**: Located approximately 0.6 mile southwest of the Project site. The park has six tennis courts, a baseball field, and a multipurpose sports field.
- **Volunteer Park:** is located approximately 0.7 mile to the west of the Project site. This is a large neighborhood park with ball fields, soccer fields, and a track.

Discussion

a,b)Less than Significant.

The maximum number of workers expected for the project is 21, and it is anticipated that workers would be derived from the local area. However, it is possible that workers may need to be temporarily relocated to the Project area. Workers would be expected to use recreational facilities within the City of Brawley during the 11-month active construction period. Because the maximum number of workers will not be expected to be greater than 21, existing recreation facilities would be expected to be able to accommodate use by project workers and would not be expected to require expansion of or construction of new recreational facilities. Use of recreational facilities by project workers will also not be expected to result in the substantial deterioration of existing recreational facilities. Because of the small number of workers for the Project, use of recreation facilities would not result in physical deterioration of recreation facilities or require the construction of new facilities or the expansion of existing facilities, and there would be no impact.

Mitigation Measures: None required.

XVII. Transportation and Traffic

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
17.	**TRANSPORTATION AND TRAFFIC— Would the project:**				
a)	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b)	Conflict or be inconsistent with CEQA Guidelines § 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?	☐	☐	☐	☒

Environmental Setting:

The City of Brawley owns and maintains local public streets within the city, and Imperial County owns and maintains local public roads in the unincorporated area. State Routes are owned and maintained by the state within both the city and unincorporated areas. The circulation system within the city is oriented in a north/south and east/west grid system. The city's roadway types include Expressway, Prime Arterial, Minor Arterial, Collector, Local Collector, Residential, Industrial Collector, and Industrial Local roadways. The city's circulation facilities are generally found to operate at acceptable levels. The City of Brawley has established level of service (LOS) C as a threshold standard to monitor the performance of community roadways (City of Brawley 2012b).

The City of Brawley experiences substantial truck traffic within the urbanized areas because of the city's proximity to State Routes 86, 78, and 111. The agricultural sector in and around Brawley also creates substantial truck traffic. State Routes 111, 86, and 78 are primary truck routes. River Drive and Best Avenue are considered secondary truck routes (City of Brawley 2017).

As described in the Project Description Section 2.1, trucks will use defined primary and secondary truck routes, as shown on Figure 4, and will travel to the Project site as follows:

1. Trucks will enter/exit the site via River Drive.
2. Trucks will travel north/south on North Cesar Chavez Street.
3. Trucks will travel east/west on B Street.
4. Trucks will travel north/south on North 8th Street/Old Highway 111.
5. Trucks will enter/exit North 8th Street/Old Highway 111 via Highway 111/State Route 78.

As described in the Project Description, to enable vehicle travel on-site with minimal soil disturbance, the on-site access road will be established in a horseshoe configuration to maintain

trucks moving forward and reduce backing where feasible. Trucks and equipment will only use the access road during construction.

Discussion

a) Less Than Significant Impact.

The Project will only use designated primary and secondary truck routes as shown on Figure 4 of the Project Description. The Project will result in a temporary increase in truck traffic during construction. Approximately 2,368 trucks would be required to deliver equipment and materials and to off-haul excavated materials. Most of the trips would occur during Phases II and III and would result in an average of 16 trucks per day.

The City of Brawley has established LOS C as a threshold to monitor the performance of roadways within the city. The Project would only cause a minor, temporary increase in truck traffic within an area already subject to truck traffic. Any temporary increase would not result in a permanent change in LOS. Delivery and off-hauling of materials would occur outside morning and evening peak commute times: between 7:00 and 9:00 a.m. and between 5:00 and 7:00 p.m.

The City of Brawley adopted a Bicycle Master Plan in 2002 to identify a system of bicycle routes that will inform planning future bicycle facilities and roadway improvements. State Highways 78 and 111 are include a Class II Bicycle Lanes indicating that a portion of the roadway is designated by signage and pavement marking for the preferential use of bicycles (City of Brawley 2012). These roadways have existing truck traffic as designated haul routes. Using them as haul routes for the Project would be consistent with the Bicycle Master Plan. Neither River Drive or Caesar Chavez Street are designated bicycle paths within the Project area and using these roads would not conflict with the Bicycle Master Plan.

b) No Impact.

CEQA Guidelines § 15064.3, subdivision (b) indicates that land use projects will have a significant impact if the project resulted in vehicle miles traveled (VMT) exceeding an applicable threshold of significance. It further notes that, if existing models or methods are not available to estimate the VMT for the project being considered, a lead agency may analyze the project's VMT qualitatively. The City of Brawley has not yet adopted a policy regarding VMT. In general, VMT is designed to account for land use projects, such as in-fill developments, or construction of permanent facilities, such as housing or commercial developments where permanent VMT could change. However, for the proposed Project, the increase in vehicle use is temporary and would only occur during construction. Because the project vehicle increases would be temporary, and because the city has not adopted a threshold for VMT, the Project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, and there would be no impact.

c) Less than Significant Impact.

The Project must be designed and implemented to meet applicable federal, state, and city codes and regulations, and as such, will not be expected to introduce any new hazards in terms of its design. The roads to the Project site are primary; secondary truck routes, roads, and highways in and around the Project area are straight; and there are no curves or dangerous intersections. The Project will not construct any roads and would therefore not create any curves or dangerous intersections. Installation of a screened fence would not create line of sight issues on River Drive.

As described in the Project Description Section 2.1, if necessary, a flagger will be used to direct truck traffic on River Drive to ensure trucks enter and exit the site safely.

Delivery of equipment and materials and off-hauling of materials would not occur during peak commute periods between 7:00 and 9:00 a.m. and between 5:00 and 7:00 p.m. Avoidance of peak commute periods would further decrease the potential for incompatible use on roads within the Project area. Because the Project would use designated truck routes, avoid truck traffic during peak commute hours, and would not involve the construction of new roads, impacts related to the Project increased hazards would be less than significant.

Trucks removing waste from the Project site will be required to have the appropriate Department of Transportation, DTSC, and California Highway Patrol hazardous waste permit, when necessary. To reduce the potential for spillage, all trailers hauling waste will include gasket-sealed tailgates with airlocks and solid vinyl tarps that seal the trailers. All trucks will be inspected prior to leaving the Project site to ensure compliance. The transport of bulk materials will be completely covered unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartments of all haul trucks are to be cleaned and/or washed at the delivery site after removal of bulk material.

Materials leaving the site will be transported following all necessary local, state, and federal regulations for the transportation of waste to Arizona. Because all waste will be transported to and disposed of in Arizona, and Arizona does not have a non-RCRA designation for waste, all waste will be designated as non-hazardous and will be transported under a non-hazardous waste manifest or bill of lading. However, of the 16,515 cy of material being removed, approximately 500 cy could potentially be considered non-RCRA hazardous waste (California hazardous waste); therefore, compliance with the DTSC requirements for hazardous waste generation and temporary on-site storage will be required. Any container used for on-site storage will be properly labelled, and the waste will be transported off site for disposal within 90 days after its generation. Following the regulations for the transportation of waste will reduce the potential for impacts related to the transportation of waste to less than significant.

d) No Impact.

The City of Brawly General Plan Safety Element Figure PSNE-5 identifies evacuation routes for the City (City of Brawley 2008a). Within the vicinity of the Project site, River Drive, Best Road, and State Route 111 are identified as evacuation routes. Emergency access to and from the Project site would be via River Drive, via N. Best Road, or via N. Caesar Chavez Street. All equipment and vehicles will be stored on site during construction. All equipment and vehicles will be stored on site during construction. The Project would not block or impede emergency access to and from the Project site or within the Project vicinity and the Project would not substantially impair the City’s emergency evacuation routes.

Mitigation Measures: None required.

XVIII. Tribal Cultural Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
18. Tribal Cultural Resources— Would the project:				
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Environmental Setting

A cultural resources records search conducted by the SCIC at San Diego State University, the regional branch of the California Historical Resources Information System, on September 18, 2017, identified one previously identified historical era (greater than 45 years old) cultural resource within a 1-mile radius of the Project area: P-13-008682. P-13-008682 is the Niland to Calexico Railroad that parallels the western boundary of the Project area. The resource does not include any portion of the Project site. In addition, the SCIC contains references to six historic addresses located within the 1-mile search radius. None of these addresses includes any portion of the Project site.

The SCIC records search further indicates that 21 cultural resource investigations have taken place within the 1-mile search radius. None of these investigations included any portion of the Project site.

Historic documentation was derived from a Preliminary Environmental Assessment of the Project area (Hart Crowser 1992). Hart Crowser (1992) reports that the PureGro facility operated between 1955 and the late 1970s for the purpose of mixing and distributing dry fertilizer. After the pesticide formulation process was discontinued, pesticide admixtures and finished products continued to be received and shipped by railroad and by truck from the site through 2000 (Arcadis 2014a).

A Sacred Lands File Search was conducted by the California NAHC on August 23, 2017 for the Project area and surrounding region. The search was negative, with no Native American resources identified in proximity to the Project area. DTSC sent letters to the sixteen Tribal contacts provided along with three maps identifying the location of the Site. One Tribe requested

consultation, requested tribal monitoring during construction, and copies of cultural resource documents prepared for the Project. DTSC provided non-confidential cultural resource documentation to the Tribe. Because of the lack of known tribal resources within the Project site, no tribal monitoring was deemed necessary. No other requests for consultation have been received. No archaeological resources have been identified as a result of records search and survey of the Project area. Analysis of survey data has determined that no known or suspected CRHR-eligible archaeological resources are present.

Discussion:

a, b) Less than Significant with Mitigation Incorporation.

The NWIC and Sacred Lands file searches did not reveal any known historical resources eligible for listing on the CRHR or in any local register. No archaeological resources have been identified as a result of records search and survey of the Project area. Analysis of survey data has determined that no known or suspected CRHR-eligible archaeological resources are present, and impacts would be less than significant.

Although no resources are anticipated, **Mitigation Measure TRI-01** will be implemented in the event of discoveries of unknown cultural resources or human remains.

Mitigation Measures:

TRI-01: Discovery of Unknown Tribal Cultural Resources or Human Remains

- Personnel performing the remedial activities will be informed that they need to be observant and aware that they may encounter potential Native American cultural or archaeological resources and/or human remains.
- In the event of accidental discovery during ground disturbing activities, excavation or disturbance of the site or any nearby area shall stop immediately, and the County Coroner notified to determine its origin. The coroner will determine disposition within 48 hours. If the remains are Native American, the coroner will be responsible for contacting the NAHC within 24 hours. The NAHC will identify and notify the person(s) who might be the most likely descendent (MLD) who will make recommendations for the appropriate and dignified treatment of the remains (Public Resources Code, section 5097.98). The descendants shall complete their inspection and make recommendations or preferences 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 accidental discovery of potential cultural or archaeological resources, immediately suspend excavation activities in the immediate area and surrounding 50 feet and contact any of the Tribal Contacts on the list provided to alert them of the discovery. DTSC staff and the property owner are also to be immediately notified and informed of this situation. After discussion with any of the Tribal Contacts and or their respective Cultural Resources Managers and in collaboration with DTSC (including the Office of Environmental Justice and Tribal Affairs) and the property owner, implement any measures deemed necessary to record and/or protect the cultural or archaeological resources.

XIX. Utilities and Service Systems

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
19. UTILITIES AND SERVICE SYSTEMS—Would the project:				
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 would cause significant effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve 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?	☐	☐	☐	☒

Environmental Setting:

The City of Brawley receives raw water from the IID. The city's water distribution system is composed of a water treatment plant, three storage facilities, two pump stations, and approximately 75 miles of water mains. The water treatment plant has the capacity to produce up to 30 million gallons of water per day.

As described in the Project Description, materials off-hauled from the Project site will be deposited at one or more of the following landfills:

- **La Paz County Landfill. Parker, Arizona**: The facility performs landfill disposal of non-hazardous municipal solid wastes, industrial wastes (including petroleum-contaminated soil), construction and demolition wastes, and other non-hazardous solid wastes. Polychlorinated biphenyls are acceptable up to 50 parts per million, and caustic may be accepted in solid form. Petroleum-contaminated soil must be non-hazardous. No liquids are accepted, except for small amounts in "consumer size" containers found in municipal solid waste (MSW). No waste pre-treatment (e.g. solidification) is performed. The landfill's remaining capacity is 100 million cubic yards
- **Northwest Regional Landfill. Surprise, Arizona**. The facility primarily accepts municipal solid wastes; however, special industrial wastes (non-hazardous) are also accepted. Solid, liquid and sludge special wastes are accepted, with sludge and liquid wastes being solidified after acceptance at the facility. The landfill's remaining capacity is approximately 142 million cubic yards.

- **Painted Desert Landfill. Joseph City, Arizona.** The facility is a landfill for municipal solid waste, construction and demolition debris, petroleum-contaminated soils, non-hazardous industrial wastes (solids), asbestos, and wood/green waste. Acceptable liquid waste is solidified. Remaining capacity is approximately 23 million cubic yards.

Discussion

a) Less than Significant Impact.

The Project would not require wastewater treatment approvals from the Colorado River (Region 7) Regional Water Quality Control Board.

The Project does not entail, nor does it require, the construction of new water or wastewater treatment facilities. During construction, a minor amount of wastewater would be created by workers and construction. Portable toilets would be rented, and wastewater would be removed by the provider. Approximately 16,515 cy of solid waste will be generated from removal of the existing stockpile, concrete foundations, and targeted excavation of soil within the proposed cover area. Materials will be removed and deposited at one of the three landfill facilities described above approved to accept non-hazardous waste. All landfills have sufficient capacity for the amount of waste anticipated.

The Project would not require new stormwater drainage facilities or expansion of existing facilities. There may be an increase in stormwater discharges during removal of the stockpile and concrete foundations, targeted excavation, construction of the residential buffer, and construction of the engineered cover. A SWPPP will be prepared that will identify specific BMPs to be implemented to reduce the potential for stormwater discharges resulting from Project activities. Sediment and erosion BMPs will include, but will not be limited to, installation of:

- Entrance/outlet tire wash
- Straw wattles along perimeter of site
- Silt fencing along perimeter of site
- Ground tarping equipment storage areas

To minimize sediment runoff, temporary stockpiles generated during construction will be placed on top of and covered with polyethylene (or similar) sheeting and will be covered as soon as possible. Additional measures may be implemented during construction as conditions require. Design of the engineered cover would include an approximately 0.5 percent slope to match the general drainage slope present at the Project site.

b) No Impact.

Removal of the existing stockpile, targeted excavation, construction of the residential buffer, and construction of the engineered cover will require water for dust control. Water needed during construction will be derived from commercial sources or from the city water supply. No new or expanded water entitlements will be required. The landscaping on the southern residential buffer zone will include native vegetation adapted to the climate and precipitation regime of the Brawley area. Some irrigation would occur during the establishment period after planting, but the landscape design would be self-sustainable and would not require further irrigation. No significant amounts of water will be required to maintain the landscaped areas.

c) No Impact.

The City of Brawley wastewater treatment plant currently provides wastewater treatment for the area. The Project will not produce wastewater that would require additional facilities. All wastewater produced during the Project can be accommodated by existing facilities. During construction, portable toilets will be brought to the Project site and managed by a vendor.

d) Less Than Significant Impact.

Approximately 16,515 cy of solid waste from the existing stockpile, concrete foundations, and targeted excavation will be removed and deposited at one of the landfills identified above. All of the landfills identified have sufficient capacity for the amount of waste anticipated. Additionally, some soil excavated from the Project could be used as daily cover and would not be counted against the facilities' capacity. Therefore, the Project would not generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure, and impacts would be less than significant.

e) No Impact.

The City of Brawley has not adopted a solid waste reduction policy. Excavation of soil for the Project is the minimum necessary to successfully implement the remediation and meet risk-based criteria. For non-hazardous soil waste deposited at landfills, much of this material can be used as daily cover and would not be counted towards landfill capacity. The Project would require deposition of approximately 16,515 cy of materials, but this would be a one-time event, and no additional solid waste would be produced by the Project.

Mitigation Measures: None required.

XX. Wildfire

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
20. Wildfire— Would the project:				
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 down slope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	☐	☐	☒	☐

Environmental Setting

There is low risk of wildfire within the Project area because of development and lack of dense vegetation. The CPUC Fire Threat Maps do not show the City of Brawley as having an elevated or extreme fire threat (CPUC 2019) The Project site is located in a low-Fire Hazard area according to Cal Fire (2008). Project activities require the use of fuels, oils, and solvents that have the potential to result in an unintended fire. However, all vegetation within the Project area will be removed, and all fuels on site will be used and stored according to manufacturers' recommendations, reducing the risk of these fuels unintentionally starting a fire.

Discussion

a) Less than Significant Impact.

The City of Brawly General Plan Safety Element Figure PSNE-5 identifies evacuation routes for the City (City of Brawley 2008a). The City has an Emergency Operations Plan that identifies how the City will respond in the event of a natural disaster (City of Brawley 2012b). Within the vicinity of the Project site, River Drive, Best Road, and State Route 111 are identified as evacuation routes. Emergency access to and from the Project site would be via River Drive, via N. Best Road, or via N. Caesar Chavez Street. All equipment and vehicles will be stored on site during construction. The Project would not block or impede emergency access to and from the Project site or within the Project vicinity, and the Project would not substantially impair the City's emergency evacuation routes. In the event of a natural disaster, on-site personnel would follow evacuation routes and instructions from City of Brawley Police or Fire as required. Therefore, the

Project would not substantially impair an adopted emergency response plan or emergency evacuation plan.

b-d) Less than Significant Impact.

The Project site is a relatively flat, sparsely vegetated parcel. As identified in Section VII Geology and Soils, there are no mapped landslides at the Project site. There are no other factors such as steep slopes or prevailing winds that will exacerbate fire risk or expose project occupants to the uncontrolled spread of a wildfire, pollutant concentrations from a wildfire, post-fire slope instability, or post-fire flooding. Therefore, impacts will be less than significant.

Mitigation Measures: None required.

XXI. Mandatory Findings of Significance

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
21. MANDATORY FINDINGS OF SIGNIFICANCE—Would the project:				
a) 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, 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) Have impacts that would be individually limited, but cumulatively considerable?: ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion

a) Less than Significant with Mitigation Incorporation.

The Project will not degrade the quality of the environment or substantially reduce the habitat for listed fish or wildlife species as described in Section IV. The Project will not eliminate examples of the major periods of California history or prehistory, and impacts on historical resources will be less than significant as described in Section V Cultural Resources and Section XVIII Tribal Cultural Resources. The Project's impacts will not substantially degrade the environment and will not, when considered with other projects, result in substantial cumulative impacts.

b) Less than Significant Impact.

The Project's impacts will not substantially degrade the environment and will not, when considered with other projects, result in substantial cumulative impacts. There are no other active projects in the City of Brawley that, combined with the Project, would result in cumulatively considerable impacts on the environment (City of Brawley 2019b).

c) Less than Significant Impact.

As documented in the analysis above, the Project will not result in substantial environmental effects on human beings directly or indirectly. All impacts resulting from the Project will be less than significant, with mitigation. Please refer to the individual resource sections for impact discussions.

On the basis of this initial study:

☐ 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, no further environmental documentation is required.

Daniel Cordero Jr. — Project Manager's Signature

11-12-19 — Date

Daniel Cordero Jr — Project Manager's Name

Senior Hazardous Substances Engineer — Project Manager's Title

714-484-5428 — Phone #

A. Ell — Branch Chief's Signature

11-12-19 — Date

Alexander Morelan — Branch Chief's Name

Branch Chief — Branch Chief's Title

714-484-5440 — Phone #

XXII. Report Preparers

Arcadis U.S., Inc.

- Lee Miles, AICP, Principal Environmental Planner
- Bryan Chen, Senior Environmental Engineer

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APPENDIX A

CalEEMOd Data Sheets

Chevron Bradley - Imperial County, Annual

Chevron Bradley

Imperial County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	11.66	Acre	11.66	507,909.60	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - site info

Land Use -

Construction Phase - Site info

Off-road Equipment - site info

Off-road Equipment - site info

Off-road Equipment - site info

Off-road Equipment - equip info

Off-road Equipment - site info

Off-road Equipment - site info

Trips and VMT - site info

On-road Fugitive Dust - Worker route is completeing paved. Hauling will encounter ~200 m of unpaved roads on site

Grading - site info

Vehicle Trips - assumes quarterly roundtrip visits and each one way trip is 20 miles. Total of 160 miles traveled

Consumer Products - no area emissions

Area Coating - no area emissions

Construction Off-road Equipment Mitigation - ICAPCD Rule 801

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	55	54
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	55	54
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	30.00	151.00
tblConstructionPhase	NumDays	30.00	5.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	10.00	41.00
tblConstructionPhase	NumDays	10.00	5.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblFleetMix	HHD	0.12	0.12
tblFleetMix	LDA	0.51	0.50
tblFleetMix	LDT1	0.03	0.03
tblFleetMix	LDT2	0.16	0.16
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.1290e-003	5.3180e-003
tblFleetMix	MCY	5.2230e-003	5.2140e-003
tblFleetMix	MDV	0.12	0.13

tblFleetMix	MH	6.9400e-004	7.3800e-004
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	3.3610e-003	3.2390e-003
tblFleetMix	SBUS	7.3900e-004	7.4500e-004
tblFleetMix	UBUS	1.1890e-003	1.1680e-003
tblGrading	AcresOfGrading	151.00	0.00
tblGrading	AcresOfGrading	0.00	12.00
tblGrading	MaterialExported	0.00	2,290.00
tblGrading	MaterialExported	0.00	5.00
tblGrading	MaterialExported	0.00	40.00
tblGrading	MaterialExported	0.00	15,250.00
tblGrading	MaterialImported	0.00	56,345.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOnRoadDust	HaulingPercentPave	50.00	99.00
tblOnRoadDust	HaulingPercentPave	50.00	99.00
tblOnRoadDust	HaulingPercentPave	50.00	99.00

tblOnRoadDust	HaulingPercentPave	50.00	99.00
tblOnRoadDust	HaulingPercentPave	50.00	99.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblTripsAndVMT	HaulingTripLength	20.00	460.00
tblTripsAndVMT	HaulingTripLength	20.00	460.00
tblTripsAndVMT	HaulingTripLength	20.00	84.00
tblTripsAndVMT	HaulingTripLength	20.00	460.00
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	5.00	1.00
tblTripsAndVMT	HaulingTripNumber	1,906.00	851.00
tblTripsAndVMT	HaulingTripNumber	7,329.00	3,286.00
tblTripsAndVMT	HaulingTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	8.00	6.00
tblTripsAndVMT	WorkerTripNumber	35.00	12.00
tblTripsAndVMT	WorkerTripNumber	43.00	42.00
tblTripsAndVMT	WorkerTripNumber	3.00	12.00
tblTripsAndVMT	WorkerTripNumber	15.00	12.00
tblVehicleEF	HHD	1.17	1.21
tblVehicleEF	HHD	5.3080e-003	5.4630e-003
tblVehicleEF	HHD	0.17	0.19
tblVehicleEF	HHD	3.85	4.04

tblVehicleEF	HHD	0.39	0.40
tblVehicleEF	HHD	2.21	2.32
tblVehicleEF	HHD	7,701.49	7,752.98
tblVehicleEF	HHD	1,424.60	1,438.33
tblVehicleEF	HHD	5.85	5.99
tblVehicleEF	HHD	30.83	32.47
tblVehicleEF	HHD	2.40	2.76
tblVehicleEF	HHD	20.27	20.28
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	6.5000e-005	7.4000e-005
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	5.9000e-005	6.8000e-005
tblVehicleEF	HHD	2.6400e-004	2.9200e-004
tblVehicleEF	HHD	6.5230e-003	7.1270e-003
tblVehicleEF	HHD	1.02	1.07
tblVehicleEF	HHD	1.3600e-004	1.4800e-004
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	6.2200e-004	6.8700e-004
tblVehicleEF	HHD	0.09	0.11
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	9.6000e-005	1.0000e-004
tblVehicleEF	HHD	2.6400e-004	2.9200e-004
tblVehicleEF	HHD	6.5230e-003	7.1270e-003
tblVehicleEF	HHD	1.16	1.22

tblVehicleEF	HHD	1.3600e-004	1.4800e-004
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	6.2200e-004	6.8700e-004
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tblVehicleEF	HHD	1.11	1.14
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tblVehicleEF	HHD	0.39	0.41
tblVehicleEF	HHD	2.15	2.26
tblVehicleEF	HHD	8,155.58	8,207.91
tblVehicleEF	HHD	1,424.60	1,438.33
tblVehicleEF	HHD	5.85	5.99
tblVehicleEF	HHD	31.82	33.50
tblVehicleEF	HHD	2.18	2.52
tblVehicleEF	HHD	20.27	20.27
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tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	6.5000e-005	7.4000e-005
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	5.9000e-005	6.8000e-005
tblVehicleEF	HHD	5.4500e-004	6.0300e-004
tblVehicleEF	HHD	8.1230e-003	8.9390e-003
tblVehicleEF	HHD	0.96	1.01
tblVehicleEF	HHD	2.1500e-004	2.3600e-004
tblVehicleEF	HHD	0.06	0.06

tblVehicleEF	HHD	6.4700e-004	7.1400e-004
tblVehicleEF	HHD	0.09	0.10
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	9.5000e-005	9.9000e-005
tblVehicleEF	HHD	5.4500e-004	6.0300e-004
tblVehicleEF	HHD	8.1230e-003	8.9390e-003
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tblVehicleEF	HHD	6.4700e-004	7.1400e-004
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tblVehicleEF	HHD	1.27	1.31
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tblVehicleEF	HHD	0.18	0.20
tblVehicleEF	HHD	5.29	5.55
tblVehicleEF	HHD	0.39	0.40
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tblVehicleEF	HHD	7,074.41	7,124.75
tblVehicleEF	HHD	1,424.60	1,438.33
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tblVehicleEF	HHD	29.48	31.05
tblVehicleEF	HHD	2.42	2.79
tblVehicleEF	HHD	20.29	20.29
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tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	6.5000e-005	7.4000e-005
tblVehicleEF	HHD	0.02	0.03

tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	5.9000e-005	6.8000e-005
tblVehicleEF	HHD	1.1300e-004	1.2500e-004
tblVehicleEF	HHD	6.1100e-003	6.6930e-003
tblVehicleEF	HHD	1.10	1.15
tblVehicleEF	HHD	4.7000e-005	5.0000e-005
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	6.5300e-004	7.1900e-004
tblVehicleEF	HHD	0.10	0.11
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	9.9000e-005	1.0200e-004
tblVehicleEF	HHD	1.1300e-004	1.2500e-004
tblVehicleEF	HHD	6.1100e-003	6.6930e-003
tblVehicleEF	HHD	1.25	1.31
tblVehicleEF	HHD	4.7000e-005	5.0000e-005
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	6.5300e-004	7.1900e-004
tblVehicleEF	HHD	0.11	0.12
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.03	0.03
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tblVehicleEF	LDA	0.24	0.26
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tblVehicleEF	LDA	2.3270e-003	2.3590e-003

tblVehicleEF	LDA	1.3900e-003	1.4220e-003
tblVehicleEF	LDA	2.1400e-003	2.1690e-003
tblVehicleEF	LDA	0.08	0.09
tblVehicleEF	LDA	0.11	0.12
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.43	0.45
tblVehicleEF	LDA	2.5560e-003	2.6610e-003
tblVehicleEF	LDA	6.7100e-004	6.9700e-004
tblVehicleEF	LDA	0.08	0.09
tblVehicleEF	LDA	0.11	0.12
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.47	0.50
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	2.24	2.35
tblVehicleEF	LDA	4.95	5.26
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tblVehicleEF	LDA	58.25	60.34
tblVehicleEF	LDA	0.22	0.24
tblVehicleEF	LDA	0.25	0.27
tblVehicleEF	LDA	1.5080e-003	1.5410e-003
tblVehicleEF	LDA	2.3270e-003	2.3590e-003
tblVehicleEF	LDA	1.3900e-003	1.4220e-003
tblVehicleEF	LDA	2.1400e-003	2.1690e-003
tblVehicleEF	LDA	0.16	0.18
tblVehicleEF	LDA	0.14	0.16

tblVehicleEF	LDA	0.09	0.10
tblVehicleEF	LDA	0.07	0.08
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.39	0.42
tblVehicleEF	LDA	2.8440e-003	2.9610e-003
tblVehicleEF	LDA	6.7200e-004	6.9900e-004
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tblVehicleEF	LDA	0.14	0.16
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tblVehicleEF	LDA	0.10	0.11
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tblVehicleEF	LDA	0.04	0.04
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tblVehicleEF	LDA	0.25	0.27
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tblVehicleEF	LDA	0.05	0.06
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tblVehicleEF	LDA	0.50	0.53

