County of Kings Community Development Agency

Central Valley Meat Company Facility Project

Conditional Use Permit No. 21-01, Kings County, CA

Administrative Draft Initial Study / Mitigated Negative Declaration

May 2021

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Acronyms and Abbreviations

AB .... Assembly Bill
AF .... Acre-Feet
AFY .... Acre-Feet/Year
APE .... Area of Potential Effect
ATC .... Authority to Construct
BACT .... Best Available Control Technology
BGS .... Below Ground Surface
BPS .... Best Performance Standards
CAAQS .... California Ambient Air Quality Standards
Cal Fire .... California Department of Forestry and Fire Protection
Cal/OSHA .... California Occupational Safety and Health Administration
CalEEMod .... California Emissions Estimator Modeling (software)
CAP .... Climate Action Plan
CARB .... California Air Resources Board
CCAA .... California Clean Air Act
CCAP .... Climate Change Action Plan
CCR .... California Code of Regulations
CDFW .... California Fish and Wildlife
CEQA .... California Environmental Quality Act
CFC .... Chlorofluorocarbons
CFR .... (U.S.) Code of Federal Regulations
CH_4 .... Methane
CNDDB .... California Department of Fish and Wildlife Natural Diversity Database
CNEL .... Community Noise Equivalent Level
CO .... carbon monoxide
County .... Kings County
CRHR .... California Register of Historical Resources
CUPA .... Certified Unified Program Agency
CUP .... Conditional Use Permit
CVMC .... Central Valley Meat Company
CVRWQCB .... Central Valley Regional Water Quality Control Board
CWA .... Clean Water Act

dB	decibels
DAF	Dissolved Air Flotation
DOC	California Department of Conservations
DPR	Department of Pesticide Regulation
DTSC	(California) Department of Toxic Substances Control
DWR	Department of Water Resources
EA	Environmental Assessment
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
FRA	Federal Railway Administration
FTA	Federal Transit Administration
GAMAQI	Guidelines for Assessing and Mitigating Air Quality Impacts
GC	Government Code
GHG	Greenhouse Gas
GIS	Geographic Information System
GP	General Plan
gpd	gallons per day
GSP	Groundwater Sustainability Plan
HFC	Hydrofluorocarbons
HSC	Health and Safety Code
HSWA	Hazardous and Solid Waste Act
HUC	Hydrologic Unit Code
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
km	kilometers
KWRA	Kings Waste and Recycling Authority
LAA	Land Application Area
LOS	Level of Service
MKGSA	Mid-Kings Groundwater Sustainability Agency
MLD	Most Likely Descendant
MMRP	Mitigation Monitoring and Reporting Program

MND .... Mitigated Negative Declaration
MRZ .... Mineral Resource Zones
NAAQS .... National Ambient Air Quality Standards
NAHC .... Native American Heritage Commission
NCCP .... Natural Community Conservation Plans
ND .... Negative Declaration
NFPA .... National Fire Protection Association
N_2O .... Nitrous Oxide
NOx .... Nitrogen oxides
NO_2 .... Nitrogen Dioxide
NPDES .... National Pollutant Discharge Elimination System
NRCS .... Natural Resources Conservation Service
NRHP .... National Register of Historic Places
O_3 .... Ozone
OCP .... Odor Control Plan
Pb .... Lead
PFC .... Perfluorocarbons
PM_{10} .... particulate matter 10 microns in size
$PM_{2.5}$ .... particulate matter 2.5 microns in size
PPB .... Parts Per Billion
PPM .... Parts Per Million
PRC .... Public Resources Code
Project .... Central Valley Meat Facility Project
PTO .... Permit to Operate
QSD .... Qualified SWPPP Developer
RC .... Resource Conservation [Element]
RCRA .... Resource Conservation and Recovery Act
ROC .... Reactive Organic Compound
RTO .... Reactive Thermal Oxidizer
RWQCB .... Regional Water Quality Control Board
SB .... Senate Bill
SF .... Square Feet
SF_6 .... Sulfur hexafluoride
SGMA .... Sustainasble Groundwater Management Act
SHC .... Streets and Highways Code

SHPO (CA) State Historic Preservation Officer
SJVAB San Joaquin Valley Air Basin
SJVAPCD San Joaquin Valley Air Pollution Control District
SLIC Spills-Leaks-Investigations-Cleanups
SO_2 Sulfur Dioxide
SOx Sulfur Oxide
SPCC Spill Prevention, Control, and Countermeasure
SR State Route
SSJVIC Southern San Joaquin Valley Information Center
SWPPP Storm Water Pollution Prevention Plan
SWRCB State Water Resources Control Board
TAC Toxic Air Contaminants
TAZ Transportation Analysis Zone
Tons/Year Tons Per Year
TPY Tons Per Year
USDA United States Department of Agriculture
USFWS United States Fish and Wildlife Service
UST Underground Storage Tank
µg/m3 micrograms per cubic meter
WDR Waste Discharge Requirements
WEAP Worker Environmental Awareness Program

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Chapter 1 Introduction

Provost & Pritchard Consulting Group (Provost & Pritchard) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) for use by the County of Kings (County) to address the potential environmental impacts of Conditional Use Permit No. 21-01 for the Central Valley Meat Company (CVMC) Facility Project (Project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 *et seq*. The County is the CEQA lead agency for this Project.

The site and the proposed Project are described in detail in the **Chapter 2 Project Description**
.

1.1 Regulatory Information

An Initial Study (IS) is a document prepared by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with California Code of Regulations Title 14 (Chapter 3, Section 15000, *et seq*.)-- also known as the CEQA Guidelines--Section 15064 (a)(1) states that an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the proposed Project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant levels. A negative declaration (ND) may be prepared instead if the lead agency finds that there is *no* substantial evidence in light of the whole record that the project may have a significant effect on the environment. An ND is a written statement describing the reasons why a proposed Project, not otherwise exempt from CEQA, would not have a significant effect on the environment and, therefore, why it would not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a ND or *mitigated* ND shall be prepared for a project subject to CEQA when either:

a. The IS shows there is no substantial evidence, in light of the whole record before the agency, that the proposed Project may have a significant effect on the environment, or

b. The IS identified potentially significant effects, but:

    1. Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed MND and IS is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur is prepared, and

    2. There is no substantial evidence, in light of the whole record before the agency, that the proposed Project *as revised* may have a significant effect on the environment.

1.2 Document Format

This IS/MND contains four chapters and five appendices, **Chapter 1 Introduction** provides an overview of the proposed Project and the CEQA process. **Chapter 2 Project Description** provides a detailed description of proposed Project components and objectives. **Chapter 3 Impact Analysis**, presents the CEQA checklist and environmental analysis for all impact areas, mandatory findings of significance, and feasible mitigation measures. If the proposed Project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the proposed Project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts, and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level. **Chapter 3** concludes with the Lead Agency's determination based upon this initial evaluation. **Chapter 4 Mitigation Monitoring and Reporting Program** (MMRP), provides the proposed mitigation measures, implementation timelines, and the entity/agency responsible for ensuring implementation.

The Air Quality and Greenhouse Gas Technical Report, Biological Resources Evaluation, Cultural Resources Information, NRCS Soil Resources Report, and Trip Generation Analysis are provided as technical **Appendix A, Appendix B, Appendix C, Appendix D**, and **Appendix E** respectively, at the end of this document.

Chapter 2 Project Description

2.1 Project Background and Objectives

2.1.1 Project Title

Central Valley Meat Company Facility Project
Conditional Use Permit No. 21-01

2.1.2 Lead Agency Name and Address

County of Kings, Community Development Agency
1400 West Lacey Boulevard, Building #6
Hanford, CA 93230

2.1.3 Contact Person and Phone Number

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2.1.4 Project Location

The Project is located on the southeast corner of Third Street and 8 ¾ Avenue in unincorporated Kings County, California, approximately 186 miles southeast of Sacramento and 73 miles northwest of Bakersfield (see **Figure 2-1** and **Figure 2-2**). The proposed site of the Project is located on Assessor's Parcel Numbers 016-060-012 (80 acres), 016-060-014 (33.65 acres) and 016-060-024 (14.1 acres). The site plan is shown in **Figure 2-4**.

2.1.5 Latitude and Longitude

The centroid of the Project area, is:

Latitude: 36° 19' 7.5216" N (36.318756),
Longitude: 119° 36' 44.784" W (-119.612440).

2.1.6 General Plan Designation and Zoning Districts

Table 2-1. General Plan Designations and Zoning Districts

Project Area	General Plan Designation	Zone District
Existing Facility, Cooler Expansion, Fuel Island, Dry Storage Expansion, Wastewater Treatment Expansion, Expansion of Processing Facility (Phase II), Livestock Canopy, Truck Wash Ramp	Heavy Industrial	IH (Heavy Industrial)
Rendering Plant, Scale House, Pet Food Facility, Freezer Cooler Building (Phase II), Brine Evaporation Pond, Hide Building, Truck Wash Building, Guard Shack	General Agriculture	AG-20 (General Agriculture, Minimum 20 acre parcels)

2.1.7 Description of Project

2.1.7.1 Project Background and Purpose

A Conditional Use Permit (CUP) No. 1528 was approved by the Kings County Planning Commission on February 5, 1990 which authorized the subject property to be used as a beef boning and slaughtering operation by Central Valley Meat Company (CVMC). Currently, CVMC has a slaughter capacity of 2,000 head per day. This capacity will not change after this project is complete. Byproducts are currently delivered to Baker Commodities in Kerman, California. Due to the expected closure of the Darling Rendering Plant, CVMC has sought to both vertically integrate its processes on the Kings County site and increase the amount of value-added products it can offer utilizing its raw rendering materials generated on-site.

The nature of the proposed operation will consist of an enclosed meat rendering facility, a new pet food facility, along with support facilities at the existing CVMC facility. The proposed meat rendering facility is intended to primarily service the needs of two existing beef processing plants (CVMC and Harris Ranch) as well as the expanded processing capacity at CVMC which is also being proposed as part of this project application. Additionally, the rendering plant will be designed and constructed to accept other regional beef suppliers.

CVMC currently has 900 regular employees and 11 USDA inspectors. Phase 1 will add 65 additional employees and Phase 2 will add 125 additional employees for a total of 1,101 employees. Currently CVMC has 672 parking spaces on site. With Phase 1 the project will add 374 parking spaces and Phase 2 will add 85 spaces for a total of 1,131 parking spaces.

2.1.7.2 Project Description

CVMC's CUP No. 21-01, proposes the following in two (2) phases:

- Phase 1
    - Construction of a 46,298 square foot (sf) rendering plant, designed to process 10,497,450 pounds of raw material per week and produce 2,055,339 pounds of tallow and 2,983,294 pounds of meat and bone meal. Raw material will be from byproducts of 2,000 head per day from CVMC and 2,500 head per day from Harris Ranch Beef Company and other west coast packers.
    - Construction of a 106,755 sf Livestock Canopy over existing cattle holding pens.
    - Expansion of existing cooler facility by 4,687 sf to provide better chilling of carcass beef.
    - Construction of scale house and guard shacks accessory structures.
    - Construction of a 28,080-sf hide building to process 3,000 hides per day.
    - Construction of a 20,000-sf pet food facility to produce 100,000 pounds of pet treats per day.

- Construction of a 5,600-sf truck wash building.
- Removal and construction of paving for automobile and truck parking and circulation purposes. . Impermeable surfaces will increase by approximately 1,868,000 square feet.
- Construction of drainage retention pond to handle approximately 20 acre-feet (af) of rainfall runoff, excavated to a depth of approximately 15 feet below ground surface (bgs).
- Construction of two brine evaporation ponds for wastewater treatment, sized to store approximately 1.0 MG each, excavated to 6 feet bgs. Wastewater generation will increase by approximately 657,689 gallons per week and will be discharged to industrial waste as part of existing CVMC Water Discharge Requirements (WDR).
- Construction of a non-retail fueling station with five (5) fueling positions serving red (not for highway use) diesel (7,000 gallons), B20 biodiesel (12,000 gallons), and diesel exhaust fluid (3,000 gallons), all stored in aboveground tanks.
- Construction of a new access drive to both phases of development from Hanford-Armona Road to the south. Existing access from Third Street will be maintained.
- Phase 1 will add 65 additional employees and will add 374 parking spaces.
- Installation of an electric power substation facility consisting of substation transformers, switches, metering and a power control building. The facility will be fed from Utility power transmission lines. The location of this connection and transmission line extension will be per the Utility. The power substation facility is required to provide adequate electrical power supply to the facility for full build out.
-

- Phase 2
    - Construction of a two-story, 103,482 sf process expansion building to consolidate production capacity of ground beef, portion control, and other bulk and case ready items from facilities in Selma and Los Angeles. The raw material for this process will come from CVMC, Harris Ranch Beef Company and other mid-western meatpackers. This expansion does not require additional slaughter capacity at CVMC.
    - Construction of a new approximately 187,000 sf freezer/cooler building.
    - Phase 2 will add 125 additional employees and Phase 2 will add 85 parking spaces.
    - Installation of an electric power substation facility consisting of substation transformers, switches, metering and a power control building. The facility will be fed from Utility power transmission lines. The location of this connection and transmission line extension will be per the Utility. The power substation facility is required to provide adequate electrical power supply to the facility for full build out.

For ease of review, **Table 2-2** below summarizes the above information in table format.

Table 2-2. Project Phases and Duration

CEQA Phase	Timing (year)	Building Feature	Building Area (ft^2)	Eave Heights
1	1	Rendering Plant[1]	46,298	45'
1	1	Brine Evaporation Pond	123,150	0
1	1	WWTP	5,000	20'
1	3-4	Pet Food Facility	20,000	30'
1	2	Dry Storage Expansion	8,000	30'

CEQA Phase	Timing (year)	Building Feature	Building Area (ft^2)	Eave Heights
1	4-5	Cooler Expansion	4,687	33'-6 5/8"
1	3-4	Hide Building	28,080	30'
1	1	Livestock Canopy	106,755	45'
1	1	Guard Shack	468	13'
1	1	Driveway from H-A Road	0	0
1	1	Drainage Retention Pond	0	0
1	3	Truck Wash Building	5,600	25'
1	1	Truck Wash Ramp	4,950	0
1	1	Scale House	336	15'
1	1	Auto Parking	110,057	0
1	1	Truck Parking	130,334	0
1	1	Fuel Island	1,200	0
2	6	Freezer/Cooler Building (Distribution Center)	186,756	45'
2	6	Processing Expansion	103,482	45'

[1] Process-related structures will be up to approximately 75 feet in height.

2.1.7.1 Construction

Construction of the Project would occur in two (2) phases over the course of six (6) years. Construction equipment will likely include rubber-tired dozers, cranes, excavators, paving equipment, and rollers. As required by SJVAPCD Regulation VIII, Rule 8021 Section 6.3, an approved Dust Control Plan will be implemented during project construction. Dedicated, newer off-road construction equipment will employ Tier 4 engines for all site preparation and grading activities.

2.1.7.2 Operation and Maintenance

Year-round operations, 7 days a week, 24 hours per day,. This will be a continuous operation, but the main traffic hours to and from this facility will take place between the hours of 5 am to 9 pm each day. The Total employees at project buildout will be 1,101 employees including 11 USDA inspectors. Project employees will be over three (3) shifts. No more than two (2) customers or visitors are anticipated to visit the Project daily. Anticipated service and delivery vehicles include two (2) plant maintenance trucks, ten (10) semi-trucks, four (4) yard power units, approximately 35 end dump trailers, three (3) sets of finished meal hopper trailers and two (2) insulated tallow tankers.

The new CVMC Rendering facility is intended to service the critical needs of its two affiliated beef processing plants, CVMC and Harris Ranch Beef Company (HRBC), which currently would account for approximately half of the design capacity, although the facility will be sized to also accept raw material from other regional beef suppliers.

The proposed Rendering facility shall consist of an enclosed meat rendering facility and support facilities, such as a scale office, maintenance garage, employee welfare, and wastewater lagoons. The Rendering facility has submitted an application for an Authority to Construct (ATC) to the San Joaquin Valley Air Pollution Control District (SJVAPCD) for the installation of a meat rendering operation, a meat and bone meal (MBM) loadout operation, and four natural gas-fired boilers. Raw materials will be transported from the CVMC meat processing facility via on-site diesel "mules" (non-road cart/trailer towing vehicles) and from the HRBC facility in Selma, CA, via facility-owned near-zero emission (NZE) trucks fueled with liquified natural gas (LNG) or compressed natural gas (CNG) with catalytic exhaust controls for minimizing emissions. Currently, most of the trucks with material needing rendering from Selma and Hanford travel to Los Angeles; these would now take the material to the new CVMC Rendering facility in Hanford. This will result in an overall reduction in trucking mileage from the current CVMC and HRBC rendering operations. Cookers and ancillary equipment will be vented through a Venturi/packed bed scrubber and RTO to control odors. Cooker and unloading area emissions will be controlled by two room air Venturi/packed bed scrubbers. Solids processing odors will be controlled by a Venturi/packed bed scrubber. Tallow will be pumped through a sealed loading system into sealed truck tanks. All loading and unloading of raw and finished product will be conducted inside the building with doors closed. There will be no outside storage of raw or finished product.

The Pet Food facility will make pet treats, such as chewy bones. The facility will process up to 100,000 pounds per day of raw materials supplied from HRBC and CVMC processing facilities. The pet food dryers/ovens will run off the steam from the Rendering plant. Odors from the dryers will be controlled by a 5 million British thermal units per hour (MMBtu/hr) natural gas regenerative thermal oxidizer (RTO). Raw materials will be transported from CVMC via on-site mules and from the HRBC facility in Selma via NZE trucks. There will be no outside storage of raw or finished product.

The fleshing of the hides will occur in the Hide building, which consists of stripping the fat off the hides, sending the fat to the rendering plant, and soaking the hides in salt water. No tanning of the hides will occur at this facility. Odors will be controlled by conducting all activities inside the building and minimizing raw material storage on-site. Raw materials will be transported from CVMC via on-site mules and from HRBC in Selma via NZE trucks. Salted hides will be transported to Long Beach and Oakland, CA. Transport of fat from the hide building to the Rendering facility will be via on-site mules.

The Freezer/Cooler building, or Distribution Center, will service the Processing Expansion trucking needs and will consolidate and re-allocate loads from the HRBC facility for distribution. All trucks that visit the Freezer/Cooler Building will be equipped with transportation refrigeration units (TRUs) that will operate for about 30-60 minutes during unloading and up to 4 hours for precool for loading. Finished product will be transported from HRBC in Selma via NZE trucks and from CVM via on-site mules. The addition of the Distribution Center will shift finished product truck travel from Selma to Hanford out to various locations in the western United States.

The Processing Expansion will consolidate ground beef processing for three facilities. This will add capacity at the existing meat processing facility in Hanford and decrease the Selma and Vernon facilities' ground beef processing capacity. The trucks that transport raw materials from the Selma and Vernon facilities will be facility-owned NZE trucks. Shipments that would have previously gone to Vernon from the existing Hanford meat processing facility will now be moved on-site by electric forklift, which will result in an overall reduction in trucking due to this expansion. All processing will occur inside, and storage of raw and finished products will occur inside on-site buildings.

The Livestock Canopy will expand the current canopy area to provide additional shade for the existing cattle stockyard.

The Project consolidates and redistributes trucks that would otherwise have traveled similar distances between the CVM and HRBC facilities and end users. Overall Project-related truck mileage increases slightly compared to current CVM and HRBC operations. To assess the emissions associated with each facility in the Project at full buildout, emissions were estimated for the entire off-site truck travel distances, even though the Project consolidates and redistributes trucks that would otherwise have traveled similar distances between the CVM and HRBC facilities and end users.

2.1.7.3 Nearby Projects

Two anticipated projects are expected to occur within the vicinity of the Project: construction of the High Speed Rail alignment and the relocation of Fire Station No. 4, approximately 1.0 and 1.25 miles to the east and southeast, respectively. Impacts from these projects will consist primarily of temporary, construction-related air quality impacts however, due to their distance from the Project, are not anticipated to cause significant impacts to sensitive receptors nearby.

2.1.8 Site and Surrounding Land Uses and Setting

See **Figure 3-4** and **Figure 3-5** for the general plan and zoning designations, respectively.

2.1.9 Other Public Agencies Whose Approval May Be Required

- San Joaquin Valley Air Pollution Control District
- State Water Resources Control Board
- United States Department of Agriculture

2.1.10 Consultation with California Native American Tribes

Public Resources Code Section 21080.3.1, *et seq. (codification of AB 52, 2013-14)*) requires that a lead agency, within 14 days of determining that it will undertake a project, must notify in writing any California Native American Tribe traditionally and culturally affiliated with the geographic area of the project if that Tribe has previously requested notification about projects in that geographic area. The notice must briefly describe the project and inquire whether the Tribe wishes to initiate request formal consultation. Tribes have 30 days from receipt of notification to request formal consultation. The lead agency then has 30 days to initiate the consultation, which then continues until the parties come to an agreement regarding necessary mitigation or agree that no mitigation is needed, or one or both parties determine that negotiation occurred in good faith, but no agreement will be made.

The County of Kings has received written correspondence from the Santa Rosa Rancheria Yokut Tribe pursuant to Public Resources Code Section 21080.3.1 requesting notification of projects in the area. No additional comments were received from the Tribe with regards to the proposed Project.