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tblVehicleEF	LDT1	0.03	0.03
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tblVehicleEF	LDT1	73.20	74.94
tblVehicleEF	LDT1	0.26	0.30
tblVehicleEF	LDT1	0.35	0.39
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tblVehicleEF	LDT1	4.7470e-003	5.1320e-003
tblVehicleEF	LDT1	2.5340e-003	2.7370e-003
tblVehicleEF	LDT1	4.3680e-003	4.7220e-003
tblVehicleEF	LDT1	0.48	0.52
tblVehicleEF	LDT1	0.60	0.65
tblVehicleEF	LDT1	0.32	0.34
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT1	0.41	0.43
tblVehicleEF	LDT1	0.39	0.44
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tblVehicleEF	LDT1	0.48	0.52
tblVehicleEF	LDT1	0.60	0.65

tblVehicleEF	LDT1	0.32	0.34
tblVehicleEF	LDT1	0.08	0.10
tblVehicleEF	LDT1	0.41	0.43
tblVehicleEF	LDT1	0.43	0.49
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	3.10	3.52
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tblVehicleEF	LDT1	0.37	0.41
tblVehicleEF	LDT1	2.7510e-003	2.9700e-003
tblVehicleEF	LDT1	4.7470e-003	5.1320e-003
tblVehicleEF	LDT1	2.5340e-003	2.7370e-003
tblVehicleEF	LDT1	4.3680e-003	4.7220e-003
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tblVehicleEF	LDT1	0.42	0.45
tblVehicleEF	LDT1	0.38	0.42
tblVehicleEF	LDT1	3.5190e-003	3.6310e-003
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tblVehicleEF	LDT1	0.81	0.87
tblVehicleEF	LDT1	0.52	0.55
tblVehicleEF	LDT1	0.10	0.12
tblVehicleEF	LDT1	0.42	0.45
tblVehicleEF	LDT1	0.41	0.47

tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	2.07	2.35
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tblVehicleEF	LDT1	291.33	300.40
tblVehicleEF	LDT1	73.20	74.94
tblVehicleEF	LDT1	0.27	0.30
tblVehicleEF	LDT1	0.37	0.41
tblVehicleEF	LDT1	2.7510e-003	2.9700e-003
tblVehicleEF	LDT1	4.7470e-003	5.1320e-003
tblVehicleEF	LDT1	2.5340e-003	2.7370e-003
tblVehicleEF	LDT1	4.3680e-003	4.7220e-003
tblVehicleEF	LDT1	0.20	0.22
tblVehicleEF	LDT1	0.54	0.58
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.45	0.48
tblVehicleEF	LDT1	0.47	0.53
tblVehicleEF	LDT1	2.9420e-003	3.0380e-003
tblVehicleEF	LDT1	8.5300e-004	8.8600e-004
tblVehicleEF	LDT1	0.20	0.22
tblVehicleEF	LDT1	0.54	0.58
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.45	0.48
tblVehicleEF	LDT1	0.51	0.58
tblVehicleEF	LDT2	8.6270e-003	9.7140e-003
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	1.06	1.16
tblVehicleEF	LDT2	2.37	2.69

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tblVehicleEF	LDT2	82.54	85.04
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tblVehicleEF	LDT2	0.23	0.27
tblVehicleEF	LDT2	1.5560e-003	1.5800e-003
tblVehicleEF	LDT2	2.5750e-003	2.6350e-003
tblVehicleEF	LDT2	1.4310e-003	1.4530e-003
tblVehicleEF	LDT2	2.3680e-003	2.4240e-003
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.21	0.23
tblVehicleEF	LDT2	0.12	0.13
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.15	0.18
tblVehicleEF	LDT2	3.5660e-003	3.6900e-003
tblVehicleEF	LDT2	8.6600e-004	8.9700e-004
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.21	0.23
tblVehicleEF	LDT2	0.12	0.13
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.17	0.19
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	1.36	1.50
tblVehicleEF	LDT2	2.44	2.78
tblVehicleEF	LDT2	393.94	407.50
tblVehicleEF	LDT2	82.54	85.04
tblVehicleEF	LDT2	0.12	0.13
tblVehicleEF	LDT2	0.25	0.29

tblVehicleEF	LDT2	1.5560e-003	1.5800e-003
tblVehicleEF	LDT2	2.5750e-003	2.6350e-003
tblVehicleEF	LDT2	1.4310e-003	1.4530e-003
tblVehicleEF	LDT2	2.3680e-003	2.4240e-003
tblVehicleEF	LDT2	0.33	0.36
tblVehicleEF	LDT2	0.27	0.30
tblVehicleEF	LDT2	0.19	0.20
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.14	0.15
tblVehicleEF	LDT2	0.14	0.16
tblVehicleEF	LDT2	3.9540e-003	4.0920e-003
tblVehicleEF	LDT2	8.6700e-004	8.9800e-004
tblVehicleEF	LDT2	0.33	0.36
tblVehicleEF	LDT2	0.27	0.30
tblVehicleEF	LDT2	0.19	0.20
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	0.14	0.15
tblVehicleEF	LDT2	0.16	0.18
tblVehicleEF	LDT2	7.6450e-003	8.6070e-003
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.88	0.97
tblVehicleEF	LDT2	2.80	3.19
tblVehicleEF	LDT2	328.63	339.98
tblVehicleEF	LDT2	82.54	85.04
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.24	0.28
tblVehicleEF	LDT2	1.5560e-003	1.5800e-003
tblVehicleEF	LDT2	2.5750e-003	2.6350e-003
tblVehicleEF	LDT2	1.4310e-003	1.4530e-003
tblVehicleEF	LDT2	2.3680e-003	2.4240e-003

tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.19	0.21
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.18	0.21
tblVehicleEF	LDT2	3.2950e-003	3.4100e-003
tblVehicleEF	LDT2	8.7400e-004	9.0600e-004
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.19	0.21
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.20	0.23
tblVehicleEF	LHD1	5.8790e-003	6.0230e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	1.29	1.39
tblVehicleEF	LHD1	2.86	3.01
tblVehicleEF	LHD1	9.48	9.49
tblVehicleEF	LHD1	597.95	603.06
tblVehicleEF	LHD1	26.97	27.39
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	2.63	2.79
tblVehicleEF	LHD1	1.09	1.11
tblVehicleEF	LHD1	1.1420e-003	1.1440e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.1100e-004	9.6500e-004

tblVehicleEF	LHD1	1.0920e-003	1.0940e-003
tblVehicleEF	LHD1	2.5900e-003	2.5830e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	8.3800e-004	8.8800e-004
tblVehicleEF	LHD1	7.0800e-003	7.2220e-003
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.1200e-003	3.1510e-003
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.48	0.47
tblVehicleEF	LHD1	0.31	0.32
tblVehicleEF	LHD1	9.4000e-005	9.5000e-005
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tblVehicleEF	LHD1	7.0800e-003	7.2220e-003
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	3.1200e-003	3.1510e-003
tblVehicleEF	LHD1	0.12	0.13
tblVehicleEF	LHD1	0.48	0.47
tblVehicleEF	LHD1	0.34	0.35
tblVehicleEF	LHD1	5.8790e-003	6.0230e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	1.31	1.41
tblVehicleEF	LHD1	2.78	2.92
tblVehicleEF	LHD1	9.48	9.49
tblVehicleEF	LHD1	597.95	603.06
tblVehicleEF	LHD1	26.97	27.39

tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	2.38	2.52
tblVehicleEF	LHD1	1.07	1.09
tblVehicleEF	LHD1	1.1420e-003	1.1440e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.1100e-004	9.6500e-004
tblVehicleEF	LHD1	1.0920e-003	1.0940e-003
tblVehicleEF	LHD1	2.5900e-003	2.5830e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	8.3800e-004	8.8800e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.19	0.19
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	4.8870e-003	4.9640e-003
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.49	0.49
tblVehicleEF	LHD1	0.30	0.31
tblVehicleEF	LHD1	9.4000e-005	9.5000e-005
tblVehicleEF	LHD1	5.8560e-003	5.9090e-003
tblVehicleEF	LHD1	3.2300e-004	3.3000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.19	0.19
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	4.8870e-003	4.9640e-003
tblVehicleEF	LHD1	0.12	0.13
tblVehicleEF	LHD1	0.49	0.49
tblVehicleEF	LHD1	0.33	0.34
tblVehicleEF	LHD1	5.8790e-003	6.0230e-003
tblVehicleEF	LHD1	0.01	0.02

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	1.26	1.36
tblVehicleEF	LHD1	3.07	3.22
tblVehicleEF	LHD1	9.48	9.49
tblVehicleEF	LHD1	597.95	603.06
tblVehicleEF	LHD1	26.97	27.39
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	2.66	2.82
tblVehicleEF	LHD1	1.14	1.17
tblVehicleEF	LHD1	1.1420e-003	1.1440e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.1100e-004	9.6500e-004
tblVehicleEF	LHD1	1.0920e-003	1.0940e-003
tblVehicleEF	LHD1	2.5900e-003	2.5830e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	8.3800e-004	8.8800e-004
tblVehicleEF	LHD1	3.1900e-003	3.2630e-003
tblVehicleEF	LHD1	0.14	0.14
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.1770e-003	1.1760e-003
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.51	0.50
tblVehicleEF	LHD1	0.32	0.34
tblVehicleEF	LHD1	9.4000e-005	9.5000e-005
tblVehicleEF	LHD1	5.8550e-003	5.9080e-003
tblVehicleEF	LHD1	3.2800e-004	3.3500e-004
tblVehicleEF	LHD1	3.1900e-003	3.2630e-003
tblVehicleEF	LHD1	0.14	0.14

tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.1770e-003	1.1760e-003
tblVehicleEF	LHD1	0.12	0.13
tblVehicleEF	LHD1	0.51	0.50
tblVehicleEF	LHD1	0.35	0.37
tblVehicleEF	LHD2	4.5200e-003	4.7000e-003
tblVehicleEF	LHD2	5.3090e-003	6.1210e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.52	0.59
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tblVehicleEF	LHD2	14.34	14.37
tblVehicleEF	LHD2	606.51	613.02
tblVehicleEF	LHD2	24.52	25.00
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tblVehicleEF	LHD2	1.55	1.76
tblVehicleEF	LHD2	0.66	0.70
tblVehicleEF	LHD2	1.3230e-003	1.3340e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.4800e-004	4.8300e-004
tblVehicleEF	LHD2	1.2650e-003	1.2760e-003
tblVehicleEF	LHD2	2.6860e-003	2.6810e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.1200e-004	4.4500e-004
tblVehicleEF	LHD2	3.0440e-003	3.2950e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4190e-003	1.5090e-003
tblVehicleEF	LHD2	0.05	0.06

tblVehicleEF	LHD2	0.15	0.16
tblVehicleEF	LHD2	0.15	0.17
tblVehicleEF	LHD2	1.4000e-004	1.4100e-004
tblVehicleEF	LHD2	5.9010e-003	5.9670e-003
tblVehicleEF	LHD2	2.7400e-004	2.8100e-004
tblVehicleEF	LHD2	3.0440e-003	3.2950e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4190e-003	1.5090e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.15	0.16
tblVehicleEF	LHD2	0.17	0.18
tblVehicleEF	LHD2	4.5200e-003	4.7000e-003
tblVehicleEF	LHD2	5.3630e-003	6.1860e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.52	0.59
tblVehicleEF	LHD2	1.48	1.61
tblVehicleEF	LHD2	14.34	14.37
tblVehicleEF	LHD2	606.51	613.02
tblVehicleEF	LHD2	24.52	25.00
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.40	1.59
tblVehicleEF	LHD2	0.65	0.68
tblVehicleEF	LHD2	1.3230e-003	1.3340e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.4800e-004	4.8300e-004
tblVehicleEF	LHD2	1.2650e-003	1.2760e-003
tblVehicleEF	LHD2	2.6860e-003	2.6810e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.1200e-004	4.4500e-004
tblVehicleEF	LHD2	6.2200e-003	6.7340e-003
tblVehicleEF	LHD2	0.08	0.09
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.2080e-003	2.3670e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.15	0.17
tblVehicleEF	LHD2	0.15	0.16
tblVehicleEF	LHD2	1.4000e-004	1.4100e-004
tblVehicleEF	LHD2	5.9010e-003	5.9670e-003
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tblVehicleEF	LHD2	6.2200e-003	6.7340e-003
tblVehicleEF	LHD2	0.08	0.09
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.2080e-003	2.3670e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.15	0.17
tblVehicleEF	LHD2	0.16	0.18
tblVehicleEF	LHD2	4.5200e-003	4.7000e-003
tblVehicleEF	LHD2	5.2110e-003	6.0030e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.13	0.14
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tblVehicleEF	LHD2	1.63	1.77
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tblVehicleEF	LHD2	606.51	613.02
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tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.56	1.78

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tblVehicleEF	LHD2	1.3230e-003	1.3340e-003
tblVehicleEF	LHD2	0.01	0.01
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tblVehicleEF	LHD2	4.4800e-004	4.8300e-004
tblVehicleEF	LHD2	1.2650e-003	1.2760e-003
tblVehicleEF	LHD2	2.6860e-003	2.6810e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.1200e-004	4.4500e-004
tblVehicleEF	LHD2	1.3430e-003	1.4610e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.2900e-004	5.5500e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.16	0.17
tblVehicleEF	LHD2	0.16	0.18
tblVehicleEF	LHD2	1.4000e-004	1.4100e-004
tblVehicleEF	LHD2	5.9010e-003	5.9660e-003
tblVehicleEF	LHD2	2.7600e-004	2.8300e-004
tblVehicleEF	LHD2	1.3430e-003	1.4610e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.2900e-004	5.5500e-004
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.16	0.17
tblVehicleEF	LHD2	0.17	0.19
tblVehicleEF	MCY	0.39	0.39
tblVehicleEF	MCY	0.15	0.15
tblVehicleEF	MCY	19.04	19.51
tblVehicleEF	MCY	9.49	9.49

tblVehicleEF	MCY	159.42	158.89
tblVehicleEF	MCY	45.69	46.14
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tblVehicleEF	MCY	0.30	0.30
tblVehicleEF	MCY	1.6860e-003	1.6390e-003
tblVehicleEF	MCY	3.5670e-003	3.6420e-003
tblVehicleEF	MCY	1.5780e-003	1.5350e-003
tblVehicleEF	MCY	3.3610e-003	3.4370e-003
tblVehicleEF	MCY	2.67	2.68
tblVehicleEF	MCY	1.10	1.11
tblVehicleEF	MCY	1.64	1.64
tblVehicleEF	MCY	1.97	1.99
tblVehicleEF	MCY	0.47	0.48
tblVehicleEF	MCY	1.98	2.00
tblVehicleEF	MCY	1.9620e-003	1.9640e-003
tblVehicleEF	MCY	6.7000e-004	6.7500e-004
tblVehicleEF	MCY	2.67	2.68
tblVehicleEF	MCY	1.10	1.11
tblVehicleEF	MCY	1.64	1.64
tblVehicleEF	MCY	2.44	2.45
tblVehicleEF	MCY	0.47	0.48
tblVehicleEF	MCY	2.16	2.17
tblVehicleEF	MCY	0.40	0.39
tblVehicleEF	MCY	0.14	0.14
tblVehicleEF	MCY	21.03	21.56
tblVehicleEF	MCY	9.53	9.56
tblVehicleEF	MCY	159.42	158.89
tblVehicleEF	MCY	45.69	46.14
tblVehicleEF	MCY	0.91	0.92
tblVehicleEF	MCY	0.29	0.29

tblVehicleEF	MCY	1.6860e-003	1.6390e-003
tblVehicleEF	MCY	3.5670e-003	3.6420e-003
tblVehicleEF	MCY	1.5780e-003	1.5350e-003
tblVehicleEF	MCY	3.3610e-003	3.4370e-003
tblVehicleEF	MCY	5.62	5.64
tblVehicleEF	MCY	1.77	1.78
tblVehicleEF	MCY	2.98	2.99
tblVehicleEF	MCY	2.00	2.02
tblVehicleEF	MCY	0.48	0.49
tblVehicleEF	MCY	1.90	1.91
tblVehicleEF	MCY	1.9940e-003	1.9970e-003
tblVehicleEF	MCY	6.6800e-004	6.7300e-004
tblVehicleEF	MCY	5.62	5.64
tblVehicleEF	MCY	1.77	1.78
tblVehicleEF	MCY	2.98	2.99
tblVehicleEF	MCY	2.47	2.48
tblVehicleEF	MCY	0.48	0.49
tblVehicleEF	MCY	2.07	2.08
tblVehicleEF	MCY	0.40	0.39
tblVehicleEF	MCY	0.17	0.17
tblVehicleEF	MCY	19.07	19.55
tblVehicleEF	MCY	10.54	10.51
tblVehicleEF	MCY	159.42	158.89
tblVehicleEF	MCY	45.69	46.14
tblVehicleEF	MCY	1.19	1.19
tblVehicleEF	MCY	0.32	0.32
tblVehicleEF	MCY	1.6860e-003	1.6390e-003
tblVehicleEF	MCY	3.5670e-003	3.6420e-003
tblVehicleEF	MCY	1.5780e-003	1.5350e-003
tblVehicleEF	MCY	3.3610e-003	3.4370e-003

tblVehicleEF	MCY	1.16	1.16
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.37	0.37
tblVehicleEF	MCY	2.02	2.05
tblVehicleEF	MCY	0.51	0.52
tblVehicleEF	MCY	2.30	2.32
tblVehicleEF	MCY	1.9640e-003	1.9670e-003
tblVehicleEF	MCY	6.9700e-004	7.0200e-004
tblVehicleEF	MCY	1.16	1.16
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.37	0.37
tblVehicleEF	MCY	2.50	2.51
tblVehicleEF	MCY	0.51	0.52
tblVehicleEF	MCY	2.50	2.52
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	2.06	2.26
tblVehicleEF	MDV	4.38	4.73
tblVehicleEF	MDV	497.64	510.02
tblVehicleEF	MDV	112.56	114.90
tblVehicleEF	MDV	0.29	0.32
tblVehicleEF	MDV	0.50	0.54
tblVehicleEF	MDV	1.7060e-003	1.7350e-003
tblVehicleEF	MDV	2.5680e-003	2.6280e-003
tblVehicleEF	MDV	1.5760e-003	1.6040e-003
tblVehicleEF	MDV	2.3630e-003	2.4190e-003
tblVehicleEF	MDV	0.23	0.23
tblVehicleEF	MDV	0.31	0.31
tblVehicleEF	MDV	0.18	0.18
tblVehicleEF	MDV	0.05	0.06

tblVehicleEF	MDV	0.21	0.21
tblVehicleEF	MDV	0.31	0.35
tblVehicleEF	MDV	4.9990e-003	5.1260e-003
tblVehicleEF	MDV	1.2030e-003	1.2330e-003
tblVehicleEF	MDV	0.23	0.23
tblVehicleEF	MDV	0.31	0.31
tblVehicleEF	MDV	0.18	0.18
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.21	0.21
tblVehicleEF	MDV	0.34	0.38
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.65	2.90
tblVehicleEF	MDV	4.51	4.87
tblVehicleEF	MDV	549.72	563.39
tblVehicleEF	MDV	112.56	114.90
tblVehicleEF	MDV	0.28	0.30
tblVehicleEF	MDV	0.53	0.57
tblVehicleEF	MDV	1.7060e-003	1.7350e-003
tblVehicleEF	MDV	2.5680e-003	2.6280e-003
tblVehicleEF	MDV	1.5760e-003	1.6040e-003
tblVehicleEF	MDV	2.3630e-003	2.4190e-003
tblVehicleEF	MDV	0.47	0.47
tblVehicleEF	MDV	0.39	0.40
tblVehicleEF	MDV	0.28	0.28
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.22	0.22
tblVehicleEF	MDV	0.29	0.32
tblVehicleEF	MDV	5.5290e-003	5.6690e-003
tblVehicleEF	MDV	1.2040e-003	1.2340e-003

tblVehicleEF	MDV	0.47	0.47
tblVehicleEF	MDV	0.39	0.40
tblVehicleEF	MDV	0.28	0.28
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.22	0.22
tblVehicleEF	MDV	0.32	0.35
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	1.74	1.92
tblVehicleEF	MDV	5.17	5.56
tblVehicleEF	MDV	461.27	472.75
tblVehicleEF	MDV	112.56	114.90
tblVehicleEF	MDV	0.29	0.32
tblVehicleEF	MDV	0.52	0.57
tblVehicleEF	MDV	1.7060e-003	1.7350e-003
tblVehicleEF	MDV	2.5680e-003	2.6280e-003
tblVehicleEF	MDV	1.5760e-003	1.6040e-003
tblVehicleEF	MDV	2.3630e-003	2.4190e-003
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.28	0.29
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	0.23	0.23
tblVehicleEF	MDV	0.37	0.41
tblVehicleEF	MDV	4.6310e-003	4.7490e-003
tblVehicleEF	MDV	1.2170e-003	1.2480e-003
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.28	0.29
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.07	0.08

tblVehicleEF	MDV	0.23	0.23
tblVehicleEF	MDV	0.41	0.45
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	7.53	10.43
tblVehicleEF	MH	10.66	12.50
tblVehicleEF	MH	972.96	974.84
tblVehicleEF	MH	62.19	69.95
tblVehicleEF	MH	1.86	2.03
tblVehicleEF	MH	1.45	1.50
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.8660e-003	2.9560e-003
tblVehicleEF	MH	3.1940e-003	3.1880e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.7160e-003	2.7550e-003
tblVehicleEF	MH	4.24	4.71
tblVehicleEF	MH	0.17	0.19
tblVehicleEF	MH	1.30	1.45
tblVehicleEF	MH	0.22	0.31
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.63	0.83
tblVehicleEF	MH	9.7600e-003	9.8290e-003
tblVehicleEF	MH	8.0900e-004	9.2200e-004
tblVehicleEF	MH	4.24	4.71
tblVehicleEF	MH	0.17	0.19
tblVehicleEF	MH	1.30	1.45
tblVehicleEF	MH	0.32	0.41
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.69	0.91

tblVehicleEF	MH	0.09	0.10
tblVehicleEF	MH	0.04	0.06
tblVehicleEF	MH	7.71	10.96
tblVehicleEF	MH	10.09	12.22
tblVehicleEF	MH	972.96	974.84
tblVehicleEF	MH	62.19	69.95
tblVehicleEF	MH	1.60	1.74
tblVehicleEF	MH	1.42	1.47
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.8660e-003	2.9560e-003
tblVehicleEF	MH	3.1940e-003	3.1880e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.7160e-003	2.7550e-003
tblVehicleEF	MH	8.87	9.88
tblVehicleEF	MH	0.21	0.23
tblVehicleEF	MH	1.96	2.17
tblVehicleEF	MH	0.23	0.31
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.61	0.82
tblVehicleEF	MH	9.7630e-003	9.8380e-003
tblVehicleEF	MH	7.9900e-004	9.1700e-004
tblVehicleEF	MH	8.87	9.88
tblVehicleEF	MH	0.21	0.23
tblVehicleEF	MH	1.96	2.17
tblVehicleEF	MH	0.33	0.43
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.66	0.89
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.05	0.07

tblVehicleEF	MH	7.20	10.11
tblVehicleEF	MH	11.97	13.75
tblVehicleEF	MH	972.96	974.84
tblVehicleEF	MH	62.19	69.95
tblVehicleEF	MH	1.94	2.12
tblVehicleEF	MH	1.52	1.58
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.8660e-003	2.9560e-003
tblVehicleEF	MH	3.1940e-003	3.1880e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.7160e-003	2.7550e-003
tblVehicleEF	MH	2.07	2.29
tblVehicleEF	MH	0.17	0.19
tblVehicleEF	MH	0.53	0.58
tblVehicleEF	MH	0.21	0.30
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.68	0.89
tblVehicleEF	MH	9.7550e-003	9.8240e-003
tblVehicleEF	MH	8.3100e-004	9.4300e-004
tblVehicleEF	MH	2.07	2.29
tblVehicleEF	MH	0.17	0.19
tblVehicleEF	MH	0.53	0.58
tblVehicleEF	MH	0.30	0.40
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.75	0.97
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	9.2220e-003	0.01
tblVehicleEF	MHD	0.09	0.10
tblVehicleEF	MHD	0.44	0.50

tblVehicleEF	MHD	0.63	0.86
tblVehicleEF	MHD	10.70	11.63
tblVehicleEF	MHD	140.24	141.70
tblVehicleEF	MHD	1,053.22	1,053.34
tblVehicleEF	MHD	61.52	62.11
tblVehicleEF	MHD	0.65	0.91
tblVehicleEF	MHD	1.15	1.75
tblVehicleEF	MHD	11.26	11.30
tblVehicleEF	MHD	3.0170e-003	4.8280e-003
tblVehicleEF	MHD	9.8340e-003	0.05
tblVehicleEF	MHD	1.1780e-003	1.2870e-003
tblVehicleEF	MHD	2.8870e-003	4.6190e-003
tblVehicleEF	MHD	9.4030e-003	0.05
tblVehicleEF	MHD	1.0830e-003	1.1830e-003
tblVehicleEF	MHD	5.1190e-003	5.6720e-003
tblVehicleEF	MHD	0.12	0.13
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	2.3090e-003	2.5260e-003
tblVehicleEF	MHD	0.04	0.08
tblVehicleEF	MHD	0.07	0.08
tblVehicleEF	MHD	0.67	0.73
tblVehicleEF	MHD	1.3510e-003	1.3650e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	8.0400e-004	8.2700e-004
tblVehicleEF	MHD	5.1190e-003	5.6720e-003
tblVehicleEF	MHD	0.12	0.13
tblVehicleEF	MHD	0.05	0.06
tblVehicleEF	MHD	2.3090e-003	2.5260e-003
tblVehicleEF	MHD	0.06	0.10
tblVehicleEF	MHD	0.07	0.08

tblVehicleEF	MHD	0.74	0.80
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	9.3570e-003	0.01
tblVehicleEF	MHD	0.09	0.10
tblVehicleEF	MHD	0.32	0.36
tblVehicleEF	MHD	0.63	0.87
tblVehicleEF	MHD	10.42	11.32
tblVehicleEF	MHD	148.54	150.09
tblVehicleEF	MHD	1,053.22	1,053.34
tblVehicleEF	MHD	61.52	62.11
tblVehicleEF	MHD	0.67	0.94
tblVehicleEF	MHD	1.03	1.57
tblVehicleEF	MHD	11.22	11.27
tblVehicleEF	MHD	2.5440e-003	4.0700e-003
tblVehicleEF	MHD	9.8340e-003	0.05
tblVehicleEF	MHD	1.1780e-003	1.2870e-003
tblVehicleEF	MHD	2.4340e-003	3.8940e-003
tblVehicleEF	MHD	9.4030e-003	0.05
tblVehicleEF	MHD	1.0830e-003	1.1830e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.16	0.17
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	3.6900e-003	4.0590e-003
tblVehicleEF	MHD	0.04	0.08
tblVehicleEF	MHD	0.08	0.08
tblVehicleEF	MHD	0.66	0.71
tblVehicleEF	MHD	1.4290e-003	1.4440e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.9900e-004	8.2100e-004
tblVehicleEF	MHD	0.01	0.01