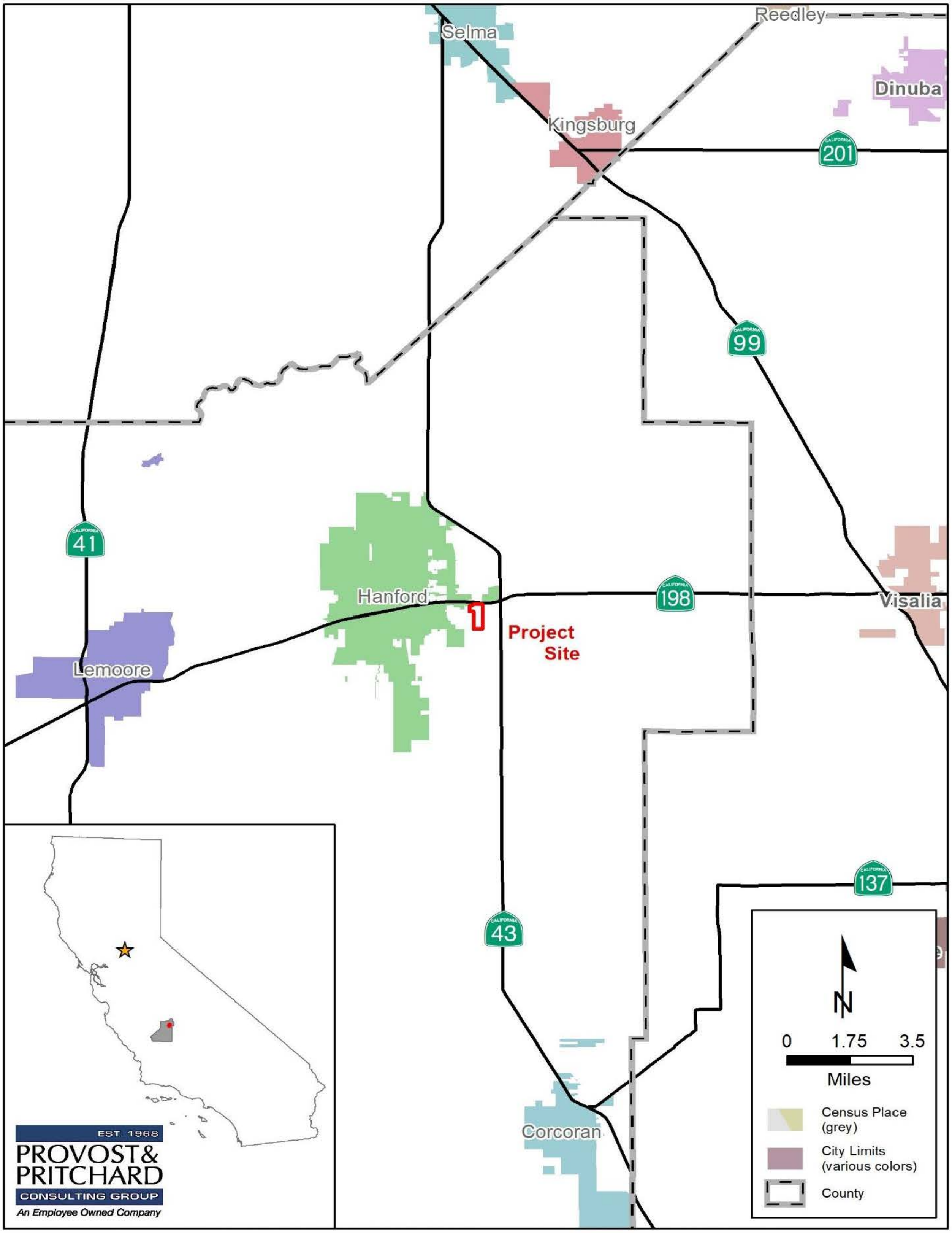

Figure 2-1. Regional Location Map

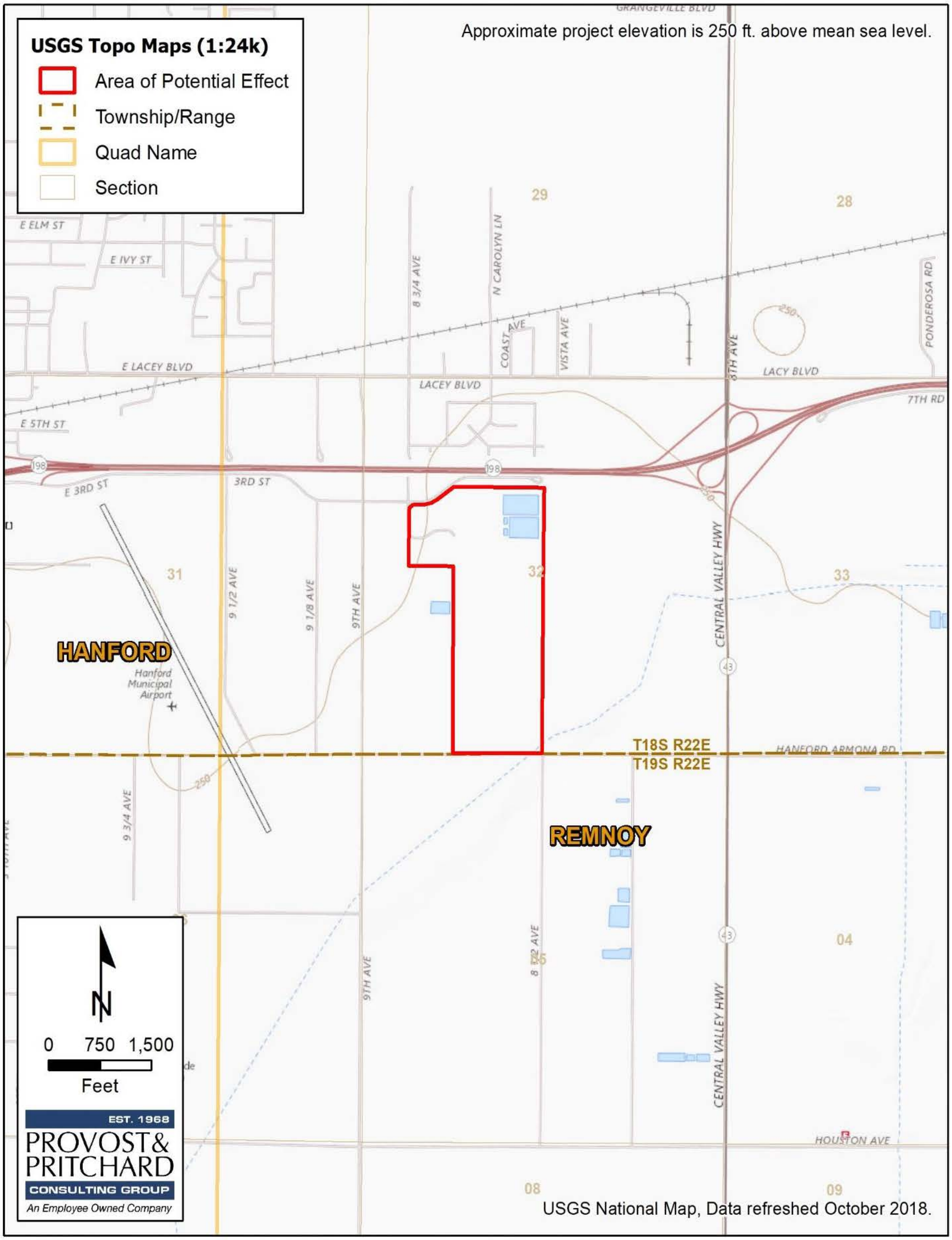

Figure 2-2. Topographic Quadrangle Map

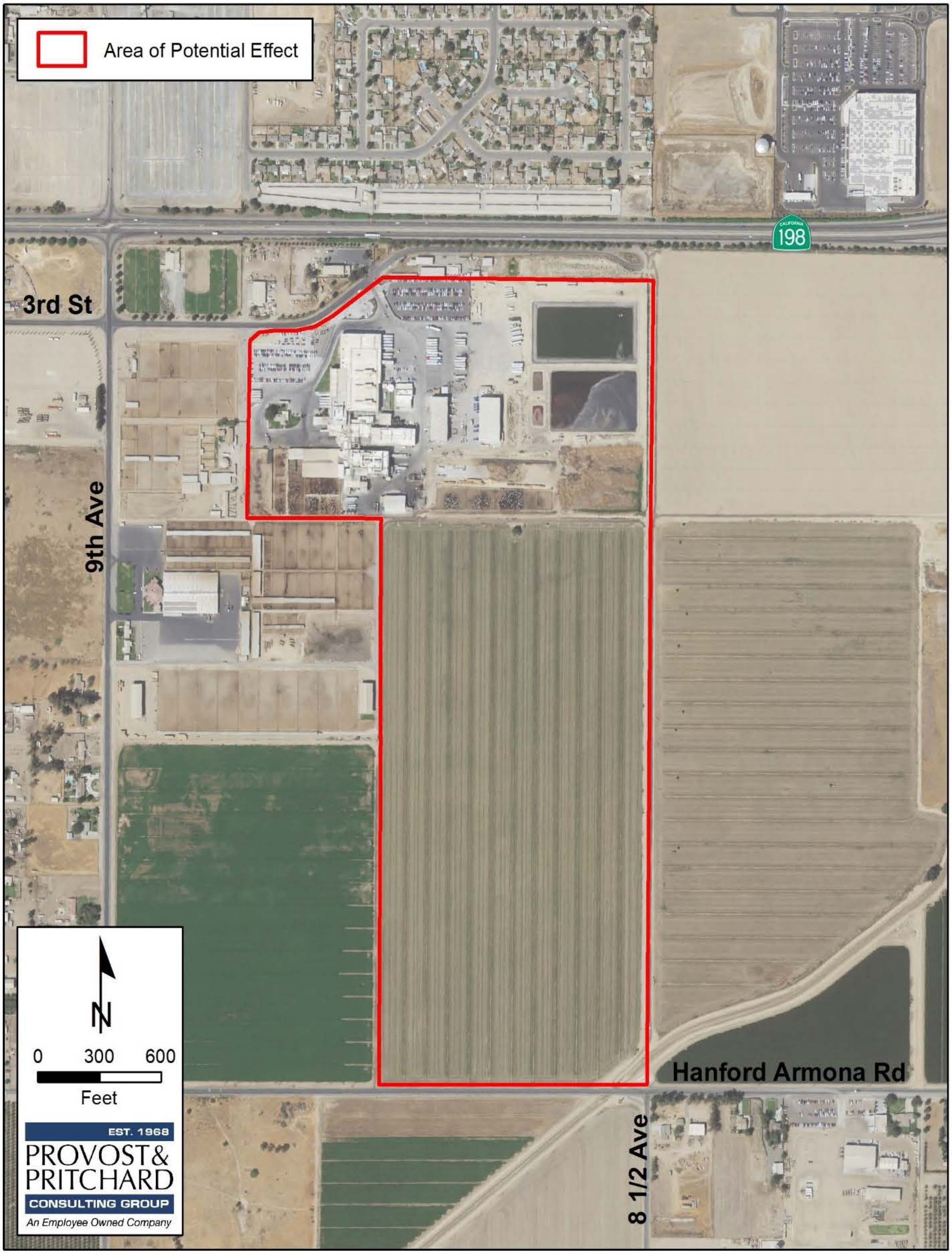

Figure 2-3. Area of Potential Effect Map

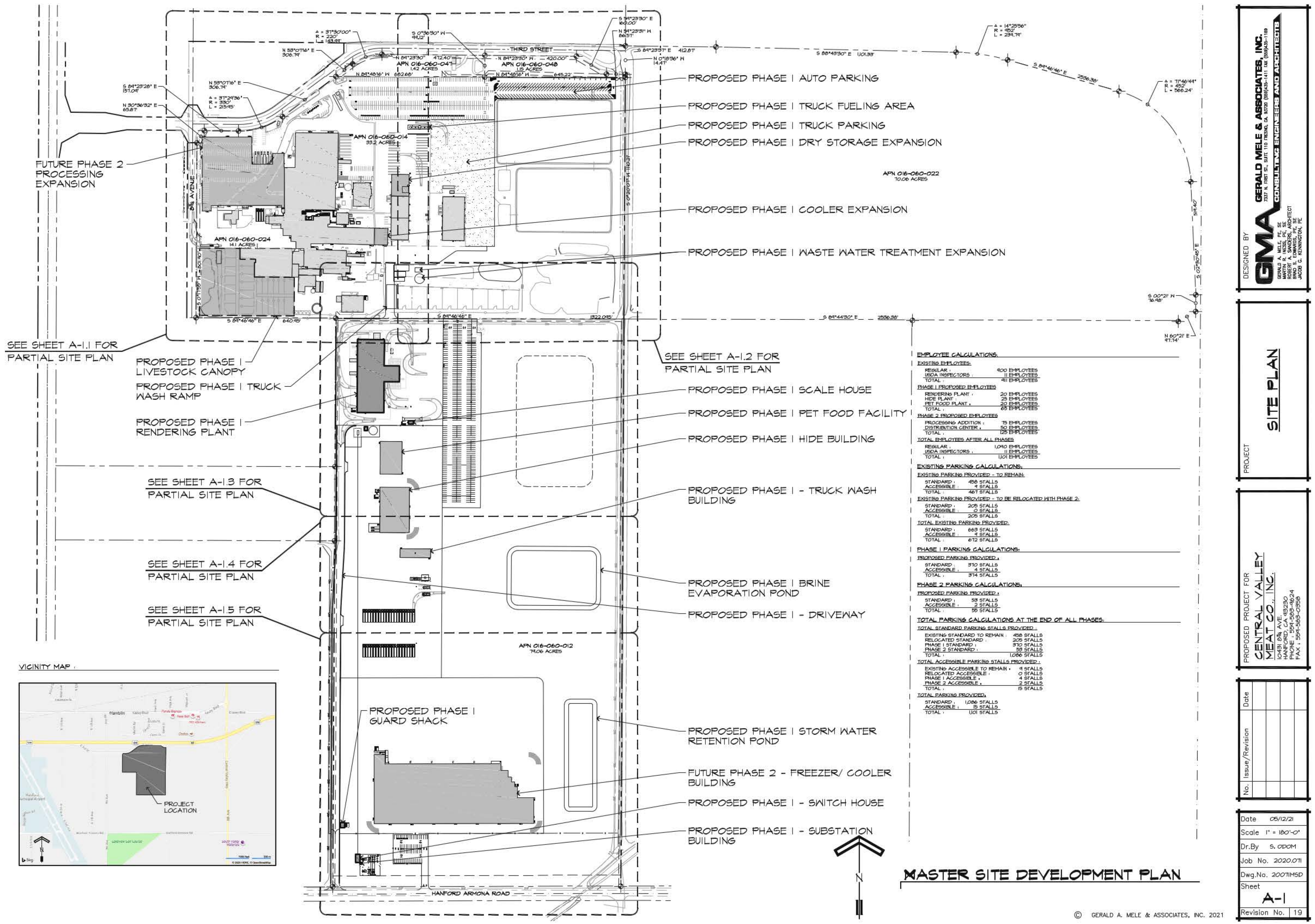

Figure 2-4. Site Plan

Chapter 3 Impact Analysis

3.1 Environmental Factors Potentially Affected

As indicated by the discussions of existing and baseline conditions, and impact analyses that follow in this Chapter, environmental factors not checked below would have no impacts or less than significant impacts resulting from the project. Environmental factors that are. checked below would have potentially significant impacts resulting from the project. Mitigation measures are recommended for each of the potentially significant impacts that would reduce the impact to less than significant.

☐ 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	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☒ Transportation	☒ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

The analyses of environmental impacts here in **Chapter 4 Mitigation Monitoring and Reporting Program** are separated into the following categories:

Potentially Significant Impact. This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

Less than Significant with Mitigation Incorporated. This category applies where the incorporation of mitigation measures would reduce an effect from a "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measure(s), and briefly explain how they would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

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

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

3.2 Aesthetics

Table 3-1. Aesthetics Impacts

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

3.2.1 Environmental Setting and Baseline Conditions

Within Kings County, agricultural land is the predominant open space landscape, representing approximately 91 percent of all unincorporated land within the County[1]. Land in the vicinity of the Proposed project consists of relatively flat irrigated farmland, the Overland Stockyard, various commercial and industrial uses, a public airport, and rural residences. Agricultural practices in the vicinity consist of row and field crops. Rural roadways and local water distribution canals are in the immediate vicinity, with State Routes 198 and 43 located less than one mile from the Project site. The Project involves the expansion of an industrial meat processing facility. The Project site is zoned both AG-20 (General Agriculture, 20 acre minimum parcel size) and IH (Heavy Industrial) by Kings County.

3.2.2 Regulatory Setting

3.2.2.1 Federal

There are no federal regulations, plans, programs, or guidelines associated with aesthetics that are applicable to the Project.

3.2.2.2 State

Scenic Highway Program: California's Scenic Highway Program was created by the Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. The State laws governing the Scenic Highway Program are found in the Streets and Highway Code (SHC) Section 260, *et seq*. A highway may be officially designated "scenic" depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the

[1]County of Kings, *2035 Kings County General Plan*, January 26, 2010 page I-3. Website: https://www.countyofkings.com/home/showdocument?id=, 3108 accessed March 2021.

extent to which development intrudes upon the traveler's enjoyment of the view. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in SHC Section 263. A list of California's scenic highways and map showing their locations may be obtained from Caltrans' Scenic Highway Coordinators.[2]

3.2.2.3 Local

2035 Kings County General Plan Policies: The Open Space Element of the 2035 Kings County General Plan describes scenic resources within the county. This element identifies portions of the Kings River as a scenic natural asset and the Coast Ranges of the county's southwest edges as a distinctive visual backdrop, which are visible along State Route 41 from the northern county line to Kettleman City which lies at the eastern base of the Ranges. The Kings River is approximately 7.5 miles (as the crow flies) north of the Project site.

As one of the agricultural Counties in the Central San Joaquin Valley, Kings County's agricultural land serves a significant role in the County's agriculturally based economy, and production of food and fiber for the rest of the Country. In addition to their economic value and commodity production, the vast stretches of field crops and orchards are also valued for their scenic beauty and representation of Kings County's identity.

The Project site is located in the City of Hanford's Sphere of Influence, and designated by the Kings County General Plan to be in a "Urban Fringe" area, defined as a "transition area around existing cities where urban and rural areas meet in which land uses are managed to prevent urban sprawl and protect agricultural land".

General Plan goals, objectives, and policies pertaining to aesthetics are as follows:

- LU Policy D1.3.4: Preserve the existing nighttime environment by limiting the illumination of areas surrounding new development. New lighting that is part of residential, commercial, industrial, or recreational development shall be oriented away from sensitive uses, and should be hooded, shielded, and located to direct light pools downward and prevent glare.
- OS Policy B1.2.1: Review new development and utility projects for compatibility and potential for impacting scenic view sheds along highly traveled scenic routes.

Kings County Development Code: The Kings County Development Code establishes lighting regulations for Agricultural zones. It states that "All new proposed uses shall preserve the existing nighttime environment by ensuring that the outdoor lighting for the use is so arranged and/or hooded as to reflect light away from adjoining properties."[3]

3.2.3 Impact Assessment

a) Would the project have a substantial adverse effect on a scenic vista?

Less than Significant Impact. The visual character of the Project area is dominated by the existing meat processing industrial facility, the Overland Stockyard, and farmland in addition to residential and commercial uses. The Project proposes to construct buildings over 35 feet in height, in addition to process-related structures such as exhaust stacks, silos, and feed elevators that are up to approximately 75 feet in height. The scenic vistas identified by the General Plan, the Kings River and the Coast Ranges, are not within the viewshed of these features and the site does not stand out from its surroundings in any remarkable fashion. Therefore, the impact would be less than significant.

[2] State of California, *Streets and Highways Code*. Website: https://leginfo.legislature.ca.gov/faces/codes_displayexpandedbranch.xhtml?tocCode=SHC&division=1.&title=&part=&chapter=&article=, accessed March 2021.
[3]Kings County *Development Code, Agricultural Zoning Districts*, Article 4 Page 4-27: Website: https://www.countyofkings.com/home/showdocument?id=24151, accessed March 2021.

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

No Impact. The Scenic Highway Program was created to preserve and protect designated scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. A highway may be officially designated "scenic" depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. However, neither State Routes 198 or 43 are officially designated "scenic" highways in this area of Kings County; consequently there are no trees, rock outcroppings, or historical buildings associated with any designated scenic highway in the Project vicinity that would be substantially damaged by the Project. There are no scenic highways in Kings County, and therefore none that are visible from the Project site[4]. There would be no impact.

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

Less than Significant Impact. The visual character of the Project area includes the existing meat processing industrial facility, the Overland Stockyard, and farmland in addition to residential and commercial uses. Over 90% of land, or approximately 818,000 acres, in Kings County is used for agricultural or animal grazing purposes[5]. Farmland also directly surrounds the Project site to the east, and south, residential and commercial land uses across SR 198 to the north, and the Overland Stockyard to the west. Although the Project would change the character of the Project site itself, the change would not be a substantial degradation of existing visual character or quality of public views of the site and its surroundings as the visual character of the site is not unique to the region. Impacts would be less than significant.

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

Less than Significant Impact. The Project is anticipated to operate on a 24/7 schedule, like the existing facility currently does, and thus the use of exterior lighting is expected. The Kings County Development Code requires that "All new proposed uses shall preserve the existing nighttime environment by ensuring that the outdoor lighting for the use is so arranged and/or hooded as to reflect light away from adjoining properties." While new sources of light will be introduced, lighting on the project site would be shielded and directed downward to minimize the potential for glare or light spillover onto adjacent property; therefore, nighttime views would not be substantially and adversely affected. Building facades will not be constructed of unpainted metallic buildings, and thus there will be no new daytime glare introduced. Impacts would be less than significant.

[4] CalTrans. List of eligible and officially designated State Scenic Highways. https://dot.ca.gov/-/media/dot-media/programs/design/documents/desig-and-eligible-aug2019_a11y.xlsx. Accessed March 2021.

[5] [5] County of Kings, *Kings County Agricultural Report*, 2018. Website: https://www.countyofkings.com/home/showdocument?id=20326 accessed March 2021.

3.3 Agriculture and Forestry Resources

Table 3-2. Agriculture and Forest Impacts

Agriculture and Forest Impacts				
Would the project:	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☒	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

3.3.1 Environmental Setting and Baseline Conditions

In 2017, Kings County was ranked 10th among California counties in agricultural production, with its top commodity being milk. The County is ranked 1st among California counties in cotton lint and cotton seed production; 3rd in the production of milk and cream, apricots, and tomatoes (processing); and is ranked 5th among California counties in the production of the following commodities: silage, pistachios, and peaches.[6]

The agricultural, southern 80-acre portion of the Project site is currently planted with alfalfa. Surrounding land uses include other agricultural uses to the immediate east and south.

Farmland Mapping and Monitoring Program (FMMP): The FMMP produces maps and statistical data used for analyzing impacts to California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called Prime Farmland. The maps are updated every two years with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance.