tblVehicleEF	MHD	0.16	0.17
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	3.6900e-003	4.0590e-003
tblVehicleEF	MHD	0.06	0.10
tblVehicleEF	MHD	0.08	0.08
tblVehicleEF	MHD	0.72	0.78
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	8.9590e-003	0.01
tblVehicleEF	MHD	0.10	0.10
tblVehicleEF	MHD	0.61	0.69
tblVehicleEF	MHD	0.61	0.84
tblVehicleEF	MHD	11.44	12.44
tblVehicleEF	MHD	128.77	130.11
tblVehicleEF	MHD	1,053.22	1,053.34
tblVehicleEF	MHD	61.52	62.11
tblVehicleEF	MHD	0.62	0.87
tblVehicleEF	MHD	1.17	1.77
tblVehicleEF	MHD	11.34	11.40
tblVehicleEF	MHD	3.6710e-003	5.8750e-003
tblVehicleEF	MHD	9.8340e-003	0.05
tblVehicleEF	MHD	1.1780e-003	1.2870e-003
tblVehicleEF	MHD	3.5130e-003	5.6200e-003
tblVehicleEF	MHD	9.4030e-003	0.05
tblVehicleEF	MHD	1.0830e-003	1.1830e-003
tblVehicleEF	MHD	2.2620e-003	2.5090e-003
tblVehicleEF	MHD	0.11	0.11
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	MHD	8.1000e-004	8.7300e-004
tblVehicleEF	MHD	0.04	0.08
tblVehicleEF	MHD	0.08	0.08

tblVehicleEF	MHD	0.71	0.77
tblVehicleEF	MHD	1.2430e-003	1.2560e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	8.1700e-004	8.4000e-004
tblVehicleEF	MHD	2.2620e-003	2.5090e-003
tblVehicleEF	MHD	0.11	0.11
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	8.1000e-004	8.7300e-004
tblVehicleEF	MHD	0.06	0.09
tblVehicleEF	MHD	0.08	0.08
tblVehicleEF	MHD	0.77	0.84
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	7.3200e-003	8.6070e-003
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.31	0.32
tblVehicleEF	OBUS	0.50	0.59
tblVehicleEF	OBUS	6.94	7.44
tblVehicleEF	OBUS	161.39	158.79
tblVehicleEF	OBUS	1,106.05	1,111.31
tblVehicleEF	OBUS	61.52	62.47
tblVehicleEF	OBUS	0.86	0.94
tblVehicleEF	OBUS	1.32	1.59
tblVehicleEF	OBUS	4.80	4.71
tblVehicleEF	OBUS	2.9100e-004	4.1300e-004
tblVehicleEF	OBUS	7.5690e-003	8.8920e-003
tblVehicleEF	OBUS	1.0260e-003	1.0570e-003
tblVehicleEF	OBUS	2.7900e-004	3.9500e-004
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tblVehicleEF	OBUS	9.4400e-004	9.7200e-004
tblVehicleEF	OBUS	5.7820e-003	6.1360e-003

tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	2.0440e-003	2.1470e-003
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.07	0.07
tblVehicleEF	OBUS	0.47	0.51
tblVehicleEF	OBUS	1.5510e-003	1.5270e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.3900e-004	7.5700e-004
tblVehicleEF	OBUS	5.7820e-003	6.1360e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	2.0440e-003	2.1470e-003
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	0.07	0.07
tblVehicleEF	OBUS	0.52	0.55
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	7.4170e-003	8.7220e-003
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.29	0.29
tblVehicleEF	OBUS	0.51	0.60
tblVehicleEF	OBUS	6.61	7.09
tblVehicleEF	OBUS	170.09	167.32
tblVehicleEF	OBUS	1,106.05	1,111.31
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tblVehicleEF	OBUS	0.89	0.97
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tblVehicleEF	OBUS	4.78	4.68
tblVehicleEF	OBUS	2.4600e-004	3.4800e-004
tblVehicleEF	OBUS	7.5690e-003	8.8920e-003

tblVehicleEF	OBUS	1.0260e-003	1.0570e-003
tblVehicleEF	OBUS	2.3500e-004	3.3300e-004
tblVehicleEF	OBUS	7.2320e-003	8.4980e-003
tblVehicleEF	OBUS	9.4400e-004	9.7200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	3.0130e-003	3.1830e-003
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.07	0.08
tblVehicleEF	OBUS	0.46	0.49
tblVehicleEF	OBUS	1.6340e-003	1.6080e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.3300e-004	7.5100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0130e-003	3.1830e-003
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	0.07	0.08
tblVehicleEF	OBUS	0.50	0.54
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	7.1260e-003	8.3770e-003
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	0.34	0.35
tblVehicleEF	OBUS	0.49	0.57
tblVehicleEF	OBUS	7.65	8.20
tblVehicleEF	OBUS	149.39	147.02
tblVehicleEF	OBUS	1,106.05	1,111.31
tblVehicleEF	OBUS	61.52	62.47

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tblVehicleEF	OBUS	4.86	4.78
tblVehicleEF	OBUS	3.5500e-004	5.0200e-004
tblVehicleEF	OBUS	7.5690e-003	8.8920e-003
tblVehicleEF	OBUS	1.0260e-003	1.0570e-003
tblVehicleEF	OBUS	3.3900e-004	4.8000e-004
tblVehicleEF	OBUS	7.2320e-003	8.4980e-003
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tblVehicleEF	OBUS	2.7450e-003	2.9240e-003
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tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	8.2700e-004	8.6200e-004
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.07	0.08
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tblVehicleEF	OBUS	0.07	0.07
tblVehicleEF	OBUS	8.2700e-004	8.6200e-004
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	0.07	0.08
tblVehicleEF	OBUS	0.55	0.59
tblVehicleEF	SBUS	1.01	1.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.09	0.10
tblVehicleEF	SBUS	7.67	7.54

tblVehicleEF	SBUS	1.27	1.40
tblVehicleEF	SBUS	7.82	8.14
tblVehicleEF	SBUS	1,200.70	1,211.51
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tblVehicleEF	SBUS	13.92	14.13
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	7.4200e-004	7.7000e-004
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	2.6570e-003	2.6630e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	6.8300e-004	7.0800e-004
tblVehicleEF	SBUS	9.5150e-003	0.01
tblVehicleEF	SBUS	0.04	0.05
tblVehicleEF	SBUS	0.97	0.95
tblVehicleEF	SBUS	3.3860e-003	3.5890e-003
tblVehicleEF	SBUS	0.13	0.14
tblVehicleEF	SBUS	0.02	0.03
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tblVehicleEF	SBUS	9.5150e-003	0.01
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tblVehicleEF	SBUS	1.39	1.37
tblVehicleEF	SBUS	3.3860e-003	3.5890e-003

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tblVehicleEF	SBUS	0.49	0.51
tblVehicleEF	SBUS	1.01	1.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.08	0.08
tblVehicleEF	SBUS	7.53	7.39
tblVehicleEF	SBUS	1.29	1.42
tblVehicleEF	SBUS	5.92	6.16
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tblVehicleEF	SBUS	13.88	14.09
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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	7.4200e-004	7.7000e-004
tblVehicleEF	SBUS	9.8440e-003	0.01
tblVehicleEF	SBUS	2.6570e-003	2.6630e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	6.8300e-004	7.0800e-004
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.05	0.06
tblVehicleEF	SBUS	0.96	0.95
tblVehicleEF	SBUS	4.9790e-003	5.3500e-003
tblVehicleEF	SBUS	0.13	0.14
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.38	0.40

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	5.6300e-004	5.5800e-004
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.05	0.06
tblVehicleEF	SBUS	1.39	1.36
tblVehicleEF	SBUS	4.9790e-003	5.3500e-003
tblVehicleEF	SBUS	0.17	0.18
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.42	0.43
tblVehicleEF	SBUS	1.01	1.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.11	0.12
tblVehicleEF	SBUS	7.87	7.74
tblVehicleEF	SBUS	1.24	1.36
tblVehicleEF	SBUS	11.40	11.86
tblVehicleEF	SBUS	1,120.72	1,130.29
tblVehicleEF	SBUS	1,077.94	1,084.83
tblVehicleEF	SBUS	45.79	44.90
tblVehicleEF	SBUS	10.74	11.37
tblVehicleEF	SBUS	4.76	5.13
tblVehicleEF	SBUS	13.98	14.19
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	7.4200e-004	7.7000e-004
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	2.6570e-003	2.6630e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	6.8300e-004	7.0800e-004

tblVehicleEF	SBUS	4.4480e-003	4.9570e-003
tblVehicleEF	SBUS	0.04	0.04
tblVehicleEF	SBUS	0.97	0.95
tblVehicleEF	SBUS	1.3250e-003	1.3850e-003
tblVehicleEF	SBUS	0.13	0.14
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.55	0.57
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.5400e-004	6.5300e-004
tblVehicleEF	SBUS	4.4480e-003	4.9570e-003
tblVehicleEF	SBUS	0.04	0.04
tblVehicleEF	SBUS	1.40	1.37
tblVehicleEF	SBUS	1.3250e-003	1.3850e-003
tblVehicleEF	SBUS	0.16	0.18
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.60	0.63
tblVehicleEF	UBUS	0.04	0.04
tblVehicleEF	UBUS	0.05	0.05
tblVehicleEF	UBUS	2.42	2.63
tblVehicleEF	UBUS	8.11	8.23
tblVehicleEF	UBUS	1,949.99	1,964.48
tblVehicleEF	UBUS	139.32	138.30
tblVehicleEF	UBUS	3.91	4.38
tblVehicleEF	UBUS	12.55	12.69
tblVehicleEF	UBUS	0.50	0.51
tblVehicleEF	UBUS	0.07	0.08
tblVehicleEF	UBUS	1.2750e-003	1.2290e-003
tblVehicleEF	UBUS	0.22	0.22
tblVehicleEF	UBUS	0.06	0.07

tblVehicleEF	UBUS	1.1720e-003	1.1300e-003
tblVehicleEF	UBUS	7.6680e-003	7.8330e-003
tblVehicleEF	UBUS	0.07	0.07
tblVehicleEF	UBUS	3.8110e-003	3.8550e-003
tblVehicleEF	UBUS	0.22	0.25
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	0.72	0.74
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	1.5420e-003	1.5340e-003
tblVehicleEF	UBUS	7.6680e-003	7.8330e-003
tblVehicleEF	UBUS	0.07	0.07
tblVehicleEF	UBUS	3.8110e-003	3.8550e-003
tblVehicleEF	UBUS	0.28	0.31
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	0.79	0.81
tblVehicleEF	UBUS	0.04	0.04
tblVehicleEF	UBUS	0.05	0.05
tblVehicleEF	UBUS	2.44	2.65
tblVehicleEF	UBUS	7.34	7.45
tblVehicleEF	UBUS	1,949.99	1,964.48
tblVehicleEF	UBUS	139.32	138.30
tblVehicleEF	UBUS	3.52	3.94
tblVehicleEF	UBUS	12.51	12.66
tblVehicleEF	UBUS	0.50	0.51
tblVehicleEF	UBUS	0.07	0.08
tblVehicleEF	UBUS	1.2750e-003	1.2290e-003
tblVehicleEF	UBUS	0.22	0.22
tblVehicleEF	UBUS	0.06	0.07
tblVehicleEF	UBUS	1.1720e-003	1.1300e-003
tblVehicleEF	UBUS	0.02	0.02

tblVehicleEF	UBUS	0.09	0.10
tblVehicleEF	UBUS	6.1500e-003	6.2570e-003
tblVehicleEF	UBUS	0.22	0.26
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	0.68	0.70
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	1.5280e-003	1.5200e-003
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	0.09	0.10
tblVehicleEF	UBUS	6.1500e-003	6.2570e-003
tblVehicleEF	UBUS	0.28	0.32
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	0.75	0.76
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.06	0.06
tblVehicleEF	UBUS	2.40	2.60
tblVehicleEF	UBUS	9.79	9.94
tblVehicleEF	UBUS	1,949.99	1,964.48
tblVehicleEF	UBUS	139.32	138.30
tblVehicleEF	UBUS	3.96	4.43
tblVehicleEF	UBUS	12.62	12.77
tblVehicleEF	UBUS	0.50	0.51
tblVehicleEF	UBUS	0.07	0.08
tblVehicleEF	UBUS	1.2750e-003	1.2290e-003
tblVehicleEF	UBUS	0.22	0.22
tblVehicleEF	UBUS	0.06	0.07
tblVehicleEF	UBUS	1.1720e-003	1.1300e-003
tblVehicleEF	UBUS	3.6450e-003	3.7410e-003
tblVehicleEF	UBUS	0.06	0.06
tblVehicleEF	UBUS	1.5410e-003	1.5480e-003

tblVehicleEF	UBUS	0.22	0.25
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	0.81	0.83
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	1.5710e-003	1.5640e-003
tblVehicleEF	UBUS	3.6450e-003	3.7410e-003
tblVehicleEF	UBUS	0.06	0.06
tblVehicleEF	UBUS	1.5410e-003	1.5480e-003
tblVehicleEF	UBUS	0.27	0.31
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	0.89	0.90
tblVehicleTrips	CC_TL	5.00	5.28
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	8.90	0.89
tblVehicleTrips	CW_TL	6.70	0.67
tblVehicleTrips	HW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	0.01

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					
2020	0.2256	3.6939	1.5735	0.0115	5.0551	0.0900	5.1451	0.5540	0.0832	0.6373			1,074.2753	0.0865	0.0000	1,076.4388

2021	0.1089	1.3636	0.7997	3.4900e-003	2.0833	0.0439	2.1273	0.2257	0.0405	0.2662			319.8401	0.0485	0.0000	321.0520
Maximum	**0.2256**	**3.6939**	**1.5735**	**0.0115**	**5.0551**	**0.0900**	**5.1451**	**0.5540**	**0.0832**	**0.6373**			**1,074.2753**	**0.0865**	**0.0000**	**1,076.4388**

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					
2020	0.2256	3.6939	1.5735	0.0115	5.0477	0.0900	5.1377	0.5531	0.0832	0.6363			1,074.2750	0.0865	0.0000	1,076.4385
2021	0.1089	1.3636	0.7997	3.4900e-003	2.0802	0.0439	2.1241	0.2253	0.0405	0.2657			319.8400	0.0485	0.0000	321.0519
Maximum	**0.2256**	**3.6939**	**1.5735**	**0.0115**	**5.0477**	**0.0900**	**5.1377**	**0.5531**	**0.0832**	**0.6363**			**1,074.2750**	**0.0865**	**0.0000**	**1,076.4385**

	ROG	NOx	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**	**0.15**	**0.00**	**0.15**	**0.18**	**0.00**	**0.16**	**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	**1-6-2020**	**4-5-2020**	1.5856	1.5856
3	**7-6-2020**	**10-5-2020**	0.6644	0.6644
4	**10-6-2020**	**1-5-2021**	1.7144	1.7144
5	**1-6-2021**	**4-5-2021**	1.3868	1.3868
6	**4-6-2021**	**7-5-2021**	0.0162	0.0162
		Highest	1.7144	1.7144

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	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.1000e-004	0.0000	0.0000	2.2000e-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
Mobile	8.0000e-005	5.7000e-004	6.3000e-004	0.0000	0.0298	0.0000	0.0298	2.9800e-003	0.0000	2.9800e-003			0.1368	2.0000e-005	0.0000	0.1372
Waste						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
Total	**9.0000e-005**	**5.7000e-004**	**7.4000e-004**	**0.0000**	**0.0298**	**0.0000**	**0.0298**	**2.9800e-003**	**0.0000**	**2.9800e-003**			**0.1371**	**2.0000e-005**	**0.0000**	**0.1374**

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	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.1000e-004	0.0000	0.0000	2.2000e-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
Mobile	8.0000e-005	5.7000e-004	6.3000e-004	0.0000	0.0298	0.0000	0.0298	2.9800e-003	0.0000	2.9800e-003			0.1368	2.0000e-005	0.0000	0.1372
Waste						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
Total	**9.0000e-005**	**5.7000e-004**	**7.4000e-004**	**0.0000**	**0.0298**	**0.0000**	**0.0298**	**2.9800e-003**	**0.0000**	**2.9800e-003**			**0.1371**	**2.0000e-005**	**0.0000**	**0.1374**

	ROG	NOx	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	Phase I - Site Prep & Mob	Site Preparation	1/6/2020	1/12/2020	5	5	1
2	Phase II - Stockpile Removal	Site Preparation	1/13/2020	3/9/2020	5	41	2
3	Phase III - Hot Spot Excavation	Grading	8/31/2020	3/29/2021	5	151	3
4	Phase IV - MW Install	Grading	4/5/2021	4/9/2021	5	5	4
5	Phase V - site preparation	Site Preparation	4/12/2021	4/16/2021	5	5	5

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 11.66

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase I - Site Prep & Mob	Air Compressors	0	6.00	78	0.48
Phase I - Site Prep & Mob	Bore/Drill Rigs	1	8.00	221	0.50
Phase I - Site Prep & Mob	Forklifts	1	8.00	89	0.20
Phase I - Site Prep & Mob	Off-Highway Trucks	1	1.00	402	0.38
Phase I - Site Prep & Mob	Rubber Tired Dozers	0	8.00	247	0.40
Phase I - Site Prep & Mob	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Phase II - Stockpile Removal	Excavators	1	8.00	158	0.38
Phase II - Stockpile Removal	Off-Highway Trucks	10	1.00	402	0.38

Phase II - Stockpile Removal	Pressure Washers	2	8.00	13	0.30
Phase II - Stockpile Removal	Rubber Tired Dozers	0	8.00	247	0.40
Phase II - Stockpile Removal	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Phase II - Stockpile Removal	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Phase III - Hot Spot Excavation	Crawler Tractors	1	8.00	212	0.43
Phase III - Hot Spot Excavation	Excavators	1	8.00	158	0.38
Phase III - Hot Spot Excavation	Forklifts	1	8.00	89	0.20
Phase III - Hot Spot Excavation	Graders	1	8.00	187	0.41
Phase III - Hot Spot Excavation	Off-Highway Trucks	10	1.00	402	0.38
Phase III - Hot Spot Excavation	Other Construction Equipment	1	8.00	172	0.42
Phase III - Hot Spot Excavation	Rubber Tired Dozers	0	8.00	247	0.40
Phase III - Hot Spot Excavation	Scrapers	0	8.00	367	0.48
Phase III - Hot Spot Excavation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Phase IV - MW Install	Bore/Drill Rigs	1	8.00	221	0.50
Phase IV - MW Install	Excavators	0	8.00	158	0.38
Phase IV - MW Install	Graders	0	8.00	187	0.41
Phase IV - MW Install	Rubber Tired Dozers	0	8.00	247	0.40
Phase IV - MW Install	Scrapers	0	8.00	367	0.48
Phase IV - MW Install	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Phase V - site preparation	Off-Highway Trucks	5	1.00	402	0.38
Phase V - site preparation	Pavers	0	8.00	130	0.42
Phase V - site preparation	Paving Equipment	0	8.00	132	0.36
Phase V - site preparation	Rollers	0	8.00	80	0.38
Phase V - site preparation	Rubber Tired Dozers	0	8.00	247	0.40
Phase V - site preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Phase I - Site Prep & Mob	3	6.00	0.00	1.00	7.30	8.90	460.00	LD_Mix	HDT_Mix	HHDT
Phase II - Stockpile Removal	14	12.00	0.00	851.00	7.30	8.90	460.00	LD_Mix	HDT_Mix	HHDT
Phase III - Hot Spot Excavation	17	42.00	0.00	3,286.00	7.30	8.90	84.00	LD_Mix	HDT_Mix	HHDT
Phase IV - MW Install	1	12.00	0.00	1.00	7.30	8.90	460.00	LD_Mix	HDT_Mix	HHDT
Phase V - site preparation	6	12.00	0.00	1.00	7.30	8.90	60.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Phase I - Site Prep & Mob - 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					6.3700e-003	0.0000	6.3700e-003	6.9000e-004	0.0000	6.9000e-004			0.0000	0.0000	0.0000	0.0000
Off-Road	1.2600e-003	0.0140	9.3400e-003	3.0000e-005		5.7000e-004	5.7000e-004		5.2000e-004	5.2000e-004			2.7616	8.9000e-004	0.0000	2.7840
Total	**1.2600e-003**	**0.0140**	**9.3400e-003**	**3.0000e-005**	**6.3700e-003**	**5.7000e-004**	**6.9400e-003**	**6.9000e-004**	**5.2000e-004**	**1.2100e-003**			**2.7616**	**8.9000e-004**	**0.0000**	**2.7840**

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	3.0000e-005	1.4600e-003	2.1000e-004	1.0000e-005	3.4700e-003	1.0000e-005	3.4800e-003	3.8000e-004	1.0000e-005	3.9000e-004			0.6695	0.0000	0.0000	0.6696
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	9.0000e-005	7.0000e-005	6.2000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005			0.0698	1.0000e-005	0.0000	0.0699
Total	**1.2000e-004**	**1.5300e-003**	**8.3000e-004**	**1.0000e-005**	**3.5500e-003**	**1.0000e-005**	**3.5600e-003**	**4.0000e-004**	**1.0000e-005**	**4.1000e-004**			**0.7393**	**1.0000e-005**	**0.0000**	**0.7395**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.9300e-003	0.0000	2.9300e-003	3.2000e-004	0.0000	3.2000e-004			0.0000	0.0000	0.0000	0.0000
Off-Road	1.2600e-003	0.0140	9.3400e-003	3.0000e-005		5.7000e-004	5.7000e-004		5.2000e-004	5.2000e-004			2.7616	8.9000e-004	0.0000	2.7839
Total	**1.2600e-003**	**0.0140**	**9.3400e-003**	**3.0000e-005**	**2.9300e-003**	**5.7000e-004**	**3.5000e-003**	**3.2000e-004**	**5.2000e-004**	**8.4000e-004**			**2.7616**	**8.9000e-004**	**0.0000**	**2.7839**

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	3.0000e-005	1.4600e-003	2.1000e-004	1.0000e-005	3.4700e-003	1.0000e-005	3.4800e-003	3.8000e-004	1.0000e-005	3.9000e-004			0.6695	0.0000	0.0000	0.6696
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	9.0000e-005	7.0000e-005	6.2000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005			0.0698	1.0000e-005	0.0000	0.0699

Total	**1.2000e-004**	**1.5300e-003**	**8.3000e-004**	**1.0000e-005**	**3.5500e-003**	**1.0000e-005**	**3.5600e-003**	**4.0000e-004**	**1.0000e-005**	**4.1000e-004**			**0.7393**	**1.0000e-005**	**0.0000**	**0.7395**

3.3 Phase II - Stockpile Removal - 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					1.5200e-003	0.0000	1.5200e-003	2.3000e-004	0.0000	2.3000e-004			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0281	0.2674	0.2214	5.3000e-004		0.0116	0.0116		0.0107	0.0107			46.0719	0.0146	0.0000	46.4364
Total	**0.0281**	**0.2674**	**0.2214**	**5.3000e-004**	**1.5200e-003**	**0.0116**	**0.0132**	**2.3000e-004**	**0.0107**	**0.0110**			**46.0719**	**0.0146**	**0.0000**	**46.4364**

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	0.0282	1.2425	0.1803	5.9900e-003	2.9548	6.8600e-003	2.9617	0.3244	6.5700e-003	0.3310			569.7722	3.3300e-003	0.0000	569.8555
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	1.4300e-003	1.0900e-003	0.0102	1.0000e-005	1.3600e-003	1.0000e-005	1.3700e-003	3.6000e-004	1.0000e-005	3.7000e-004			1.1440	9.0000e-005	0.0000	1.1463
Total	**0.0296**	**1.2435**	**0.1905**	**6.0000e-003**	**2.9562**	**6.8700e-003**	**2.9631**	**0.3248**	**6.5800e-003**	**0.3313**			**570.9162**	**3.4200e-003**	**0.0000**	**571.0018**

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					7.0000e-004	0.0000	7.0000e-004	1.1000e-004	0.0000	1.1000e-004			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0281	0.2674	0.2214	5.3000e-004		0.0116	0.0116		0.0107	0.0107			46.0718	0.0146	0.0000	46.4363
Total	**0.0281**	**0.2674**	**0.2214**	**5.3000e-004**	**7.0000e-004**	**0.0116**	**0.0123**	**1.1000e-004**	**0.0107**	**0.0109**			**46.0718**	**0.0146**	**0.0000**	**46.4363**

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	0.0282	1.2425	0.1803	5.9900e-003	2.9548	6.8600e-003	2.9617	0.3244	6.5700e-003	0.3310			569.7722	3.3300e-003	0.0000	569.8555
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	1.4300e-003	1.0900e-003	0.0102	1.0000e-005	1.3600e-003	1.0000e-005	1.3700e-003	3.6000e-004	1.0000e-005	3.7000e-004			1.1440	9.0000e-005	0.0000	1.1463
Total	**0.0296**	**1.2435**	**0.1905**	**6.0000e-003**	**2.9562**	**6.8700e-003**	**2.9631**	**0.3248**	**6.5800e-003**	**0.3313**			**570.9162**	**3.4200e-003**	**0.0000**	**571.0018**

3.4 Phase III - Hot Spot 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					
Fugitive Dust					5.8400e-003	0.0000	5.8400e-003	8.8000e-004	0.0000	8.8000e-004			0.0000	0.0000	0.0000	0.0000
Off-Road	0.1418	1.5502	0.9882	2.2300e-003		0.0680	0.0680		0.0625	0.0625			195.7881	0.0633	0.0000	197.3711
Total	**0.1418**	**1.5502**	**0.9882**	**2.2300e-003**	**5.8400e-003**	**0.0680**	**0.0738**	**8.8000e-004**	**0.0625**	**0.0634**			**195.7881**	**0.0633**	**0.0000**	**197.3711**

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	0.0138	0.6089	0.0861	2.6200e-003	2.0714	2.9000e-003	2.0743	0.2243	2.7700e-003	0.2271			249.3067	3.6000e-003	0.0000	249.3968
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	0.0109	8.3100e-003	0.0772	1.0000e-004	0.0103	7.0000e-005	0.0104	2.7400e-003	7.0000e-005	2.8000e-003			8.6916	7.1000e-004	0.0000	8.7093
Total	**0.0247**	**0.6172**	**0.1634**	**2.7200e-003**	**2.0817**	**2.9700e-003**	**2.0846**	**0.2271**	**2.8400e-003**	**0.2299**			**257.9983**	**4.3100e-003**	**0.0000**	**258.1061**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6900e-003	0.0000	2.6900e-003	4.1000e-004	0.0000	4.1000e-004			0.0000	0.0000	0.0000	0.0000
Off-Road	0.1418	1.5502	0.9882	2.2300e-003		0.0680	0.0680		0.0625	0.0625			195.7879	0.0633	0.0000	197.3709

Total	**0.1418**	**1.5502**	**0.9882**	**2.2300e-003**	**2.6900e-003**	**0.0680**	**0.0706**	**4.1000e-004**	**0.0625**	**0.0629**			**195.7879**	**0.0633**	**0.0000**	**197.3709**

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	0.0138	0.6089	0.0861	2.6200e-003	2.0714	2.9000e-003	2.0743	0.2243	2.7700e-003	0.2271			249.3067	3.6000e-003	0.0000	249.3968
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	0.0109	8.3100e-003	0.0772	1.0000e-004	0.0103	7.0000e-005	0.0104	2.7400e-003	7.0000e-005	2.8000e-003			8.6916	7.1000e-004	0.0000	8.7093
Total	**0.0247**	**0.6172**	**0.1634**	**2.7200e-003**	**2.0817**	**2.9700e-003**	**2.0846**	**0.2271**	**2.8400e-003**	**0.2299**			**257.9983**	**4.3100e-003**	**0.0000**	**258.1061**

3.4 Phase III - Hot Spot Excavation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8400e-003	0.0000	5.8400e-003	8.8000e-004	0.0000	8.8000e-004			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0903	0.9603	0.6734	1.5500e-003		0.0413	0.0413		0.0380	0.0380			136.3600	0.0441	0.0000	137.4625
Total	**0.0903**	**0.9603**	**0.6734**	**1.5500e-003**	**5.8400e-003**	**0.0413**	**0.0471**	**8.8000e-004**	**0.0380**	**0.0389**			**136.3600**	**0.0441**	**0.0000**	**137.4625**