The California DOC's 2016 FMMP is a non-regulatory program that produces "Important Farmland" maps and statistical data used for analyzing impacts on California's agricultural resources. The Important Farmland maps identify eight land use categories, five of which are agriculture related: prime farmland, farmland of

[6] County of Kings, *Kings County Agricultural Report*, 2018. Website: https://www.countyofkings.com/home/showdocument?id=20326 accessed March 2021.

statewide importance, unique farmland, farmland of local importance, and grazing land – rated according to soil quality and irrigation status. Each is summarized below:

• PRIME FARMLAND (P): Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

• FARMLAND OF STATEWIDE IMPORTANCE (S): Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

• UNIQUE FARMLAND (U): Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non- irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

• FARMLAND OF LOCAL IMPORTANCE (L): Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

• GRAZING LAND (G): Land on which the existing vegetation is suited to the grazing of livestock. The minimum mapping unit for Grazing Land is 40 acres.

• URBAN AND BUILT-UP LAND (D): Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

• OTHER LAND (X): 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 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

•WATER (W): Perennial water bodies with an extent of at least 40 acres.

A review of the "Important Farmlands" mapping by the California Department of Conservation's (DOC's) Farmland Mapping and Monitoring Program (FMMP) and as shown in **Figure 3-1**, the FMMP for Kings County designates the Project site as Farmland of Statewide Importance.

The FMMP provides statistics on conversion of farmland to nonagricultural uses. Of the total land area that was inventoried (890,798 acres), in 2016, Kings County had approximately 479,839 acres of Important Farmlands (including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance) and an additional 338,243 acres of grazing land. The remaining 72,654 acres of land were Urban and Built-up Land, Other Land, and Water Area. In the period between 2014 and 2016, Important Farmlands showed a net decrease of 27,694 acres within the County.[7]

[7] County of Kings, *Kings County Agricultural Report,* 2018. Website: https://www.countyofkings.com/home/showdocument?id=19239, accessed March 2021.

3.3.1.1 Local Regulations

2035 Kings County General Plan: The Resource Conservation (RC) Element of the 2035 Kings County General Plan describes how agricultural resources continue to remain one of the highest valued assets within Kings County. Since 1969, the County has implemented several programs, ordinances, and policies to sustain agriculture. Recently, Kings County has developed the "Priority Agricultural Land Model" by using geographic information system (GIS) data and other relevant information resources to evaluate farmland resources throughout the County. The model established a "highest to lowest" priority designation of all agricultural growing areas[8].

- RC Policy B1.1.2: Use the Priority Agricultural Model as a reference for determining potential economic and resource impacts related to the loss of agricultural land resulting from conversion to urban uses.
- RC Policy B1.2.1: Require new development that results in the loss of agricultural lands to provide mitigation to offset the loss. The County's Farmland Preservation Mitigation Strategy shall require comparable acreage enrollment in the County's Farmland Security Zone.
- RC Policy B1.2.2: Conversion of agricultural land to urban uses shall require payment of mitigation fees that are based on average per acre fee for the establishment of a new Farmland Security Zone creation. All mitigation costs shall be borne by project proponent(s).[9]
- RC Policy B1.2.3: Under the County's existing program, mitigation fees shall be used for the creation of new Farmland Security Zone contracts only and applied on willing landowner property that is greater than ten acres and located within the "Medium," "Medium-High" and "Highest" Priority Agricultural Land as defined under the County's Priority Agricultural Land Model, and within the eligible Department of Conservation farmland classifications as required by the California Land Conservation Act of 1965.
- RC Policy C1.1.2: Evaluate the effects of the loss of agricultural soils related to discretionary land use approvals for non-agricultural uses that are allowed in agriculturally zoned land.

Pursuant to Kings County's Priority Agricultural Land Model,[10] the southern 80 acres of the Project site is designated as Very Low Priority.

Kings County Development Code: The Kings County Development Code establishes the basic regulations under which land within the county unincorporated areas is developed. This includes allowable or conditional uses, building setback requirements, and development standards. Pursuant to State law[11], the zoning ordinance must be consistent with the Kings County General Plan. The basic intent of the Kings County Development Code is to preserve, promote and protect the public health, safety, comfort, convenience, prosperity and general welfare via the orderly regulation of land uses throughout the unincorporated area of the County. The AG-20 district is intended primarily for application to rural areas of the county which are generally characterized by agricultural uses of land north of Kansas Avenue where farm sizes have historically been smaller than in other areas of the county. These areas should be reserved for commercial agricultural uses because of their high quality soil, existing or potential irrigation works, exclusive agricultural character of the area, or the need to reserve areas for intensive agricultural uses, which by their nature may be incompatible with nonagricultural or quasi-agricultural uses. The minimum parcel size in the AG-20 zoning district is 20 acres in size.

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[8] County of Kings, *2035 Kings County General Plan, Resource Conservation Element*, January 26, 2010, Page RC-19. Website: https://www.countyofkings.com/home/showdocument?id=3112, accessed February 2021.

[9] Since the implementation of the Kings County General Plan the State of California has removed subvention payments to local jurisdictions who participate in Williamson Act/Farmland Security Zone programs and the Board of Supervisors no longer accepts new Williamson Act and Farmland Security Zone Contracts contract applications due to lack of State funding.

[10] County of Kings, *2035 Kings County General Plan, Resource Conservation Element,* January 26, 2010, Figure RC-13. Website: https://www.countyofkings.com/home/showdocument?id=3112, accessed March 2021.

[11] Government Code Section 65860. Website: http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=GOV&sectionNum=65860, accessed February 2021.

3.3.2 Impact Assessment

a) Would the project 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?

Less than Significant Impact with Mitigation Incorporated. The Project would convert existing Farmland of Statewide Importance to a non-farmland use. The amount of farmland converted, approximately 76 acres, would require compliance with General Plan RC Policies B1.2.1, B1.2.2, and B1.2.3, which will require the payment of fees to include an amount of farmland equivalent to 76 acres of Farmland of Statewide Importance to enrolled in the County's Farmland Security Zone. The 2035 Kings County General Plan EIR analyzed the loss of farmland within the Urban Fringe areas and came to the conclusion that implementation of General Plan policies would reduce impacts to less than significant.[12] As this Project is located in the Urban Fringe area, and Conditional Use Permits are required to be consistent with the General Plan, implementation of General Plan Policy B1.2.2 would ensure this impact is less than significant. However, since Policy B1.2.2 is unlikely to be implemented due to reasons mentioned above, **Mitigation Measure AG-1** proposes to require the protection of farmland of equal of greater quality than the farmland converted, at a ratio of 1:1. **AG-1** will ensure that impacts to farmland are less than significant.

Mitigation Measure

AG-1 (Restrictive Covenant): Prior to issuance of building permits, the Project Proponent shall mitigate for the loss of Farmland of Statewide Importance at a ratio of 1:1 with restrictive covenants, which are effective for the life of this project. The agricultural land preserved under the restrictive covenants shall be of equal or greater quality as defined by the CDC's FMMP (i.e., if Farmland of Statewide Importance is converted then the agricultural land preserved must not be in a classification indicating a lower quality than Farmland of Statewide Importance).

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Less than Significant Impact. The uses proposed under the Conditional Use Permit are allowed uses in the AG-20 zone, subject to the approval of a Conditional Use Permit, thus the Project would not conflict with existing zoning for agricultural use. The AG-20 district portion of the Project site is under a Williamson Act contract, which was originally designed to prevent the premature conversion of agricultural land to urban uses. According to the Kings County Uniform Rules for Agricultural Preserves[13], compatible uses of Williamson Act contract land include,

> "Agricultural produce processing facilities for the processing of food, feed, fiber and fertilizers, and other similar activities, which convert raw agricultural produce that is grown or raised on farmland to a ready-for-market condition by canning, bottling, cooking, drying, mixing, combining, cutting, crushing, packing, packaging, or some other form of processing, on land zoned either AG-20 or AG-40 subject to the approval of a conditional use permit by the Planning Commission including any environmental review which may be required, and in compliance with the requirements found in Section 51238.1 of the California Government Code.

The Project proposes a processing facility for the processing of food that converts raw agricultural products (live cattle), raised on farmland, to a ready-for-market condition by means of processing on land zoned AG-40, which is subject to a Conditional Use Permit, and would comply with the requirements of Government Code Section 51238.1. As the use proposes a compatible use, impacts will be less than significant.

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[12] Kings County. *2035 Kings County General Plan Update, Final Environmental Impact Report*. Website: https://www.countyofkings.com/home/showpublisheddocument?id=5897 accessed March 2021.
[13] Kings County. *Uniform Rules for Agricultural Preserves in Kings County. Website: https://www.countyofkings.com/home/showpublisheddocument/24863/637412266027400000. Accessed April 2021.*

c) Would the project 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))? and

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Project would convert existing farmland to an agricultural processing facility. There is no forest land on the Project site. The project will have no impact on forest land, zoning for forest land or timberland, nor convert forest land to a non-forest use. Thus, there will be no impact.

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

No Impact. The Project does not involve other changes in the existing environment, such as the requirement of additional off-site improvements, that could result in the conversion of Farmland, to a non-agricultural use, or the conversion of forest land to a non-forest use. No impact would occur.

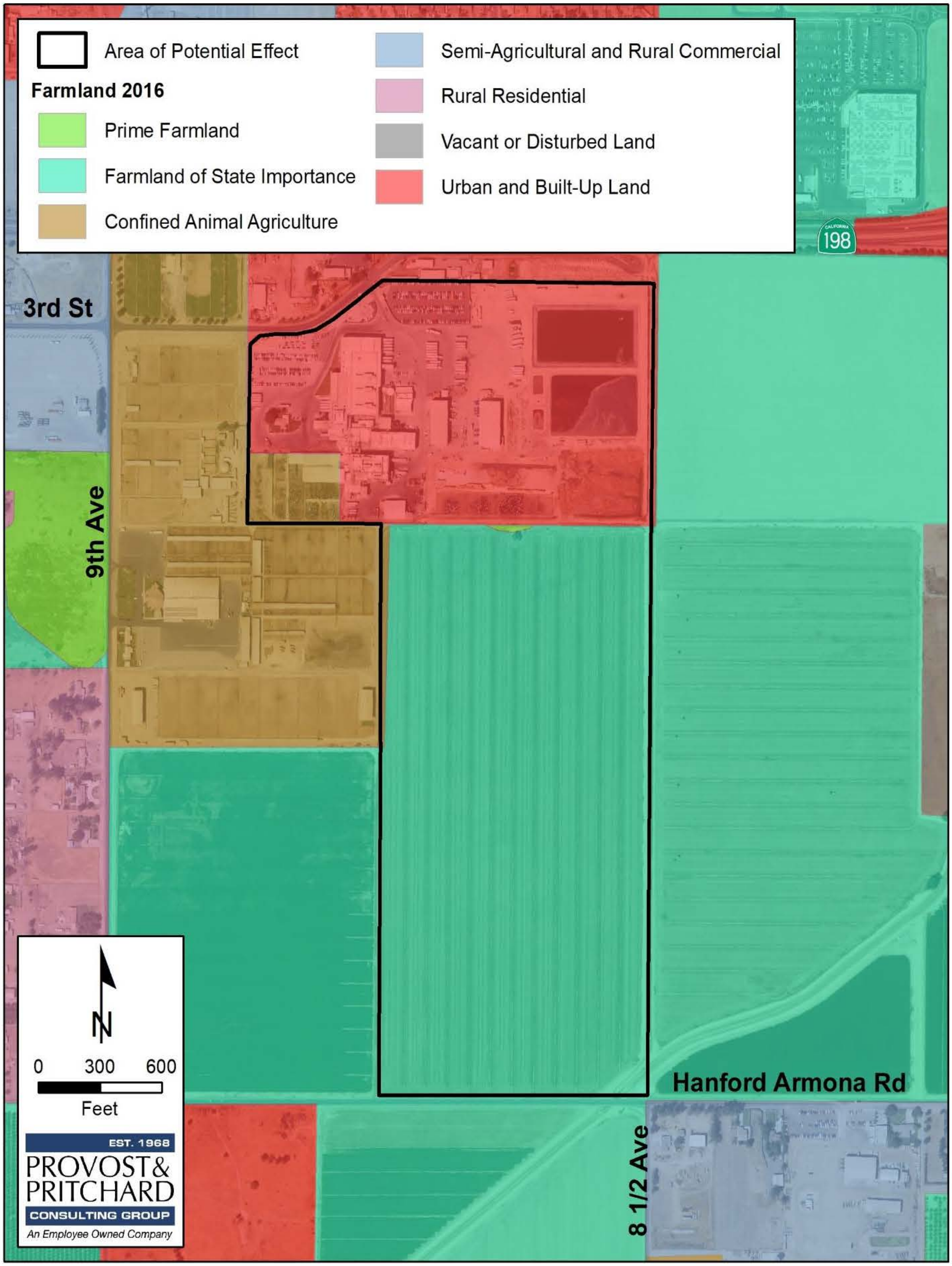

Figure 3-1. Farmland Designation Map

3.4 Air Quality

Table 3-3. Air Quality Impacts

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

3.4.1 Regulatory Setting

3.4.1.1 Regulatory Attainment Designations

Under the California Clean Air Act (CCAA), the California Air Resources Board (CARB) is required to designate areas of the State as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The Environmental Protection Agency (EPA) designates areas for ozone, carbon monoxide (CO), and nitrogen dioxide (NO_2) as "does not meet the primary standards," "cannot be classified," or "better than national standards." For SO_2, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used. The EPA uses the same sub-categories for nonattainment status: serious, severe, and extreme. In 1991, EPA assigned new nonattainment designations to areas that had previously been classified as Group I, II, or III for PM_{10} based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

The State and national attainment status designations pertaining to the SJVAB are summarized in **Appendix A**. The SJVAB is currently designated as a nonattainment area with respect to the State PM_{10} standard, ozone, and $PM_{2.5}$ standards. The SJVAB is designated nonattainment for the NAAQS 8-hour ozone and $PM_{2.5}$ standards. On September 25, 2008, the EPA re-designated the San Joaquin Valley to attainment status for the PM_{10} NAAQS and approved the PM_{10} Maintenance Plan.

Table 3-4. Summary of Ambient Air Quality Standards and Attainment Designation

Pollutant	Averaging Time	California Standards*		National Standards*	
		Concentration*	Attainment Status	Primary	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm	Nonattainment/ Severe	–	No Federal Standard
	8-hour	0.070 ppm	Nonattainment	0.075 ppm	Nonattainment (Extreme)**
Particulate Matter (PM_{10})	AAM	20 µg/m³	Nonattainment	–	Attainment
	24-hour	50 µg/m³		150 µg/m³	
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m³	Nonattainment	12 µg/m³	Nonattainment
	24-hour	No Standard		35 µg/m³	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment/ Unclassified	35 ppm	Attainment/ Unclassified
	8-hour	9 ppm		9 ppm	
	8-hour (Lake Tahoe)	6 ppm		–	
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm	Attainment	53 ppb	Attainment/ Unclassified
	1-hour	0.18 ppm		100 ppb	
Sulfur Dioxide (SO_2)	AAM	–	Attainment	--	Attainment/ Unclassified
	24-hour	0.04 ppm		--	
	3-hour	–		0.5 ppm	
	1-hour	0.25 ppm		75 ppb	
Lead (Pb)	30-day Average	1.5 µg/m³	Attainment	–	No Designation/ Classification
	Calendar Quarter	–		--	
	Rolling 3-Month Average	–		0.15 µg/m³	
Sulfates (SO_4)	24-hour	25 µg/m³	Attainment	No Federal Standards	
Hydrogen Sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m³)	Unclassified		
Vinyl Chloride (C_2H_3Cl)	24-hour	0.01 ppm (26 µg/m³)	Attainment		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/km-visibility of 10 miles or more due to particles when the relative humidity is less than 70%.	Unclassified		

** For more information on standards visit: https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf*
*** No Federal 1-hour standard. Reclassified extreme nonattainment for the Federal 8-hour standard [2015].*
****Secondary Standard*
Source: CARB 2015; SJVAPCD 2015

3.4.1.2 Thresholds of Significance

To assist local jurisdictions in the evaluation of air quality impacts, the SJVAPCD has published the *Guide for Assessing and Mitigating Air Quality Impacts*. This guidance document includes recommended thresholds of significance to be used for the evaluation of short-term construction, long-term operational, odor, toxic air contaminant, and cumulative air quality impacts. Accordingly, the SJVAPCD-recommended thresholds of significance are used to determine whether implementation of the proposed Project would result in a significant air quality impact. Projects that exceed these recommended thresholds would be considered to have a potentially significant impact to human health and welfare. The thresholds of significance are summarized, as follows:

Short-Term Emissions of Particulate Matter (PM_{10}): Construction impacts associated with the proposed Project would be considered significant if the feasible control measures for construction in compliance with Regulation VIII as listed in the SJVAPCD guidelines are not incorporated or implemented, or if project-generated emissions would exceed 15 tons per year (TPY).

Short-Term Emissions of Ozone Precursors (ROG and NO_X): Construction impacts associated with the proposed Project would be considered significant if the project generates emissions of Reactive Organic Gases (ROG) or NO_X that exceeds 10 TPY.

Long-Term Emissions of Particulate Matter (PM_{10}): Operational impacts associated with the proposed Project would be considered significant if the project generates emissions of PM_{10} that exceed 15 TPY.

Long-Term Emissions of Ozone Precursors (ROG and NO_X): Operational impacts associated with the proposed Project would be considered significant if the project generates emissions of ROG or NO_X that exceeds 10 TPY.

Conflict with or Obstruct Implementation of Applicable Air Quality Plan: Due to the region's nonattainment status for ozone, $PM_{2.5}$, and PM_{10}, if the project-generated emissions of either of the ozone precursor pollutants (i.e., ROG and NO_x) or PM_{10} would exceed the SJVAPCD's significance thresholds, then the project would be considered to conflict with the attainment plans. In addition, if the project would result in a change in land use and corresponding increases in vehicle miles traveled, the project may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

Local Mobile-Source CO Concentrations: Local mobile source impacts associated with the proposed Project would be considered significant if the project contributes to CO concentrations at receptor locations in excess of the California Ambient Air Quality Standards (CAAQS) (i.e. 9.0 ppm for 8 hours or 20 ppm for 1 hour).

Toxic Air Contaminants: Exposure to toxic air contaminants (TAC) would be considered significant if the probability of contracting cancer for the Maximally Exposed Individual (i.e., maximum individual risk) would exceed 20 in 1 million or would result in a Hazard Index greater than 1.

Odors: Odor impacts associated with the proposed Project would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors.

3.4.2 Environmental Setting and Baseline Conditions

The project site is located in Unincorporated Kings County, which is within the San Joaquin Valley Air Basin (SJVAB). The SJVAB also includes all of Fresno, Madera, Merced, San Joaquin, Stanislaus, and Tulare Counties and the valley portion of Kern County. Ambient concentrations of air pollutants are determined by the levels of emissions released by pollutant sources and the ability of the atmosphere to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and the presence of sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

3.4.2.1 Topography, Meteorology, and Climate

The SJVAB occupies the southern half of the Central Valley and is approximately 250 miles long and 35 miles wide. The SJVAB is a well-defined climatic region with distinct topographic features on three sides, as follows:

1. The west side of the SJVAB is defined by the Coast Ranges, which have an average elevation of 3,000 feet.
2. The south side of the SJVAB is defined by the San Emigdio Mountains, which are part of the Coast Ranges, and the Tehachapi Mountains, which are part of the Sierra Nevada.
3. On the east side, the Sierra Nevada defines the border.
4. The north of the SJVAB is San Joaquin County, where no topographic feature delineates the northern edge of the basin. Thus, the SJVAB can be considered a "bowl" open only to the north.

The SJVAB is basically flat with a downward gradient in terrain to the northwest. Air flows into the SJVAB through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Sacramento-San Joaquin Delta (Delta) from the San Francisco Bay area. The mountains surrounding the SJVAB create a barrier to airflow, which leads to the entrapment of air pollutants when meteorological conditions are unfavorable for transport and dilution. As a result, the SJVAB is highly susceptible to pollutant accumulation over time.

The inland Mediterranean climate of the SJVAB is characterized by hot, dry summers and cool, winters with some rain. The climate is a result of the topography and the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow, where daily summer high temperatures often exceed 100 degrees Fahrenheit. In winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and storms, and temperatures in the 30s[14].

Most of the precipitation in the SJVAB occurs as rainfall during winter storms. The rare occurrence of precipitation during the summer is in the form of convective rain showers (showers caused due to rising warm air). The amount of precipitation in the SJVAB decreases from north to south primarily because the Pacific storm track often passes through the norther portion of the SJVAB, which the southern portion remains protected by the Pacific high-pressure cell.

The winds and unstable atmospheric conditions associated with passing winter storms result in periods of low air pollution and excellent visibility. Precipitation and fog tend to reduce or limit some pollutant concentrations. For instance, clouds and fog block sunlight, which is required to fuel photochemical reactions that form ozone. Because CO is partially water soluble, precipitation and fog also tend to reduce CO concentrations in the atmosphere. In addition, PM_{10} can be washed from the atmosphere through wet deposition processes (e.g., rain). However, between winter storms, high pressure and light winds lead to the creation of low-level temperature inversions and stable atmospheric conditions, resulting in the concentrations of air pollutants (e.g., CO and PM_{10}). Summer is considered the ozone season in the SJVAB. This season is characterized by poor air movement in the mornings and by longer daylight hours, which provide a plentiful amount of sunlight to fuel photochemical reactions between reactive organic gases (ROG) and NO_X, which result in ozone formation. The predominant wind direction is from the northwest[15].

[14] SJVAPCD. GAMAQI. Website: http://www.valleyair.org/transportation/GAMAQI_12-26-19.pdf. Accessed March 2021.
[15] Western Regional Climate Center. *Local Climate Data Summaries.* Website: https://wrcc.dri.edu/cgi-bin/clilcd.pl?ca93193. Accessed March 2021.

3.4.2.2 Criteria Pollutants

California's ambient air monitoring network is one of the most extensive in the world, with more than 250 sites and 700 individual monitors measuring air pollutant levels across a diverse range of topography, meteorology, emissions, and air quality. Existing levels of ambient air quality and historical trends and projections in the Project are best documented by measurements made by these monitoring sites. The nearest monitoring site to the Project is approximately 1.75 miles west of the Project in the City of Hanford at Lincoln Elementary (807 South Irwin Street).

The site measures O_3, PM_{10}, and $PM_{2.5}$. Data presented in **Table 3-5** summarize monitoring data from the CARB's Aerometric Data Analysis and Management System for the Hanford-S Irwin Street location published from 2017 to 2019. The nearest source of CO and SO2 monitoring data is from the Fresno – Garland Station in Fresno.

Table 3-5. Ambient Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2017	2018	2019
Ozone	1-hour	Max 1 Hour (ppm)	0.106	0.108	0.093
		Days > State Standard (0.09 ppm)	7	1	0
	8-hour	Max 8 Hour (ppm)	.094	.082	.076
		Days > State Standard (0.070 ppm)	34	38	7
		Days > National Standard (0.070 ppm)	38	29	13
		Days > National Standard (0.075 ppm)	22	12	4
Inhalable coarse particles (PM_{10})	Annual	State Annual Average (µg/m3)	49.9	47.3	44.8
	24-hour	National 24 Hour (µg/m3)	298.4	174.2	211.7
		Days > State Standard (50 µg/m3)	122.0	113.5	104.4
		Days > National Standard (150 µg/m3)	1.0	6.1	6.6
Fine particulate matter ($PM_{2.5}$)	Annual	National Annual Average (µg/m3)[1]	17.2	17.7	12.2
	24-hour	24 Hour (µg/m3)	113.4	107.8	48.2
		Days > National Standard (35 µg/m3) [1]	33.8	[1]	21.0
Carbon Monoxide (CO)	1-hour	1 Hour (µg/m3)	2,725.5	2,555.4	2,315.5
	8-hour	8 Hour (µg/m3)	2,213.0	2,329.5	1,747.1
Sulfur Dioxide (SO_2)	1-hour	Federal 1 Hour (µg/m3)	13.0	14.6	14.6
		State 1 Hour (µg/m3)	20.5	19.2	23.7
	3-hour	3 Hour (µg/m3)	12.0	13.6	12.8

[1] Insufficient data available to determine the value.

3.4.2.3 Toxic Air Contaminants (TACs)

According to the California Almanac of Emissions and Air Quality, the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being diesel PM[16]. Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on the engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. Unlike other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. However, CARB has made preliminary concentration estimates based on a PM exposure method. This method uses the CARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate the concentrations of diesel PM. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

[16] CARB. *The California Almanac of Emissions and Air Quality*. 2013. Website: https://ww2.arb.ca.gov/our-work/programs/resource-center/technical-assistance/air-quality-and-emissions-data/almanac. Accessed March 2021.

Diesel PM poses the greatest health risk among these 10 TACs mentioned. Based on receptor modeling techniques, CARB estimated its health risk to be 390 excess cancer cases per million people in the SJVAB in the year 2000[17]. Overall, statewide emissions of diesel PM are forecasted to decline by 71 percent between 2000 and 2035[18].

3.4.2.4 Odors

Although the area surrounding the CVM facility is primarily rural, there are scattered houses within 1 mile, including a residential neighborhood north of Highway 198. According to the SJVAPCD GAMAQI, a significant odor problem is defined as more than one confirmed complaint per year averaged over a 3-year period, or three unconfirmed complaints per year averaged over a 3-year period. An unconfirmed complaint means that either the odor/air contaminant release could not be detected or the source/facility could not be determined. In the past 36 months, the SJVAPCD has received one complaint about odor nuisance related to the existing CVM facility. In response to the complaint, the District performed an odor survey of the facility and the surrounding area; however, the District was unable to confirm the odor to substantiate the complaint. Therefore, this one unconfirmed complaint falls below the significance threshold of three unconfirmed complaints per year averaged over a 3-year period.

3.4.2.5 Sensitive Receptors

The CVMC site has a similar agricultural/livestock uses directly west of the existing facility, to the north of the existing beef processing facility and north of highway CA-198 there is a residential neighborhood, to the west of the proposed expansion area approximately ¼ of a mile is a residential neighborhood, to the south of the proposed expansion area are agricultural/livestock uses together with some rural residences and to the east of the project site are agricultural type uses with a few rural residences. There are two existing residences located on the CVMC property,. The nearest off-site resident is a single-family home approximately 75 feet west of the existing processing facility. The nearest school is in Hanford, northwest of the facility approximately one mile away. The closest offsite workplace where workers regularly congregate is the Overland Stock Yard, directly west of the new Rendering facility.

3.4.3 Impact Assessment

An Air Quality and Greenhouse Gas Emissions Technical Report (**Appendix A**) was prepared using CalEEMod, Version 2016.3.2, EMFAC2017, AERMOD, and HARP2 for the proposed Project in April 2021. The sections below detail the methodology of the air quality and greenhouse gas emissions report and its conclusions.

3.4.3.1 Short-Term Construction-Generated Emissions

The construction and general operational sources (area, energy, mobile, waste, and water conveyance) analysis was performed using the California Emissions Estimation Model® (CalEEMod) version 2016.3.2, the official statewide land use computer model designed to provide a uniform platform for estimating potential criteria pollutant and GHG emissions associated with both construction and operations of land use projects under CEQA. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The mobile source emission factors used in the model, which are published by CARB, include the Pavley standards and Low Carbon Fuel standards. The model also identifies project design features, regulatory measures, and mitigation measures to reduce criteria pollutant and GHG emissions, along with calculating the benefits achieved from the selected measures. CalEEMod was developed by the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the South Coast Air Quality Management District (SCAQMD), the Bay Area Air Quality Management District (BAAQMD), the

[17] CARB. *The California Almanac of Emissions and Air Quality.* 2009.
[18] CARB. *The California Almanac of Emissions and Air Quality.* 2013. Website: https://ww2.arb.ca.gov/our-work/programs/resource-center/technical-assistance/air-quality-and-emissions-data/almanac. Accessed March 2021.

SJVAPCD, and other California air districts. Default land use data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) were provided by the various California air districts to account for local requirements and conditions. As the official assessment methodology for land use projects in California, CalEEMod is relied upon herein for construction and operational emissions quantification, which forms the basis for the impact analysis.

Modeling assumptions and output files are included in **Appendix A**. **Table 3-6** and **Table 3-7** show mitigated construction criteria emissions evaluated against SJVAPCD annual and daily significance thresholds, respectively. For the two Project Phases, construction would occur over five non-contiguous years in three Stages: Stage 1 (2021-2022); Stage 2 (2023); and Stage 3 (2027-2028). Stages 1 and 2 occur during the CEQA Phase 1 and Stage 3 coincides with Phase 2. The stages consisted of construction the following features:

1. Rendering Plant, Brine Evaporation Pond, WWTP, Dry Storage Expansion, Livestock Canopy, Guard Shack, Driveway from Hanford-Armona Road, Drainage Retention Pond, Truck Wash Ramp, Scale House, Auto and Truck Parking.
2. Pet Food Facility, Cooler Expansion, Hide Building and Truck Wash Building.
3. Freezer/Cooler Building (Distribution Center) and Processing Expansion.

The construction-related DPM emissions for the entire construction period from the construction equipment, on-site diesel truck, and near off-site (¼-mile) truck travel are presented in **Table 3-8**.

Table 3-6. Construction Mobile and Area Sources Summary – Annual Mitigated

Mobile and Area Sources	NOx (tons/yr)	SOx (tons/yr)	PM10 (tons/yr)	PM2.5 (tons/yr)	CO (tons/yr)	VOC (tons/yr)
Stage 1 (2021-22)	2.22	0.01	0.20	0.10	2.53	0.78
Stage 2 (2023)	1.19	0.00	0.07	0.05	1.42	0.53
Stage 3 (2027-28)	1.58	0.01	0.20	0.10	2.48	2.12
Construction Maxima	**2.22**	**0.01**	**0.20**	**0.10**	**2.53**	**2.12**
SJVAPCD CEQA Threshold	**10**	**27**	**15**	**15**	**100**	**10**
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Table 3-7. Construction Mobile and Area Sources Summary – Daily Mitigated

Mobile and Area Sources	NOx (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO (lb/day)	VOC (lb/day)
Stage 1 (2021-22)	23.2	0.1	7.5	4.0	33.6	53.6
Stage 2 (2023)	11.5	0.0	2.3	1.2	13.4	37.3
Stage 3 (2027-28)	13.5	0.0	7.2	4.0	21.2	93.6
Construction Maxima	23.2	0.1	7.5	4.0	33.6	93.6
SJVAPCD CEQA Threshold	100	100	100	100	100	100
Above Threshold?	No	No	No	No	No	No

Table 3-8. DPM Emissions – Entire Construction Period

Sources	Stage 1 Construction (lb)	Stage 2 Construction (lb)	Stage 3 Construction (lb)	Total Construction Emissions (lb)	Average Annual Construction Emissions (lb/yr)
Construction Equipment	214.82	96.16	103.82	414.80	59.26
On-Site Trucks	1.55	0.03	0.18	1.75	0.25
Off-Site Trucks	0.52	0.01	0.06	0.58	0.08

3.4.3.2 Long-Term Operational Emissions

Operational emissions from the Project consist of stationary source emissions from the new rendering facility and Pet Food facility regenerative thermal oxidizer (RTO), mobile sources (trucks, mules, TRUs, and workers), and building operations (heating/cooling, landscaping, etc.). The following sections describe the emission calculations for each source type. Modeling assumptions and output files are included in **Appendix A**. The proposed Project criteria pollutant emissions are summarized in **Table 3-9** and **Table 3-10** on an annual and daily basis, respectively. The proposed Project TAC emissions are summarized in **Table 3-11**.

Table 3-9. Project Criteria Pollutant Annual Emissions

Category	Source	NOx	SOx	PM10	PM2.5	CO	VOC
		(in tons per year)					
Permitted Sources							
Rendering Facility	Rendering Operations	1.17	7.22	1.47	0.92	2.72	3.50
	Loadout Operations	–	–	0.05	0.03	–	–
	Boilers	5.57	3.10	3.26	3.26	40.13	5.97
Pet Food Facility	Regenerative Thermal Oxidizer (RTO)	0.79	0.06	0.17	0.17	1.84	0.12
Fueling Station	Diesel Tanks	–	–	–	–	–	0.005
Total Permitted Activities Emissions		**7.52**	**10.38**	**4.94**	**4.37**	**44.69**	**9.60**
SJVAPCD CEQA Threshold		**10**	**27**	**15**	**15**	**100**	**10**
Above Threshold?		**No**	**No**	**No**	**No**	**No**	**No**
Non-Permitted Sources							
Mobile Sources	Vehicle Exhaust – On-Site	0.91	0.003	0.01	0.01	1.64	0.27
	Vehicle Exhaust – Near Off-Site	0.06	0.0003	0.001	0.001	0.06	0.01
	Vehicle Exhaust – Highway	19.77	0.09	0.37	0.36	3.46	0.80
	Road Dust – On-Site	–	–	0.24	0.06	–	–
	Road Dust – Near Off-Site	–	–	0.12	0.03	–	–
	Road Dust – Highway	–	–	5.44	1.33	–	–
Building Operations	Natural Gas and Maintenance	0.22	0.001	0.02	0.02	0.19	1.98
Total Non-Permitted Activities Emissions		**20.96**	**0.09**	**6.20**	**1.81**	**5.35**	**3.06**
SJVAPCD CEQA Threshold		**10**	**27**	**15**	**15**	**100**	**10**
Above Threshold?		**Yes**	**No**	**No**	**No**	**No**	**No**

Note: Mobile sources include all off-site travel.

Table 3-10. Project Criteria Pollutant Daily Emissions

Category	Source	NO_x (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)	CO (lb/day)	VOC (lb/day)
Permitted Sources							
Rendering Facility	Rendering Operations	6.39	78.65	14.11	8.37	14.92	25.25
	Loadout Operations	–	–	0.54	0.29	–	–
	Boilers	30.51	16.96	17.85	17.85	219.89	32.73
Pet Food Facility	RTO	4.32	0.34	0.91	0.91	10.08	0.66
Fueling Station	Diesel Tanks	–	–	–	–	–	0.03
Total Permitted Activities Emissions		**41.22**	**95.96**	**33.41**	**27.43**	**244.89**	**58.67**
SJVAPCD CEQA Threshold		**100**	**100**	**100**	**100**	**100**	**100**
Above Threshold?		**No**	**No**	**No**	**No**	**Yes**	**No**
Non-Permitted Sources							
Mobile Sources	Vehicle Exhaust – On-Site	5.00	0.02	0.03	0.03	8.99	1.48
	Vehicle Exhaust – Near Off-Site	0.33	0.001	0.003	0.003	0.33	0.04
	Road Dust – On-Site	–	–	1.34	0.33	–	–
	Road Dust – Near Off-Site	–	–	0.67	0.17	–	–
Building Operations	Natural Gas and Maintenance	1.20	0.01	0.09	0.09	1.05	10.84
Total Non-Permitted Activities Emissions		***6.53***	***0.03***	***2.13***	***0.62***	***10.37***	***12.36***
SJVAPCD CEQA Threshold		***100***	***100***	***100***	***100***	***100***	***100***
Above Threshold?		***No***	***No***	***No***	***No***	***No***	***No***

Note: Mobile sources include ¼ mile travel near off-site per SJVAPCD Policy APR-2030.

Table 3-11. Operational TAC Emissions

Pollutant	Rendering Facility			Pet Food Facility	Fueling Station	Mobile Sources	Total Emissions
	RTO	Two Room Air Scrubbers	Four Boilers	RTO	Diesel Tanks	Diesel Vehicles and Equipment	
	Annual Emissions (lb/yr)						
DPM	–	–	–	–	–	11.5	**11.5**
H_2S	–	153.4	–	–	–	–	**153.4**
Acetaldehyde	0.279	–	6.734	0.188	–	–	**7.2**
Acrolein	0.175	–	5.865	0.118	–	–	**6.2**
Benzene	0.519	–	12.599	0.350	0.009	–	**13.5**
Ethylbenzene	0.616	–	14.988	0.416	–	–	**16.0**
Formaldehyde	1.102	–	26.718	0.745	–	–	**28.6**
Hexane	0.408	–	9.992	0.276	–	–	**10.7**
Naphthalene	0.019	–	0.652	0.013	–	–	**0.7**

Pollutant	Rendering Facility			Pet Food Facility	Fueling Station	Mobile Sources	Total Emissions
	RTO	Two Room Air Scrubbers	Four Boilers	RTO	Diesel Tanks	Diesel Vehicles and Equipment	
	Annual Emissions (lb/yr)						
PAHs (excl. naphthalene)	0.006	–	0.217	0.004	–	–	**0.2**
Propylene	47.386	–	1151.2	32.0	–	–	**1,230.7**
Toluene	2.373	–	57.562	1.603	0.050	–	**61.6**
Xylenes	1.763	–	42.792	1.191	0.044	–	**45.8**
Ammonia	–	–	9753.0	–	–	–	**9,753.0**
Total TACs (lb/yr)							**11,339.1**

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact with Mitigation Incorporated. The SJVAB is in nonattainment with State and federal O_3 and $PM_{2.5}$ standards and State PM_{10} standards; for all other pollutants, the SJVAB is either attainment or unclassified status. Due to the nonattainment status, the SJVAPCD periodically updates the San Joaquin Valley Clean Air Plan (CAP) to meet State and federal requirements and/or to incorporate the latest technical information. The CAP is the District's contribution to the State Implementation Plan (SIP), which is submitted to the U.S. EPA for approval under the CAA.

The SJVAPCD has adopted two current plans:

1. The 2016 Plan for the 2008 8-hour Ozone Standard – This plan addresses strategies and actions necessary to improve the valley's air quality and meet the federal air quality standards for O3; and,
2. The 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards – This plan addresses strategies and actions necessary to improve the valley's air quality and meet the newest federal air quality standards for PM2.5.

Operation of the proposed Project would not conflict with the SJVAPCD air quality planning goals because project elements would be required to comply with all applicable SJVAPCD rules and CARB regulations during construction and operations [e.g., New Source Review (NSR), permitting requirements, prohibitions, visible emissions, nuisance, fugitive dust, architectural coatings, gas-fired heating equipment, etc.]. These rules and regulations have been incorporated into Mitigation Measure AQ-1.

As further discussed in Impact 3.4.3(b) below, the Applicant will work with the SJVAPCD to mitigate operational PM_{10} and $PM_{2.5}$ in compliance with SJVAPCD Policy APR-1925, including the surrender of Emission Reduction Credits (ERCs) or a Voluntary Emission Reduction Agreement (VERA), described below as Mitigation Measure AQ-2. ERCs and VERAs fund emission-reducing projects off-site, but are located within the San Joaquin Valley Air Pollution Control District's boundaries. Such projects can include replacing old high-emitting agricultural equipment, scrapping old cars (e.g., vehicles that fail smog tests and repairs would not be cost-effective), and other incentive projects, such as repowering.

Therefore, with the implementation of Mitigation Measures AQ-1 and AQ-2, the Project would not conflict with or obstruct implementation of the applicable air quality plan, and the overall impact would be less than significant.

Mitigation Measures

AQ-1 (Dust Control Plan): Pursuant to SJVAPCD Regulation VIII, Rule 8021 Section 6.3, the Project shall submit a Dust Control Plan (DCP) to the Air Pollution Control Officer (APCO) prior to the start of construction activities at the site. The DCP shall describe all fugitive dust control measures to be implemented before, during, and after any dust-generating activity. The DCP shall contain all the information described in Section 6.3.6 of the rule and identify applicable dust control measures contained in Rules 8031, 8041, 8051, 8061, and 8071. Construction activities shall not commence until the APCO has approved or conditionally approved the DCP for implementation. The Applicant shall provide written notification to the APCO via fax, e-mail, or mail within 10 days prior to commencement of earthmoving and other construction activities. When exposure to dust is unavoidable for workers who will be disturbing the top 2 to 12 inches of soil, the construction contractor shall provide workers with National Institute for Occupational Safety and Health (NIOSH)-approved respiratory protection with particulate filters rated N95, N99, N100, P100, or HEPA, as recommended in the California Department of Public Health publication "Preventing Work-Related Coccidioidomycosis (Valley fever)."

AQ-2 (Particulate Matter): Prior to issuance of an Authority to Construct/Permit to Operate, the Project will mitigate PM_{10} and $PM_{2.5}$ through consultation with the SJVAPCD to comply with the requirements of SJVAPCD Policy APR-1925, including the surrender ERCs or a VERA.

b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less than Significant Impact with Mitigation Incorporated. The SJVAB is nonattainment with respect to State and federal O_3 and $PM_{2.5}$ standards and State PM_{10} standards. The project would emit O_3 precursors (VOC and NO_x) and PM_{10} and $PM_{2.5}$ emissions.

The County and SJVAPCD CEQA guidance requires construction and operations emissions to be compared to the CEQA mass thresholds shown in **Section 3.4.2.1** for determination of significance. If all emissions are below these thresholds, then a project would not cause or contribute to a violation of any CAAQS or NAAQS. If emissions exceed these thresholds, an AAQA should be conducted to show that the project would not cause or contribute to a violation of any CAAQS or NAAQS.

As shown in **Table 3-6** and **Table 3-7**, construction emissions are below both the daily and annual SJVAPCD CEQA thresholds; therefore, construction emissions would have a less than significant cumulative impact on air quality.

As shown in **Table 3-9** and **Table 3-10**, except for CO daily permitted and NOx annual non-permitted operational emissions, all other pollutants are below the annual and daily CEQA significance thresholds.

Due to the elevated CO and NOx emissions, a detailed AAQA was prepared for the proposed Project for NO_2, SO_2, CO, PM_{10}, and $PM_{2.5}$, and the results are presented in Table 4-1 in **Appendix A**. The AAQA demonstrates that the Project will not cause an exceedance of the NO_2, SO_2, or CO NAAQS or CAAQS. The 1-hour CO NAAQS or CAAQS were not analyzed as the advancement of modern vehicle emission control technology since the mid-1990s has brought the San Joaquin Valley into attainment since 1994.

Since background PM_{10} and $PM_{2.5}$ concentrations are greater than the NAAQS and CAAQS, the modeled concentrations are compared to the SILs. The model-predicted PM_{10} and $PM_{2.5}$ concentrations from all on-site stationary and mobile exhaust sources are greater than the SILs, and the concentrations from road dust sources are less than the PM_{10} and $PM_{2.5}$ fugitive dust SILs.

Per SJVAPCD Policy APR-1925, if modeling shows project impacts are above the applicable AAQS or SIL, then the project can surrender offsets in the form of ERCs or VERAs to mitigate project emissions. The Project will mitigate PM_{10} and $PM_{2.5}$ emissions by working with the SJVAPCD to comply with the requirements of

SJVAPCD Policy APR-1925, including the surrender of ERCs or a VERA; therefore, the Project will have a less than significant impact on air quality.

Mitigation Measures

See AQ-1 and AQ-2, above.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact with Mitigation Incorporated. The SJVAPCD has set CEQA thresholds of significance through policy APR-1906 for TAC emissions based on the results of a Health Risk Assessment (HRA). The threshold for the maximally exposed individual (MEI) is a predicted cancer risk that is less than or equal to 20 in one million and acute or chronic non-cancer risk predicted to be less than 1.0. [19]

To assess the potential acute, chronic, and carcinogenic health risks from the project, construction and an operational HRAs were conducted.

Table 3-12 presents a summary of the construction HRA results at the Point of Maximum Impact (PMI), Maximally Exposed Individual Resident (MEIR), Maximally Exposed Individual Worker (MEIW), and maximally exposed sensitive receptor. The PMI is a location within the modeling grid where the model calculates the highest (worst-case) health risk, and may or may not be a habitable location. **Appendix A** presents more detailed tables of the HARP2 modeling results for construction for each health risk, at each receptor type, broken down by pollutant and source.

The results show that, for all receptor types and locations, the predicted health risks are less than the SJVAPCD cancer significance threshold and well below the non-cancer thresholds, with the implementation of Mitigation Measure AQ-3, which requires the use of a clean construction fleet. The cancer risk PMI occurs at the facilities western fence line near the Overland Stockyard. The western fenceline extends the entire length of the facility, thus covers a large area. The PMI was predicted to occur near the Overland Stockyard and the new Rendering Facility. The offsite residence in question is approximately 300 meters away from the PMI, as is the onsite mobile home. For both construction and operations the PMI occurs near the new Rendering Facility. Whereas the onsite resident is impacted by construction of the Rendering and other nearby buildings, and for operations it is primarily impacted by the diesel mules that will operate within a few feet from that home. PMI represents worst-case scenario, and the likelihood of a resident or worker remaining at the fence line during the entire seven-year duration of construction is unlikely and speculative. The cancer risk at the MEIR occurs at the on-site temporary mobile home resident located north of the existing dry storage building. DPM emissions from the construction equipment contributes to the majority of the cancer risk.