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	9.1000e-003	0.3757	0.0579	1.8100e-003	2.0661	1.7700e-003	2.0678	0.2224	1.6900e-003	0.2241			172.0470	2.4200e-003	0.0000	172.1075
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	7.0400e-003	5.2900e-003	0.0494	7.0000e-005	7.1800e-003	5.0000e-005	7.2300e-003	1.9100e-003	4.0000e-005	1.9500e-003			5.8441	4.5000e-004	0.0000	5.8554
Total	**0.0161**	**0.3810**	**0.1073**	**1.8800e-003**	**2.0732**	**1.8200e-003**	**2.0751**	**0.2243**	**1.7300e-003**	**0.2261**			**177.8911**	**2.8700e-003**	**0.0000**	**177.9629**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6900e-003	0.0000	2.6900e-003	4.1000e-004	0.0000	4.1000e-004			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0903	0.9603	0.6734	1.5500e-003		0.0413	0.0413		0.0380	0.0380			136.3598	0.0441	0.0000	137.4624
Total	**0.0903**	**0.9603**	**0.6734**	**1.5500e-003**	**2.6900e-003**	**0.0413**	**0.0440**	**4.1000e-004**	**0.0380**	**0.0384**			**136.3598**	**0.0441**	**0.0000**	**137.4624**

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	9.1000e-003	0.3757	0.0579	1.8100e-003	2.0661	1.7700e-003	2.0678	0.2224	1.6900e-003	0.2241			172.0470	2.4200e-003	0.0000	172.1075
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	7.0400e-003	5.2900e-003	0.0494	7.0000e-005	7.1800e-003	5.0000e-005	7.2300e-003	1.9100e-003	4.0000e-005	1.9500e-003			5.8441	4.5000e-004	0.0000	5.8554
Total	**0.0161**	**0.3810**	**0.1073**	**1.8800e-003**	**2.0732**	**1.8200e-003**	**2.0751**	**0.2243**	**1.7300e-003**	**0.2261**			**177.8911**	**2.8700e-003**	**0.0000**	**177.9629**

3.5 Phase IV - MW Install - 2021

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
Off-Road	6.5000e-004	7.5600e-003	5.1800e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004			2.0685	6.7000e-004	0.0000	2.0853
Total	**6.5000e-004**	**7.5600e-003**	**5.1800e-003**	**2.0000e-005**	**0.0000**	**2.3000e-004**	**2.3000e-004**	**0.0000**	**2.1000e-004**	**2.1000e-004**			**2.0685**	**6.7000e-004**	**0.0000**	**2.0853**

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	3.0000e-005	1.2700e-003	2.0000e-004	1.0000e-005	3.4700e-003	1.0000e-005	3.4800e-003	3.8000e-004	1.0000e-005	3.9000e-004			0.6632	0.0000	0.0000	0.6633
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	1.6000e-004	1.2000e-004	1.1400e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005			0.1347	1.0000e-005	0.0000	0.1349
Total	**1.9000e-004**	**1.3900e-003**	**1.3400e-003**	**1.0000e-005**	**3.6400e-003**	**1.0000e-005**	**3.6500e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**			**0.7978**	**1.0000e-005**	**0.0000**	**0.7982**

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
Off-Road	6.5000e-004	7.5600e-003	5.1800e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004			2.0685	6.7000e-004	0.0000	2.0853
Total	**6.5000e-004**	**7.5600e-003**	**5.1800e-003**	**2.0000e-005**	**0.0000**	**2.3000e-004**	**2.3000e-004**	**0.0000**	**2.1000e-004**	**2.1000e-004**			**2.0685**	**6.7000e-004**	**0.0000**	**2.0853**

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	3.0000e-005	1.2700e-003	2.0000e-004	1.0000e-005	3.4700e-003	1.0000e-005	3.4800e-003	3.8000e-004	1.0000e-005	3.9000e-004			0.6632	0.0000	0.0000	0.6633
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	1.6000e-004	1.2000e-004	1.1400e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005			0.1347	1.0000e-005	0.0000	0.1349
Total	**1.9000e-004**	**1.3900e-003**	**1.3400e-003**	**1.0000e-005**	**3.6400e-003**	**1.0000e-005**	**3.6500e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**			**0.7978**	**1.0000e-005**	**0.0000**	**0.7982**

3.6 Phase V - site preparation - 2021

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
Off-Road	1.4100e-003	0.0130	0.0113	3.0000e-005		5.8000e-004	5.8000e-004		5.3000e-004	5.3000e-004			2.4947	8.1000e-004	0.0000	2.5149
Total	**1.4100e-003**	**0.0130**	**0.0113**	**3.0000e-005**	**0.0000**	**5.8000e-004**	**5.8000e-004**	**0.0000**	**5.3000e-004**	**5.3000e-004**			**2.4947**	**8.1000e-004**	**0.0000**	**2.5149**

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	1.0000e-005	2.2000e-004	3.0000e-005	0.0000	4.5000e-004	0.0000	4.5000e-004	5.0000e-005	0.0000	5.0000e-005			0.0933	0.0000	0.0000	0.0934
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	1.6000e-004	1.2000e-004	1.1400e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005			0.1347	1.0000e-005	0.0000	0.1349
Total	**1.7000e-004**	**3.4000e-004**	**1.1700e-003**	**0.0000**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**			**0.2280**	**1.0000e-005**	**0.0000**	**0.2283**

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
Off-Road	1.4100e-003	0.0130	0.0113	3.0000e-005		5.8000e-004	5.8000e-004		5.3000e-004	5.3000e-004			2.4947	8.1000e-004	0.0000	2.5149
Total	**1.4100e-003**	**0.0130**	**0.0113**	**3.0000e-005**	**0.0000**	**5.8000e-004**	**5.8000e-004**	**0.0000**	**5.3000e-004**	**5.3000e-004**			**2.4947**	**8.1000e-004**	**0.0000**	**2.5149**

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	1.0000e-005	2.2000e-004	3.0000e-005	0.0000	4.5000e-004	0.0000	4.5000e-004	5.0000e-005	0.0000	5.0000e-005			0.0933	0.0000	0.0000	0.0934
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	1.6000e-004	1.2000e-004	1.1400e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005			0.1347	1.0000e-005	0.0000	0.1349
Total	**1.7000e-004**	**3.4000e-004**	**1.1700e-003**	**0.0000**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**			**0.2280**	**1.0000e-005**	**0.0000**	**0.2283**

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	8.0000e-005	5.7000e-004	6.3000e-004	0.0000	0.0298	0.0000	0.0298	2.9800e-003	0.0000	2.9800e-003			0.1368	2.0000e-005	0.0000	0.1372
Unmitigated	8.0000e-005	5.7000e-004	6.3000e-004	0.0000	0.0298	0.0000	0.0298	2.9800e-003	0.0000	2.9800e-003			0.1368	2.0000e-005	0.0000	0.1372

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.23	0.00	0.00	160	160
Total	0.23	0.00	0.00	160	160

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
Other Asphalt Surfaces	0.67	5.28	0.89	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.503420	0.033264	0.160883	0.129541	0.018929	0.005318	0.019165	0.118376	0.003239	0.001168	0.005214	0.000745	0.000738

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
Electricity Unmitigated						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
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

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					
Other Asphalt Surfaces	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
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**

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					
Other Asphalt Surfaces	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

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**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	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	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.1000e-004	0.0000	0.0000	2.2000e-004
Unmitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.1000e-004	0.0000	0.0000	2.2000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	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
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.1000e-004	0.0000	0.0000	2.2000e-004
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.1000e-004**	**0.0000**	**0.0000**	**2.2000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	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
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.1000e-004	0.0000	0.0000	2.2000e-004
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.1000e-004**	**0.0000**	**0.0000**	**2.2000e-004**

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			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	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			
Other Asphalt Surfaces	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			
Other Asphalt Surfaces	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

Chevron Bradley

Imperial County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	11.66	Acre	11.66	507,909.60	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - site info

Land Use -

Construction Phase - Site info

Off-road Equipment - site info

Off-road Equipment - site info

Off-road Equipment - site info

Off-road Equipment - equip info

Off-road Equipment - site info

Off-road Equipment - site info

Trips and VMT - site info

On-road Fugitive Dust - Worker route is completeing paved. Hauling will encounter ~200 m of unpaved roads on site

Grading - site info

Vehicle Trips - assumes quarterly roundtrip visits and each one way trip is 20 miles. Total of 160 miles traveled

Consumer Products - no area emissions

Area Coating - no area emissions

Construction Off-road Equipment Mitigation - ICAPCD Rule 801

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	55	54
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	55	54
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	30.00	151.00
tblConstructionPhase	NumDays	30.00	5.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	10.00	41.00
tblConstructionPhase	NumDays	10.00	5.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblFleetMix	HHD	0.12	0.12
tblFleetMix	LDA	0.51	0.50
tblFleetMix	LDT1	0.03	0.03
tblFleetMix	LDT2	0.16	0.16
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.1290e-003	5.3180e-003
tblFleetMix	MCY	5.2230e-003	5.2140e-003
tblFleetMix	MDV	0.12	0.13

tblFleetMix	MH	6.9400e-004	7.3800e-004
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	3.3610e-003	3.2390e-003
tblFleetMix	SBUS	7.3900e-004	7.4500e-004
tblFleetMix	UBUS	1.1890e-003	1.1680e-003
tblGrading	AcresOfGrading	151.00	0.00
tblGrading	AcresOfGrading	0.00	12.00
tblGrading	MaterialExported	0.00	2,290.00
tblGrading	MaterialExported	0.00	5.00
tblGrading	MaterialExported	0.00	40.00
tblGrading	MaterialExported	0.00	15,250.00
tblGrading	MaterialImported	0.00	56,345.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOnRoadDust	HaulingPercentPave	50.00	99.00
tblOnRoadDust	HaulingPercentPave	50.00	99.00
tblOnRoadDust	HaulingPercentPave	50.00	99.00

tblOnRoadDust	HaulingPercentPave	50.00	99.00
tblOnRoadDust	HaulingPercentPave	50.00	99.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblTripsAndVMT	HaulingTripLength	20.00	142.00
tblTripsAndVMT	HaulingTripLength	20.00	142.00
tblTripsAndVMT	HaulingTripLength	20.00	71.00
tblTripsAndVMT	HaulingTripLength	20.00	142.00
tblTripsAndVMT	HaulingTripLength	20.00	60.00
tblTripsAndVMT	HaulingTripNumber	5.00	1.00
tblTripsAndVMT	HaulingTripNumber	1,906.00	851.00
tblTripsAndVMT	HaulingTripNumber	7,329.00	3,286.00
tblTripsAndVMT	HaulingTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	8.00	6.00
tblTripsAndVMT	WorkerTripNumber	35.00	12.00
tblTripsAndVMT	WorkerTripNumber	43.00	42.00
tblTripsAndVMT	WorkerTripNumber	3.00	12.00
tblTripsAndVMT	WorkerTripNumber	15.00	12.00
tblVehicleEF	HHD	1.17	1.21
tblVehicleEF	HHD	5.3080e-003	5.4630e-003
tblVehicleEF	HHD	0.17	0.19
tblVehicleEF	HHD	3.85	4.04

tblVehicleEF	HHD	0.39	0.40
tblVehicleEF	HHD	2.21	2.32
tblVehicleEF	HHD	7,701.49	7,752.98
tblVehicleEF	HHD	1,424.60	1,438.33
tblVehicleEF	HHD	5.85	5.99
tblVehicleEF	HHD	30.83	32.47
tblVehicleEF	HHD	2.40	2.76
tblVehicleEF	HHD	20.27	20.28
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	6.5000e-005	7.4000e-005
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	5.9000e-005	6.8000e-005
tblVehicleEF	HHD	2.6400e-004	2.9200e-004
tblVehicleEF	HHD	6.5230e-003	7.1270e-003
tblVehicleEF	HHD	1.02	1.07
tblVehicleEF	HHD	1.3600e-004	1.4800e-004
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	6.2200e-004	6.8700e-004
tblVehicleEF	HHD	0.09	0.11
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	9.6000e-005	1.0000e-004
tblVehicleEF	HHD	2.6400e-004	2.9200e-004
tblVehicleEF	HHD	6.5230e-003	7.1270e-003
tblVehicleEF	HHD	1.16	1.22

tblVehicleEF	HHD	1.3600e-004	1.4800e-004
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	6.2200e-004	6.8700e-004
tblVehicleEF	HHD	0.10	0.12
tblVehicleEF	HHD	1.11	1.14
tblVehicleEF	HHD	5.3210e-003	5.4790e-003
tblVehicleEF	HHD	0.17	0.19
tblVehicleEF	HHD	2.81	2.95
tblVehicleEF	HHD	0.39	0.41
tblVehicleEF	HHD	2.15	2.26
tblVehicleEF	HHD	8,155.58	8,207.91
tblVehicleEF	HHD	1,424.60	1,438.33
tblVehicleEF	HHD	5.85	5.99
tblVehicleEF	HHD	31.82	33.50
tblVehicleEF	HHD	2.18	2.52
tblVehicleEF	HHD	20.27	20.27
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	6.5000e-005	7.4000e-005
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	5.9000e-005	6.8000e-005
tblVehicleEF	HHD	5.4500e-004	6.0300e-004
tblVehicleEF	HHD	8.1230e-003	8.9390e-003
tblVehicleEF	HHD	0.96	1.01
tblVehicleEF	HHD	2.1500e-004	2.3600e-004
tblVehicleEF	HHD	0.06	0.06

tblVehicleEF	HHD	6.4700e-004	7.1400e-004
tblVehicleEF	HHD	0.09	0.10
tblVehicleEF	HHD	0.08	0.08
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	9.5000e-005	9.9000e-005
tblVehicleEF	HHD	5.4500e-004	6.0300e-004
tblVehicleEF	HHD	8.1230e-003	8.9390e-003
tblVehicleEF	HHD	1.09	1.15
tblVehicleEF	HHD	2.1500e-004	2.3600e-004
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	6.4700e-004	7.1400e-004
tblVehicleEF	HHD	0.10	0.11
tblVehicleEF	HHD	1.27	1.31
tblVehicleEF	HHD	5.2800e-003	5.4320e-003
tblVehicleEF	HHD	0.18	0.20
tblVehicleEF	HHD	5.29	5.55
tblVehicleEF	HHD	0.39	0.40
tblVehicleEF	HHD	2.36	2.48
tblVehicleEF	HHD	7,074.41	7,124.75
tblVehicleEF	HHD	1,424.60	1,438.33
tblVehicleEF	HHD	5.85	5.99
tblVehicleEF	HHD	29.48	31.05
tblVehicleEF	HHD	2.42	2.79
tblVehicleEF	HHD	20.29	20.29
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tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	6.5000e-005	7.4000e-005
tblVehicleEF	HHD	0.02	0.03

tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.01	0.02
tblVehicleEF	HHD	5.9000e-005	6.8000e-005
tblVehicleEF	HHD	1.1300e-004	1.2500e-004
tblVehicleEF	HHD	6.1100e-003	6.6930e-003
tblVehicleEF	HHD	1.10	1.15
tblVehicleEF	HHD	4.7000e-005	5.0000e-005
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	6.5300e-004	7.1900e-004
tblVehicleEF	HHD	0.10	0.11
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	9.9000e-005	1.0200e-004
tblVehicleEF	HHD	1.1300e-004	1.2500e-004
tblVehicleEF	HHD	6.1100e-003	6.6930e-003
tblVehicleEF	HHD	1.25	1.31
tblVehicleEF	HHD	4.7000e-005	5.0000e-005
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	6.5300e-004	7.1900e-004
tblVehicleEF	HHD	0.11	0.12
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	1.72	1.80
tblVehicleEF	LDA	4.82	5.11
tblVehicleEF	LDA	253.24	263.58
tblVehicleEF	LDA	58.25	60.34
tblVehicleEF	LDA	0.23	0.25
tblVehicleEF	LDA	0.24	0.26
tblVehicleEF	LDA	1.5080e-003	1.5410e-003
tblVehicleEF	LDA	2.3270e-003	2.3590e-003

tblVehicleEF	LDA	1.3900e-003	1.4220e-003
tblVehicleEF	LDA	2.1400e-003	2.1690e-003
tblVehicleEF	LDA	0.08	0.09
tblVehicleEF	LDA	0.11	0.12
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.43	0.45
tblVehicleEF	LDA	2.5560e-003	2.6610e-003
tblVehicleEF	LDA	6.7100e-004	6.9700e-004
tblVehicleEF	LDA	0.08	0.09
tblVehicleEF	LDA	0.11	0.12
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.47	0.50
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	2.24	2.35
tblVehicleEF	LDA	4.95	5.26
tblVehicleEF	LDA	281.18	292.69
tblVehicleEF	LDA	58.25	60.34
tblVehicleEF	LDA	0.22	0.24
tblVehicleEF	LDA	0.25	0.27
tblVehicleEF	LDA	1.5080e-003	1.5410e-003
tblVehicleEF	LDA	2.3270e-003	2.3590e-003
tblVehicleEF	LDA	1.3900e-003	1.4220e-003
tblVehicleEF	LDA	2.1400e-003	2.1690e-003
tblVehicleEF	LDA	0.16	0.18
tblVehicleEF	LDA	0.14	0.16

tblVehicleEF	LDA	0.09	0.10
tblVehicleEF	LDA	0.07	0.08
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.39	0.42
tblVehicleEF	LDA	2.8440e-003	2.9610e-003
tblVehicleEF	LDA	6.7200e-004	6.9900e-004
tblVehicleEF	LDA	0.16	0.18
tblVehicleEF	LDA	0.14	0.16
tblVehicleEF	LDA	0.09	0.10
tblVehicleEF	LDA	0.10	0.11
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.43	0.46
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	1.41	1.48
tblVehicleEF	LDA	5.65	5.99
tblVehicleEF	LDA	233.73	243.25
tblVehicleEF	LDA	58.25	60.34
tblVehicleEF	LDA	0.23	0.25
tblVehicleEF	LDA	0.25	0.27
tblVehicleEF	LDA	1.5080e-003	1.5410e-003
tblVehicleEF	LDA	2.3270e-003	2.3590e-003
tblVehicleEF	LDA	1.3900e-003	1.4220e-003
tblVehicleEF	LDA	2.1400e-003	2.1690e-003
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.10	0.11
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.05	0.06
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.50	0.53

tblVehicleEF	LDA	2.3560e-003	2.4530e-003
tblVehicleEF	LDA	6.8700e-004	7.1400e-004
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.10	0.11
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	0.55	0.58
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	2.43	2.76
tblVehicleEF	LDT1	5.76	6.45
tblVehicleEF	LDT1	314.37	324.05
tblVehicleEF	LDT1	73.20	74.94
tblVehicleEF	LDT1	0.26	0.30
tblVehicleEF	LDT1	0.35	0.39
tblVehicleEF	LDT1	2.7510e-003	2.9700e-003
tblVehicleEF	LDT1	4.7470e-003	5.1320e-003
tblVehicleEF	LDT1	2.5340e-003	2.7370e-003
tblVehicleEF	LDT1	4.3680e-003	4.7220e-003
tblVehicleEF	LDT1	0.48	0.52
tblVehicleEF	LDT1	0.60	0.65
tblVehicleEF	LDT1	0.32	0.34
tblVehicleEF	LDT1	0.06	0.07
tblVehicleEF	LDT1	0.41	0.43
tblVehicleEF	LDT1	0.39	0.44
tblVehicleEF	LDT1	3.1780e-003	3.2800e-003
tblVehicleEF	LDT1	8.3400e-004	8.6400e-004
tblVehicleEF	LDT1	0.48	0.52
tblVehicleEF	LDT1	0.60	0.65

tblVehicleEF	LDT1	0.32	0.34
tblVehicleEF	LDT1	0.08	0.10
tblVehicleEF	LDT1	0.41	0.43
tblVehicleEF	LDT1	0.43	0.49
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	3.10	3.52
tblVehicleEF	LDT1	5.99	6.72
tblVehicleEF	LDT1	347.37	357.92
tblVehicleEF	LDT1	73.20	74.94
tblVehicleEF	LDT1	0.25	0.28
tblVehicleEF	LDT1	0.37	0.41
tblVehicleEF	LDT1	2.7510e-003	2.9700e-003
tblVehicleEF	LDT1	4.7470e-003	5.1320e-003
tblVehicleEF	LDT1	2.5340e-003	2.7370e-003
tblVehicleEF	LDT1	4.3680e-003	4.7220e-003
tblVehicleEF	LDT1	1.02	1.09
tblVehicleEF	LDT1	0.81	0.87
tblVehicleEF	LDT1	0.52	0.55
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.42	0.45
tblVehicleEF	LDT1	0.38	0.42
tblVehicleEF	LDT1	3.5190e-003	3.6310e-003
tblVehicleEF	LDT1	8.3700e-004	8.6800e-004
tblVehicleEF	LDT1	1.02	1.09
tblVehicleEF	LDT1	0.81	0.87
tblVehicleEF	LDT1	0.52	0.55
tblVehicleEF	LDT1	0.10	0.12
tblVehicleEF	LDT1	0.42	0.45
tblVehicleEF	LDT1	0.41	0.47

tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	2.07	2.35
tblVehicleEF	LDT1	6.83	7.65
tblVehicleEF	LDT1	291.33	300.40
tblVehicleEF	LDT1	73.20	74.94
tblVehicleEF	LDT1	0.27	0.30
tblVehicleEF	LDT1	0.37	0.41
tblVehicleEF	LDT1	2.7510e-003	2.9700e-003
tblVehicleEF	LDT1	4.7470e-003	5.1320e-003
tblVehicleEF	LDT1	2.5340e-003	2.7370e-003
tblVehicleEF	LDT1	4.3680e-003	4.7220e-003
tblVehicleEF	LDT1	0.20	0.22
tblVehicleEF	LDT1	0.54	0.58
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.45	0.48
tblVehicleEF	LDT1	0.47	0.53
tblVehicleEF	LDT1	2.9420e-003	3.0380e-003
tblVehicleEF	LDT1	8.5300e-004	8.8600e-004
tblVehicleEF	LDT1	0.20	0.22
tblVehicleEF	LDT1	0.54	0.58
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.45	0.48
tblVehicleEF	LDT1	0.51	0.58
tblVehicleEF	LDT2	8.6270e-003	9.7140e-003
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	1.06	1.16
tblVehicleEF	LDT2	2.37	2.69

tblVehicleEF	LDT2	355.48	367.74
tblVehicleEF	LDT2	82.54	85.04
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.23	0.27
tblVehicleEF	LDT2	1.5560e-003	1.5800e-003
tblVehicleEF	LDT2	2.5750e-003	2.6350e-003
tblVehicleEF	LDT2	1.4310e-003	1.4530e-003
tblVehicleEF	LDT2	2.3680e-003	2.4240e-003
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.21	0.23
tblVehicleEF	LDT2	0.12	0.13
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.15	0.18
tblVehicleEF	LDT2	3.5660e-003	3.6900e-003
tblVehicleEF	LDT2	8.6600e-004	8.9700e-004
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.21	0.23
tblVehicleEF	LDT2	0.12	0.13
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.17	0.19
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	1.36	1.50
tblVehicleEF	LDT2	2.44	2.78
tblVehicleEF	LDT2	393.94	407.50
tblVehicleEF	LDT2	82.54	85.04
tblVehicleEF	LDT2	0.12	0.13
tblVehicleEF	LDT2	0.25	0.29

tblVehicleEF	LDT2	1.5560e-003	1.5800e-003
tblVehicleEF	LDT2	2.5750e-003	2.6350e-003
tblVehicleEF	LDT2	1.4310e-003	1.4530e-003
tblVehicleEF	LDT2	2.3680e-003	2.4240e-003
tblVehicleEF	LDT2	0.33	0.36
tblVehicleEF	LDT2	0.27	0.30
tblVehicleEF	LDT2	0.19	0.20
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.14	0.15
tblVehicleEF	LDT2	0.14	0.16
tblVehicleEF	LDT2	3.9540e-003	4.0920e-003
tblVehicleEF	LDT2	8.6700e-004	8.9800e-004
tblVehicleEF	LDT2	0.33	0.36
tblVehicleEF	LDT2	0.27	0.30
tblVehicleEF	LDT2	0.19	0.20
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	0.14	0.15
tblVehicleEF	LDT2	0.16	0.18
tblVehicleEF	LDT2	7.6450e-003	8.6070e-003
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.88	0.97
tblVehicleEF	LDT2	2.80	3.19
tblVehicleEF	LDT2	328.63	339.98
tblVehicleEF	LDT2	82.54	85.04
tblVehicleEF	LDT2	0.13	0.14
tblVehicleEF	LDT2	0.24	0.28
tblVehicleEF	LDT2	1.5560e-003	1.5800e-003
tblVehicleEF	LDT2	2.5750e-003	2.6350e-003
tblVehicleEF	LDT2	1.4310e-003	1.4530e-003
tblVehicleEF	LDT2	2.3680e-003	2.4240e-003

tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.19	0.21
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.18	0.21
tblVehicleEF	LDT2	3.2950e-003	3.4100e-003
tblVehicleEF	LDT2	8.7400e-004	9.0600e-004
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.19	0.21
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.15	0.16
tblVehicleEF	LDT2	0.20	0.23
tblVehicleEF	LHD1	5.8790e-003	6.0230e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	1.29	1.39
tblVehicleEF	LHD1	2.86	3.01
tblVehicleEF	LHD1	9.48	9.49
tblVehicleEF	LHD1	597.95	603.06
tblVehicleEF	LHD1	26.97	27.39
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	2.63	2.79
tblVehicleEF	LHD1	1.09	1.11
tblVehicleEF	LHD1	1.1420e-003	1.1440e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.1100e-004	9.6500e-004

tblVehicleEF	LHD1	1.0920e-003	1.0940e-003
tblVehicleEF	LHD1	2.5900e-003	2.5830e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	8.3800e-004	8.8800e-004
tblVehicleEF	LHD1	7.0800e-003	7.2220e-003
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.1200e-003	3.1510e-003
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.48	0.47
tblVehicleEF	LHD1	0.31	0.32
tblVehicleEF	LHD1	9.4000e-005	9.5000e-005
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tblVehicleEF	LHD1	7.0800e-003	7.2220e-003
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	3.1200e-003	3.1510e-003
tblVehicleEF	LHD1	0.12	0.13
tblVehicleEF	LHD1	0.48	0.47
tblVehicleEF	LHD1	0.34	0.35
tblVehicleEF	LHD1	5.8790e-003	6.0230e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	1.31	1.41
tblVehicleEF	LHD1	2.78	2.92
tblVehicleEF	LHD1	9.48	9.49
tblVehicleEF	LHD1	597.95	603.06
tblVehicleEF	LHD1	26.97	27.39

tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	2.38	2.52
tblVehicleEF	LHD1	1.07	1.09
tblVehicleEF	LHD1	1.1420e-003	1.1440e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.1100e-004	9.6500e-004
tblVehicleEF	LHD1	1.0920e-003	1.0940e-003
tblVehicleEF	LHD1	2.5900e-003	2.5830e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	8.3800e-004	8.8800e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.19	0.19
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	4.8870e-003	4.9640e-003
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.49	0.49
tblVehicleEF	LHD1	0.30	0.31
tblVehicleEF	LHD1	9.4000e-005	9.5000e-005
tblVehicleEF	LHD1	5.8560e-003	5.9090e-003
tblVehicleEF	LHD1	3.2300e-004	3.3000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.19	0.19
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	4.8870e-003	4.9640e-003
tblVehicleEF	LHD1	0.12	0.13
tblVehicleEF	LHD1	0.49	0.49
tblVehicleEF	LHD1	0.33	0.34
tblVehicleEF	LHD1	5.8790e-003	6.0230e-003
tblVehicleEF	LHD1	0.01	0.02