Table 3-12. Construction Health Risk Assessment Results

Health Risk	PMI	MEIR	Maximum Sensitive Receptor	MEIW	SJVAPCD CEQA Threshold
Cancer Risk (In One Million)	20.34	19.48	0.22	1.79	20
HIC	0.008	0.007	0.0001	0.003	1

[19] San Joaquin Valley Air Pollution Control District (SJVAPCD). APR-1906, Framework for Performing Health Risk Assessments. July 1, 2018. Website (https://www.valleyair.org/policies_per/policies_per_idx.htm) accessed April 12, 2021.

The results of the HRA from the Project operational emissions at full buildout are summarized in **Table 3-13**. Appendix A presents more detailed tables of the HARP2 modeling results for operations for each health risk, at each receptor type, broken down by pollutant and source.

The results show that, for all receptor types and locations, the predicted health risks are less than the SJVAPCD cancer significance threshold and well below the non-cancer thresholds. The cancer risk PMI and MEIR occur at the same location, the on-site temporary mobile home resident located north of the existing dry storage building. DPM emissions from the mules contributes to the majority of the cancer risk at this location.

Table 3-13. Operational Health Risk Assessment Results

Health Risk	PMI	MEIR	Maximum Sensitive Receptor	MEIW	SJVAPCD CEQA Threshold
Cancer Risk (In One Million)	8.66	8.66	0.68	0.28	20
HIC	0.009	0.003	0.0002	0.002 (Annual) 0.0003 (8-Hour)	1
HIA	0.054	0.012	0.003	0.015	1

The results of the construction HRA are summarized in **Table 3-12**, which shows that predicted health risks are less than significant, with implementation of Mitigation Measure AQ-3. The results of the operational HRA are summarized in **Table 3-13**, which shows that predicted health risks are less than significant.

Soil disturbance during construction activities would have the potential to expose workers and other persons near the project site to Valley fever, which is a respiratory fungal infection caused by two species of coccidioides (kok-sid-e-OY-deze) organisms. These fungi are found in soil in certain regions of the United States, particularly the southwest, including the San Joaquin Valley. The fungi spores can be entrained into the air by anything that disturbs the soil, such as farming, construction, and high winds. When inhaled, the fungi can cause Valley fever, also known as acute coccidioidomycosis (kok-sid-e-oy-doh-my-KOH-sis). Mild cases of Valley fever usually resolve on their own. In more-severe cases, doctors treat the infection with antifungal medications. Valley fever is the initial form of coccidioidomycosis infection. This initial, acute illness can develop into a more serious disease, including chronic and disseminated coccidioidomycosis. Symptoms of Valley fever include: fatigue (tiredness); cough; fever; shortness of breath; headache; night sweats; muscle aches or joint pain; and rashes on upper body or legs. These symptoms can be similar to those of other common illnesses, which may cause delays in getting patients correctly diagnosed and treated.

For many people, symptoms disappear after weeks or months without any treatment; however, healthcare providers may prescribe antifungal medications for some people to reduce symptoms or prevent the infection from getting worse. People who have severe lung infections or infections that have spread to other parts of the body always need antifungal treatment and may need hospitalization.

Anyone who lives in or travels to an area where the fungus lives is at risk of contracting Valley fever. Valley fever can affect people of any age, but is most common in adults aged 60 and older. Additionally, certain groups of people may be at higher risk for developing the severe forms of Valley fever, such as: people who have weakened immune systems (e.g., HIV/AIDS, organ transplants, medications such as corticosteroids or tumor necrosis factor inhibitors); pregnant women; diabetics; and certain racial groups (e.g., Black or Filipino)[20,21]. Mitigation Measure AQ-1 addresses protection against Valley fever for construction workers.

[20] Website: https://www.mayoclinic.org/diseases-conditions/valley-fever/symptoms-causes/syc-20378761. Accessed April 2021.
[21] Website: https://www.cdc.gov/fungal/features/valley-fever.html. Accessed April 2021.

Mitigation Measures

AQ-3 (Clean Construction Fleet): During construction, all earthmoving equipment used during site preparation and grading activities will be part of a "Clean Fleet" equipped with Tier 4 diesel engines that substantially reduce DPM emissions compared to older fleet equipment with lower-Tier engines (i.e., Tiers 1, 2, or 3).

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact. While odors rarely cause physical harm, they can be unpleasant, often generating citizen complaints. The SJVAPCD GAMAQI outlines the screening level for potential odor sources as 1 mile for rendering plants, food processing facilities, and feed lots to assess this criterion. The SJVAPCD also recommends reviewing historical odor complaints in the vicinity of the project.

The existing CVM meat processing facility is considered a potentially odor-generating source, and SJVAPCD records show it does not produce odors that adversely affect a substantial number of people.

Although the Project will add new possible sources of odors, potential odors will be minimized through significant odor control systems, as discussed in **Appendix A** and **Section 2.1.7.2, Operation and Maintenance**; thus, the potential for odorous emissions is similar to the existing CVM facility, and based on SJVAPCD records, it is expected that the Project will not produce odors that adversely affect a substantial number of people.

For sources permitted by the SJVAPCD, such as the Rendering Facility and the RTO at the Pet Food Facility, Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance, or annoyance to the public. To comply with this rule, CVM proposes the installation of odor control systems and operational procedures, further described under Project Operation and Maintenance in **Section 2.1.7.2**. Odor impacts will remain less than significant.

3.5 Biological Resources

Table 3-14. Biological Resources Impacts

Biological Resources Impacts				
Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game 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 Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

3.5.1 Environmental Setting and Baseline Conditions

The Project site is located in eastern Kings County within the lower San Joaquin Valley, part of the Great Valley of California (see **Figure 2-1**). The Valley is bordered by the Sierra Nevada Mountain Ranges to the east, the Coast Ranges to the west, San Joaquin County to the north, and to the south the San Emigdio Mountains, which are part of the Coast Ranges, and the Tehachapi Mountains, which are part of the Sierra Nevada.

Like most of California, the San Joaquin Valley experiences a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures often reach above 90 degrees Fahrenheit, and the humidity is generally low. Winter temperatures are often below 60 degrees Fahrenheit during the day and rarely exceed 70 degrees. On average, the Central Valley receives approximately 10 inches of precipitation in the form of rainfall yearly, most of which occurs between October and March.

The entire Project site lies within Guernsey Slough sub-watershed; Hydrologic Unit Code (HUC): 180300122001, part of the Jacobs Slough-Frontal Tulare Lake Bed watershed; HUC: 1803001220. The principal drainage in the vicinity is Lakeside ditch, which runs through the southeast corner of the Project site.

During a field survey conducted on February 16, 2021, the 80-acre field included strips of alfalfa and recently grazed alfalfa. Herds of sheep were present during the survey. Most of the fields were surrounded by low electrical fencing and hard, compact, frequently used dirt roads. Domestic dogs used for herding were also present in the area during the survey. Non-agricultural vegetation was almost entirely absent. A few patches of cheeseweed (*Malva parviflora)* were observed along the margins of the fields. A single English walnut (*Juglans regia)* was present on the northern perimeter of the fields. Several American crows (*Corvus brachyrhynchos*) were observed perched in the walnut tree. Several dead crows and cattle egrets (*Bubulcus ibis*) were laying underneath the walnut next to numerous shotgun shells. Lakeside ditch runs through the southeastern most corner of the APE. The canal was largely dry and devoid of vegetation at the time of the survey. Some water with a significant algal film was observed located underneath the area where the ditch passes under Hanford Armona Road. Debris and a few coyote melons (*Cucurbita palmata)* were scattered throughout the general area. Other species observed during the surveying of the fields include killdeer (*Charadrius vociferus*), house sparrows (*Passer domesticus*), and white crowned sparrows (*Zonotrichia leucophrys*).

The current location of the Central Valley Meat Co. operations was dominated by concrete structures and cattle holding facilities. The site is completely enclosed by chain link fencing. The eastern portion of the site is dedicated to dairy ponds and cattle refuse. Numerous birds were present in and around the cattle pens and ponds, including cattle egrets, crows, killdeer, European starlings (*Sturnus vulgaris*), rock pigeons (*Columba livia*), black phoebes (*Sayornis nigricans*), great egrets (*Ardea alba*), and least sandpipers (*Calidris minutilla*). Multiple feral domestic cats *(Felis catus*) were also observed in this area. Additional mammalian species expected to occur nearby include coyote (*Canis latrans*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), Botta's pocket gopher (*Thomomys bottae*), and other common murid rodents. Large trucks and heavy machinery were being operated throughout the site. Ornamental shrubs including lantanas bordered the roads and facilities within the complex. Numerous rodent bait traps were identified in and around the vegetation. A small residence is located within the western portion of the complex. Ornamental trees containing inactive nests were present next to the house. A single cooper's hawk (*Accipiter cooperii*) was observed perched within a large tree inside the residential lot.

3.5.2 Regulatory Setting

3.5.2.1 State

General plans, area plans, and specific projects are subject to the provisions of CEQA. The purpose of CEQA is to assess the impacts of Projects on the environment prior to project implementation. Impacts to biological resources are just one type of environmental impact assessed under CEQA and can vary from project to project in terms of scope and magnitude. Projects requiring removal of vegetation may result in the mortality or displacement of animals associated with this vegetation. Animals adapted to humans, roads, buildings, and pets may replace those species formerly occurring on a site. Plants and animals that are State and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. Such impacts may be considered either "significant" or "less-than-significant" under CEQA. According to *California Environmental Quality Act, Statute and Guidelines* (AEP 2012), "significant effect on the environment" means a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered "significant" if they would:

- 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 CDFW or USFWS;

- 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 CDFW or USFWS;
- 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;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) states that a project may trigger the requirement to make a "mandatory finding of significance" if the project has 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 an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory."*

3.5.2.2 Local

The Kings County General Plan contains the following policies related to the preservation of biological resources that may be considered relevant to the Project's environmental review.

- Preserve land that contains important natural plant and animal habitats;
- Require that development in or adjacent to important natural plant and animal habitats minimize the disruption of such habitats;
- Ensure that, in development decisions affecting riparian environments, the conservation of fish and wildlife habitat and the protection of scenic qualities are balanced with other purposes representing basic health, safety, and economic needs;
- Balance the protection of the County's diverse plant and animal communities with the County's economic needs;
- Require mitigation measures to protect important plant and wildlife habitats;
- Require as a primary objective in the review of development projects the preservation of healthy native oaks and other healthy native trees; and,
- Maintain to the maximum extent practical the natural plant communities utilized as habitat by threatened and endangered species.

Table 3-15. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity

Species	Status	Habitat	Occurrence on Project Site
blunt-nosed leopard lizard *(Gambelia sila)*	FE, CE, CFP	Inhabits semi-arid grasslands, alkali flats, low foothills, canyon floors, large washes, and arroyos, usually on sandy, gravelly, or loamy substrate, sometimes on hardpan. Often found where there are abundant rodent burrows in dense vegetation or tall grass. Cannot survive on lands under cultivation. Known to bask on kangaroo rat mounds and often seeks shelter at the base of shrubs, in small mammal burrows, or in rock piles. Adults may excavate shallow burrows but rely on deeper pre-existing rodent burrows for hibernation and reproduction.	**Unlikely**. Agricultural activities onsite make the APE unsuitable for this species. The only regional recorded observation of this species occurred more than 30 years ago approximately 9.5 miles southwest of the APE in valley sink scrub habitat.
burrowing owl *(Athene cunicularia)*	CSC	Resides in open, dry annual or perennial grasslands, deserts, and scrublands with low growing vegetation. Nests underground in existing burrows created by mammals, most often ground squirrels.	**Unlikely**. The highly disturbed habitats of the APE and surrounding lands are unsuitable for this species. Nesting and foraging habitat is absent due to incompatible topography and/or vegetative cover. All regional recorded observations of this species have occurred within the vicinity of Cross Creek and Cameron Creek. At most, a burrowing owl individual could potentially pass over or through the site but would not be expected to nest or forage within or adjacent to proposed impact areas.
California tiger salamander *(Ambystoma californiense)*	FT, CT, CWL	Requires vernal pools or seasonal ponds for breeding and small mammal burrows for aestivation. Generally found in grassland and oak savannah plant communities in central California from sea level to 1500 feet in elevation.	**Absent**. The highly disturbed habitats of the APE and surrounding lands are unsuitable for this species. Wetland habitat suitable for breeding is absent from the APE and potential aestivation habitat is marginal.
loggerhead shrike *(Lanius ludovicianus)*	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the Central Valley, nests in riparian areas, desert scrub, and agricultural hedgerows.	**Unlikely**. Suitable nesting habitat is absent from the APE and surrounding lands. The only regional observation of this species occurred approximately 30 years ago in riparian habitat along Cottonwood Creek. At most, this species could occasionally fly over the APE.
San Joaquin kit fox *(Vulpes macrotis mutica)*	FE, CT	Underground dens with multiple entrances in alkali sink, valley grassland, and woodland in valleys and adjacent foothills.	**Unlikely**. The three nearest recorded observations of this species occurred more than 45 years ago. Although some populations of San Joaquin Kit Fox in other parts of California have adapted to an urbanized environment, modern kit fox occurrences are locally scarce. Presence

Species	Status	Habitat	Occurrence on Project Site
			of domestic dogs on site and lack of prey species makes this less than marginal habitat for this species. The APE is located approximately 50 miles east of the nearest known core population in Ciervo-Panoche Natural Area. At most, this species could conceivably pass through the Project area during dispersal movements.
Swainson's hawk *(Buteo swainsoni)*	CT	Nests in large trees in open areas adjacent to grasslands, grain or alfalfa fields, or livestock pastures suitable for supporting rodent populations.	**Possible**. Nesting habitat in the vicinity of Project activities is marginal for this species. A nest tree was observed less than a mile from the APE in 2016. Marginal foraging habitat is found throughout the region.
Tipton kangaroo rat *(Dipodomys nitratoides nitratoides)*	FE, CE	Burrows in soil. Often found in grassland and shrubland.	**Absent**. Suitable habitat for this species is absent from the APE and surrounding lands. The APE is outside the current known range of this species. The only two regional recorded observations of this species occurred in 1985, approximately 9 miles southwest of the APE in shrub-marsh habitat.
tricolored blackbird *(Agelaius tricolor)*	CT, CSC	Nests colonially near fresh water in dense cattails or tules, or in thickets of riparian shrubs. Forages in grassland and cropland. Large colonies are often found on dairy farm forage fields.	**Possible**. The Project is located within the historic and current breeding range of this species. Although there have been no recorded observations of this species in the past 20 years in the vicinity of the Project, the alfalfa fields on site and the surrounding area could serve as marginal foraging habitat. Higher quality habitat with less disturbance, however, is abundant in the region.
vernal pool fairy shrimp *(Branchinecta lynchi)*	FT	Occupies vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	**Absent**. Suitable vernal pool habitat for this species is absent from the APE and surrounding lands. The APE is subject to frequent ground disturbance and therefore generally unsuitable for this species.
vernal pool tadpole shrimp *(Lepidurus packardi)*	FE	Occurs in vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	**Absent**. Suitable vernal pool habitat for this species is absent from the APE and surrounding lands. The APE is subject to frequent ground disturbance and therefore generally unsuitable for this species.
western mastiff bat *(Eumops perotis californicus)*	CSC	Found in open, arid to semi-arid habitats, including dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and	**Unlikely**. Roosting and breeding habitat is absent from the APE and surrounding lands, but this species may occasionally forage over the Project site. The only

Species	Status	Habitat	Occurrence on Project Site
		agricultural areas, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces but may also use high buildings and tunnels.	recorded observation of this species in the vicinity corresponds to a historic (1899) collection from the general region of "Traver." The exact location is unknown.
western pond turtle *(Emys marmorata)*	CSC	An aquatic turtle of ponds, marshes, slow-moving rivers, streams, and irrigation ditches with riparian vegetation. Requires adequate basking sites and sandy banks or grassy open fields to deposit eggs.	**Unlikely**. The highly disturbed habitats of the Project area and fragmentation of the surrounding lands are unsuitable for this species. Typical preferred aquatic habitat is absent from the Project site, and terrestrial habitat is unsuitable due to frequent ground disturbance associated with agricultural production.
western spadefoot *(Spea hammondii)*	CSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Vernal pools or temporary wetlands, lasting a minimum of three weeks, which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	**Unlikely**. Vernal pools are absent from the APE. The disturbed habitats of the Project areas are generally unsuitable for this species. All recorded observations in the vicinity have occurred within vernal pools in undisturbed grassland habitat, with the majority located near Cross Creek and Cottonwood Creek approximately 7 miles northeast of the APE.

Table 3-16. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity

Species	Status	Habitat	Occurrence on Project Site
alkali-sink goldfields (*Lasthenia chrysantha*)	CNPS 1B	Found in vernal pool and wet saline flat habitats. Occurrences documented in the San Joaquin and Sacramento Valleys at elevations below 656 feet. Blooms February - April.	**Absent.** Vernal pool habitat is absent from APE and surrounding areas. The disturbed habitats and soils onsite are unsuitable for this species
brittlescale *(Atriplex depressa)*	CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in alkaline or clay soils, typically in meadows or annual grassland in at elevations below 1050 feet. Sometimes associated with vernal pools. Blooms June–October.	**Absent.** The disturbed habitats and soils onsite are unsuitable for this species. There have been no observations of this species in the vicinity of the APE in over 50 years.
California alkali grass *(Puccinellia simplex)*	CNPS 1B	Found in the San Joaquin Valley and other parts of California in saline flats and mineral springs within valley grassland and wetland-riparian communities at elevations below 3000 feet. Blooms March–May.	**Absent.** One occurrence of this species has been mapped within the APE, however the observation was made in 1942 with the location described as "2 Miles east of Hanford". The observation notes, "Possibly extirpated by development and agricultural conversion based on aerial imagery of the area". The disturbed habitats and soils onsite are unsuitable for this species.

Species	Status	Habitat	Occurrence on Project Site
Earlimart orache *(Atriplex cordulata var. erecticaulis)*	CNPS 1B	Found in the San Joaquin Valley in saline or alkaline soils, typically within valley and foothill grassland at elevations below 375 feet. Blooms August–September.	**Absent.** The disturbed habitats onsite are unsuitable for this species. The nearest observation of this species occurred approximately 8 miles south of the APE and is from a 1994 collection. When the site was surveyed in 2002, no observations of the species occurred. All other regional observations of this species have occurred in the vicinity of Cottonwood creek.
heartscale *(Atriplex cordulata var. cordulata)*	CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in saline or alkaline soils within shadescale scrub, valley grassland, and wetland-riparian communities at elevations below 230 feet. Blooms June–July.	**Absent.** The disturbed habitats onsite are unsuitable for this species. The only regional recorded observation of this species is from a historical collection dated 1938.
lesser saltscale *(Atriplex minuscula)*	CNPS 1B	Found in the San Joaquin Valley in sandy, alkaline soils in alkali scrub, valley and foothill grassland, and alkali sink communities at elevations below 750 feet. Blooms April–October.	**Absent.** The disturbed habitats onsite are unsuitable for this species. All regional recorded observations of this species have occurred in vernal pool habitat or alkali grasslands, both of which are absent from the APE and surrounding area.
Mud nama (*Nama stenocarpa*)	CNPS 2B	Found in the San Joaquin Valley and throughout southern California, this species grows in wetland habitats including marshes, swamps, and river banks. Occurs at elevations below 2660 feet. Blooms March – October.	**Absent.** Suitable wetland habitat is absent from the APE. The only regional observation of this species is mapped approximately 8.5 miles south of the APE and occurred in a flood control channel.
recurved larkspur *(Delphinium recurvatum)*	CNPS 1B	Occurs in poorly drained, fine, alkaline soils in grassland and alakli scrub communities at elevations between 100 feet and 2600 feet. Blooms March–June.	**Absent.** The disturbed habitats and soils onsite are unsuitable for this species. The only regional observation of this species is from a historical collection dated 1914 and is mapped in the general area of “Guernsey”.
subtle orache *(Atriplex subtilis)*	CNPS 1B	Found in the San Joaquin Valley in saline depressions in alkaline soils within valley and foothill grassland communities at elevations below 330 feet. Blooms June–October.	**Absent.** The disturbed habitats onsite are unsuitable for this species. The nearest recorded observation of this species occurred more than 25 years ago in the vicinity of Cross Creek. One regional observation of this species lists it as “Possibly Extirpated” from the area.

EXPLANATION OF OCCURRENCE DESIGNATIONS

Present:	Species observed on the site at time of field surveys or during recent past
Likely:	Species not observed on the site, but it may reasonably be expected to occur there on a regular basis
Possible:	Species not observed on the site, but it could occur there from time to time
Unlikely:	Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient
Absent:	Species not observed on the site, and precluded from occurring there due to absence of suitable habitat

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
CCT	California Threatened (Candidate)	CFP	California Fully Protected
CSC	California Species of Special Concern	CWL	California Watch List
CR	California Rare		

CNPS RARE PLANT RANKS

1B	Plants Rare, Threatened, or Endangered in California and elsewhere
2B	Plants Rare, Threatened, or Endangered in California but more common elsewhere

3.5.3 Impact Assessment

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

Less than Significant Impact with Mitigation Incorporated. Portions of the site contain marginal foraging habitat for several avian species, including the Swainson's hawk and tricolored blackbird. Suitable nesting trees were observed within the vicinity of the Project area including large eucalyptus trees. Smaller avian species may nest within ornamental trees and shrubs in residential backyards. Ground nesting birds such as the killdeer could nest on the bare ground or compacted dirt roads onsite.

Swainson's hawks are common in this portion of Kings County, and there are multiple known nest trees within five miles of the Project area. In the absence of preferred habitat, especially within the Central Valley, Swainson's hawks often nest within eucalyptus trees lining highways, and several raptor species nest within ornamental Mexican fan palms. Although nesting habitat onsite and in the vicinity is not ideal due to the absence of native riparian trees, and suboptimal foraging habitat , raptors, such as the special status Swainson's hawk could conceivably nest or forage near the Project Area. In the event that a Swainson's hawk or other avian species is foraging within the site during construction activities, the individual would be expected to fly away from disturbance they encounter, subsequently eliminating the risk of injury or mortality while foraging. Birds nesting within the site or on the ground could be injured or killed by Project activities. Furthermore, construction activities could disturb birds nesting within or adjacent to work areas, resulting in nest abandonment. Construction activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of State and federal laws and are considered a significant impact under CEQA.