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.15	0.15
tblVehicleEF	LHD1	1.26	1.36
tblVehicleEF	LHD1	3.07	3.22
tblVehicleEF	LHD1	9.48	9.49
tblVehicleEF	LHD1	597.95	603.06
tblVehicleEF	LHD1	26.97	27.39
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	2.66	2.82
tblVehicleEF	LHD1	1.14	1.17
tblVehicleEF	LHD1	1.1420e-003	1.1440e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	9.1100e-004	9.6500e-004
tblVehicleEF	LHD1	1.0920e-003	1.0940e-003
tblVehicleEF	LHD1	2.5900e-003	2.5830e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	8.3800e-004	8.8800e-004
tblVehicleEF	LHD1	3.1900e-003	3.2630e-003
tblVehicleEF	LHD1	0.14	0.14
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.1770e-003	1.1760e-003
tblVehicleEF	LHD1	0.10	0.10
tblVehicleEF	LHD1	0.51	0.50
tblVehicleEF	LHD1	0.32	0.34
tblVehicleEF	LHD1	9.4000e-005	9.5000e-005
tblVehicleEF	LHD1	5.8550e-003	5.9080e-003
tblVehicleEF	LHD1	3.2800e-004	3.3500e-004
tblVehicleEF	LHD1	3.1900e-003	3.2630e-003
tblVehicleEF	LHD1	0.14	0.14

tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.1770e-003	1.1760e-003
tblVehicleEF	LHD1	0.12	0.13
tblVehicleEF	LHD1	0.51	0.50
tblVehicleEF	LHD1	0.35	0.37
tblVehicleEF	LHD2	4.5200e-003	4.7000e-003
tblVehicleEF	LHD2	5.3090e-003	6.1210e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.52	0.59
tblVehicleEF	LHD2	1.52	1.65
tblVehicleEF	LHD2	14.34	14.37
tblVehicleEF	LHD2	606.51	613.02
tblVehicleEF	LHD2	24.52	25.00
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.55	1.76
tblVehicleEF	LHD2	0.66	0.70
tblVehicleEF	LHD2	1.3230e-003	1.3340e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.4800e-004	4.8300e-004
tblVehicleEF	LHD2	1.2650e-003	1.2760e-003
tblVehicleEF	LHD2	2.6860e-003	2.6810e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.1200e-004	4.4500e-004
tblVehicleEF	LHD2	3.0440e-003	3.2950e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4190e-003	1.5090e-003
tblVehicleEF	LHD2	0.05	0.06

tblVehicleEF	LHD2	0.15	0.16
tblVehicleEF	LHD2	0.15	0.17
tblVehicleEF	LHD2	1.4000e-004	1.4100e-004
tblVehicleEF	LHD2	5.9010e-003	5.9670e-003
tblVehicleEF	LHD2	2.7400e-004	2.8100e-004
tblVehicleEF	LHD2	3.0440e-003	3.2950e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4190e-003	1.5090e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.15	0.16
tblVehicleEF	LHD2	0.17	0.18
tblVehicleEF	LHD2	4.5200e-003	4.7000e-003
tblVehicleEF	LHD2	5.3630e-003	6.1860e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.52	0.59
tblVehicleEF	LHD2	1.48	1.61
tblVehicleEF	LHD2	14.34	14.37
tblVehicleEF	LHD2	606.51	613.02
tblVehicleEF	LHD2	24.52	25.00
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.40	1.59
tblVehicleEF	LHD2	0.65	0.68
tblVehicleEF	LHD2	1.3230e-003	1.3340e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.4800e-004	4.8300e-004
tblVehicleEF	LHD2	1.2650e-003	1.2760e-003
tblVehicleEF	LHD2	2.6860e-003	2.6810e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.1200e-004	4.4500e-004
tblVehicleEF	LHD2	6.2200e-003	6.7340e-003
tblVehicleEF	LHD2	0.08	0.09
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.2080e-003	2.3670e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.15	0.17
tblVehicleEF	LHD2	0.15	0.16
tblVehicleEF	LHD2	1.4000e-004	1.4100e-004
tblVehicleEF	LHD2	5.9010e-003	5.9670e-003
tblVehicleEF	LHD2	2.7300e-004	2.8000e-004
tblVehicleEF	LHD2	6.2200e-003	6.7340e-003
tblVehicleEF	LHD2	0.08	0.09
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.2080e-003	2.3670e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.15	0.17
tblVehicleEF	LHD2	0.16	0.18
tblVehicleEF	LHD2	4.5200e-003	4.7000e-003
tblVehicleEF	LHD2	5.2110e-003	6.0030e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.51	0.58
tblVehicleEF	LHD2	1.63	1.77
tblVehicleEF	LHD2	14.34	14.37
tblVehicleEF	LHD2	606.51	613.02
tblVehicleEF	LHD2	24.52	25.00
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.56	1.78

tblVehicleEF	LHD2	0.69	0.73
tblVehicleEF	LHD2	1.3230e-003	1.3340e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.4800e-004	4.8300e-004
tblVehicleEF	LHD2	1.2650e-003	1.2760e-003
tblVehicleEF	LHD2	2.6860e-003	2.6810e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.1200e-004	4.4500e-004
tblVehicleEF	LHD2	1.3430e-003	1.4610e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.2900e-004	5.5500e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.16	0.17
tblVehicleEF	LHD2	0.16	0.18
tblVehicleEF	LHD2	1.4000e-004	1.4100e-004
tblVehicleEF	LHD2	5.9010e-003	5.9660e-003
tblVehicleEF	LHD2	2.7600e-004	2.8300e-004
tblVehicleEF	LHD2	1.3430e-003	1.4610e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.2900e-004	5.5500e-004
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.16	0.17
tblVehicleEF	LHD2	0.17	0.19
tblVehicleEF	MCY	0.39	0.39
tblVehicleEF	MCY	0.15	0.15
tblVehicleEF	MCY	19.04	19.51
tblVehicleEF	MCY	9.49	9.49

tblVehicleEF	MCY	159.42	158.89
tblVehicleEF	MCY	45.69	46.14
tblVehicleEF	MCY	1.11	1.12
tblVehicleEF	MCY	0.30	0.30
tblVehicleEF	MCY	1.6860e-003	1.6390e-003
tblVehicleEF	MCY	3.5670e-003	3.6420e-003
tblVehicleEF	MCY	1.5780e-003	1.5350e-003
tblVehicleEF	MCY	3.3610e-003	3.4370e-003
tblVehicleEF	MCY	2.67	2.68
tblVehicleEF	MCY	1.10	1.11
tblVehicleEF	MCY	1.64	1.64
tblVehicleEF	MCY	1.97	1.99
tblVehicleEF	MCY	0.47	0.48
tblVehicleEF	MCY	1.98	2.00
tblVehicleEF	MCY	1.9620e-003	1.9640e-003
tblVehicleEF	MCY	6.7000e-004	6.7500e-004
tblVehicleEF	MCY	2.67	2.68
tblVehicleEF	MCY	1.10	1.11
tblVehicleEF	MCY	1.64	1.64
tblVehicleEF	MCY	2.44	2.45
tblVehicleEF	MCY	0.47	0.48
tblVehicleEF	MCY	2.16	2.17
tblVehicleEF	MCY	0.40	0.39
tblVehicleEF	MCY	0.14	0.14
tblVehicleEF	MCY	21.03	21.56
tblVehicleEF	MCY	9.53	9.56
tblVehicleEF	MCY	159.42	158.89
tblVehicleEF	MCY	45.69	46.14
tblVehicleEF	MCY	0.91	0.92
tblVehicleEF	MCY	0.29	0.29

tblVehicleEF	MCY	1.6860e-003	1.6390e-003
tblVehicleEF	MCY	3.5670e-003	3.6420e-003
tblVehicleEF	MCY	1.5780e-003	1.5350e-003
tblVehicleEF	MCY	3.3610e-003	3.4370e-003
tblVehicleEF	MCY	5.62	5.64
tblVehicleEF	MCY	1.77	1.78
tblVehicleEF	MCY	2.98	2.99
tblVehicleEF	MCY	2.00	2.02
tblVehicleEF	MCY	0.48	0.49
tblVehicleEF	MCY	1.90	1.91
tblVehicleEF	MCY	1.9940e-003	1.9970e-003
tblVehicleEF	MCY	6.6800e-004	6.7300e-004
tblVehicleEF	MCY	5.62	5.64
tblVehicleEF	MCY	1.77	1.78
tblVehicleEF	MCY	2.98	2.99
tblVehicleEF	MCY	2.47	2.48
tblVehicleEF	MCY	0.48	0.49
tblVehicleEF	MCY	2.07	2.08
tblVehicleEF	MCY	0.40	0.39
tblVehicleEF	MCY	0.17	0.17
tblVehicleEF	MCY	19.07	19.55
tblVehicleEF	MCY	10.54	10.51
tblVehicleEF	MCY	159.42	158.89
tblVehicleEF	MCY	45.69	46.14
tblVehicleEF	MCY	1.19	1.19
tblVehicleEF	MCY	0.32	0.32
tblVehicleEF	MCY	1.6860e-003	1.6390e-003
tblVehicleEF	MCY	3.5670e-003	3.6420e-003
tblVehicleEF	MCY	1.5780e-003	1.5350e-003
tblVehicleEF	MCY	3.3610e-003	3.4370e-003

tblVehicleEF	MCY	1.16	1.16
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.37	0.37
tblVehicleEF	MCY	2.02	2.05
tblVehicleEF	MCY	0.51	0.52
tblVehicleEF	MCY	2.30	2.32
tblVehicleEF	MCY	1.9640e-003	1.9670e-003
tblVehicleEF	MCY	6.9700e-004	7.0200e-004
tblVehicleEF	MCY	1.16	1.16
tblVehicleEF	MCY	0.88	0.89
tblVehicleEF	MCY	0.37	0.37
tblVehicleEF	MCY	2.50	2.51
tblVehicleEF	MCY	0.51	0.52
tblVehicleEF	MCY	2.50	2.52
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	2.06	2.26
tblVehicleEF	MDV	4.38	4.73
tblVehicleEF	MDV	497.64	510.02
tblVehicleEF	MDV	112.56	114.90
tblVehicleEF	MDV	0.29	0.32
tblVehicleEF	MDV	0.50	0.54
tblVehicleEF	MDV	1.7060e-003	1.7350e-003
tblVehicleEF	MDV	2.5680e-003	2.6280e-003
tblVehicleEF	MDV	1.5760e-003	1.6040e-003
tblVehicleEF	MDV	2.3630e-003	2.4190e-003
tblVehicleEF	MDV	0.23	0.23
tblVehicleEF	MDV	0.31	0.31
tblVehicleEF	MDV	0.18	0.18
tblVehicleEF	MDV	0.05	0.06

tblVehicleEF	MDV	0.21	0.21
tblVehicleEF	MDV	0.31	0.35
tblVehicleEF	MDV	4.9990e-003	5.1260e-003
tblVehicleEF	MDV	1.2030e-003	1.2330e-003
tblVehicleEF	MDV	0.23	0.23
tblVehicleEF	MDV	0.31	0.31
tblVehicleEF	MDV	0.18	0.18
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.21	0.21
tblVehicleEF	MDV	0.34	0.38
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	2.65	2.90
tblVehicleEF	MDV	4.51	4.87
tblVehicleEF	MDV	549.72	563.39
tblVehicleEF	MDV	112.56	114.90
tblVehicleEF	MDV	0.28	0.30
tblVehicleEF	MDV	0.53	0.57
tblVehicleEF	MDV	1.7060e-003	1.7350e-003
tblVehicleEF	MDV	2.5680e-003	2.6280e-003
tblVehicleEF	MDV	1.5760e-003	1.6040e-003
tblVehicleEF	MDV	2.3630e-003	2.4190e-003
tblVehicleEF	MDV	0.47	0.47
tblVehicleEF	MDV	0.39	0.40
tblVehicleEF	MDV	0.28	0.28
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.22	0.22
tblVehicleEF	MDV	0.29	0.32
tblVehicleEF	MDV	5.5290e-003	5.6690e-003
tblVehicleEF	MDV	1.2040e-003	1.2340e-003

tblVehicleEF	MDV	0.47	0.47
tblVehicleEF	MDV	0.39	0.40
tblVehicleEF	MDV	0.28	0.28
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.22	0.22
tblVehicleEF	MDV	0.32	0.35
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	1.74	1.92
tblVehicleEF	MDV	5.17	5.56
tblVehicleEF	MDV	461.27	472.75
tblVehicleEF	MDV	112.56	114.90
tblVehicleEF	MDV	0.29	0.32
tblVehicleEF	MDV	0.52	0.57
tblVehicleEF	MDV	1.7060e-003	1.7350e-003
tblVehicleEF	MDV	2.5680e-003	2.6280e-003
tblVehicleEF	MDV	1.5760e-003	1.6040e-003
tblVehicleEF	MDV	2.3630e-003	2.4190e-003
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.28	0.29
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	0.23	0.23
tblVehicleEF	MDV	0.37	0.41
tblVehicleEF	MDV	4.6310e-003	4.7490e-003
tblVehicleEF	MDV	1.2170e-003	1.2480e-003
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.28	0.29
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.07	0.08

tblVehicleEF	MDV	0.23	0.23
tblVehicleEF	MDV	0.41	0.45
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	7.53	10.43
tblVehicleEF	MH	10.66	12.50
tblVehicleEF	MH	972.96	974.84
tblVehicleEF	MH	62.19	69.95
tblVehicleEF	MH	1.86	2.03
tblVehicleEF	MH	1.45	1.50
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.8660e-003	2.9560e-003
tblVehicleEF	MH	3.1940e-003	3.1880e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.7160e-003	2.7550e-003
tblVehicleEF	MH	4.24	4.71
tblVehicleEF	MH	0.17	0.19
tblVehicleEF	MH	1.30	1.45
tblVehicleEF	MH	0.22	0.31
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.63	0.83
tblVehicleEF	MH	9.7600e-003	9.8290e-003
tblVehicleEF	MH	8.0900e-004	9.2200e-004
tblVehicleEF	MH	4.24	4.71
tblVehicleEF	MH	0.17	0.19
tblVehicleEF	MH	1.30	1.45
tblVehicleEF	MH	0.32	0.41
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.69	0.91

tblVehicleEF	MH	0.09	0.10
tblVehicleEF	MH	0.04	0.06
tblVehicleEF	MH	7.71	10.96
tblVehicleEF	MH	10.09	12.22
tblVehicleEF	MH	972.96	974.84
tblVehicleEF	MH	62.19	69.95
tblVehicleEF	MH	1.60	1.74
tblVehicleEF	MH	1.42	1.47
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.8660e-003	2.9560e-003
tblVehicleEF	MH	3.1940e-003	3.1880e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.7160e-003	2.7550e-003
tblVehicleEF	MH	8.87	9.88
tblVehicleEF	MH	0.21	0.23
tblVehicleEF	MH	1.96	2.17
tblVehicleEF	MH	0.23	0.31
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.61	0.82
tblVehicleEF	MH	9.7630e-003	9.8380e-003
tblVehicleEF	MH	7.9900e-004	9.1700e-004
tblVehicleEF	MH	8.87	9.88
tblVehicleEF	MH	0.21	0.23
tblVehicleEF	MH	1.96	2.17
tblVehicleEF	MH	0.33	0.43
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.66	0.89
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.05	0.07

tblVehicleEF	MH	7.20	10.11
tblVehicleEF	MH	11.97	13.75
tblVehicleEF	MH	972.96	974.84
tblVehicleEF	MH	62.19	69.95
tblVehicleEF	MH	1.94	2.12
tblVehicleEF	MH	1.52	1.58
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.8660e-003	2.9560e-003
tblVehicleEF	MH	3.1940e-003	3.1880e-003
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.7160e-003	2.7550e-003
tblVehicleEF	MH	2.07	2.29
tblVehicleEF	MH	0.17	0.19
tblVehicleEF	MH	0.53	0.58
tblVehicleEF	MH	0.21	0.30
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.68	0.89
tblVehicleEF	MH	9.7550e-003	9.8240e-003
tblVehicleEF	MH	8.3100e-004	9.4300e-004
tblVehicleEF	MH	2.07	2.29
tblVehicleEF	MH	0.17	0.19
tblVehicleEF	MH	0.53	0.58
tblVehicleEF	MH	0.30	0.40
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.75	0.97
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	9.2220e-003	0.01
tblVehicleEF	MHD	0.09	0.10
tblVehicleEF	MHD	0.44	0.50

tblVehicleEF	MHD	0.63	0.86
tblVehicleEF	MHD	10.70	11.63
tblVehicleEF	MHD	140.24	141.70
tblVehicleEF	MHD	1,053.22	1,053.34
tblVehicleEF	MHD	61.52	62.11
tblVehicleEF	MHD	0.65	0.91
tblVehicleEF	MHD	1.15	1.75
tblVehicleEF	MHD	11.26	11.30
tblVehicleEF	MHD	3.0170e-003	4.8280e-003
tblVehicleEF	MHD	9.8340e-003	0.05
tblVehicleEF	MHD	1.1780e-003	1.2870e-003
tblVehicleEF	MHD	2.8870e-003	4.6190e-003
tblVehicleEF	MHD	9.4030e-003	0.05
tblVehicleEF	MHD	1.0830e-003	1.1830e-003
tblVehicleEF	MHD	5.1190e-003	5.6720e-003
tblVehicleEF	MHD	0.12	0.13
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	2.3090e-003	2.5260e-003
tblVehicleEF	MHD	0.04	0.08
tblVehicleEF	MHD	0.07	0.08
tblVehicleEF	MHD	0.67	0.73
tblVehicleEF	MHD	1.3510e-003	1.3650e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	8.0400e-004	8.2700e-004
tblVehicleEF	MHD	5.1190e-003	5.6720e-003
tblVehicleEF	MHD	0.12	0.13
tblVehicleEF	MHD	0.05	0.06
tblVehicleEF	MHD	2.3090e-003	2.5260e-003
tblVehicleEF	MHD	0.06	0.10
tblVehicleEF	MHD	0.07	0.08

tblVehicleEF	MHD	0.74	0.80
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	9.3570e-003	0.01
tblVehicleEF	MHD	0.09	0.10
tblVehicleEF	MHD	0.32	0.36
tblVehicleEF	MHD	0.63	0.87
tblVehicleEF	MHD	10.42	11.32
tblVehicleEF	MHD	148.54	150.09
tblVehicleEF	MHD	1,053.22	1,053.34
tblVehicleEF	MHD	61.52	62.11
tblVehicleEF	MHD	0.67	0.94
tblVehicleEF	MHD	1.03	1.57
tblVehicleEF	MHD	11.22	11.27
tblVehicleEF	MHD	2.5440e-003	4.0700e-003
tblVehicleEF	MHD	9.8340e-003	0.05
tblVehicleEF	MHD	1.1780e-003	1.2870e-003
tblVehicleEF	MHD	2.4340e-003	3.8940e-003
tblVehicleEF	MHD	9.4030e-003	0.05
tblVehicleEF	MHD	1.0830e-003	1.1830e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.16	0.17
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	3.6900e-003	4.0590e-003
tblVehicleEF	MHD	0.04	0.08
tblVehicleEF	MHD	0.08	0.08
tblVehicleEF	MHD	0.66	0.71
tblVehicleEF	MHD	1.4290e-003	1.4440e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.9900e-004	8.2100e-004
tblVehicleEF	MHD	0.01	0.01

tblVehicleEF	MHD	0.16	0.17
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	3.6900e-003	4.0590e-003
tblVehicleEF	MHD	0.06	0.10
tblVehicleEF	MHD	0.08	0.08
tblVehicleEF	MHD	0.72	0.78
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	8.9590e-003	0.01
tblVehicleEF	MHD	0.10	0.10
tblVehicleEF	MHD	0.61	0.69
tblVehicleEF	MHD	0.61	0.84
tblVehicleEF	MHD	11.44	12.44
tblVehicleEF	MHD	128.77	130.11
tblVehicleEF	MHD	1,053.22	1,053.34
tblVehicleEF	MHD	61.52	62.11
tblVehicleEF	MHD	0.62	0.87
tblVehicleEF	MHD	1.17	1.77
tblVehicleEF	MHD	11.34	11.40
tblVehicleEF	MHD	3.6710e-003	5.8750e-003
tblVehicleEF	MHD	9.8340e-003	0.05
tblVehicleEF	MHD	1.1780e-003	1.2870e-003
tblVehicleEF	MHD	3.5130e-003	5.6200e-003
tblVehicleEF	MHD	9.4030e-003	0.05
tblVehicleEF	MHD	1.0830e-003	1.1830e-003
tblVehicleEF	MHD	2.2620e-003	2.5090e-003
tblVehicleEF	MHD	0.11	0.11
tblVehicleEF	MHD	0.04	0.05
tblVehicleEF	MHD	8.1000e-004	8.7300e-004
tblVehicleEF	MHD	0.04	0.08
tblVehicleEF	MHD	0.08	0.08

tblVehicleEF	MHD	0.71	0.77
tblVehicleEF	MHD	1.2430e-003	1.2560e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	8.1700e-004	8.4000e-004
tblVehicleEF	MHD	2.2620e-003	2.5090e-003
tblVehicleEF	MHD	0.11	0.11
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	MHD	8.1000e-004	8.7300e-004
tblVehicleEF	MHD	0.06	0.09
tblVehicleEF	MHD	0.08	0.08
tblVehicleEF	MHD	0.77	0.84
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	7.3200e-003	8.6070e-003
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.31	0.32
tblVehicleEF	OBUS	0.50	0.59
tblVehicleEF	OBUS	6.94	7.44
tblVehicleEF	OBUS	161.39	158.79
tblVehicleEF	OBUS	1,106.05	1,111.31
tblVehicleEF	OBUS	61.52	62.47
tblVehicleEF	OBUS	0.86	0.94
tblVehicleEF	OBUS	1.32	1.59
tblVehicleEF	OBUS	4.80	4.71
tblVehicleEF	OBUS	2.9100e-004	4.1300e-004
tblVehicleEF	OBUS	7.5690e-003	8.8920e-003
tblVehicleEF	OBUS	1.0260e-003	1.0570e-003
tblVehicleEF	OBUS	2.7900e-004	3.9500e-004
tblVehicleEF	OBUS	7.2320e-003	8.4980e-003
tblVehicleEF	OBUS	9.4400e-004	9.7200e-004
tblVehicleEF	OBUS	5.7820e-003	6.1360e-003

tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	2.0440e-003	2.1470e-003
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.07	0.07
tblVehicleEF	OBUS	0.47	0.51
tblVehicleEF	OBUS	1.5510e-003	1.5270e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.3900e-004	7.5700e-004
tblVehicleEF	OBUS	5.7820e-003	6.1360e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.06	0.07
tblVehicleEF	OBUS	2.0440e-003	2.1470e-003
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	0.07	0.07
tblVehicleEF	OBUS	0.52	0.55
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	7.4170e-003	8.7220e-003
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.29	0.29
tblVehicleEF	OBUS	0.51	0.60
tblVehicleEF	OBUS	6.61	7.09
tblVehicleEF	OBUS	170.09	167.32
tblVehicleEF	OBUS	1,106.05	1,111.31
tblVehicleEF	OBUS	61.52	62.47
tblVehicleEF	OBUS	0.89	0.97
tblVehicleEF	OBUS	1.19	1.44
tblVehicleEF	OBUS	4.78	4.68
tblVehicleEF	OBUS	2.4600e-004	3.4800e-004
tblVehicleEF	OBUS	7.5690e-003	8.8920e-003

tblVehicleEF	OBUS	1.0260e-003	1.0570e-003
tblVehicleEF	OBUS	2.3500e-004	3.3300e-004
tblVehicleEF	OBUS	7.2320e-003	8.4980e-003
tblVehicleEF	OBUS	9.4400e-004	9.7200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	3.0130e-003	3.1830e-003
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.07	0.08
tblVehicleEF	OBUS	0.46	0.49
tblVehicleEF	OBUS	1.6340e-003	1.6080e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.3300e-004	7.5100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.06	0.06
tblVehicleEF	OBUS	3.0130e-003	3.1830e-003
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	0.07	0.08
tblVehicleEF	OBUS	0.50	0.54
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	7.1260e-003	8.3770e-003
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	0.34	0.35
tblVehicleEF	OBUS	0.49	0.57
tblVehicleEF	OBUS	7.65	8.20
tblVehicleEF	OBUS	149.39	147.02
tblVehicleEF	OBUS	1,106.05	1,111.31
tblVehicleEF	OBUS	61.52	62.47

tblVehicleEF	OBUS	0.82	0.90
tblVehicleEF	OBUS	1.34	1.61
tblVehicleEF	OBUS	4.86	4.78
tblVehicleEF	OBUS	3.5500e-004	5.0200e-004
tblVehicleEF	OBUS	7.5690e-003	8.8920e-003
tblVehicleEF	OBUS	1.0260e-003	1.0570e-003
tblVehicleEF	OBUS	3.3900e-004	4.8000e-004
tblVehicleEF	OBUS	7.2320e-003	8.4980e-003
tblVehicleEF	OBUS	9.4400e-004	9.7200e-004
tblVehicleEF	OBUS	2.7450e-003	2.9240e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	8.2700e-004	8.6200e-004
tblVehicleEF	OBUS	0.04	0.04
tblVehicleEF	OBUS	0.07	0.08
tblVehicleEF	OBUS	0.50	0.54
tblVehicleEF	OBUS	1.4370e-003	1.4140e-003
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.5100e-004	7.7000e-004
tblVehicleEF	OBUS	2.7450e-003	2.9240e-003
tblVehicleEF	OBUS	0.03	0.03
tblVehicleEF	OBUS	0.07	0.07
tblVehicleEF	OBUS	8.2700e-004	8.6200e-004
tblVehicleEF	OBUS	0.05	0.05
tblVehicleEF	OBUS	0.07	0.08
tblVehicleEF	OBUS	0.55	0.59
tblVehicleEF	SBUS	1.01	1.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.09	0.10
tblVehicleEF	SBUS	7.67	7.54

tblVehicleEF	SBUS	1.27	1.40
tblVehicleEF	SBUS	7.82	8.14
tblVehicleEF	SBUS	1,200.70	1,211.51
tblVehicleEF	SBUS	1,077.94	1,084.83
tblVehicleEF	SBUS	45.79	44.90
tblVehicleEF	SBUS	11.24	11.89
tblVehicleEF	SBUS	4.70	5.06
tblVehicleEF	SBUS	13.92	14.13
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	7.4200e-004	7.7000e-004
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	2.6570e-003	2.6630e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	6.8300e-004	7.0800e-004
tblVehicleEF	SBUS	9.5150e-003	0.01
tblVehicleEF	SBUS	0.04	0.05
tblVehicleEF	SBUS	0.97	0.95
tblVehicleEF	SBUS	3.3860e-003	3.5890e-003
tblVehicleEF	SBUS	0.13	0.14
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.44	0.46
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	5.9400e-004	5.9100e-004
tblVehicleEF	SBUS	9.5150e-003	0.01
tblVehicleEF	SBUS	0.04	0.05
tblVehicleEF	SBUS	1.39	1.37
tblVehicleEF	SBUS	3.3860e-003	3.5890e-003

tblVehicleEF	SBUS	0.17	0.18
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.49	0.51
tblVehicleEF	SBUS	1.01	1.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	0.08	0.08
tblVehicleEF	SBUS	7.53	7.39
tblVehicleEF	SBUS	1.29	1.42
tblVehicleEF	SBUS	5.92	6.16
tblVehicleEF	SBUS	1,258.62	1,270.33
tblVehicleEF	SBUS	1,077.94	1,084.83
tblVehicleEF	SBUS	45.79	44.90
tblVehicleEF	SBUS	11.59	12.27
tblVehicleEF	SBUS	4.23	4.55
tblVehicleEF	SBUS	13.88	14.09
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	7.4200e-004	7.7000e-004
tblVehicleEF	SBUS	9.8440e-003	0.01
tblVehicleEF	SBUS	2.6570e-003	2.6630e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	6.8300e-004	7.0800e-004
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.05	0.06
tblVehicleEF	SBUS	0.96	0.95
tblVehicleEF	SBUS	4.9790e-003	5.3500e-003
tblVehicleEF	SBUS	0.13	0.14
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.38	0.40

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	5.6300e-004	5.5800e-004
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.05	0.06
tblVehicleEF	SBUS	1.39	1.36
tblVehicleEF	SBUS	4.9790e-003	5.3500e-003
tblVehicleEF	SBUS	0.17	0.18
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.42	0.43
tblVehicleEF	SBUS	1.01	1.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.11	0.12
tblVehicleEF	SBUS	7.87	7.74
tblVehicleEF	SBUS	1.24	1.36
tblVehicleEF	SBUS	11.40	11.86
tblVehicleEF	SBUS	1,120.72	1,130.29
tblVehicleEF	SBUS	1,077.94	1,084.83
tblVehicleEF	SBUS	45.79	44.90
tblVehicleEF	SBUS	10.74	11.37
tblVehicleEF	SBUS	4.76	5.13
tblVehicleEF	SBUS	13.98	14.19
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	7.4200e-004	7.7000e-004
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	2.6570e-003	2.6630e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	6.8300e-004	7.0800e-004

tblVehicleEF	SBUS	4.4480e-003	4.9570e-003
tblVehicleEF	SBUS	0.04	0.04
tblVehicleEF	SBUS	0.97	0.95
tblVehicleEF	SBUS	1.3250e-003	1.3850e-003
tblVehicleEF	SBUS	0.13	0.14
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.55	0.57
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.5400e-004	6.5300e-004
tblVehicleEF	SBUS	4.4480e-003	4.9570e-003
tblVehicleEF	SBUS	0.04	0.04
tblVehicleEF	SBUS	1.40	1.37
tblVehicleEF	SBUS	1.3250e-003	1.3850e-003
tblVehicleEF	SBUS	0.16	0.18
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.60	0.63
tblVehicleEF	UBUS	0.04	0.04
tblVehicleEF	UBUS	0.05	0.05
tblVehicleEF	UBUS	2.42	2.63
tblVehicleEF	UBUS	8.11	8.23
tblVehicleEF	UBUS	1,949.99	1,964.48
tblVehicleEF	UBUS	139.32	138.30
tblVehicleEF	UBUS	3.91	4.38
tblVehicleEF	UBUS	12.55	12.69
tblVehicleEF	UBUS	0.50	0.51
tblVehicleEF	UBUS	0.07	0.08
tblVehicleEF	UBUS	1.2750e-003	1.2290e-003
tblVehicleEF	UBUS	0.22	0.22
tblVehicleEF	UBUS	0.06	0.07

tblVehicleEF	UBUS	1.1720e-003	1.1300e-003
tblVehicleEF	UBUS	7.6680e-003	7.8330e-003
tblVehicleEF	UBUS	0.07	0.07
tblVehicleEF	UBUS	3.8110e-003	3.8550e-003
tblVehicleEF	UBUS	0.22	0.25
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	0.72	0.74
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	1.5420e-003	1.5340e-003
tblVehicleEF	UBUS	7.6680e-003	7.8330e-003
tblVehicleEF	UBUS	0.07	0.07
tblVehicleEF	UBUS	3.8110e-003	3.8550e-003
tblVehicleEF	UBUS	0.28	0.31
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	0.79	0.81
tblVehicleEF	UBUS	0.04	0.04
tblVehicleEF	UBUS	0.05	0.05
tblVehicleEF	UBUS	2.44	2.65
tblVehicleEF	UBUS	7.34	7.45
tblVehicleEF	UBUS	1,949.99	1,964.48
tblVehicleEF	UBUS	139.32	138.30
tblVehicleEF	UBUS	3.52	3.94
tblVehicleEF	UBUS	12.51	12.66
tblVehicleEF	UBUS	0.50	0.51
tblVehicleEF	UBUS	0.07	0.08
tblVehicleEF	UBUS	1.2750e-003	1.2290e-003
tblVehicleEF	UBUS	0.22	0.22
tblVehicleEF	UBUS	0.06	0.07
tblVehicleEF	UBUS	1.1720e-003	1.1300e-003
tblVehicleEF	UBUS	0.02	0.02

tblVehicleEF	UBUS	0.09	0.10
tblVehicleEF	UBUS	6.1500e-003	6.2570e-003
tblVehicleEF	UBUS	0.22	0.26
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	0.68	0.70
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	1.5280e-003	1.5200e-003
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	0.09	0.10
tblVehicleEF	UBUS	6.1500e-003	6.2570e-003
tblVehicleEF	UBUS	0.28	0.32
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	0.75	0.76
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.06	0.06
tblVehicleEF	UBUS	2.40	2.60
tblVehicleEF	UBUS	9.79	9.94
tblVehicleEF	UBUS	1,949.99	1,964.48
tblVehicleEF	UBUS	139.32	138.30
tblVehicleEF	UBUS	3.96	4.43
tblVehicleEF	UBUS	12.62	12.77
tblVehicleEF	UBUS	0.50	0.51
tblVehicleEF	UBUS	0.07	0.08
tblVehicleEF	UBUS	1.2750e-003	1.2290e-003
tblVehicleEF	UBUS	0.22	0.22
tblVehicleEF	UBUS	0.06	0.07
tblVehicleEF	UBUS	1.1720e-003	1.1300e-003
tblVehicleEF	UBUS	3.6450e-003	3.7410e-003
tblVehicleEF	UBUS	0.06	0.06
tblVehicleEF	UBUS	1.5410e-003	1.5480e-003

tblVehicleEF	UBUS	0.22	0.25
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	0.81	0.83
tblVehicleEF	UBUS	0.02	0.02
tblVehicleEF	UBUS	1.5710e-003	1.5640e-003
tblVehicleEF	UBUS	3.6450e-003	3.7410e-003
tblVehicleEF	UBUS	0.06	0.06
tblVehicleEF	UBUS	1.5410e-003	1.5480e-003
tblVehicleEF	UBUS	0.27	0.31
tblVehicleEF	UBUS	0.01	0.01
tblVehicleEF	UBUS	0.89	0.90
tblVehicleTrips	CC_TL	5.00	5.28
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	8.90	0.89
tblVehicleTrips	CW_TL	6.70	0.67
tblVehicleTrips	HW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	0.01

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					
2020	3.6956	47.0148	25.5638	0.1188	46.0777	1.5841	46.7497	5.0602	1.4594	5.9242			12,213.2263	1.6756	0.0000	12,235.5461

2021	3.3941	41.7960	24.8854	0.1016	58.4843	1.3820	59.8663	6.3246	1.2732	7.5978			10,240.4535	1.6706	0.0000	10,282.2182
Maximum	**3.6956**	**47.0148**	**25.5638**	**0.1188**	**58.4843**	**1.5841**	**59.8663**	**6.3246**	**1.4594**	**7.5978**			**12,213.2263**	**1.6756**	**0.0000**	**12,235.5461**

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					
2020	3.6956	47.0148	25.5638	0.1188	25.6278	1.5841	26.2997	3.0131	1.4594	4.1026			12,213.2263	1.6756	0.0000	12,235.5461
2021	3.3941	41.7960	24.8854	0.1016	32.3845	1.3820	33.7665	3.7125	1.2732	4.9857			10,240.4535	1.6706	0.0000	10,282.2182
Maximum	**3.6956**	**47.0148**	**25.5638**	**0.1188**	**32.3845**	**1.5841**	**33.7665**	**3.7125**	**1.4594**	**4.9857**			**12,213.2263**	**1.6756**	**0.0000**	**12,235.5461**

	ROG	NOx	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**	**44.52**	**0.00**	**43.66**	**40.92**	**0.00**	**32.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.10E-04	1.00E-05	1.20E-03	0.0000		0.0000	0.0000		0.0000	0.0000			2.5500e-003	1.0000e-005		2.7200e-003
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

Mobile	5.5000e-004	4.3100e-003	4.9800e-003	1.0000e-005	0.2294	1.0000e-005	0.2294	0.0229	1.0000e-005	0.0229			1.0957	1.3000e-004		1.0991
Total	**6.60E-04**	**4.32E-03**	**6.18E-03**	**1.00E-05**	**0.2294**	**1.0000e-005**	**0.2294**	**0.0229**	**1.0000e-005**	**0.0229**			**1.0982**	**1.4000e-004**	**0.0000**	**1.1018**

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	1.1000e-004	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000			2.5500e-003	1.0000e-005		2.7200e-003
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
Mobile	5.5000e-004	4.3100e-003	4.9800e-003	1.0000e-005	0.2294	1.0000e-005	0.2294	0.0229	1.0000e-005	0.0229			1.0957	1.3000e-004		1.0991
Total	**6.6000e-004**	**4.3200e-003**	**6.1800e-003**	**1.0000e-005**	**0.2294**	**1.0000e-005**	**0.2294**	**0.0229**	**1.0000e-005**	**0.0229**			**1.0982**	**1.4000e-004**	**0.0000**	**1.1018**

	ROG	NOx	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	Phase I - Site Prep & Mob	Site Preparation	1/6/2020	1/12/2020	5	5	1
2	Phase II - Stockpile Removal	Site Preparation	1/13/2020	3/9/2020	5	41	2
3	Phase III - Hot Spot Excavation	Grading	8/31/2020	3/29/2021	5	151	3
4	Phase IV - MW Install	Grading	4/5/2021	4/9/2021	5	5	4
5	Phase V - site preparation	Site Preparation	4/12/2021	4/16/2021	5	5	5

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 11.66

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase I - Site Prep & Mob	Air Compressors	0	6.00	78	0.48
Phase I - Site Prep & Mob	Bore/Drill Rigs	1	8.00	221	0.50
Phase I - Site Prep & Mob	Forklifts	1	8.00	89	0.20
Phase I - Site Prep & Mob	Off-Highway Trucks	1	1.00	402	0.38
Phase I - Site Prep & Mob	Rubber Tired Dozers	0	8.00	247	0.40
Phase I - Site Prep & Mob	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Phase II - Stockpile Removal	Excavators	1	8.00	158	0.38
Phase II - Stockpile Removal	Off-Highway Trucks	10	1.00	402	0.38
Phase II - Stockpile Removal	Pressure Washers	2	8.00	13	0.30
Phase II - Stockpile Removal	Rubber Tired Dozers	0	8.00	247	0.40
Phase II - Stockpile Removal	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Phase II - Stockpile Removal	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Phase III - Hot Spot Excavation	Crawler Tractors	1	8.00	212	0.43
Phase III - Hot Spot Excavation	Excavators	1	8.00	158	0.38
Phase III - Hot Spot Excavation	Forklifts	1	8.00	89	0.20
Phase III - Hot Spot Excavation	Graders	1	8.00	187	0.41
Phase III - Hot Spot Excavation	Off-Highway Trucks	10	1.00	402	0.38
Phase III - Hot Spot Excavation	Other Construction Equipment	1	8.00	172	0.42
Phase III - Hot Spot Excavation	Rubber Tired Dozers	0	8.00	247	0.40
Phase III - Hot Spot Excavation	Scrapers	0	8.00	367	0.48
Phase III - Hot Spot Excavation	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Phase IV - MW Install	Bore/Drill Rigs	1	8.00	221	0.50
Phase IV - MW Install	Excavators	0	8.00	158	0.38
Phase IV - MW Install	Graders	0	8.00	187	0.41
Phase IV - MW Install	Rubber Tired Dozers	0	8.00	247	0.40
Phase IV - MW Install	Scrapers	0	8.00	367	0.48
Phase IV - MW Install	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Phase V - site preparation	Off-Highway Trucks	5	1.00	402	0.38
Phase V - site preparation	Pavers	0	8.00	130	0.42
Phase V - site preparation	Paving Equipment	0	8.00	132	0.36
Phase V - site preparation	Rollers	0	8.00	80	0.38
Phase V - site preparation	Rubber Tired Dozers	0	8.00	247	0.40
Phase V - site preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Phase I - Site Prep & Mob	3	6.00	0.00	1.00	7.30	8.90	142.00	LD_Mix	HDT_Mix	HHDT
Phase II - Stockpile Removal	14	12.00	0.00	851.00	7.30	8.90	142.00	LD_Mix	HDT_Mix	HHDT
Phase III - Hot Spot Excavation	17	42.00	0.00	3,286.00	7.30	8.90	71.00	LD_Mix	HDT_Mix	HHDT
Phase IV - MW Install	1	12.00	0.00	1.00	7.30	8.90	142.00	LD_Mix	HDT_Mix	HHDT
Phase V - site preparation	6	12.00	0.00	1.00	7.30	8.90	60.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Phase I - Site Prep & Mob - 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					2.5468	0.0000	2.5468	0.2751	0.0000	0.2751			0.0000			0.0000
Off-Road	0.5044	5.6101	3.7373	0.0126		0.2269	0.2269		0.2088	0.2088			1,217.6655	0.3938		1,227.5109
Total	**0.5044**	**5.6101**	**3.7373**	**0.0126**	**2.5468**	**0.2269**	**2.7737**	**0.2751**	**0.2088**	**0.4839**			**1,217.6655**	**0.3938**		**1,227.5109**

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	4.4900e-003	0.1976	0.0286	8.9000e-004	0.4426	1.0100e-003	0.4436	0.0485	9.6000e-004	0.0494			93.2629	1.0000e-003		93.2880
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
Worker	0.0336	0.0271	0.2295	2.9000e-004	0.0333	2.3000e-004	0.0336	8.8400e-003	2.1000e-004	9.0500e-003			28.5044	2.3300e-003		28.5626
Total	**0.0381**	**0.2247**	**0.2581**	**1.1800e-003**	**0.4760**	**1.2400e-003**	**0.4772**	**0.0573**	**1.1700e-003**	**0.0585**			**121.7673**	**3.3300e-003**		**121.8506**

Mitigated Construction On-Site

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

Category	lb/day										lb/day					
Fugitive Dust					1.1715	0.0000	1.1715	0.1265	0.0000	0.1265			0.0000			0.0000
Off-Road	0.5044	5.6101	3.7373	0.0126		0.2269	0.2269		0.2088	0.2088			1,217.6655	0.3938		1,227.5109
Total	**0.5044**	**5.6101**	**3.7373**	**0.0126**	**1.1715**	**0.2269**	**1.3985**	**0.1265**	**0.2088**	**0.3353**			**1,217.6655**	**0.3938**		**1,227.5109**

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	4.4900e-003	0.1976	0.0286	8.9000e-004	0.2460	1.0100e-003	0.2470	0.0288	9.6000e-004	0.0298			93.2629	1.0000e-003		93.2880
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
Worker	0.0336	0.0271	0.2295	2.9000e-004	0.0333	2.3000e-004	0.0336	8.8400e-003	2.1000e-004	9.0500e-003			28.5044	2.3300e-003		28.5626
Total	**0.0381**	**0.2247**	**0.2581**	**1.1800e-003**	**0.2793**	**1.2400e-003**	**0.2805**	**0.0377**	**1.1700e-003**	**0.0388**			**121.7673**	**3.3300e-003**		**121.8506**

3.3 Phase II - Stockpile Removal - 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					0.0741	0.0000	0.0741	0.0112	0.0000	0.0112			0.0000			0.0000
Off-Road	1.3722	13.0425	10.7980	0.0259		0.5671	0.5671		0.5241	0.5241			2,477.3444	0.7839		2,496.9424

Total	**1.3722**	**13.0425**	**10.7980**	**0.0259**	**0.0741**	**0.5671**	**0.6412**	**0.0112**	**0.5241**	**0.5353**			**2,477.3444**	**0.7839**		**2,496.9424**

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	0.4660	20.5075	2.9705	0.0923	45.9370	0.1044	46.0414	5.0313	0.0999	5.1311			9,678.8732	0.1042		9,681.4786
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
Worker	0.0672	0.0543	0.4589	5.8000e-004	0.0667	4.6000e-004	0.0671	0.0177	4.2000e-004	0.0181			57.0087	4.6500e-003		57.1251
Total	**0.5332**	**20.5618**	**3.4294**	**0.0929**	**46.0036**	**0.1049**	**46.1085**	**5.0490**	**0.1003**	**5.1492**			**9,735.8819**	**0.1089**		**9,738.6038**

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					0.0341	0.0000	0.0341	5.1600e-003	0.0000	5.1600e-003			0.0000			0.0000
Off-Road	1.3722	13.0425	10.7980	0.0259		0.5671	0.5671		0.5241	0.5241			2,477.3444	0.7839		2,496.9424
Total	**1.3722**	**13.0425**	**10.7980**	**0.0259**	**0.0341**	**0.5671**	**0.6012**	**5.1600e-003**	**0.5241**	**0.5292**			**2,477.3444**	**0.7839**		**2,496.9424**

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	0.4660	20.5075	2.9705	0.0923	25.5270	0.1044	25.6314	2.9903	0.0999	3.0901			9,678.8732	0.1042		9,681.4786
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
Worker	0.0672	0.0543	0.4589	5.8000e-004	0.0667	4.6000e-004	0.0671	0.0177	4.2000e-004	0.0181			57.0087	4.6500e-003		57.1251
Total	**0.5332**	**20.5618**	**3.4294**	**0.0929**	**25.5937**	**0.1049**	**25.6985**	**3.0080**	**0.1003**	**3.1083**			**9,735.8819**	**0.1089**		**9,738.6038**

3.4 Phase III - Hot Spot 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					
Fugitive Dust					0.0773	0.0000	0.0773	0.0117	0.0000	0.0117			0.0000			0.0000
Off-Road	3.1856	34.8362	22.2066	0.0501		1.5270	1.5270		1.4049	1.4049			4,849.8749	1.5686		4,889.0886
Total	**3.1856**	**34.8362**	**22.2066**	**0.0501**	**0.0773**	**1.5270**	**1.6044**	**0.0117**	**1.4049**	**1.4166**			**4,849.8749**	**1.5686**		**4,889.0886**

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	0.2750	11.9887	1.7509	0.0501	40.6261	0.0555	40.6816	4.3911	0.0531	4.4442			5,248.3773	0.0908		5,250.6464
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
Worker	0.2351	0.1899	1.6063	2.0200e-003	0.2333	1.6000e-003	0.2349	0.0619	1.4700e-003	0.0634			199.5306	0.0163		199.9379
Total	**0.5100**	**12.1786**	**3.3572**	**0.0521**	**40.8594**	**0.0571**	**40.9165**	**4.4531**	**0.0546**	**4.5076**			**5,447.9079**	**0.1071**		**5,450.5843**

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					0.0356	0.0000	0.0356	5.3900e-003	0.0000	5.3900e-003			0.0000			0.0000
Off-Road	3.1856	34.8362	22.2066	0.0501		1.5270	1.5270		1.4049	1.4049			4,849.8749	1.5686		4,889.0886
Total	**3.1856**	**34.8362**	**22.2066**	**0.0501**	**0.0356**	**1.5270**	**1.5626**	**5.3900e-003**	**1.4049**	**1.4103**			**4,849.8749**	**1.5686**		**4,889.0886**

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	0.2750	11.9887	1.7509	0.0501	22.4733	0.0555	22.5288	2.5759	0.0531	2.6289			5,248.3773	0.0908		5,250.6464
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

Worker	0.2351	0.1899	1.6063	2.0200e-003	0.2333	1.6000e-003	0.2349	0.0619	1.4700e-003	0.0634			199.5306	0.0163		199.9379
Total	**0.5100**	**12.1786**	**3.3572**	**0.0521**	**22.7066**	**0.0571**	**22.7637**	**2.6378**	**0.0546**	**2.6923**			**5,447.9079**	**0.1071**		**5,450.5843**

3.4 Phase III - Hot Spot Excavation - 2021

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					0.0773	0.0000	0.0773	0.0117	0.0000	0.0117			0.0000			0.0000
Off-Road	2.9142	30.9769	21.7230	0.0501		1.3320	1.3320		1.2254	1.2254			4,848.7473	1.5682		4,887.9519
Total	**2.9142**	**30.9769**	**21.7230**	**0.0501**	**0.0773**	**1.3320**	**1.4093**	**0.0117**	**1.2254**	**1.2371**			**4,848.7473**	**1.5682**		**4,887.9519**

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	0.2605	10.6458	1.6887	0.0496	58.1736	0.0485	58.2222	6.2510	0.0464	6.2974			5,199.1302	0.0875		5,201.3166
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
Worker	0.2194	0.1732	1.4738	1.9500e-003	0.2333	1.5300e-003	0.2349	0.0619	1.4100e-003	0.0633			192.5760	0.0150		192.9498
Total	**0.4799**	**10.8191**	**3.1625**	**0.0515**	**58.4070**	**0.0501**	**58.4570**	**6.3129**	**0.0478**	**6.3607**			**5,391.7062**	**0.1024**		**5,394.2663**

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					0.0356	0.0000	0.0356	5.3900e-003	0.0000	5.3900e-003			0.0000			0.0000
Off-Road	2.9142	30.9769	21.7230	0.0501		1.3320	1.3320		1.2254	1.2254			4,848.7473	1.5682		4,887.9519
Total	**2.9142**	**30.9769**	**21.7230**	**0.0501**	**0.0356**	**1.3320**	**1.3675**	**5.3900e-003**	**1.2254**	**1.2308**			**4,848.7473**	**1.5682**		**4,887.9519**

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	0.2605	10.6458	1.6887	0.0496	32.1156	0.0485	32.1641	3.6452	0.0464	3.6916			5,199.1302	0.0875		5,201.3166
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
Worker	0.2194	0.1732	1.4738	1.9500e-003	0.2333	1.5300e-003	0.2349	0.0619	1.4100e-003	0.0633			192.5760	0.0150		192.9498
Total	**0.4799**	**10.8191**	**3.1625**	**0.0515**	**32.3489**	**0.0501**	**32.3990**	**3.7071**	**0.0478**	**3.7549**			**5,391.7062**	**0.1024**		**5,394.2663**

3.5 Phase IV - MW Install - 2021

Unmitigated Construction On-Site

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

Category	lb/day										lb/day					
Fugitive Dust					2.0000e-004	0.0000	2.0000e-004	3.0000e-005	0.0000	3.0000e-005			0.0000			0.0000
Off-Road	0.2582	3.0228	2.0740	9.4300e-003		0.0916	0.0916		0.0843	0.0843			912.0624	0.2950		919.4369
Total	**0.2582**	**3.0228**	**2.0740**	**9.4300e-003**	**2.0000e-004**	**0.0916**	**0.0918**	**3.0000e-005**	**0.0843**	**0.0843**			**912.0624**	**0.2950**		**919.4369**

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	4.2500e-003	0.1736	0.0277	8.8000e-004	0.4426	8.8000e-004	0.4435	0.0485	8.4000e-004	0.0493			92.3806	9.7000e-004		92.4048
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
Worker	0.0627	0.0495	0.4211	5.6000e-004	0.0667	4.4000e-004	0.0671	0.0177	4.0000e-004	0.0181			55.0217	4.2700e-003		55.1285
Total	**0.0669**	**0.2231**	**0.4487**	**1.4400e-003**	**0.5093**	**1.3200e-003**	**0.5106**	**0.0662**	**1.2400e-003**	**0.0674**			**147.4023**	**5.2400e-003**		**147.5333**

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					9.0000e-005	0.0000	9.0000e-005	1.0000e-005	0.0000	1.0000e-005			0.0000			0.0000
Off-Road	0.2582	3.0228	2.0740	9.4300e-003		0.0916	0.0916		0.0843	0.0843			912.0624	0.2950		919.4369

Total	**0.2582**	**3.0228**	**2.0740**	**9.4300e-003**	**9.0000e-005**	**0.0916**	**0.0917**	**1.0000e-005**	**0.0843**	**0.0843**			**912.0624**	**0.2950**		**919.4369**

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	4.2500e-003	0.1736	0.0277	8.8000e-004	0.2460	8.8000e-004	0.2469	0.0288	8.4000e-004	0.0297			92.3806	9.7000e-004		92.4048
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
Worker	0.0627	0.0495	0.4211	5.6000e-004	0.0667	4.4000e-004	0.0671	0.0177	4.0000e-004	0.0181			55.0217	4.2700e-003		55.1285
Total	**0.0669**	**0.2231**	**0.4487**	**1.4400e-003**	**0.3126**	**1.3200e-003**	**0.3140**	**0.0465**	**1.2400e-003**	**0.0478**			**147.4023**	**5.2400e-003**		**147.5333**

3.6 Phase V - site preparation - 2021

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	0.5660	5.1854	4.5130	0.0114		0.2324	0.2324		0.2138	0.2138			1,099.9770	0.3558		1,108.8708
Total	**0.5660**	**5.1854**	**4.5130**	**0.0114**	**0.0000**	**0.2324**	**0.2324**	**0.0000**	**0.2138**	**0.2138**			**1,099.9770**	**0.3558**		**1,108.8708**

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	2.1100e-003	0.0861	0.0136	3.9000e-004	0.1870	3.8000e-004	0.1874	0.0205	3.6000e-004	0.0209			40.8731	7.8000e-004		40.8925
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
Worker	0.0627	0.0495	0.4211	5.6000e-004	0.0667	4.4000e-004	0.0671	0.0177	4.0000e-004	0.0181			55.0217	4.2700e-003		55.1285
Total	**0.0648**	**0.1356**	**0.4347**	**9.5000e-004**	**0.2537**	**8.2000e-004**	**0.2545**	**0.0382**	**7.6000e-004**	**0.0389**			**95.8948**	**5.0500e-003**		**96.0210**

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	0.5660	5.1854	4.5130	0.0114		0.2324	0.2324		0.2138	0.2138			1,099.9770	0.3558		1,108.8708
Total	**0.5660**	**5.1854**	**4.5130**	**0.0114**	**0.0000**	**0.2324**	**0.2324**	**0.0000**	**0.2138**	**0.2138**			**1,099.9770**	**0.3558**		**1,108.8708**

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	2.1100e-003	0.0861	0.0136	3.9000e-004	0.1039	3.8000e-004	0.1043	0.0122	3.6000e-004	0.0125			40.8731	7.8000e-004		40.8925
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
Worker	0.0627	0.0495	0.4211	5.6000e-004	0.0667	4.4000e-004	0.0671	0.0177	4.0000e-004	0.0181			55.0217	4.2700e-003		55.1285
Total	**0.0648**	**0.1356**	**0.4347**	**9.5000e-004**	**0.1706**	**8.2000e-004**	**0.1714**	**0.0299**	**7.6000e-004**	**0.0306**			**95.8948**	**5.0500e-003**		**96.0210**

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	5.50E-04	4.31E-03	4.98E-03	1.00E-05	0.2294	1.0000e-005	0.2294	0.0229	1.0000e-005	0.0229			1.0957	1.3000e-004		1.0991
Unmitigated	5.5000e-004	4.3100e-003	4.9800e-003	1.0000e-005	0.2294	1.0000e-005	0.2294	0.0229	1.0000e-005	0.0229			1.0957	1.3000e-004		1.0991

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.23	0.00	0.00	160	160
Total	0.23	0.00	0.00	160	160

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
Other Asphalt Surfaces	0.67	5.28	0.89	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.503420	0.033264	0.160883	0.129541	0.018929	0.005318	0.019165	0.118376	0.003239	0.001168	0.005214	0.000745	0.000738

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
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

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					
Other Asphalt Surfaces	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
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**

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					
Other Asphalt Surfaces	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
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**

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	1.1000e-004	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000			2.5500e-003	1.0000e-005		2.7200e-003
Unmitigated	1.1000e-004	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000			2.5500e-003	1.0000e-005		2.7200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	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	1.1000e-004	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000			2.5500e-003	1.0000e-005		2.7200e-003
Total	**1.1000e-004**	**1.0000e-005**	**1.2000e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.5500e-003**	**1.0000e-005**		**2.7200e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	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	1.1000e-004	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000			2.5500e-003	1.0000e-005		2.7200e-003

Total	1.1000e-004	1.0000e-005	1.2000e-003	0.0000		0.0000	0.0000		0.0000	0.0000			2.5500e-003	1.0000e-005		2.7200e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B

Health Risk Assessment Data

Table 1
Project Construction Phases
Former PureGro Facility
Brawley, California

Phase	Start Date	End Date	Total Days
Site Preparation & Mobilization	1/6/2020	1/12/2020	5
Stockpile Removal	1/13/2020	3/9/2020	41
Hot Spot Excavations, Backfill, and Gravel Cover	8/31/2020	12/31/2020	89
	1/1/2021	3/29/2021	62
Monitoring Well Installation	4/5/2021	4/9/2021	5
Site Finalization & Demobilization	4/12/2021	4/16/2021	5