The Project Area is located within the historic and current distribution range for the special status tricolored blackbird. However, tricolored blackbirds are nearly extirpated from Kings County and very few sites have recently been occupied by a breeding colony in any given year. While suitable breeding habitat was not observed at the time of the field survey or during any of the site visits, the agricultural field onsite could be utilized for a as foraging habitat for this species. Although it seems unlikely, if a breeding colony of tricolored blackbirds were present within the field planned for construction, nests could be disturbed or destroyed, resulting in nest abandonment and reproductive failure.

As previously mentioned, due to the ruderal nature of the lands, nesting and foraging habitat for raptors, resident and migratory birds, and special status birds within the Project Area is marginal, at best. Habitat of higher foraging and nesting value is regionally abundant. Therefore, the development resulting from implementation of the Project would not be considered a significant loss of foraging or nesting habitat under CEQA.

Implementation of the following measures would reduce potential impacts to nesting raptors, migratory birds, and special status birds, including Swainson's hawk and tricolored blackbird to a less than significant level under CEQA, and would ensure compliance with State and federal laws protecting these avian species.

Mitigation Measures:

The following measures will be implemented prior to the start of construction:

> **NEST-1a (Avoidance):** The Project's construction activities shall occur, if feasible, between September 16 and January 31 (outside of nesting bird season) in an effort to avoid impacts to nesting birds.
>
> **NEST-1b (Pre-construction Surveys):** If activities must occur within nesting bird season (February 1 to September 15), a qualified biologist shall conduct pre-construction surveys for Swainson's hawk nests onsite and within a 0.5-mile radius. These surveys will be conducted in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee, 2000) or current guidance. In addition to the focused Swainson's hawk surveys, a qualified biologist shall conduct a pre-construction survey for all other nesting birds within 14 days prior to the start of construction. The survey shall include the proposed work area and surrounding lands within 50 feet. All raptor nests will be considered "active" upon the nest-building stage.
>
> **NEST-1c (Establish Buffers):** On discovery of any active nests near work areas, the biologist shall determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. Specifically, a 0.5-mile disturbance-free buffer shall be implemented around active Swainson's hawk nests. Construction buffers shall be identified with flagging, fencing, or other easily visible means, and shall be maintained until the biologist has determined that the nestlings have fledged and are no longer dependent on the nest.
>
> **WEAP-1d (WEAP Training):** On discovery of any special status bird species, all personnel associated with Project construction shall attend mandatory Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, prior to initiating construction activities (including staging and mobilization). The specifics of this program shall include identification of the special status species and suitable habitats, a description of the regulatory status and general ecological characteristics of the species, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information, along with photographs or illustrations of the special status species, shall also be prepared for distribution to all contractors, their employees, and all other personnel involved with construction of the Project. All employees shall sign a form documenting that they have attended WEAP training and understand the information presented to them.

b) Would the project 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?

Less than Significant Impact. There are no CNDDB-designated "natural communities of special concern" recorded within the Project area or surrounding lands. The Project site consists of agricultural fields and cattle operations which have been in operation for at least the last 35 years. Processing facilities have been developed in the northern portion of the APE over time with major expansions happening before 2003 and around 2016. Currently, there are no natural lakes or streams onsite. Furthermore, the Project site is surrounded by intensively cultivated agricultural lands. Undoubtedly, some native wildlife species use the Project area in the absence of preferred habitat. However, because of the aforementioned disturbance, the Project area represents relatively low-quality habitat for native plants and animals. Impacts will be less than significant.

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

No Impact. The Project does not propose to alter the existing man-made canal, Lakeside Ditch. There will be no impact.

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

Less than Significant Impact. The Project area is flanked by intensively cultivated agricultural lands, residential development, and paved roads. Therefore, the Project area does not contain features that would be likely to function as a wildlife movement corridor. Furthermore, the Project is located in a region often disturbed by intensive agricultural cultivation practices and human disturbance which would discourage dispersal and migration. At most, domestic dogs, coyotes, and common gray foxes may utilize the canal banks to travel between agricultural lands while foraging nocturnally. The Project does not propose the removal of the canal banks, and outside of construction hours and after construction completion, these species would continue to travel along the banks of the Lakeside ditch canal. For these reasons, implementation of the Project will not have a significant impact on wildlife movement corridors.

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

No Impact. The Project is consistent with the goals and policies of the Kings County General Plan. The County does not have a tree preservation policy or ordinance. There will be no impact.

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

No Impact. There are no known habitat conservation plans or Natural Community Conservation Plans (NCCP) in the Project area. There will be no impact.

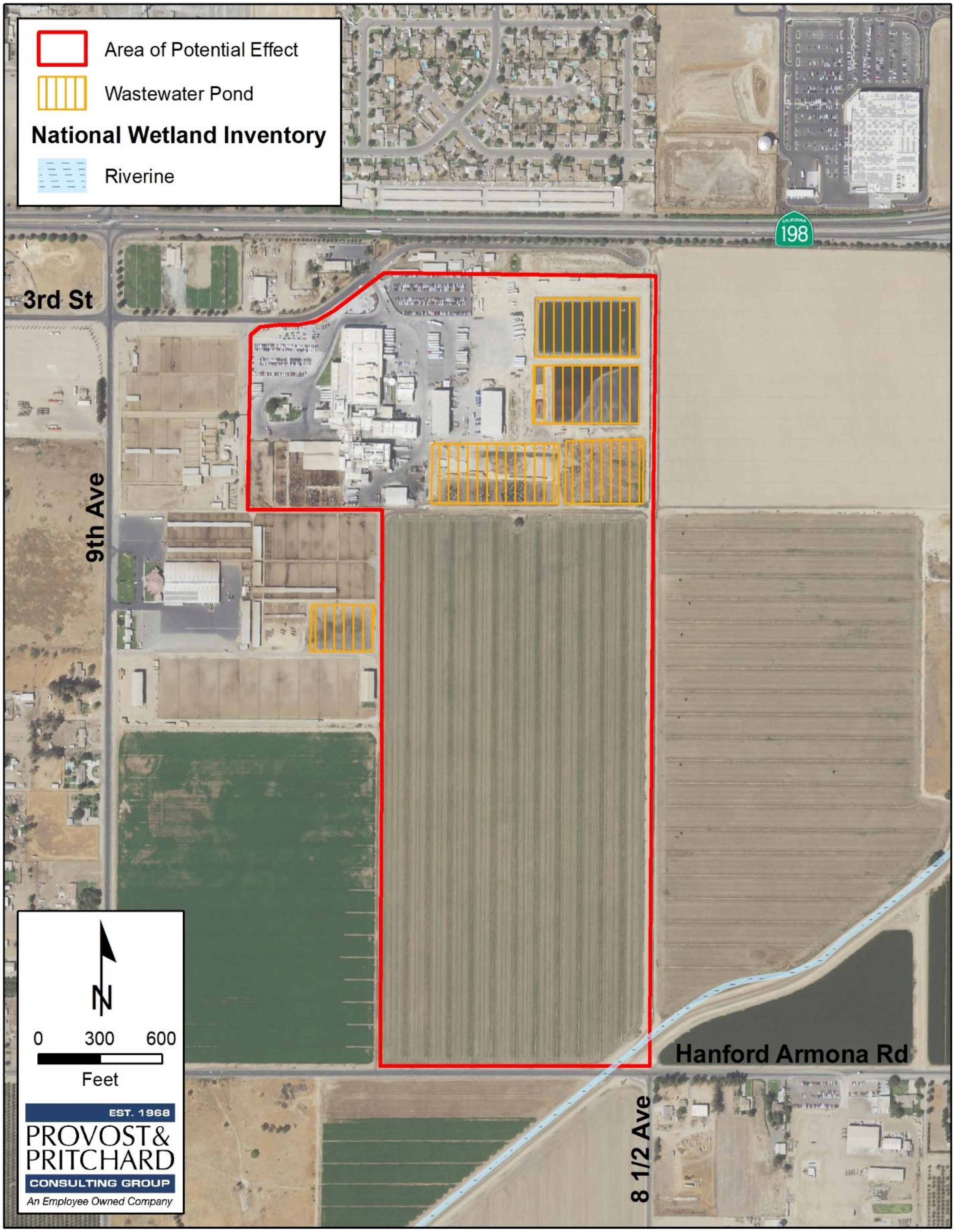

Figure 3-2. Wetlands Map

3.6 Cultural Resources

Table 3-17. Cultural Resources Impacts

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

3.6.1 Environmental Setting and Baseline Conditions

The Proposed Project site lies within Kings County, which occupies an archeologically and historically rich part of the San Joaquin Valley.

Records Search

On August 31, 2020, Provost & Pritchard received a records search from the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS), located at California State University, Bakersfield. The records search encompassed the Project APE as well as a 0.5-mile radius surrounding the various locations. SSJVIC staff examined site record files, maps, and other materials to identify previously recorded resources and prior surveys within the delineated area (**Appendix C**). Additional sources included the State Office of Historic Preservation (SHPO) Historic Properties Directory, Archaeological Determinations of Eligibility, and the California Inventory of Historic Resources.

Native American Outreach

In August of 2020, Provost & Pritchard contacted the Native American Heritage Commission (NAHC) in Sacramento. Provost & Pritchard provided NAHC a brief description of the project and a map showing its location and requested that the NAHC perform a search of the Sacred Lands File to determine if any Native American resources have been recorded in the immediate study area. The results were negative. Provost & Pritchard also requested NAHC provide a current list of local Native American contacts for the Proposed Project APE. The six tribes identified by NAHC were contacted in writing via US mail with a letter dated August 28, 2020 informing them about the Proposed Project.

3.6.2 Regulatory Setting

3.6.2.1 Federal

There are no federal regulations, plans, programs, or guidelines associated with cultural resources that are applicable to the Project.

3.6.2.2 State

California Environmental Quality Act

The Project is subject to CEQA which requires public or private projects financed or approved by public agencies to assess their effects on historical resources. CEQA uses the term "historical resources" to include buildings, sites, structures, objects or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance. CEQA states that if implementation of a project results in significant effects on historical resources, then alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed (CCR 15064.5, 15126.4). For the purposes of this CEQA document, a significant impact would occur if project implementation:

- Causes a substantial change in the significance of a historical resource
- Causes a substantial adverse change in the significance of an archaeological resource
- Disturbs any human remains, including those interred outside of formal cemeteries

Therefore, before impacts and mitigation measures can be identified, the significance of historical resources must be determined. CEQA guidelines define three ways that a property may qualify as a historical resource for the purposes of CEQA review:

- If the resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR)
- If the resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC unless the preponderance of evidence demonstrates that it is not historically or culturally significant
- The lead agency determines the resource to be significant as supported by substantial evidence in light of the whole record (CCR, Title 14, Division 6, Chapter 3, Section 15064.5(a))

Each of these ways of qualifying as a historical resource for the purpose of CEQA is related to the eligibility criteria for inclusion in the CRHR (PRC 5020.1(k), 5024.1, 5024.1(g)).

A historical resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
- Is associated with the lives of persons important in our past
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
- Has yielded, or may be likely to yield, information important in prehistory or history Properties that area listed in or eligible for listing in the National Register of Historic Places are considered eligible for listing in the CRHR, and thus are significant historical resources for the purpose of CEQA (PRC Section 5024.1(d)(1)).

Public Resources Code §5097.5

California Public Resources Code §5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands." Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority or public corporation, or any agency thereof. Section 5097.5 states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor.

Health and Safety Code §7050.5

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper and dignified treatment of the remains and associated grave artifacts.

3.6.2.3 Local

Kings County General Plan Policies

The 2035 Kings County General Plan Resource Conservation Element includes a goal with supporting objectives and policies related to archaeological, cultural, and historical resources. Those policies that are pertinent to the Project are included below:

- RC Policy I1.1.3: Encourage the protection of cultural and archaeological sites with potential for placement on the National Register of Historic Places and/or inclusion in the California Inventory of Historic Resources.

- RC Policy I1.2.1: Participate in and support efforts to identify significant cultural and archaeological resources and protect those resources in accordance with PRC 5097.9 and 5097.993.

- RC Policy I1.2.2: Continue to solicit input from local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance.

- RC Policy I1.2.3: Address archaeological and cultural resources in accordance with CEQA for discretionary land use applications[22]

The 2035 Kings County General Plan identifies four sites in the County that are listed on the National Register of Historic Places, and three additional sites that have been designated as California Historical Landmarks. Three of the sites on the National Register are in Hanford: the Taoist Temple; the old County Courthouse; and the Carnegie Library. The fourth site is the Witt archaeological site near Dudley Ridge. None of these sites are proximate to the Project site. The three California Historical Landmarks are the Mussel Slough Tragedy site south of Hardwick; the Kingston Town site north of Hardwick; and the El Adobe de los Robles Rancho west of Lemoore. These sites are located in the unincorporated portions of the County and none are proximate to the Project parcel. The 2035 General Plan also identifies 16 additional historic sites of local importance. The sites include seven cemeteries and two churches located in Corcoran, Lemoore, Grangeville, and other rural areas in the northern County. Additional sites include the original site of Lemoore, Avenal Ranch, Kettleman Hills fossil beds, and First High School on the Kings River. The Project site is not located within or proximate to any of these sites.

[22] County of Kings, *2035 Kings County General Plan*, p. RC-53, January 26, 2010). Website: https://www.countyofkings.com/home/showdocument?id=3112, accessed March 2021.

3.6.3 Impact Assessment

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? and

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

Less than Significant Impacts with Mitigation. A records search from the California Historical Resources Information System (CHRIS) at the Southern San Joaquin Valley Information Center (SSJVIC) dated August 31, 2020 (**Appendix C**) indicated that there are no cultural resource studies conducted within the project area. However there have been six previous cultural resource studies conducted within the one-half mile radius. CHRIS did confirm that there is one recorded resources within the project area and one recorded resources within the one-half mile radius. Lakeside Ditch nor any potential historical integrity of the ditch will be impacted by this project.

To identify any historic properties, the SSJVIC examined the current inventories of the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks (CHL), California Points of Historical Interest (CPHI), California Inventory of Historic Resources (CIHR), California State Historic Landmarks, and other pertinent historical data available at the SSJVIC. There is one recorded resource within the project area, P-16-000086, Lakeside Ditch, which will not be impacted by the project. It is unknown if any other resources exist there. There is one recorded resource within the one-half mile radius, P-16-000122, an historic era railroad. Therefore Mitigation Measure **CUL-1** has been incorporated into the project.

Provost & Pritchard contacted the Native American Heritage Commission (NAHC) for a Sacred Lands File & Native American Contacts List which was received August 21, 2020. Following receipt of the list, Provost & Pritchard sent letters to the following Tribes via United States mail dated August 28, 2020, requesting consultation:

1. *Kings River Choinumni Farm Tribe, Stan Alec*
2. *Santa Rosa Rancheria Tachi Yokut Tribe, Leo Sisco, Chairperson*
3. *Table Mountain Rancheria of California, Leanne Walker-Grant, Chairperson*
4. *Table Mountain Rancheria of California, Bob Pennell, Cultural Resources Director*
5. *Tule River Indian Tribe, Neil Pevron, Chairperson*
6. *Wuksache Indian Tribe/Eshom Valley Band, Kenneth Woodrow, Chairperson*

No responses were received. All Tribal correspondence is included within **Appendix C** to this initial study.

Although it is unlikely that archeological remains would occur during construction or operation of the Proposed Project, **CUL-1** is to be considered.

Mitigation Measure

CUL-1 (Protection of Cultural Resources). In order to avoid the potential for impacts to historic and prehistoric archaeological resources, the following measures shall be implemented, as necessary, in conjunction with the construction of each phase of the Project:

a. Cultural Resources Alert on Project Plans. The project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources.

b. **Pre-Construction Briefing**. The project proponent shall retain Santa Rosa Rancheria Cultural Staff to provide a pre-construction Cultural Sensitivity Training to construction staff regarding the discovery of cultural resources and the potential for discovery during ground disturbing activities, which will include information on potential cultural material finds and on the procedures to be enacted if resources are found.

c. **Stop Work Near any Discovered Cultural Resources**. The project proponent shall retain a professional archaeologist on an "on-call" basis during ground disturbing construction for the project to review, identify and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified cultural resources be discovered during construction of the project, the project proponent shall cease work within 100 feet of the resources, and Kings County Community Development Agency (CDA) shall be notified immediately. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under CEQA.

d. **Mitigation for Discovered Cultural Resources**. If the professional archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the project proponent and other appropriate parties of the evaluation and recommended mitigation measures to mitigate the impact to a less-than-significant level. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the Kings County CDA. The archaeologist shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System, Southern San Joaquin Valley Information Center. The resources shall be photo documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation Department. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.

e. **Native American Monitoring**. Prior to any ground disturbance, the project proponent shall offer the Santa Rosa Rancheria Tachi Yokut Tribe the opportunity to provide a Native American Monitor during ground disturbing activities during construction. Tribal participation would be dependent upon the availability and interest of the Tribe.

f. **Disposition of Cultural Resources**. Upon coordination with the Kings County Community Development Agency, any pre-historic archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded applicable cultural resources laws and guidelines.

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

Less than Significant Impact with Mitigation Incorporated. No formal cemeteries or other places of human internment are known to exist on the Project site; however, in accordance with Health and Safety Code Section 7050.5 and Public Resource Code Section 5097.98, if human remains are uncovered, Mitigation Measure **CUL-2** would be implemented.

Mitigation Measure

CUL-2 (Protection of Buried Human Remains). In order to avoid the potential for impacts to buried human remains, the following measures shall be implemented, as necessary, in conjunction with the construction of each phase of the Project:

a. Pursuant to State Health and Safety Code Section 7050.5(e) and Public Resources Code Section 5097.98, if human bone or bone of unknown origin is found at any time during on- or off-site construction, all work shall stop in the vicinity of the find and the Kings County Coroner shall be notified immediately. If the remains are determined to be Native American, the Coroner shall notify the California State Native American Heritage Commission (NAHC), who shall identify the person believed to be the Most Likely Descendant (MLD). The project proponent and MLD, with the assistance of the archaeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon treatment shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. California Public Resources Code allows 48 hours for the MLD to make their wishes known to the landowner after being granted access to the site. If the MLD and the other parties do not agree on the reburial method, the project will follow Public Resources Code Section 5097.98(e) which states that ". . . the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

b. Any findings shall be submitted by the archaeologist in a professional report submitted to the project applicant, the MLD, the Kings County Community Development Agency, and the California Historical Resources Information System, Southern San Joaquin Valley Information Center.

3.7 Energy

Table 3-18. Energy Impacts

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

3.7.1 Environmental Setting and Baseline Conditions

Southern California Edison (SCE) and the Southern California Gas Company (SCG) are the primary electric and gas power utility purveyors in the Project area. The majority of the energy consumed in Kings County is for non-residential purposes. The Project will utilize electricity and natural gas for its power sources.

3.7.2 Regulatory Setting

There following General Plan policies associated with energy that are applicable to the Project:

- RC Policy G1.3.1: Encourage developers to be innovative in providing landscaping that modifies microclimates, thus reducing energy consumption.
- RC Policy G1.3.2: Require new urban development to provide and maintain shade trees and other landscaping along streets and within parking areas to reduce radiation heating. However, solar access for solar panels shall not be blocked.
- RC Policy G1.3.3: Participate, to the extent feasible, in local and State programs that strive to reduce the consumption of energy.

3.7.3 Impact Assessment

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact. The Project would be expected to comply with construction best management practices as part of construction through required compliance with a SWPPP and Dust Control Plan. Once completed, the Project would, as a result of its newer design, and compliance with new energy efficiency requirements for equipment, devices and coatings than the aging Darling Rendering Plant in addition to the reduction in fuel used for delivery of byproducts from the Fresno facility. Fuel consumption for travel to the Project would be comparable to existing conditions.

The Project includes installation of an electric power substation facility consisting of substation transformers, switches, metering and a power control building. The facility will be fed from Utility power transmission lines. The location of this connection and transmission line extension will be per the Utility. The power substation facility is required to provide adequate electrical power supply to the facility for full build out.

Operation of the Project would include electricity and natural gas usage from lighting, space and water heating, appliances, and landscape maintenance activities. Indirect energy use would include solid waste removal. The facility would be constructed to meet the California Building Energy Efficiency Standards that are in effect at the time of construction. The project would also implement SJVAPCD-recommended Best Performance Standards for stationary equipment, which has a co-benefit of reducing energy demand once the project is operational. Therefore, the Project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation. Impacts will be less than significant.

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than Significant Impact. The construction and on-going operation of the Project would result in energy conservation pursuant to more contemporary building standards and therefore would not consume significantly more energy since the animal carcasses leaving the Project site currently would be processed by a new facility built to current standards. The Project would not obstruct a state plan for renewable energy or energy efficiency. Impacts would be less than significant.

3.8 Geology and Soils

Table 3-19. Geology and Soils Impacts

Geology and Soils Impacts					
Would the project:		**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
	ii) Strong seismic ground shaking?	☐	☐	☒	☐
	iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
	iv) Landslides?	☐	☐	☒	☐
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☒	☐	☐

3.8.1 Environmental Setting and Baseline Conditions

3.8.1.1 Geology and Soils

The project is located near the southern boundary of the City of Hanford in Kings County, in the southern section of California's Great Valley Geomorphic Province, or Central Valley. The Sacramento Valley makes up the northern third and the San Joaquin Valley makes up the southern two-thirds of the geomorphic province. Both valleys are watered by large rivers flowing west from the Sierra Nevada Range, with smaller tributaries flowing east from the Coast Ranges. Most of the surface of the Great Valley is covered by Quaternary (present day to 1.6 million years ago) alluvium. As stated in the 2035 Kings County General Plan, soil preservation is of the utmost importance. The County shares responsibility of the soil responsibility with several Conservation

Districts and various agencies and organizations in the community.[23] The Project site contains Kimberlina fine sandy loam, saline-alkali and sandy substratum.[24]

3.8.1.2 Faults and Seismicity

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone and no known faults cut through the local soil at the site. The nearest mapped principal fault is the San Andreas Fault, located approximately 52.4 miles southwest of the Project site. The San Andreas Fault is the dominant active tectonic feature of the Coast Ranges and represents the boundary of the North American and Pacific plates. A smaller unnamed fault zone is approximately 37.9 miles southeast of the site. The closest major fault, Poso Creek Fault is located approximately 39.2 miles south of the Project site and has a slip rate of <0.2 mm.[25]

3.8.1.3 Liquefaction

The potential for liquefaction, which is the loss of soil strength due to seismic forces, is dependent on soil types and density, depth to groundwater, and the duration and intensity of ground shaking. The portion of Kings County where the Project is located has a low to moderate liquefaction risk.