Table 2
Construction DPM Emissions
Former PureGro Facility
Brawley, California

Phase	Year	Exhaust PM10 (lbs/day)			Exhaust PM10 (g/s)		
		Equipment	Haul Trucks	Worker Vehicles	Equipment	Haul Trucks	Worker Vehicles
Site Preparation & Mobilization	2020	0.227	1.01E-03	2.30E-04	0.004	3.81E-07	2.98E-07
Stockpile Removal	2020	0.567	1.04E-01	4.60E-04	0.009	3.94E-05	5.97E-07
Hot Spot Excavations, Backfill, and Gravel Cover	2020	1.527	5.55E-02	1.60E-03	0.024	4.13E-05	2.08E-06
	2021	1.332	4.85E-02	1.53E-03	0.021	3.61E-05	1.99E-06
Monitoring Well Installation	2021	0.092	8.80E-04	4.40E-04	0.001	3.32E-07	5.71E-07
Site Finalization & Demobilization	2021	0.2324	3.80E-04	4.40E-04	0.004	1.43E-07	5.71E-07

Notes
1 Assumes all exhaust PM10 is diesel particulate matter (DPM)
2 Emission estimates for the entire vehicle trip. Modeled DPM risk assessment evaluates emissions to the major highway

Table 3
Construction DPM Air Concentrations
Former PureGro Facility
Brawley, California

Year	Phase	x/Q		Exhaust PM10 (g/sec)			DPM Air Concentrations (ug/m3)		
		Equipment	Vehicles	Equipment	Haul Trucks	Worker Vehicles	Equipment	Haul Trucks	Worker Vehicles
2020	Site Preparation & Mobilization	4.5	4.3	3.58E-03	3.81E-07	2.98E-07	1.60E-02	1.63E-06	1.27E-06
2020	Stockpile Removal	1.1	4.3	8.95E-03	3.94E-05	5.97E-07	9.74E-03	1.68E-04	2.55E-06
2020	Hot Spot Excavations, Backfill, and	4.5	4.3	2.41E-02	4.13E-05	2.08E-06	1.08E-01	1.76E-04	8.86E-06
2021	Gravel Cover	4.5	4.3	2.10E-02	3.61E-05	1.99E-06	9.39E-02	1.54E-04	8.49E-06
2021	Monitoring Well Installation	4.5	4.3	1.45E-03	3.32E-07	5.71E-07	6.46E-03	1.42E-06	2.44E-06
2021	Site Finalization & Demobilization	4.5	4.3	3.67E-03	1.43E-07	5.71E-07	1.64E-02	6.12E-07	2.44E-06

Table 4
Construction DPM Health Impacts
Former PureGro Facility
Brawley, California

Chemical	Avg Conc ug/m3	Cancer Potency Factor [mg/kg-day]-1	Inhale Chronic REL mg/kg-day	Exposure Duration years	Cancer Risk	Noncancer HI
DPM	3.38E-02	1.1	5	1.3	7.68E-06	6.76E-03

APPENDIX C

California Natural Diversity Database Summary

Map of Project Area

California Natural Diversity Database (CNDDB) Commercial [ds85]

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

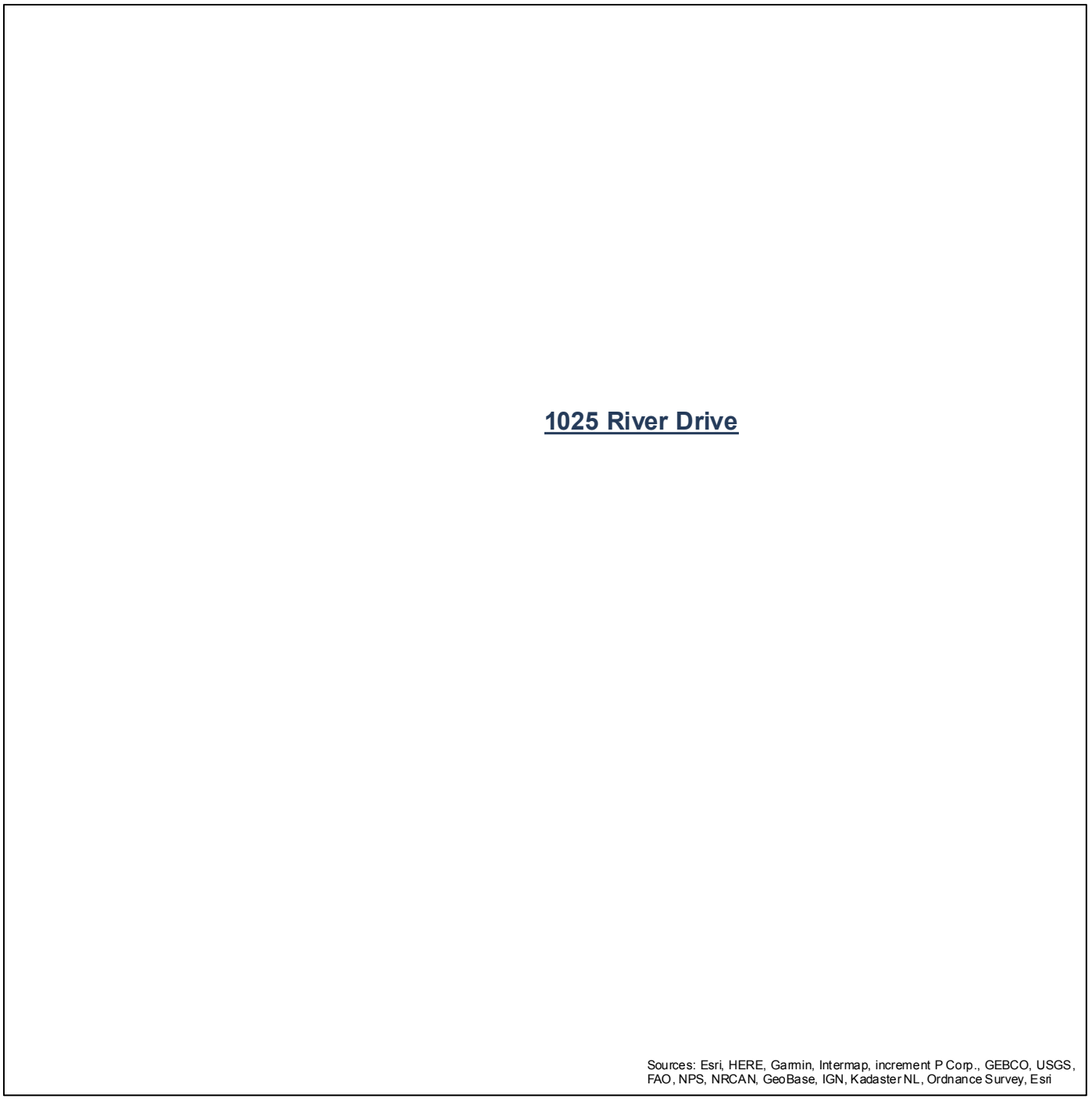
1:36,112

0 0.3 0.6 1.2 mi

0 0.5 1 2 km

N

August 23, 2019



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

Author: cnddb_com@dfg.ca.gov

Printed from http://bios.dfg.ca.gov

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Brawley (3211585))
 AND County IS (Imperial)

Map Index Number: 81571
Key Quad: El Centro (3211575)
Occurrence Number: 1647
EO Index: 82538
Element Code: ABNSB10010
Occurrence Last Updated: 2011-03-11

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G4
State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:

OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:

SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 2009-03-10
Last Survey Date: 2009-03-10
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Fair
Trend: Unknown

Location:

ALONG HWY 111, AREA SOUTH OF E HARRIS ROAD (RUBBER DRAIN 2) AND NORTH OF ROBINSON ROAD (MC CALL DRAIN 4), IMPERIAL.

Detailed Location:

ALONG ROSE LATERAL 3. MAPPED TO PROVIDED COORDINATES. 1 BURROW SITE WAS ACTUALLY A 3 BURROW COMPLEX.

Ecological:

VACANT ROADSIDE DESERT SCRUB HABITATS AMID URBAN AND AGRICULTURAL AREAS. VISIBLE DISTURBANCES INCLUDE VEHICLE TRAFFIC.

Threats:

POSSIBLY THREATENED BY VEHICLE COLLISIONS.

General:

20 BURROWS ACTIVE SOMETIME BETWEEN OCT 2008 AND MAR 2009, 3 OF WHICH HAD UNKNOWN OCCUPANCY ON 10 MAR 2009. SIX BURROWS WITH TWO OR MORE OWLS, 6 BURROWS WITH 1 OWL, AND 1 UNOCCUPIED BURROW WITH OLD SIGN.

PLSS: T15S, R14E, Sec. 03, E (S)
UTM: Zone-11 N3637897 E639419
Accuracy: specific area
Latitude/Longitude: 32.87034 / -115.50978
Area (acres): 68
Elevation (feet): -120

County Summary:

Imperial

Quad Summary:

El Centro (3211575), Brawley (3211585)

Sources:

BUT08F0022 BUTCHER, L. (INSIGNIA ENVIRONMENTAL) - FIELD SURVEY FORM AND TABULAR DATA FOR ATHENE CUNICULARIA 2008-09-29

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 81572
Key Quad: Brawley (3211585)
Occurrence Number: 1648
EO Index: 82539
Element Code: ABNSB10010
Occurrence Last Updated: 2011-02-03

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S3
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:
SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 2009-03-10
Last Survey Date: 2009-03-10
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Fair
Trend: Unknown

Location:
JUST NNW OF SR 111 AT E KEYSTONE RD (CR S27), BRAWLEY.

Detailed Location:
"183 FEET N OF THE NE CORNER OF KEYSTONE YARD." MAPPED TO PROVIDED COORDINATES.

Ecological:
VACANT ROADSIDE DESERT SCRUB HABITATS AMID URBAN AND AGRICULTURAL AREAS. VISIBLE DISTURBANCES INCLUDE VEHICLE TRAFFIC.

Threats:
POSSIBLY THREATENED BY VEHICLE COLLISIONS.

General:
3 OWLS OBSERVED AT BURROW COMPLEX SOMETIME BETWEEN OCT 2008 AND MAR 2009.

PLSS: T14S, R14E, Sec. 22, SE (S)
UTM: Zone-11 N3642768 E639259
Accuracy: 80 meters
Latitude/Longitude: 32.91428 / -115.51076
Area (acres): 0
Elevation (feet): -140

County Summary:	Quad Summary:
Imperial	Brawley (3211585)

Sources:

BUT08F0022 BUTCHER, L. (INSIGNIA ENVIRONMENTAL) - FIELD SURVEY FORM AND TABULAR DATA FOR ATHENE CUNICULARIA 2008-09-29

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 81573
Key Quad: Brawley (3211585)
Occurrence Number: 1649
EO Index: 82540
Element Code: ABNSB10010
Occurrence Last Updated: 2011-03-11

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S3
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:
SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 2009-03-10
Last Survey Date: 2009-03-10
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Fair
Trend: Unknown

Location:
ALONG SR 111, N OF W CAREY RD (LILAC DRAIN), BRAWLEY.

Detailed Location:
NORTH OF LILAC DRAIN. MAPPED TO PROVIDED COORDINATES.

Ecological:
VACANT ROADSIDE DESERT SCRUB HABITATS AMID URBAN AND AGRICULTURAL AREAS. VISIBLE DISTURBANCES INCLUDE VEHICLE TRAFFIC.

Threats:
POSSIBLY THREATENED BY VEHICLE COLLISIONS.

General:
10 BURROWS OBSERVED ACTIVE SOMETIME BETWEEN OCT 2008 AND MAR 2009, 1 OF WHICH WAS NOT ACTIVE AND 1 WITH UNKNOWN OCCUPANCY ON 10 MAR 2009: 4 BURROWS WITH 1 OWL, 4 BURROWS WITH 2 OWLS, AND 1 BURROW WITH SCAT AND FEATHERS.

PLSS: T14S, R14E, Sec. 15, S (S)
Accuracy: specific area
Area (acres): 26
UTM: Zone-11 N3644642 E639310
Latitude/Longitude: 32.93117 / -115.50992
Elevation (feet): -130

County Summary:	Quad Summary:
Imperial	Brawley (3211585)

Sources:

BUT08F0022 BUTCHER, L. (INSIGNIA ENVIRONMENTAL) - FIELD SURVEY FORM AND TABULAR DATA FOR ATHENE CUNICULARIA 2008-09-29

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 81574
Key Quad: Brawley (3211585)
Occurrence Number: 1650
EO Index: 82541
Element Code: ABNSB10010
Occurrence Last Updated: 2011-02-04

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S3
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:

OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:

SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 2009-03-10
Last Survey Date: 2009-03-10
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Fair
Trend: Unknown

Location:

ALONG SR 111, 0.4 MI S OF MALAN ST, BRAWLEY.

Detailed Location:

ALONG THE WEST SIDE OF BEST CANAL. MAPPED TO PROVIDED COORDINATES.

Ecological:

VACANT ROADSIDE DESERT SCRUB HABITATS AMID URBAN AND AGRICULTURAL AREAS. VISIBLE DISTURBANCES INCLUDE VEHICLE TRAFFIC. BURROW LOCATED ALONG CONCRETE-LINED CANAL LATERAL.

Threats:

POSSIBLY THREATENED BY VEHICLE COLLISIONS.

General:

1 NORTH-FACING BURROW WITH EVIDENCE OF CURRENT OCCUPATION OBSERVED ON 10 MAR 2009. BURROW ACTIVE DURING PERIOD OF OCT 2008 - MAR 2009.

PLSS: T14S, R14E, Sec. 03, NE (S)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N3648408 E639340
Latitude/Longitude: 32.96513 / -115.50904
Elevation (feet): -120

County Summary:	Quad Summary:
Imperial	Brawley (3211585)

Sources:

BUT08F0022 BUTCHER, L. (INSIGNIA ENVIRONMENTAL) - FIELD SURVEY FORM AND TABULAR DATA FOR ATHENE CUNICULARIA 2008-09-29

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 81575
Key Quad: Brawley (3211585)
Occurrence Number: 1651
EO Index: 82542
Element Code: ABNSB10010
Occurrence Last Updated: 2011-02-04

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S3
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:
SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 2009-03-10
Last Survey Date: 2009-03-10
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Fair
Trend: Unknown

Location:
ALONG SR 111, JUST NORTH OF MALAN ST AND SOUTH OF MAIN ST (SR 78), BRAWLEY.

Detailed Location:
ALONG THE EAST SIDE OF BEST CANAL. MAPPED TO PROVIDED COORDINATES.

Ecological:
VACANT ROADSIDE DESERT SCRUB HABITATS AMID URBAN AND AGRICULTURAL AREAS. VISIBLE DISTURBANCES INCLUDE VEHICLE TRAFFIC.

Threats:
POSSIBLY THREATENED BY VEHICLE COLLISIONS.

General:
4 ACTIVE BURROWS: 3 EAST-FACING BURROWS ALONG THE CANAL WITH 1 OWL, AND 1 WEST-FACING BURROW NEAR CULVERTS UNDER PLASTIC SHEETING WITH ONE OWL; OBSERVED SOMETIME BETWEEN OCT 2008 AND MAR 2009.

PLSS: T13S, R14E, Sec. 34, SE (S)
Accuracy: specific area
Area (acres): 14
UTM: Zone-11 N3649386 E639318
Latitude/Longitude: 32.97395 / -115.50913
Elevation (feet): -120

County Summary:
Imperial

Quad Summary:
Brawley (3211585)

Sources:
BUT08F0022 BUTCHER, L. (INSIGNIA ENVIRONMENTAL) - FIELD SURVEY FORM AND TABULAR DATA FOR ATHENE CUNICULARIA 2008-09-29

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 63282
EO Index: 63374
Key Quad: Brawley (3211585)
Element Code: ABNYF04150
Occurrence Number: 29
Occurrence Last Updated: 2005-12-01

Scientific Name: *Melanerpes uropygialis*
Common Name: Gila woodpecker

Listing Status: **Federal:** None
State: Endangered
Rare Plant Rank:

CNDDB Element Ranks: **Global:** G5
State: S1
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:

IN CALIFORNIA, INHABITS COTTONWOODS AND OTHER DESERT RIPARIAN TREES, SHADE TREES, AND DATE PALMS.

Micro Habitat:

CAVITY NESTER IN RIPARIAN TREES OR SAGUARO CACTUS.

Last Date Observed: 2001-01-21
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2001-01-21
Occurrence Rank: Poor
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

EAST OF THE NEW RIVER AND WEST OF THE INTERSECTION OF WEST "D" ST AND PINNER DRIVE, BRAWLEY.

Detailed Location:

Ecological:

OLD DATE PALM PLANTATION SURROUNDED BY RESIDENTIAL HOMES. SALT CEDAR RIPARIAN FOREST ALONG NEW RIVER. SOME DESERT SCRUB REMAINS AS UNDERSTORY, BUT SITE IS MOSTLY DISTURBED.

Threats:

SITE PROPOSED FOR RESIDENTIAL DEVELOPMENT.

General:

THIS HAS BEEN AN HISTORICALLY RELIABLE LOCATION TO SEE GILA WOODPECKERS FOR MANY YEARS. DATE PALMS SHOW NESTING CAVITIES. 1 ADULT & 1 OF UNKNOWN AGE OBSERVED 21 JAN 2001.

PLSS: T13S, R14E, Sec. 32 (S)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N3650113 E635130
Latitude/Longitude: 32.98103 / -115.55382
Elevation (feet): -104

County Summary:	Quad Summary:
Imperial	Brawley (3211585)

Sources:

HAR01F0016 HARRIS, S. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR MELANERPES UROPYGIALIS 2001-01-21

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 06299
Key Quad: Brawley (3211585)
Occurrence Number: 43
EO Index: 86587
Element Code: ABNYF04150
Occurrence Last Updated: 2012-03-22

Scientific Name: *Melanerpes uropygialis*
Common Name: Gila woodpecker

Listing Status: **Federal:** None
State: Endangered
CNDDB Element Ranks: **Global:** G5
State: S1

Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:
IN CALIFORNIA, INHABITS COTTONWOODS AND OTHER DESERT RIPARIAN TREES, SHADE TREES, AND DATE PALMS.

Micro Habitat:
CAVITY NESTER IN RIPARIAN TREES OR SAGUARO CACTUS.

Last Date Observed: 1955-12-21
Last Survey Date: 1955-12-21
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:
BRAWLEY.

Detailed Location:
EXACT COLLECTION LOCATIONS FOR MUSEUM SPECIMENS NOT GIVEN; LOCALITY STATED AS "BRAWLEY." MAPPED TO TOWN OF BRAWLEY.

Ecological:

Threats:

General:
STAGER COLLECTED 1 FEMALE (UMMZ #126798) & HOWELL COLLECTED 1 FEMALE (UMMZ #126799) 27 OCT 1940. JEWETT COLLECTED 1 FEMALE & 1 MALE (PSM #876 & 877) 16 OCT 1944. BURLEIGH COLLECTED 1 FEMALE (DMNH #46563) 21 DEC 1955.

PLSS: T13S, R14E, Sec. 33 (S)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N3650470 E637820
Latitude/Longitude: 32.98392 / -115.52499
Elevation (feet): -120

County Summary:	Quad Summary:
Imperial	Brawley (3211585)

Sources:

BUR55S0001	BURLEIGH, T. - DMNH #46563 COLLECTED AT BRAWLEY 1955-12-21
HOW40S0010	HOWELL, A. - UMMZ #126799 COLLECTED AT BRAWLEY 1940-10-27
JEW44S0001	JEWETT, S. - PSM #876 & 877 COLLECTED AT BRAWLEY 1944-10-16
STA40S0002	STAGER, K. - UMMZ #126798 COLLECTED AT BRAWLEY 1940-10-27

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 06299
Key Quad: Brawley (3211585)
Occurrence Number: 18

EO Index: 24406
Element Code: ABPBK06090
Occurrence Last Updated: 1989-08-10

Scientific Name: *Toxostoma crissale*
Common Name: Crissal thrasher

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G5
State: S3

Rare Plant Rank:

Other Lists: CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern

General Habitat:

RESIDENT OF SOUTHEASTERN DESERTS IN DESERT RIPARIAN AND DESERT WASH HABITATS.

Micro Habitat:

NESTS IN DENSE VEGETATION ALONG STREAMS/WASHES; MESQUITE, SCREWBEAN MESQUITE, IRONWOOD, CATCLAW, ACACIA, ARROWWEED, WILLOW.

Last Date Observed: 1910-12-25
Last Survey Date: 1910-12-25
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

BRAWLEY.

Detailed Location:

Ecological:

Threats:

General:

UCLA SPECIMEN #10826.

PLSS: T13S, R14E, Sec. 33, NE (S)
UTM: Zone-11 N3650470 E637820

Accuracy: 1 mile
Latitude/Longitude: 32.98392 / -115.52499

Area (acres): 0
Elevation (feet): -120

County Summary:	Quad Summary:
Imperial	Brawley (3211585)

Sources:

BLM80S0013 BLM - DESERT PLAN STAFF - COMPILATION OF HISTORIC MUSEUM SPECIMEN INFORMATION FOR TOXOSTOMA DORSALE, COLLECTED DURING THE PREPARATION OF "THE CALIFORNIA DESERT PLAN". 1980-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 06299
Key Quad: Brawley (3211585)
Occurrence Number: 1
EO Index: 58840
Element Code: AMACC05070
Occurrence Last Updated: 2004-12-21

Scientific Name: *Lasiurus xanthinus*
Common Name: western yellow bat

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G5
State: S3

Rare Plant Rank:
Other Lists: CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
WBWG_H-High Priority

General Habitat:
FOUND IN VALLEY FOOTHILL RIPARIAN, DESERT RIPARIAN, DESERT WASH, AND PALM OASIS HABITATS.

Micro Habitat:
ROOSTS IN TREES, PARTICULARLY PALMS. FORAGES OVER WATER AND AMONG TREES.

Last Date Observed: 1999-09-07
Last Survey Date: 1999-09-07
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:
BRAWLEY.

Detailed Location:
EXACT LOCATIONS NOT GIVEN. MAPPED IN THE VICINTY OF BRAWLEY.

Ecological:

Threats:

General:
COLLECTED AT "BRAWLEY:" 1 MALE 17 SEP 1981 (MVZ #181866), 1 FEMALE 7 JUN 1989 (MVZ #186301), 2 FEMALES 26 JUN 1990 (LACM #93986 & 93987), 1 FEMALE 7 SEP 1999 (MVZ #200030). COLLECTED "NEAR BRAWLEY:" 1 FEMALE 15 SEP 1987 (MVZ #181867).

PLSS: T13S, R14E, Sec. 33 (S)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N3650470 E637820
Latitude/Longitude: 32.98392 / -115.52499
Elevation (feet): -120

County Summary:	Quad Summary:
Imperial	Brawley (3211585)

Sources:

MAN04S0014	MAMMAL NETWORKED INFORMATION SYSTEM (MANIS) - PRINTOUT OF LASIURUS XANTHINUS SPECIMEN RECORDS FROM MANIS. THIS INCLUDES RECORDS FROM LACM & MVZ. 2004-12-20

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 06296
Key Quad: Brawley (3211585)
Occurrence Number: 58
EO Index: 27921
Element Code: ARACF12040
Occurrence Last Updated: 2016-07-20

Scientific Name: *Phrynosoma mcallii*
Common Name: flat-tailed horned lizard

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G3
State: S2
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_NT-Near Threatened

General Habitat:
RESTRICTED TO DESERT WASHES AND DESERT FLATS IN CENTRAL RIVERSIDE, EASTERN SAN DIEGO, AND IMPERIAL COUNTIES.

Micro Habitat:
CRITICAL HABITAT ELEMENT IS FINE SAND, INTO WHICH LIZARDS BURROW TO AVOID TEMPERATURE EXTREMES; REQUIRES VEGETATIVE COVER AND ANTS.

Last Date Observed: 1971-05-14
Last Survey Date: 1971-05-14
Owner/Manager: UNKNOWN
Presence: Possibly Extirpated
Occurrence Type: Natural/Native occurrence
Occurrence Rank: None
Trend: Unknown

Location:
100 YARDS EAST OF THE JUNCTION OF HIGHWAYS 86 & 78 ON HIGHWAY 78.

Detailed Location:
DIRECTIONS IN "LOCATION" FIELD SAME AS LOCATION STATED ON MVZ RECORD.

Ecological:

Threats:
DEVELOPMENT.

General:
1 FEMALE COLLECTED (MVZ #98182) ON 14 MAY 1971.

PLSS: T13S, R14E, Sec. 32, NE (S)
UTM: Zone-11 N3649897 E636400
Accuracy: 1/5 mile
Latitude/Longitude: 32.97893 / -115.54027
Area (acres): 0
Elevation (feet): -110

County Summary:
Imperial

Quad Summary:
Brawley (3211585)

Sources:
RUT71S0004 RUTH, S. & R. STEBBINS - MVZ #98182 COLLECTED AT 100 YDS E JUNCTION HWY. 86 ON HWY. 78 1971-05-14

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 06299
EO Index: 99133
Key Quad: Brawley (3211585)
Element Code: IIHYM24480
Occurrence Number: 217
Occurrence Last Updated: 2015-10-07

Scientific Name: *Bombus crotchii*
Common Name: Crotch bumble bee

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists:

CNDDB Element Ranks: **Global:** G3G4
State: S1S2

General Habitat:

COASTAL CALIFORNIA EAST TO THE SIERRA-CASCADE CREST AND SOUTH INTO MEXICO.

Micro Habitat:

FOOD PLANT GENERA INCLUDE ANTIRRHINUM, PHACELIA, CLARKIA, DENDROMECON, ESCHSCHOLZIA, AND ERIOGONUM.

Last Date Observed: 1948-10-29
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1948-10-29
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

BRAWLEY.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED BY CNDDB IN THE VICINITY OF THE CITY OF BRAWLEY.

Ecological:

Threats:

General:

COLLECTIONS WERE MADE IN THIS VICINITY ON 29 OCT 1948.

PLSS: T13S, R14E, Sec. 33 (S)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N3650470 E637820
Latitude/Longitude: 32.98392 / -115.52499
Elevation (feet): -120

County Summary:

Imperial

Quad Summary:

Brawley (3211585)

Sources:

HAS48S0001 HASHE, J. - UCRC ENT #289267, 289268, 289269, 289270, 289271 & 289272 COLLECTED FROM BRAWLEY 1948-10-29

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 06299
Key Quad: Brawley (3211585)
Occurrence Number: 4
EO Index: 45966
Element Code: PDEUP0D010
Occurrence Last Updated: 2010-03-10

Scientific Name: *Euphorbia abramsiana*
Common Name: Abrams' spurge

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 2B.2
Other Lists: SB_RSABG-Rancho Santa Ana Botanic Garden

CNDDB Element Ranks: **Global:** G4
State: S2

General Habitat:
MOJAVEAN DESERT SCRUB, SONORAN DESERT SCRUB.

Micro Habitat:
SANDY SITES. -45-1445 M.

Last Date Observed: 1912-10-16
Last Survey Date: 1912-10-16
Owner/Manager: UNKNOWN
Presence: Possibly Extirpated
Occurrence Type: Natural/Native occurrence
Occurrence Rank: None
Trend: Unknown

Location:
BRAWLEY, SALTON BASIN, WESTERN COLORADO DESERT.

Detailed Location:
"STREETS OF BRAWLEY."

Ecological:

Threats:

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1912 PARISH COLLECTION. NEEDS FIELDWORK; POSSIBLY EXTIRPATED?