3.8.1.4 Soil Subsidence

Subsidence occurs when a large land area settles due to over-saturation or extensive withdrawal of ground water, oil, or natural gas. These areas are typically composed of open-textured soils, high in silt or clay content, that become saturated. The Project site contains soil types with a low to moderate risk of subsidence.

3.8.1.5 Dam and Levee Failure

Pine Flat Reservoir is located approximately 34 miles east, and the Project site and adjacent lands lies within the inundation zone for Pine Flat Dam. The Kings County Multi-Jurisdiction Hazard Mitigation Plan deems dam inundation a catastrophic but remote risk.

3.8.2 Regulatory Setting

3.8.2.1 State

California Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (originally enacted in 1972 and renamed in 1994) is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The statute prohibits the location of most types of structures intended for human occupancy across the traces of active faults and regulates construction in the corridors along active faults.

California Building Standards Code

The California Code of Regulations (CCR) Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The California Building Code incorporates by reference the International Building Code with necessary California amendments. The International Building Code is a widely adopted model building code in the United States published by the International Code Council. About one-third of the text within the California Building Standards Code has been tailored for California earthquake conditions.

[23] County of Kings, *2035 Kings County General Plan*, p. RC-53, January 26, 2010). Website: https://www.countyofkings.com/home/showdocument?id=3112, Accessed March 2021.

[24] See Exhibit B for Soils Report.

[25] California Department of Conservation. *Data Viewer.* Website: https://maps.conservation.ca.gov/cgs/DataViewer/ accessed March 2021.

3.8.3 Impact Assessment

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

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

Less than Significant Impact. The Project site does not lie within an Alquist-Priolo Earthquake Fault Zone. Kings County has no known major fault systems within its territory. The greatest potential for geologic disaster in Kings County is posed by the San Andreas Fault, which is located approximately four miles west of the Kings County line boundary within Monterey County. Another large fault that may pose potential geologic hazards for Kings County is the White Wolf fault located in Kern County near Arvin and Bakersfield[26].

The Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death associated with an unlikely event of a ruptured earthquake fault lines. As such, impacts will be less than significant.

a-ii) Strong seismic ground shaking?

Less than Significant Impact. According to the Kings County Seismic Safety Map[27], the Project site is located in Seismic Zone V-1. The generalized geologic formations in this zone are moderately thick marine and continental sedimentary deposits overlying the granitic basement complex. Amplification of shaking that would affect low to medium-rise structures is relatively high but the distance to either of the fault systems that are expected sources of the shaking is sufficiently great that the effect should be minimal[28]. The risk of adverse effects to the Project from ground shaking from an earthquake on these faults would be less than significant.

a-iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact. The Project site is mapped within a low to moderate risk of liquefaction or subsidence hazard zone as indicated on Figure HS-2 of the 2035 Kings County General Plan. The risk of adverse effects from the Project regarding liquefaction or subsidence would be less than significant.

a-iv) Landslides?

No Impact. The Project site is in an area of minimal landslide potential[29]. In addition, the site is relatively flat; therefore, there is no potential for a landslide to occur and no impacts to the Project from landslides are predicted.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. Dischargers whose projects disturb one (1) or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. These activities could expose soils to erosion processes and the extent of erosion would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions. Earth disturbing activities associated with the Project would include minor grading building pad, parking and driveway, minor, excavation for building footings, a ponding basin, and infrastructure construction

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[26] County of Kings, *2035 Kings County General Plan, Health and Safety Element*, Page HS-6, January 26, 2010 https://www.countyofkings.com/home/showdocument?id=13515, accessed March 2021
[27] Ibid, Figure HS-2.
[28] Ibid, Page HS-9.
[29] Ibid, Figure HS-3.

across the Project site. The Project will therefore require a Construction General Permit or a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD). Therefore, the impact would be less than significant.

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

Less than Significant Impact. The Project area and the immediate surrounding lands do not have any substantial grade changes in the topography that would expose people or structures to potential substantial adverse effects on, or offsite, such as landslides, lateral spreading, subsidence, liquefaction or collapse. Any impact would be less than significant.

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

No Impact. Figure HS-4 on Page 13 of the Health and Safety Element of the 2035 Kings County General Plan, shows that the Project site is not located on expansive soil, therefore there would be no impact.

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

No Impact. The project site is located on a map published by the Community Development Agency of the County of Kings and requires a leach field of approximately 40 square feet for every 100 gallons of septic tank capacity[30]. Furthermore, all wastewater generated will be treated on-site. Therefore, the soils are capable of adequately supporting the use of septic tanks and thus there is no impact.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Less than Significant Impact with Mitigation Incorporated. No known paleontological resources exist within the Project area. As the Project would require ground-disturbing activities, it is possible that an undiscovered paleontological resource may be impacted by ground disturbing activities. Therefore, the Project will comply with **GEO-1** below. Any impacts would be less than significant with mitigation incorporated.

Mitigation Measure

GEO-1 (Paleontological Resources). During any ground disturbance activities, if paleontological resources are encountered, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the Natural History Museum of Los Angeles County or other appropriate facility regarding any discoveries of paleontological resources.

If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited

[30] Kings County Planning Agency. Septic Tank Absorption Field Minimum Requirements. https://www.countyofkings.com/home/showdocument?id=3180

and permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.

3.9 Greenhouse Gas Emissions

Table 3-20. Greenhouse Gas Emissions Impacts

Greenhouse Gas Emissions Impacts				
Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☒	☐	☐

3.9.1 Environmental Setting and Baseline Conditions

Commonly identified GHG emissions and sources include the following:

Carbon dioxide (CO_2) is an odorless, colorless natural greenhouse gas. CO_2 is emitted from natural and anthropogenic sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic out gassing. Anthropogenic sources include the burning of coal, oil, natural gas, and wood.

Methane (CH_4) is a flammable greenhouse gas. A natural source of methane is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain methane, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and ruminants such as cattle.

Nitrous oxide (N_2O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load.

Water vapor is the most abundant, and variable greenhouse gas. It is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life.

Ozone (O_3) is known as a photochemical pollutant and is a greenhouse gas; however, unlike other greenhouse gases, ozone in the troposphere is relatively short-lived and, therefore, is not global in nature. Ozone is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds, nitrogen oxides, and sunlight.

Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. CFCs destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol in 1987.

Hydrofluorocarbons (HFCs) are synthetic chemicals that are used as a substitute for CFCs. Of all the greenhouse gases, HFCs are one of three groups (the other two are perfluorocarbons and sulfur hexafluoride) with the highest global warming potential. HFCs are human-made for applications such as air conditioners and refrigerants.

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere; therefore, PFCs have long atmospheric lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest global warming potential of any gas evaluated. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth, and what the effects of clouds will be in determining the rate at which the mean temperature will increase. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, air pollution episodes, and the consequence of these effects on the economy.

Emissions of GHGs contributing to global climate change are largely attributable to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. About three-quarters of human emissions of CO_2 to the global atmosphere during the past 20 years are due to fossil fuel burning. Atmospheric concentrations of CO_2, CH_4, and N_2O have increased 31 percent, 151 percent, and 17 percent respectively since the year 1750 (CEC 2008). GHG emissions are typically expressed in carbon dioxide-equivalents (CO_2e), based on the GHG's Global Warming Potential (GWP). The GWP is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, one ton of CH_4 has the same contribution to the greenhouse effect as approximately 21 tons of CO_2. Therefore, CH_4 is a much more potent GHG than CO_2.

An Air Quality and Greenhouse Gas Emissions Evaluation Report was prepared in April 2021, and is contained in **Appendix A**. The essential conclusions of this Report are as follows:

3.9.1.1 Short-Term Construction-Generated Emissions

Estimated construction-generated emissions are summarized in **Table 3-21**.

Table 3-21. Short-Term Construction-Generated GHG Emissions

Stage	Emissions (MT CO_2e)/yr
Stage 1	*621.96*
Stage 2	*233.17*
Stage 3	*538.72*

3.9.1.2 Long-Term Operational Emissions

Estimated long-term operational emissions are summarized in **Table 3-22**.

Table 3-22. Long-Term Operational GHG Emissions

Category	Source	Emissions (MT CO_2e)/yr
Direct Emissions		
Rendering Facility	*Boilers*	*115,374*
	RTO	*3,443*
Pet Food Facility	*RTO*	*2,326*
Annual Stationary Source Emissions		***121,243***
Mobile Sources	*Vehicle Exhaust – On-Site*	*440*
	Vehicle Exhaust – Near Off-Site	*78*
	Vehicle Exhaust – Highway[1]	*-*
Building Operations	*Natural Gas and Maintenance*	*239*
Annual Land Use Emissions		***757***
Indirect Emissions		
Building Operations	*Electricity, Water, and Waste*	*2,203*
Annual Project Indirect Emissions		***2,203***
Total Annual Project Direct and Indirect Emissions		***124,103***

[1] Highway mileage and associate GHG emissions pre-project and post-project are net zero.

3.9.1.3 Effects of Climate Change

The sections below detail the methodology of the report and its conclusions.

3.9.2 Impact Assessment

3.9.2.1 Thresholds of Significance

CEQA Guidelines Amendments became effective March 18, 2010. Included in the Amendments are revisions to the Appendix G Initial Study Checklist. In accordance with these Amendments, a project would be considered to have a significant impact to climate change if it would:

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

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

In accordance with SJVAPCD's *CEQA Greenhouse Gas Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects*[31], proposed projects complying with Best Performance Standards (BPS) would be determined to have a less-than-significant impact. Projects not complying with BPS would be considered less than significant if operational GHG emissions would be reduced or mitigated by a minimum of 29 percent, in comparison to business-as-usual (year 2004) conditions. In addition, project-generated emissions complying with an approved plan or mitigation program would also be determined to have a less-than-significant impact.

[31] Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf Accessed April 2021.

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

Less than Significant with Mitigation Incorporated.

Construction Emissions. GHG emissions will occur during construction activities associated with the Project. Off-road equipment assumed to be used during construction includes graders, dozers, scrapers, off-highway trucks, compactors, and rollers. On-road mobile sources assumed to be used during construction include haul trucks (e.g., concrete, gravel), delivery vehicles, and employee commute vehicles. Construction GHG emissions are presented in **Table 3-21**.

Operational Emissions. GHG emissions from the operation of the Project include direct emissions from stationary sources, mobile sources (e.g., trucks, mules, TRUs, and worker vehicles), and building natural gas usage, and indirect emissions associated with electricity usage for building operations and water pumping. Direct and indirect operational emissions are shown in **Table 3-22**.

This Project consolidates and redistributes trucks that would otherwise have traveled similar distances between the CVM and HRBC facilities and end users. There is a nominal project-related trucking mileage increase; as such, off-site truck travel GHG emissions are estimated to be zero.

Since stationary source GHG emissions are generated by stationary combustion and are greater than 25,000 MT/yr, the facility will comply with the Cap-and-Trade Program, and all stationary source GHG emissions will be mitigated through the Cap-and-Trade Program[32,33].

SJVAPCD CEQA guidance states the "GHG emission increases subject to CARB's Cap-and-Trade Regulation would have a less than significant individual and cumulative impact on global climate change." Therefore, the Project's stationary source GHG emissions would have a less than significant impact on the environment.

As shown in **Table 3-22**, Project-related mobile source and building operations direct and indirect GHG emissions were estimated to be 2,960 MT/yr. The remaining 121,243 MT/yr comes from stationary sources, and due to the amount of those anticipated emissions, would be regulated under California's Cap-and-Trade program. Although the SJVAPCD does not have numeric significance thresholds for GHG emissions, the guidance does allow that thresholds in other areas can be used for evaluating impacts. Therefore, the GHG emissions not covered in Cap-and-Trade were compared to the significance threshold of 10,000 MT/yr CO_2e, which is the threshold for industrial projects in the SCAQMD and BAAQMD[34][35], as well as other air districts. The estimated GHG emissions from this project are well below that threshold, and hence considered less than significant.

SB 32 (2016) amended provisions of AB 32 (2006), to require CARB to reduce statewide GHG emissions to 40% below 1990 levels by 2030, which supports the long-term target of carbon neutrality by 2045 (EO B-55-18). Thus, GHG mass emissions thresholds in many California air districts are effectively discounted to 60% of their originally adopted values.

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[32] California Code of Regulations. Section 95811. *Covered Entities.* Website: https://govt.westlaw.com/calregs/Document/I099E196E50FD409AA254520A73E06036?viewType=FullText&originationContext=documenttoc&transitionType=DocumentItem&contextData=(sc.Default). Accessed April 2021.

[33] California Code of Regulations. Section 95812. *Inclusion Thresholds for Covered Entities.* Website: https://govt.westlaw.com/calregs/Document/I0296D3D07DD947199420B1AFAECE7AB9?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default). Accessed April 2021.

[34] South Coast Air Quality Management District. *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf. Accessed April 2021.

[35] Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines*. Website: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed April 2021.

Based on the foregoing, and in accordance with the "compliance with regulatory standards" pathway to compliance identified by the Newhall court, the proposed Project will be consistent with California's adopted California Climate Change Scoping Plan, CARB's GHG Cap-and-Trade Program, and other applicable adopted standards and regulations, described below as Mitigation Measure GHG-1. Therefore, the Project will have a less than significant impact on the environment.

Mitigation Measures

GHG-1 (Cap-and-Trade): CVMC shall enroll its facility in the CARB Cap-and-Trade Program and shall cause its annual net emissions not exceed 25,000 MT CO2e for that year.

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

Less than Significant with Mitigation Incorporated. Consistent with Newhall, under the SJVAPCD's CEQA guidance for GHG impacts, a project would not have a significant GHG impact if it is consistent with an applicable plan to reduce GHG emissions and a CEQA-compliance analysis was completed for the GHG reduction plan.

The KCAG's Regional Transportation Plan (RTP) was adopted in 2018 and provides regional-scale measures to regulate, monitor, and control GHG emissions in Kings County. The RTP is an applicable plan adopted for the purpose of reducing GHGs from transportation sectors in Kings County. For the County, CARB Scenario D – Balanced Solution – was selected by KCAG as the preferred Sustainable Communities Strategy (SCS) scenario, which is planned to meet or exceed GHG reduction targets.

The RTP is based on an analysis that considers the entire County and includes all projects involving changes in regional growth and land use in Kings County, as well as the countywide vehicle traffic projections. Cumulative GHG emissions analyzed in the RTP were compared to regional GHG thresholds and analyzed under statewide plans and regulations. This analysis concluded that the projected increase in GHG emissions from existing conditions to 2042 would primarily be due to changes in regional growth/land use; however, the RTP achieves GHG emission reduction targets from mobile sources by implementing a mix of land use strategies, transportation management, economic factors, and road projects.

The Project will implement trip minimization and energy-efficient features consistent with the County's General Plan. In accord with the County's RTP/SCS, the Project will implement clean truck programs and carpooling or alternative commuting options. These are described below as Mitigation Measure **GHG-2.**

The Project, which includes improvements to a facility that existed before the 2018 adoption of the RTP, is consistent with the land use and transportation management strategies and assumptions set forth in the RTP. This is because its existence, as a large employer in an unincorporated area near Hanford, was considered in the development of the RTP. Accordingly, pursuant to the "consistency with an applicable SCS" pathway to compliance identified by the Newhall court, the Project's impacts related to GHG emissions can be considered less than significant on the project level because the 2018 RTP/SCS Balanced Solution GHG emission reduction targets of 5% for 2020 and 10% for 2035 would be met. Impacts, after implementation of GHG-1 and GHG-2, would be less than significant.

Mitigation Measure

See **GHG-1** above.

GHG-2 (Trip Minimization and Efficiency): The Project shall comply with San Joaquin Valley Air Pollution Control District Rule 9410. All facility-owned truck fleets shall be Near-Zero Emissions or better.

3.10 Hazards and Hazardous Materials

Table 3-23. Hazards and Hazardous Materials Impacts

Hazards and Hazardous Materials Impacts					
	Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g)	Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

3.10.1 Environmental Setting and Baseline Conditions

The Project site has been in continuous agricultural use since 1937. Central Valley Meat Company has occupied the site since 1990.

3.10.1.1 Hazardous Materials

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code (GC) Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop at least annually an updated Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List. DTSC's EnviroStor database provides DTSC's component of Cortese List data (DTSC, 2010). In addition to the EnviroStor database, the State Water Resources Control Board (SWRCB) Geotracker database provides information on regulated hazardous waste facilities in California, including underground storage tank (UST) cases and non-UST cleanup programs, including Spills-Leaks-Investigations-Cleanups (SLIC) sites, Department of Defense (DOD) sites, and Land Disposal program. A search of the DTSC EnviroStor database and the SWRCB Geotracker performed on October 22, 2018 determined that there are no known active hazardous waste generators or hazardous material spill sites within the Project site or immediate surrounding vicinity.

3.10.1.2 Airports

The Hanford Municipal Airport is located approximately 0.6 miles west and the Visalia Municipal Airport is located approximately 11.6 miles east of the Project site.

3.10.1.3 Emergency Response Plan

The Kings County Office of Emergency Management coordinates the development and maintenance of the Kings County Emergency Operations Plan.

3.10.1.4 Sensitive Receptors

The closest sensitive receptors, rural single-family residences, are located approximately 400 feet from the Project site.

3.10.2 Regulatory Setting

3.10.2.1 Federal

Hazardous Materials - U.S. Environmental Protection Agency: The U.S. Environmental Protection Agency (EPA) was established in 1970 to consolidate in one agency a variety of Federal research, monitoring, standard-setting and enforcement activities to ensure environmental protection. EPA's mission is to protect human health and to safeguard the natural environment — air, water, and land — upon which life depends. EPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and delegates to States and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Where national standards are not met, EPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act: The Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes.

Clean Water Act/SPCC Rule: The Clean Water Act (CWA) (33 U.S.C. Section 1251, *et seq*., formerly the Water Pollution Control Act of 1972), was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. As part of the Clean Water Act, the EPA oversees and enforces the Oil Pollution Prevention regulation contained in Title 40 of the CFR, Part 112, which is often referred to as the "SPCC rule" because the regulations describe the requirements for facilities to prepare, amend and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans. A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the "navigable waters" of the United States. Other federal regulations overseen by the EPA relevant to hazardous materials and environmental contamination include Title 40, CFR, Chapter 1, Subchapter D – Water Programs and Subchapter I – Solid Wastes. Title 40, CFR, Chapter 1, Subchapter D, Parts 116 and 117 designate hazardous substances under the Water Pollution Control Act. Title 40, CFR, Part 116 sets forth a determination of the reportable quantity for each substance that is designated as hazardous. Title 40, CFR, Part 117 applies to quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

3.10.2.2 State

California Environmental Protection Agency (CalEPA): CalEPA was created in 1991 by Governor's Executive Order. The California Air Resources Board (CARB), the Department of Pesticide Regulation (DPR), the Department of Resources Recycling and Recovery (CalRecycle), the Department of Toxic Substances Control (DTSC), the Office of Environmental Health Hazard Assessment (OEHHA) and the State Water Resources Control Board (SWRCB) were placed under the CalEPA umbrella to create cabinet-level voices for the protection of human health and the environment and to assure the coordinated deployment of State resources.[36] The mission of CalEPA is to restore, protect, and enhance the environment to ensure public health, environmental quality, and economic vitality under Title 22 of the CCR.[37]

Department of Toxic Substances Control (DTSC): DTSC is a department of CalEPA and is the primary agency in California that regulates hazardous waste, clean-up of existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. GC Section 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, SWRCB Division of Drinking Water lists of contaminated drinking water wells, sites listed by the SWRCB as having UST leaks and which have had a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites that have had a known migration of hazardous waste/material.[38]

Unified Program: The Unified Program (CCR Title 27, Division 1, Subdivision 4, Chapter 1, Sections 15100-15620) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following six environmental and emergency response programs.[39]

- Hazardous Waste Generator (HWG) program and Hazardous Waste On-site Treatment activities;
- Aboveground Storage Tank (AST) program Spill Prevention Control and Countermeasure Plan requirements;
- Underground Storage Tank (UST) program;
- Hazardous Materials Release Response Plans and Inventory (HMRRP) program;
- California Accidental Release Prevention (CalARP) program;
- Hazardous Materials Management Plans and Hazardous Materials Inventory Statement (HMMP/HMIS) requirements.

The Secretary of CalEPA is directly responsible for coordinating the administration of the Unified Program. The Unified Program requires all counties to apply to the CalEPA Secretary for the certification of a local

[36] California Environmental Protection Agency. Website: https://calepa.ca.gov/about/, accessed March 2021.
[37] State of California, *Title 22, Division 2, California Code of Regulation, Chapter 3. Sage Drinking Water and Toxic Enforcement Act of 1986, Article 6. Clear and Reasonable Warnings*. Website: https://oehha.ca.gov/media/downloads/crnr/12601proposed20regulatory20text5.pdf, accessed March 2021.
[38] California Department of Toxic Substances Control. http://www.dtsc.ca.gov/ Accessed March 2021.
[39] California Environmental Protection Agency. http://www.calepa.ca.gov/cupa/ Accessed March 2021.

unified program agency. Qualified cities are also permitted to apply for certification. The local Certified Unified Program Agency (CUPA) is required to consolidate, coordinate, and make consistent the administrative requirements, permits, fee structures, and inspection and enforcement activities for these six program elements in the county. Most CUPAs have been established as a function of a local environmental health or fire department.

Hazardous Waste Management Program: The Hazardous Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement, and Unified Program activities in accordance with Health and Safety Code (HSC) Section 25135, *et seq*. The main focus of HWMP is to ensure the safe storage, treatment, transportation, and disposal of hazardous wastes.

State Water Resources Control Board (SWRCB): The SWRCB was created by the California legislature in 1967. The mission of SWRCB is to ensure the highest reasonable quality for waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses. The joint authority of water allocation and water quality protection enables SWRCB to provide comprehensive protection for California's waters.

California Department of Industrial Relations – Division of Occupational Safety and Health (Cal/OSHA): In California, every employer has a legal obligation to provide and maintain a safe and healthful workplace for employees, according to the California Occupational Safety and Health Act of 1973 (per Title 8 of the CCR). The Division of Occupational Safety and Health (Cal/OSHA) program is responsible for enforcing California laws and regulations pertaining to workplace safety and health and for providing assistance to employers and workers about workplace safety and health issues. Cal/OSHA regulations are administered through Title 8 of the CCR. The regulations require all manufacturers or importers to assess the hazards of substances that they produce or import and all employers to provide information to their employees about the hazardous substances to which they may be exposed.