PLSS: T13S, R14E, Sec. 33 (S)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N3650470 E637820
Latitude/Longitude: 32.98392 / -115.52499
Elevation (feet): -120

County Summary:	Quad Summary:
Imperial	Brawley (3211585)

Sources:

PAR12S0002 PARISH, S. - PARISH #8305 JEPS #51908, RSA #433514A, GH #347537, DS #115109 1912-10-16

APPENDIX D

California Air Resources Board Emissions Factor Results

Phase	Subphase	Trucks	Total Miles	District Miles						
I		1	230	71						
II		835	230	71						
		1	30	30						
		15	230	71						
III	i	60	230	71	E	1070	Import (Fill)	25,680		
	ii	12	230	71	E	215	Export	1,300		
	iii	1	230	71	E	12				
	iv	1	230	71	E	3	3136.734599	TOTAL		
	v	60	30	30	F	1082	926	230-mile	misc material, excavated soil, soil cutting	
	vi	12	30	30	F	218	20	125-miles	cap material	
	vii	225	30	30	F	4250	601	50-mile	stone, gravel	
	viii	25	30	30	F	425	821	30-mile	trees, nonhaz waste, poles, general fill, sand fill	
	ix	10	125	71						
	x	10	125	71						
	xi	495	30	30	F	8900				
	xii	495	50	50	F	8900				
	xiii	25	50	50	F	445				
	xiv	1	30	30						
	xv	81	50	50	F	1460				
	xvi	1	30	30						
IV		1	230	71						
V		1	30	30						

		Total Miles		District Miles	
Phase	Trucks	One-Way	Round Trip	One-Way	Round Trip
I	1	230	460	71	142
II	851	230	460	71	142
III	1514	49	98	40	81
IV	1	230	460	71	142
V	1	30	60	30	60

Phase	Year	Trip Type	Vehicle Type	% of Fleet		Total Round	Round Trip	Fuel Efficiency		Fuel Usage (gal)	
				Gas	Diesel			Gas	Diesel	Gas	Diesel
I	2020	Worker	LDA	67.0%	0.6%	15	15	29.7	41.5	5	0
			LDT1	6.1%	0.0%	15	15	24.5	29.0	1	0
			LDT2	24.7%	0.0%	15	15	22.0	31.7	2	0
		Hauling	HHDT	0.5%	99.5%	1	460	4.8	6.5	0	71
II		Worker	LDA	67.0%	0.6%	246	15	29.7	41.5	81	1
			LDT1	6.1%	0.0%	246	15	24.5	29.0	9	0
			LDT2	24.7%	0.0%	246	15	22.0	31.7	40	0
		Hauling	HHDT	0.5%	99.5%	851	460	4.8	6.5	422	60,038
III		Worker	LDA	67.0%	0.6%	3171	15	29.7	41.5	1,047	7
			LDT1	6.1%	0.0%	3171	15	24.5	29.0	116	0
			LDT2	24.7%	0.0%	3171	15	22.0	31.7	518	1
		Hauling	HHDT	0.5%	99.5%	1514	98	4.8	6.5	160	22,765
IV	2021	Worker	LDA	67.0%	0.7%	30	15	30.6	42.7	10	0
			LDT1	5.9%	0.0%	30	15	25.3	29.6	1	0
			LDT2	24.4%	0.0%	30	15	22.8	32.6	5	0
		Hauling	HHDT	0.5%	99.5%	1	460	4.9	6.5	0	70
V		Worker	LDA	67.0%	0.7%	30	15	30.6	42.7	10	0
			LDT1	5.9%	0.0%	30	15	25.3	29.6	1	0
			LDT2	24.4%	0.0%	30	15	22.8	32.6	5	0
		Hauling	HHDT	0.5%	99.5%	1	60	4.9	6.5	0	9
									TOTAL	**2,433**	**82,961**

Notes:

CalEEMod default vehicle mix of light-duty auto (LDA), light-duty truck type 1 (LDT1), and light-duty truck type 2 (LDT2) for worker trips, and heavy heavy duty trucks (HHDT) for hauling trips.

Percent of fleet based on EMFAC2014 output

References:

California Air Resources Board (CARB). EMFAC2014 Web Database. Version 1.0.7. https://www.arb.ca.gov/emfac/2014/ Accessed: September 25, 2019.

Source	Fuel Use (gal)
Diesel	
On-Road Construction Trips	82,961
Off-Road Construction Equipment	41,415
TOTAL	124,375
Gasoline	
On-Road Construction Trips	2,433

Notes:
On-road mobile source fuel based on trip lengths and trip rates as stated in the project description and fleet-average fuel consmption in gallons per mile from EMFAC2014 for 2020-2021 in Imperial County.

Off-road mobile source fuel usage based on brake specific fuel consumption (BSFC) rates in the OFFROAD 2011 statewide data sets as well as horsepower, usage hours, and load factors from CalEEMod.

Phase	Days	# of Workers	Equipment	# of Equipment	Hours Used Daily	Annual Hrs	HP	Load	BSFC	Diesel Fuel Use
I	5	3	Bore/Drill Rigs	1	8	40	221	0.5	0.367	228
			Dump truck	1	1	5	402	0.38	0.367	39
			Forklift	1	8	40	89	0.2	0.408	41
II	41	6	Excavators	1	8	328	158	0.38	0.367	1,017
			Loaders	1	8	328	97	0.37	0.408	676
			Dump truck	10	1	410	402	0.38	0.367	3,233
			Pressure washers	2	8	656	13	0.3	0.408	147
III	151	21	Excavators Compactors	1	8	1208	158	0.38	0.367	3,744
			Graders	1	8	1208	187	0.41	0.367	4,781
			Forklift	1	8	1208	89	0.2	0.408	1,234
			Loaders	1	8	1208	97	0.37	0.408	2,488
			Crawler Tractor	2	8	2416	212	0.43	0.367	11,370
			Dump truck	10	1	1510	402	0.38	0.367	11,908
IV	5	6	Bore/Drill Rigs	1	8	40	221	0.5	0.367	228
V	5	6	Dump truck	5	1	25	402	0.38	0.367	197
			Loader	1	8	40	97	0.37	0.408	82
									TOTAL	**41,415**

Notes:
Horsepower and load factor based on CalEEMod defaults

Brake specific fuel consumption (BSFC) for equipment is 0.367 lb/hp-hr for equipment less than 100 hp and 0.408 lb/hp-hr for equipment equal or greater than 100 hp per OFFROAD 2011.

Fuel unit converstion lbs/gallon = 7.109

References:
United States Environmental Protection Agency (USEPA). 2010. Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression-Ignition. NR-009d. Office of Transportation and Air Quality. July.

EMFAC2014 (v1.0.7) Emissions Inventory
Region Type: County
Region: Imperial
Calendar Year: 2020, 2021
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Trip Type	CalYr	VehClass	Fuel	Population	VMT	_Consump	Miles/Gallo	% of Fleet
Imperial	Hauling	2020	HHDT	GAS	23	2769	0.572396	4.838006	0.5%
Imperial	Hauling	2020	HHDT	DSL	4473	747070	115.30	6.48	99.5%
Imperial	Worker	2020	LDA	GAS	82948	3064802	103.35	29.65	67.0%
Imperial	Worker	2020	LDA	DSL	787	31086	0.75	41.46	0.6%
Imperial	Worker	2020	LDA	ELEC	1821	92960	0.00	0.00	1.5%
Imperial	Worker	2020	LDT1	GAS	7607	210289	8.58	24.52	6.1%
Imperial	Worker	2020	LDT1	DSL	14	242	0.01	29.03	0.0%
Imperial	Worker	2020	LDT1	ELEC	6	178	0.00	0.00	0.0%
Imperial	Worker	2020	LDT2	GAS	30508	1017315	46.17	22.04	24.7%
Imperial	Worker	2020	LDT2	DSL	45	1775	0.06	31.71	0.0%
Imperial	Hauling	2021	HHDT	GAS	24	2765	0.57	4.87	0.5%
Imperial	Hauling	2021	HHDT	DSL	4568	768239	117.39	6.54	99.5%
Imperial	Worker	2021	LDA	GAS	85234	3118713	102.07	30.55	67.0%
Imperial	Worker	2021	LDA	DSL	855	33172	0.78	42.67	0.7%
Imperial	Worker	2021	LDA	ELEC	2527	126381	0.00	0.00	2.0%
Imperial	Worker	2021	LDT1	GAS	7486	208275	8.22	25.32	5.9%
Imperial	Worker	2021	LDT1	DSL	13	227	0.01	29.64	0.0%
Imperial	Worker	2021	LDT1	ELEC	6	168	0.00	0.00	0.0%
Imperial	Worker	2021	LDT2	GAS	31055	1031936	45.26	22.80	24.4%
Imperial	Worker	2021	LDT2	DSL	50	1891	0.06	32.59	0.0%

EMFAC2014 annual output for Imperial County aggregated vehicle model years and speeds

Appendix E

Mitigation, Monitoring, and Reporting Plan

Draft Mitigation, Monitoring, and Reporting Program

Former PureGro Facility Remedial Action Plan
Brawley, California

Prepared for:
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Contact:

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November 2019

Prepared by:

ARCADIS Design & Consultancy for natural and built assets

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Project Description and Background

The Department of Toxic Substances Control (DTSC) oversees the environmental investigations and remedial activities of the Former PureGro Facility property (the Project site) in accordance with Imminent and Substantial Endangerment Determination and Consent Order I&SE-CO 03/04-009, issued March 2004. Therefore, DTSC has prepared this Initial Study (IS) to support the approval of the Draft Revised Remedial Action Plan (RAP) for the Former PureGro Facility located in Brawley, Imperial County, California (the Project).

The Project site is located in the City of Brawley, Imperial County, California, and the property is owned by PureGro Company (PureGro). DTSC is proposing to approve a RAP for the Former PureGro Facility requiring compliance with the California Environmental Quality Act (CEQA).

Currently, the site is vacant, fenced, and relatively flat. A temporary stockpile of excavated soil was brought on site from the property to the east, placed within a second, internal fenced enclosure, and covered with several layers of erosion control blanket material to provide stability and prevent dust generation until a final remedy is implemented. Chevron Environmental Management Company (CEMC) currently inspects and maintains the entire Project site annually and as needed, including the fences and stockpile. Maintenance activities include site-wide dust control measures, vegetation control, fence repair, signage, and graffiti abatement. Site dust control measures include annual application of dust suppressant to exposed soil surfaces of the site.

The Project involves remediation of the former PureGro Facility property to meet commercial/industrial and residential risk-based criteria. Specifically, work will include targeted excavation on the property and within a residential buffer zone on the eastern border, landscaping of the southern border residential buffer zone, soil stockpile removal, placement of an engineered cover over the entire 11-acre site (i.e., site’s entirety north of the southern fence line), establishment of institutional controls, and groundwater monitoring. Project construction activities are anticipated to occur over a 16-month period beginning in January 2020. There will be a 5-month hiatus in mid-2020 for a total of 11 months of active construction.

Organization of the Mitigation, Monitoring, and Reporting Program

The following describes the sections of the Mitigation, Monitoring, and Reporting (MMRP):

- **CEQA Guidelines** - Provides an overview of CEQA's monitoring and reporting requirements, and program objectives,
- **MMRP** - Describes the entities responsible for implementation of the mitigation monitoring plan, the plan scope, procedures for monitoring and reporting, public availability of documents, the process for making changes to the program, types of mitigation measures, and the manner in which monitoring will be reported to ensure implementation of mitigation measures.
- **Mitigation Monitoring and Reporting Program Summary** - Outlines mitigation measures, responsible entities, and the timing for monitoring and reporting for each mitigation measure included in the plan.
- **Report Preparation** - Lists the individuals involved in development of this MMRP.

Introduction and CEQA Guidelines

CEQA requires that when a Lead Agency completes an environmental analysis that includes mitigation measures, the Lead Agency must adopt an MMRP that identifies the timing and responsibility for implementation of those mitigation measures identified in the Initial Study (Public Resources Code Section 21081.6). The MMRP must be designed to ensure compliance with the mitigation measures during the project and also document compliance with those mitigation measures during and after project implementation.

Program Objectives

The objectives of the MMRP include the following:

- Provide documentation that mitigation measures are implemented as described in the IS/MND
- Report project compliance with mitigation measures, performance standards and/or other conditions
- Make available to the public, upon request, the record of compliance with project mitigation measures

MMRP

This MMRP delegates responsibilities for monitoring the Project and insuring implementation of mitigation measures and also allows DTSC flexibility in determining how best to monitor implementation. Monitoring procedures will vary according to the type of mitigation measure. The timing for monitoring and reporting is described in the monitoring and reporting summary table included as part of this program. Adequate monitoring consists of demonstrating that monitoring procedures took place and that mitigation measures were implemented. At least one inspector will be assigned to monitor project construction. The inspector will be familiar with a broad range of regulatory issues and will provide first line oversight for much of the monitoring program. Responsibilities of DTSC include identification of typical mitigation measure-related issues such as noisy equipment, dust, safety problems, etc. Generally, problems are corrected through direction to the Contractor or through other appropriate, established mechanisms. Internal

reporting procedures are already in place to document any problems and to address broader implementation issues.

Reporting Procedures

As Lead Agency under CEQA, DTSC is responsible for implementing the mitigation measures included in this MMRP. Reporting consists of establishing a record that a mitigation measure is being implemented and generally involves the following steps:

- DTSC distributes reporting forms to CEMC (as indicated in the summary form).
- CEMC (or its Contractor) verifies compliance by signing the monitoring and reporting form and/or documenting compliance.
- CEMC (or its Contractor) provide DTSC with verification that monitoring has been conducted and ensures, as applicable, that mitigation measures have been implemented.
- DTSC prepares construction activity reports during the construction phase and incorporates project reports, as appropriate, into the periodic reports summarizing all mitigation monitoring efforts.

The reporting forms prepared by DTSC will document the implementation status of the mitigation measures for the project. The progress reports describe the monitoring status of all project mitigation measures. Reporting forms and progress reports will be available at DTSC's offices in Cypress during normal business hours. DTSC is also responsible for assisting the Contractor with reporting responsibilities to ensure that the Contractor understands their responsibility and completes the reporting procedures accurately and on schedule.

Public Availability

During Project implementation, all reporting forms, progress reports, data sheets, and correction instructions related to the MMRP for the Project will be available for public review upon request at the DTSC Cypress Offices during normal business hours.

Program Changes

If minor changes are required to the MMRP, they will be made in accordance with CEQA and will be permitted after further review by DTSC. Example of changes could include reassignment of monitoring and reporting responsibilities and/or redesign to make any appropriate improvements. No change will be permitted unless the MMRP continues to satisfy the requirements of Public Resources Code Section 21081.6.

Types of Mitigation Measures Being Monitored

The Initial Study/Mitigated Negative Declaration for the Project is a "project-specific" evaluation as defined in the CEQA Guidelines. The Initial Study/Mitigated Negative Declaration recommends 13 project-specific mitigation measures to reduce impacts related to biological resources, cultural resources, hazards and hazardous materials, noise, and tribal cultural resources. Compliance with these mitigation measures will be accomplished through administrative controls over project planning and implementation, and in this case, through incorporation of specific construction methods and verification of construction in accordance with these special provisions. Monitoring

will be accomplished as described previously under “Reporting Procedures” through verification and certification by personnel.

In general, implementation of the MMRP will require the following actions:

- Appropriate mitigation measures will be included in construction documents.
- CEMC and its Contractor will review the Initial Study/Mitigated Negative Declaration, which provides general background information on the reasons for including specified mitigation measures.
- Problems or exceptions to compliance will be addressed by DTSC as appropriate.
- Periodic meetings may be held during construction to report on compliance with mitigation measures.

Mitigation, Monitoring, and Reporting Program Summary

Mitigation Measure	Responsible Entity	Timing	Monitoring Entity	Compliance Action and Reporting	Verification of Compliance		
					Initials	Date	Comments
Biological Resources							
BIO-01 Tree Removal Outside Nesting Season: The two trees located at the site entrance will be removed outside of the nesting season, between August and February.	DTSC	Before Construction	CEMC	Before Construction			
BIO-02: Pre-construction Nesting Surveys and Buffers: If tree removal cannot occur outside the nesting season (between August and February), a qualified avian biologist will conduct nesting surveys before tree removal. If nests are observed, trees will not be removed until young have fledged. A 200-foot buffer will be established for passerine nests and a 500-foot buffer will be established for raptor nests. The	DTSC	Before Construction	CEMC	During Construction			

buffers will remain until young have fledged.							
BIO-03 Pre-construction Survey and Burrowing Owl Protection: Prior to stockpile removal, the stockpile area will be surveyed by a qualified biologist to ensure that there are no burrowing owls present. If any burrowing owls are present, the biologist will coordinate with the California Department of Fish and Wildlife to determine the appropriate next steps. If burrowing owls are present on site outside the nesting season (Generally August through February), the owls shall be passively relocated by installation of a one-way doors on the burrows. If construction activity will occur during the burrowing owl nesting season and active nests are present on site, a work-exclusion buffer zone shall be created around the nest to allow for the successful fledging of the burrowing owls. After fledging has occurred, the burrowing owls shall be passively relocated by	DTSC	Before Construction	CEMC	Before Construction			

installation of a one-way door on the burrow. If no active nests are observed, passive relocation of owls during the nesting season could occur in coordination with California Department of Fish and Wildlife							
Cultural Resources							
CUL-01 Unintended Discovery of Human Remains: In the event of unexpected discovery of human remains, the following standard measures, imposed under Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5 pertaining to the discovery of human remains, will be implemented: All work in the vicinity of the discovery will be halted until a qualified archeologist can evaluate the find(s) under Section 106 of the National Historic Preservation Act The Imperial County Coroner will be contacted to determine that no investigation of the circumstances, manner, or cause of death is	DTSC	During Construction	CEMC	During Construction			

required and to recommend treatment and disposition of the human remains. If the Coroner determines the remains to be Native American, the Coroner will contact the NAHC within 24 hours. The applicant will retain a qualified archaeologist to provide adequate inspection, recommendations, and retrieval, if appropriate. The NAHC will identify the person or persons it believes to be the most likely descended from the deceased Native American and will contact such descendant in accordance with state law. The applicant will be responsible for ensuring that human remains and associated grave goods are reburied with appropriate dignity at a place and process suitable to the most likely descendent.							
Hazards and Hazardous Materials							
HAZ-01 Site-Specific Health and Safety Plan (HASP): A site-specific HASP will be prepared that will address identification of job hazards, hazard mitigation,	DTSC	Before Construction	CEMC	During Construction			

safe work practices, and emergency response procedures. Project site personnel, contractors, and visitors will be required to review the HASP prior to beginning the work and will conduct the work in accordance with the HASP. The HASP will include measures required for safe work at the site and will identify the required personal protection equipment that must be worn by contractors. The HASP will be maintained on site and will be reviewed each day prior to the start of construction and the daily tailgate meeting. If necessary, the HASP will be updated if additional measures are required to protect workers during construction.							
HAZ-02 Dust Control Plan: A Dust Control Plan will be implemented to describe dust prevention, monitoring, and mitigation methods and other BMPs and regulatory compliance measures that will be implemented to monitor, control, reduce, and mitigate dust generation during construction activities. The Dust Control Plan will, at a minimum, include the following dust control	DTSC	Before Construction	CEMC	During Construction			

measures to be implemented during construction: Dust will be suppressed by spraying or misting the soil handling areas and haul roads with water, chemical stabilizers, dust suppressants, or other suitable material if water does not sufficiently address dust generation. Two all-terrain watering trucks will be on-site at all times for general dust control and dust control during excavation at the stockpile and targeted excavations. Water trucks will be positioned at the excavation location and will apply water as the excavation progresses. Similarly, during targeted excavation, water trucks will water before and after excavation. All vehicles and equipment will use a singular, conditioned road as described in the Project Description of the Initial Study. Soil stockpiles will be immediately covered, and all stockpiles will be positioned on sheeting.							

Truck beds containing soil will be covered to minimize the potential for dust generation during transport. During soil disturbance (excavation of the stockpile, targeted excavation, and placement of the engineered cover) the area of soil disturbance will be the smallest possible to reduce the source of the dust. At the stockpile and targeted excavation sites, water will be applied before and after excavation. Water will be applied during placement of the engineered cover both before and after placement of the sand and crushed stone. If necessary, the sand and crushed stone will be watered prior to placement to reduce dust. Ground cover will be replaced in disturbed areas as quickly as possible. Vehicle speed for all construction vehicles will not exceed 15 mph on any unpaved surface at the construction Project site. Vehicle's tires will be inspected before							

exiting the job site and washed, if necessary, to remove excess debris and soil. Airborne particulates will be monitored in compliance with all applicable regulations to verify and document the effectiveness of dust suppression measures. At a minimum, monitors will be placed at the perimeter of the property using an upwind/downwind sampling approach. If Visual Dust Emissions (dust emissions visual by the observer) reaches 20 percent, work will be stopped until opacity decreases below 20 percent. Opacity will be tested using the Visual Determination of Opacity found in Appendix A of Imperial County Air Pollution Control District's (ICAPCD) Rule 800 General Requirements for Control of Fine Particle Matter (PM 10) (IAPCD 2012). During times of excessive wind that could generate unacceptable dust unrelated to site activities, work will be stopped temporarily until wind speeds decrease. An anemometer will be maintained on site to monitor real-time wind							

speeds. If wind speeds exceed 25 mph, earth moving activities such as grading or excavation will cease until wind speeds are below 25 mph. During construction, a noise barrier or blanket will be installed along the southern portion of the site along River Drive. The noise barrier will be up to 15 feet high and will help to contain dust and airborne particles during construction. All disturbed areas, including bulk material storage that is not being actively used, will be effectively stabilized, and visible emissions will be limited to no greater than 20 percent opacity for dust emissions using water, chemical stabilizers, dust suppressants, or other suitable material such as vegetative ground cover. All on-site and off-site unpaved roads will be effectively stabilized, and visible emissions will be limited to no greater than 20 percent opacity for dust emissions by paving, application of chemical stabilizers or dust suppressants, and/or watering.							

All unpaved traffic areas 1 acre or more with 75 or more average vehicle trips per day will be effectively stabilized, and visible emissions will be limited to no greater than 20 percent opacity for dust emissions by paving, application of chemical stabilizers or dust suppressants, and/or watering. The transport of bulk materials will be completely covered unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartments of all haul trucks are to be cleaned and/or washed at the delivery site after removal of bulk material. All track-out or carry-out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area. During movement, handling, or transfer, bulk material will be stabilized before handling or at points of transfer with application							

of sufficient water, chemical stabilizers or by sheltering or enclosing the operation and transfer line. The construction of any new unpaved road is prohibited within any area with a population of 500 or more unless the road meets the definition of a temporary unpaved road. Any temporary unpaved road will be effectively stabilized, and visible emissions will be limited to no greater than 20 percent opacity for dust emission by paving, application of chemical stabilizers or dust suppressants, and/or watering.							
HAZ-03 Dust Concern Hotline: A dedicated phone number and email address will be established to allow nearby residents to call and/or email the project team if there are concerns regarding dust. During periods of active work on-site, the phone line and email will be staffed and answered in real time or near real time. Response time for intake, assessment, and resolution is expected to be within 24 hours during active periods of field work. During inactive periods, the phone line will have a	DTSC	Before Construction	CEMC	During Construction			

voicemail greeting but still be monitored every day, with response time expected to be within 48 hours. The phone number and email address will be distributed (e.g., websites, mailing, handout) to nearby residences, businesses, and organizations, and to JW Oakley Elementary School, Barbara Worth Junior High School, and Brawley Union High School. Calls and emails to the dust concern hotline will be logged and the question or concern forwarded to DTSC and the project team to evaluate for further action and response as needed. The concern will be investigated by the on-site project team, and if it's determined to be project related, the on-site team will apply different or additional dust control measures, as listed above. A summary of the concern/complaint, assessment, and outcomes will be reported to DTSC.							
HAZ-04 Spill Prevention Plan: A Spill Prevention Plan will be prepared that will identify the measures to be taken to prevent spills and to contain spills should they occur during construction.	DTSC	Before Construction	CEMC	During Construction			

Vehicles and construction equipment will be inspected daily to verify that there are no leaking fluids (e.g., oil, hydraulic, lubricant, or brake fluids) and that fuels and fluids are stored in proper, labelled containers with secondary containment if necessary. A chemical spill kit will be located on site during construction, and field personnel will be informed of its location. Observation of spills, leaking fluids, or improperly stored fluids will trigger the issuance of a "stop work" notice until the problem is resolved, including the removal of soil impacted by vehicle fluids. Leaking or damaged equipment will not be operated until it is repaired or replaced. The Spill Prevention Plan will include measures in the unlikely event of an accident including emergency actions, phone numbers for response and clean up, and procedures for handling spills. The Spill Prevention Plan will be provided to all drivers hauling materials to and from the Project site.							
Noise and Vibration							

NOI-01 Noise Barrier or Blanket: Temporary sound barriers would be installed along the southern boundary of the Project site. The final location and length of the wall should be determined in the final design phase of the Project, but at a minimum, the barrier will be designed to reduce noise impacts a minimum of 5 dBA.	DTSC	Before Construction	CEMC	During Construction			
NOI-02 Equipment Noise Control: Equipment and trucks used for project construction will employ the best available noise control techniques to the extent feasible. Jackhammers and other percussive equipment would be equipped with mufflers. Trucks and equipment would minimize the potential for backing and generating backing warning sounds to the extent feasible. Muffling equipment and reducing the potential for backing warnings would reduce temporary noise impacts on sensitive receptors.	DTSC	During Construction	CEMC	During Construction			
NOI-3 Location of Equipment and Stationary Noise Sources: Equipment and stationary noise sources will be located as far from adjacent noise sensitive receptors as reasonably possible and will be	DTSC	During Construction	CEMC	During Construction			

enclosed if feasible. Generators and other stationary equipment would be located as far from sensitive receptors as feasible. Only equipment necessary for construction of the project will be operated near sensitive receptors. Locating stationary equipment far away from sensitive receptors would reduce temporary construction noise to below 65 dBA for most equipment.							
NOI-04 Noise Concern Hotline: A dedicated phone number and email address will be established to allow nearby residents to call and/or email the project team if there are concerns regarding project noise. During periods of active work on-site, the phone line and email will be staffed and answered in real time or near real time. Response time for intake, assessment, and resolution is expected to be within 24 hours during active periods of field work. During inactive periods, the phone line will have a voicemail greeting but still be monitored every day, with response time expected to be within 48 hours. The phone number and email address will be distributed (e.g., websites, mailing,	DTSC	Before Construction	CEMC	During Construction			

handout) to nearby residences, businesses, and organizations. Calls and emails to the noise concern hotline will be logged and the question or concern forwarded to DTSC and the project team to evaluate for further action and response as needed. The complaint will be investigated by the on-site project team, and if it's determined to be project related, the on-site team will apply different or additional noise control measures, as listed above. A summary of the concern/complaint, assessment, and outcomes will be reported to DTSC.							
Tribal Cultural Resources							
TRI-01 Discovery of Unknown Tribal Cultural Resources or Human Remains: Personnel performing the remedial activities will be informed that they need to be observant and aware that they may encounter potential Native American cultural or archaeological resources and/or human remains.	DTSC	During Construction	CEMC	During Construction			

In the event of accidental discovery during ground disturbing activities, excavation or disturbance of the site or any nearby area shall stop immediately, and the County Coroner notified to determine its origin. The coroner will determine disposition within 48 hours. If the remains are Native American, the coroner will be responsible for contacting the NAHC within 24 hours. The NAHC will identify and notify the person(s) who might be the most likely descendent (MLD) who will make recommendations for the appropriate and dignified treatment of the remains (Public Resources Code, Section 5097.98). The descendants shall complete their inspection and make recommendations or preferences 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 accidental discovery of potential cultural or archaeological resources,							

immediately suspend excavation activities in the immediate area and surrounding 50 feet and contact any of the Tribal Contacts on the list provided to alert them of the discovery. DTSC staff and the property owner are also to be immediately notified and informed of this situation. After discussion with any of the Tribal Contacts and or their respective Cultural Resources Managers and in collaboration with DTSC (including the Office of Environmental Justice and Tribal Affairs) and the property owner, implement any measures deemed necessary to record and/or protect the cultural or archaeological resources.							

Report Preparation

This MMRP was prepared by Arcadis, U.S., Inc. on behalf of DTSC. The following individuals prepared the MMRP:

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