3.10.2.3 Local

Kings County General Plan Policies: The 2035 Kings County General Plan Health and Safety Element includes an objective and policy related to environmental hazards and hazardous materials. The policy that is pertinent to the Project is included below:

- HS Objective B1.5: Ensure adequate protection of County residents from new generations of toxic or hazardous waste substances.

- HS Policy B1.5.1: Evaluated development applications to determine the potential for hazardous waste generation and be required to provide sufficient financial assurance that is available to the County to cover waste cleanup and/or site restoration in instances where the site has been abandoned or the business operator is unable to remove hazardous materials form the site.

3.10.3 Impact Assessment

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

Less than Significant Impact with Mitigation Incorporated. The Project will require the delivery of hazardous materials, such as gasoline and diesel, in quantities large enough that improper transport, use, or disposal could create a significant hazard to the public or the environment, which is a significant impact. The County however requires, by implementing State law, that such projects prepare, implement, and maintain a Hazardous Materials Business Plan, described as Mitigation Measure **HAZ-1.** These plans are reviewed and approved by the County Department of Public Health. Compliance with the Hazardous Material Business Plan will ensure the Project will have a less than significant impact.

Mitigation Measure

HAZ-1 (Protection from Hazardous Materials). In order to protect the public from potential release of hazardous materials, the project applicant shall prepare and implement a new Hazardous Materials Business Plan (HMBP) in accordance with the requirements of the Kings County Public Health Department's Environmental Health Services Division and the Hazardous Materials Release Response Plan and Inventory Act of 1985. Under this state law, the applicant is required to prepare an HMBP to be submitted to the Kings County Public Health Department, Environmental Health Services Division, which is the Certified Unified Program Agency (CUPA) for Kings County. The HMBP shall include a hazardous material inventory, emergency response procedures, training program information, and basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of at the proposed project site, and procedures for handling and disposing of unanticipated hazardous materials encountered during construction. The HMBP shall include an inventory of the hazardous waste generated on-site, and would specify procedures for proper disposal. As required, hazardous waste would be transported by a licensed hauler and disposed of at a licensed facility. According to the HMBP reporting requirements, workers must be trained to respond to releases of hazardous materials in accordance with state and federal laws and regulations governing hazardous materials and hazardous waste (e.g., HAZWOPER training required by OSHA). Any accidental release of small quantities of hazardous materials shall be promptly contained and abated in accordance with applicable regulatory requirements and reported to the Environmental Health Services Division. As the CUPA for Kings County, the Environmental Health Services Division of the County Public Health Department is responsible for implementation and enforcement of HMBPs. Implementation of the HMBP for the project would ensure that minor spills or releases of hazardous materials would not pose a significant risk to the public or the environment.

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

Less than Significant Impact with Mitigation Incorporated. The existing facility has been in operation since at least 1990. No violations from the Department of Toxic Substances Control or State Water Resources Control Board have been found. Despite this, project construction and operations could cause an accidental spill which would release hazardous material into the environment, which is a significant impact. However, as mentioned above, the Project will be required to implement Mitigation Measure **HAZ-1** and prepare and maintain a Hazardous Material Business Plan. Impacts would be less than significant.

Mitigation Measure

See **HAZ-1**.

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

No Impact. There are no schools, existing or proposed, within one-quarter mile of the Project site. Therefore, there is no impact.

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

No Impact. The Project area and the parcel within which it lies does not involve land that is listed as an active hazardous materials site pursuant to Government Code Section 65962.5 and is not included on the lists compiled by the Department of Toxic Substances Control described in Section 65962.5 above. Both the State Water Board's Geotracker and Department of Toxic Substances Control EnviroStor websites were checked for contaminated groundwater or sites in the area and none were found at or adjacent to the Project site. There would be no impact.

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

Less than Significant Impact. The Project site is within an Airport Land Use Plan, with the nearest being the Hanford Airport Land Use Plan. The Project would comply with the density limitation of 150 persons per acre, or approximately 12,000 persons on the Project site, and is located outside of the 55 dB zone. The Project is more than two miles away from all other public and public use airports. Therefore, impacts will be less than significant.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. The proposed Project would comply with the Kings County Emergency Plan[40]. The Project site is not located adjacent to primary or secondary evacuation routes pursuant to in the Health and Safety Element of the 2035 Kings County General Plan. Therefore, Project-related impacts to emergency evacuation routes or emergency response routes on local roadways would be considered less than significant.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less than Significant Impact. The Project is not located within a Wildland-Urban Interface area[41] and therefore the Project will have not expose people structures, directly or indirectly, to a significant risk caused by wildland fires. There will be a less than significant impact.

[40]2015 Kings County Emergency Operations Plan https://www.countyofkings.com/departments/public-safety/office-of-emergency-management/preparedness/plans, accessed February 2021.
[41] CALFIRE. Wildland-Urban Interface Map. Website: https://frap.fire.ca.gov/media/10300/wui_19_ada.pdf accessed March 2021.

3.11 Hydrology and Water Quality

Table 3-24. Hydrology and Water Quality Impacts

Hydrology and Water Quality Impacts					
	Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such 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 or through the addition of impervious surfaces, in a manner which would:				
	i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
	ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or 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?	☐	☐	☐	☒

3.11.1 Environmental Setting and Baseline Conditions

The climate in Kings County can be classified as Mediterranean with average rainfall rates of 7.6 inches annually, occurring primarily between November and April[42]. Hydrology in the Project area is associated with the Tulare Lake Hydrologic Region, containing three main subbasins. The Tulare Lake subbasin is in the northern alluvial fan and basin subarea characterized by southwest to south flowing rivers, creeks, and irrigation canal systems that convey water from the Sierra Nevada to the west toward the Tulare Lake Bed. The southern portion of

[42] County of Kings, *2035 Kings County General Plan, Health and Safety Element*, p. HS-2, January 26, 2010. Website: https://www.countyofkings.com/home/showdocument?id=13515 accessed March 2021.

the basin is internally drained by the Kings, Kaweah, Tule, and Kern Rivers[43]. The Tulare Lake Basin comprises the drainage area of the San Joaquin Valley south of the San Joaquin River and is essentially a closed basin because surface water drains north into the San Joaquin River only in years of extreme rainfall. The Project site consists of irrigated farmland and an existing Fire Station, both served by groundwater.

The Project site is currently served by an existing groundwater well used for existing processes. The 80-acre portion of the Project site currently occupied by farmland uses, specifically alfalfa, is also served by groundwater. According to the 2017 Census of Agriculture, alfalfa in California has been surveyed to use an average of 3.9 acre-feet per acre[44], or a total of 312 acre-feet annually on the Project site, specifically.

3.11.2 Regulatory Setting

3.11.2.1 Federal

Clean Water Act: The Clean Water Act (CWA) is intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 CFR 1251). The regulations implementing the CWA protect waters of the U.S. including streams and wetlands (33 CFR 328.3). The CWA requires States to set standards to protect, maintain, and restore water quality by regulating point source and some non-point source discharges. Under Section 402 of the CWA, the National Pollutant Discharge Elimination System (NPDES) permit process was established to regulate these discharges.

Federal Emergency Management Agency (FEMA) Flood Zones: The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, FEMA has developed Flood Insurance Rate Maps (FIRM) that can be used for planning purposes. Flood hazard areas identified on the Flood Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (un-shaded).

3.11.2.2 State

State Water Resources Control Board: The SWRCB has jurisdiction over water quality issues in California. The SWRCB is governed by the Porter-Cologne Water Quality Act (Division 7 of the Water Code (WC)), which establishes the legal framework for water quality control activities by the SWRCB. The intent of the Porter-Cologne Act is to regulate factors which may affect the quality of waters of the State to attain the highest quality which is reasonable, considering a full range of demands and values. Much of the implementation of the SWRCB's responsibilities is delegated to its nine Regional Boards. The Project area is located within the Central Valley Regional Water Quality Control Board (CVRWQCB). The CVRWQCB administers the NPDES storm water-permitting program in the Central Valley region. Construction activities on one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). Additionally, CVRWQCB is responsible

[43] California Department of Water Resources, California's Groundwater Bulletin 118, Tulare Lake Hydrologic Region, San Joaquin Valley Groundwater Basin, Kaweah Subbasin, 2016. Website: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/B118-Interim-Update-2016.pdf, accessed March 2021.

[44] United States Department of Agriculture. 2017 Census of Agriculture. Table 36: Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013. Website: https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/Farm_and_Ranch_Irrigation_Survey/fris.pdf. Accessed February 2021.

for issuing Waste Discharge Requirements Orders under WC Section 13260, Article 4, Waste Discharge Requirements.

For projects proposing ground disturbance of one acre or greater, the SWRCB requires a Storm Water Pollution Prevention Plan (SWPPP) as a requirement of the NPDES to regulate water quality associated with construction or industrial activities.

Recycled Water Policy: The Water Recycling Act of 1991 (WC Section 1357,5 *et seq.*) established a Statewide goal to recycle a total of 700,000 acre-feet of water per year (AFY) by the year 2000 and 1,000,000 AFY by the year 2010. In February 2009, the SWRCB adopted its Recycled Water Policy (SWRCB Resolution No. 2009-0011), the purpose of which is to increase the beneficial use of recycled water from municipal wastewater sources in a manner that fully implements State and Federal water quality laws. The policy directs the State to rely less on variable annual precipitation and more on sustainable management of surface waters and groundwater, together with enhanced water conservation, water reuse and the use of stormwater. As a part of the new recycled water policy, the SWRCB adopted the following four goals for California:

1. Increase the use of recycled water over 2002 levels by at least one million AFY by 2020 and by at least two million AFY by 2030.
2. Increase the use of stormwater over use in 2007 by at least 500,000 AFY by 2020 and by at least one million AFY by 2030.
3. Increase the amount of water conserved in urban and industrial uses by comparison to 2007 by at least 20 percent by 2020.
4. Included in these goals is the substitution of as much recycled water for potable water as possible by 2030.

In the new policy, the SWRCB also discussed several practical impacts of the greater use of recycled water in the State. Those impacts include the following:

- Groundwater salt and nutrient control: The SWRCB imposed a requirement that consistent salt and nutrient management plans be prepared for each basin and subbasin in California. Such plans must include a significant stormwater use and recharge component.
- Landscape irrigation: The SWRCB discussed issues involving the permitting of landscape irrigation projects that use recycled water, including the control of incidental runoff of recycled water.
- Groundwater recharge: The SWRCB addressed site-specific approvals of groundwater recharge projects using recycled water, emphasizing that such projects must not lower the water quality within a groundwater basin.
- Chemicals of emerging concern: The SWRCB further addressed chemicals of emerging concern (CEC), knowledge of which is currently "incomplete." An advisory panel will advise the Water Board regarding actions involving CECs, as they relate to the use of recycled water.

The wide-ranging ramifications of using recycled water, coupled with the aggressive goals established by the SWRCB for such future use in California, demonstrates that the new Recycled Water Policy will have a significant impact on land use activities within the State for many years to come.

Department of Water Resources (DWR): WC Section 10004, *et seq.* requires that DWR update the State Water Plan every five years. The Plan is currently undergoing its 2018 update; the most recent adopted version is from 2013.

For Update 2013, DWR worked with researchers at the University of California, Davis, to quantify how much growth might occur in the Tulare Lake Hydrologic Region through 2050. The model was used to estimate a year 2050 urban footprint under the scenarios of alternative population growth and development density. Each of the growth scenarios shows a decline in irrigated acreage over existing conditions, but to varying degrees. Irrigated crop acreage declines, on average, by about 90 thousand acres by year 2050 as a result of low population growth and urbanization in Tulare Lake region, while the decline under high population growth was higher by about 200 thousand acres. The change in water demand from 2006 to 2050 is estimated for the Tulare Lake Hydrologic Region for the agriculture and urban sectors under nine growth scenarios and 13 scenarios of future climate change. Urban demand increased under all nine growth scenarios tracking with population growth. Agricultural water demand decreases under all future scenarios due to reduction in irrigated lands as a result of urbanization and background water conservation. Groundwater resources were evaluated for performance under the plausible futures, resulting in 198 scenarios showing the change in groundwater storage from 2013 to 2050. About 95 percent of the futures lead to groundwater declines in the Tulare Lake Hydrologic Region and about 50 percent of the futures lead to declines greater than 10 percent.[45]

Government Code 65302 (d): A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, river and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. That portion of the conservation element including waters shall be developed in coordination with any County-wide water agency and with all district and city agencies which have developed, served, controlled or conserved water for any purpose for the County or city for which the plan is prepared. Coordination shall include the discussion and evaluation of any water supply and demand information described in Section 65352.5, if that information has been submitted by the water agency to the city or County. The conservation element may also cover:

1. The reclamation of land and waters.
2. Prevention and control of the pollution of streams and other waters.
3. Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan.
4. Prevention, control, and correction of the erosion of soils, beaches, and shores.
5. Protection of watersheds.
6. The location, quantity and quality of the rock, sand and gravel resources.
7. Flood control.

Sustainable Groundwater Management Act: On September 16, 2014 Governor Edmund G. Brown, Jr. signed historic legislation to strengthen local management and monitoring of groundwater basins most critical to the State's water needs. The three bills, SB 1168 (Pavley), SB 1319 (Pavley), and AB 1739 (Dickinson) together makeup the Sustainable Groundwater Management Act (SGMA). SGMA comprehensively reforms groundwater management in California. The intent of the Act is to place management at the local level, although the State may intervene to manage basins when local agencies fail to take appropriate responsibility. The Act provides authority for local agency management of groundwater and requires creation of groundwater sustainability agencies and implementation of plans to achieve groundwater sustainability within basins of high and medium priority including the Tulare Lake Sub-basin. The Act took effect on January 1, 2015 and will be implemented over the course of next several years and decades.

3.11.2.3 Local

Kings County General Plan Policies:

The 2035 Kings County General Plan Health and Safety Element has the following goal and policies related to flood hazards:

- <u>HS GOAL A4</u>: Prevent unnecessary exposure of people and property to flood damage.

[45] California Department of Water Resources, *California Water Plan Update 2013*, *Tulare Lake Hydrologic Region,* 2013. Website: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2013/Regional-Reports/Water-Plan-Update-2013-Tulare-Lake-Regional-Report.pdf, accessed March 2021.

- HS Policy A4.1.1: Review new development proposals against current Federal Emergency Management Agency (FEMA) digital flood insurance rate maps and California Department of Water Resource special flood hazard maps to determine project site susceptibility to flood hazard.
- HS Policy A4.1.5: Regulate development, water diversion, vegetation removal, and grading to minimize any increase in flood damage to people and property.
- HS Policy A4.1.7: Consider and identify all areas subject to flooding in the review of all land divisions and development projects.

3.11.3 Impact Assessment

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact with Mitigation Incorporated.

Construction

The NPDES Program has responsibility for regulating stormwater discharges to surface waters. Since the amount of disturbance that would result from the project is greater than an acre, the applicant would be required to obtain coverage under the Construction Stormwater General Permit from the SWRCB actually and comply with the conditions of the permit. The applicant would also be required to implement a SWPPP as described in HYD-1, the development of which would be based on final engineering design and would include all project components. The SWPPP is required by law to include erosion and sediment control measures to reduce runoff during construction.

Mitigation Measure

HYD-1 Stormwater Quality Protection. Prior to construction grading the applicant shall be required to file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) to comply with the General Permit and prepare a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall be prepared by a Qualified SWPPP Developer (QSD) and shall detail the Best Management Practices (BMPs) to control pollutants that shall be implemented and complied with during the construction phase of the project. Construction contracts for the project shall include the requirement to implement the BMPs in accordance with the SWPPP. Example BMPs may include the following:

- Existing vegetation will be preserved to the maximum extent practicable. Clearing and grubbing will only be performed in areas where new foundations, utilities, or internal access drives are planned.
- All soil compaction and subgrade preparation specifications will be performed in accordance with the site-specific recommendations of a California-licensed Geotechnical Engineer, and will be based on his or her field exploration prior to construction.
- Disturbed areas will be seeded upon completion of construction in order to protect exposed soils from erosion by wind and water. Upon completion of an earth disturbance activity, disturbed areas will be covered with a minimum uniform 70 percent perennial vegetative cover, with a density capable of resisting accelerated erosion and sedimentation, or be returned to pre-construction conditions.
- A tackifier with a non-seeded mix, or the establishment of a visible crust through control means, will be used to temporarily stabilize disturbed areas until soil can be prepared for revegetation.
- A non-combustible surface will surround the project site to provide a stabilized surface for post-construction access. Nonvegetative stabilization methods, such as gravel mulch, will be used to provide a stabilized, 12-foot-wide access corridor.
- A stabilized construction entrance/exit will be maintained at the construction site entrance/exit to reduce tracking of sediment by construction traffic. The entrance/exit will be constructed consistent with the detail included with the Erosion and Sediment Control Drawings (ESCDs).

- The construction access route into the site will be maintained to prevent erosion and to control tracking of mud and soil material onto adjacent roads. The ESCDs will specify the construction access location. A regular maintenance program will replace sediment-clogged stabilization material with new stabilization material as required.
- Excess mud will be removed from construction vehicle wheels prior to exiting the site to prevent excessive tracking of mud onto the roadway.
- Road sweeping and vacuuming will occur as necessary during construction to keep street surfaces clear of soil and debris. Washing sediment onto streets will not occur.
- During windy conditions (forecast or actual wind conditions of approximately 25 mph or greater), or during wind speeds prescribed in the Dust Control Plan, whichever is less, dust control will be applied to disturbed areas, including construction access driveways, to adequately control wind erosion. Water will be applied to disturbed soil areas of the project site using water trucks as required by weather conditions to control dust. Water application rates will be minimized as necessary to prevent runoff and ponding.
- Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding, or alternate methods.
- Maintain sufficient quantities of temporary sediment control materials on-site throughout the duration of the project.

Operations

The wastewater produced by the Project will be contained by internal septic sewer system piping. Runoff generated as a result of the decreased permeability of the Project Site will be collected via onsite storm drain conveyance systems and collected within an existing lined pond. The lined pond is part of an existing conveyance system with an existing Report of Waste Discharge. Design, operation and maintenance of these systems would not violate any waste discharge requirements. Water quality for domestic/potable use is controlled by the County itself pursuant to State water quality regulations.

A SWPPP will be developed in accordance with the SWRCB NPDES permit regulating Industrial site pollution prevention. The SWPPP will be required to be developed prior to facility operations unless the facility is covered under an alternate NPDES permit. A Hazardous Material Business Plan (HMBP, See **HAZ-1**) and Spill Prevention, Control and Countermeasure (SPCC) Plan will be developed prior to operations as required by the County and Federal regulations.

It is not anticipated that the Project will degrade either surface- or ground-water quality. Implementation of **HYD-1** and **HAZ-1** would ensure that there are no violations of water quality standards or waste discharge requirements during construction; therefore, this impact would be less than significant after mitigation is incorporated.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No Impact. The Project site is located in a non-adjudicated groundwater basin. As a result, landowners have rights to pump and use groundwater beneath their lands, as long as the groundwater is beneficially used. However, pursuant to the Sustainable Groundwater Management Act, all groundwater users must comply with requirements identified in the Groundwater Sustainability Plan that overlies the area. The Project is within the Mid-Kings Groundwater Sustainability Agency's (MKGSA) boundary. The MKGSA has worked collaboratively with four other Groundwater Sustainability Agencies to prepare, collectively, the Tulare Lake Subbasin Groundwater Sustainability Plan (GSP). The GSP was adopted on January 14, 2020 by the MKGSA, submitted to the Department of Water Resources (DWR), and is being reviewed for conformity with the SGMA requirements.

Table 3-25. Water Demand

	AF/acre	Acres	AF per year (AFY)
Existing Farmland Conditions	3.9	80	312
Conversion of Farmland			(312)
Project Demand			141.23
Net Increase/(Reduction) from Existing Conditions			(170.77)
Sustainable Yield	0.965	80	77.2
Significant Impact?			No

Further, the GSP states the GSA will prepare groundwater allocations for pumping and associated fees with exceedances thereof; however, those allocation levels have not been defined at this time. The GSP further states there is an estimated sustainable yield for agricultural land of 0.965 AFY/Ac[46]. As the Project proposes to utilize approximately 123,000 gallons per day, or approximately 141.23 AFY, across 126.9 acres, Project operations will utilize 170.77 acre-feet per year less than existing conditions. Water utilization will be more sustainable and there will be no impact. Additionally, the Project will retain all stormwater runoff on site. Therefore, there will be no impact.

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

c-i) result in substantial erosion or siltation on- or off-site? or

c-ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? or

c-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

c-iv) impede or redirect flood flows?

No Impacts. The Project would not alter any existing drainage patterns of the site area such that substantial erosion or siltation on- or -off site would result nor would it alter the course of any streams or rivers as there are none in immediate proximity to the site. The rate and amount of surface runoff from local storms may increase slightly due to the addition of building and parking impervious surfacing, however the proposed drainage basin is sized to retain all stormwater run-off on site and so as to not result in flooding on- or off-site. The Project would not contribute additional runoff water that would exceed the capacity of existing or planned stormwater drainage facilities. Additionally, the project would not impede or redirect flood flows (see **Figure 3-3**). Thus, the Project will have no impact.

d) Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundations?

Less than Significant Impact. The Project is not located in a flood hazard zone, however it is located in a Dam Inundation Flood risk area, from the Pine Flat Dam[47], located approximately 30 miles northeast of the Project site. Estimated amount of time to reach the Project site is anticipated to be approximately five hours. The Kings County Multi-Hazard Mitigation Plan indicates that the significance of such an event is Low, defined as having

[46] Tulare Lake Subbasin Groundwater Sustainability Plan, January 2020; Section 3.3.4.
[47] County of Kings. 2035 General Plan, Health and Safety Element. Figure HS-7. Website: https://www.countyofkings.com/home/showpublisheddocument?id=13515 accessed March 2021.

minimal potential impact. Level of inundation would decrease as distance from point of failure increased. Due to the distance to Pine Flat Dam, impacts would be less than significant.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. The Project is within the Mid-Kings Groundwater Sustainability Agency's (MKGSA) boundary, whose Groundwater Sustainability Plan was adopted in January 2020. As the Project will result in a significant decrease in groundwater consumption from existing conditions, the Project will not conflict with or obstruction implementation of the GSP. There will be no impact.

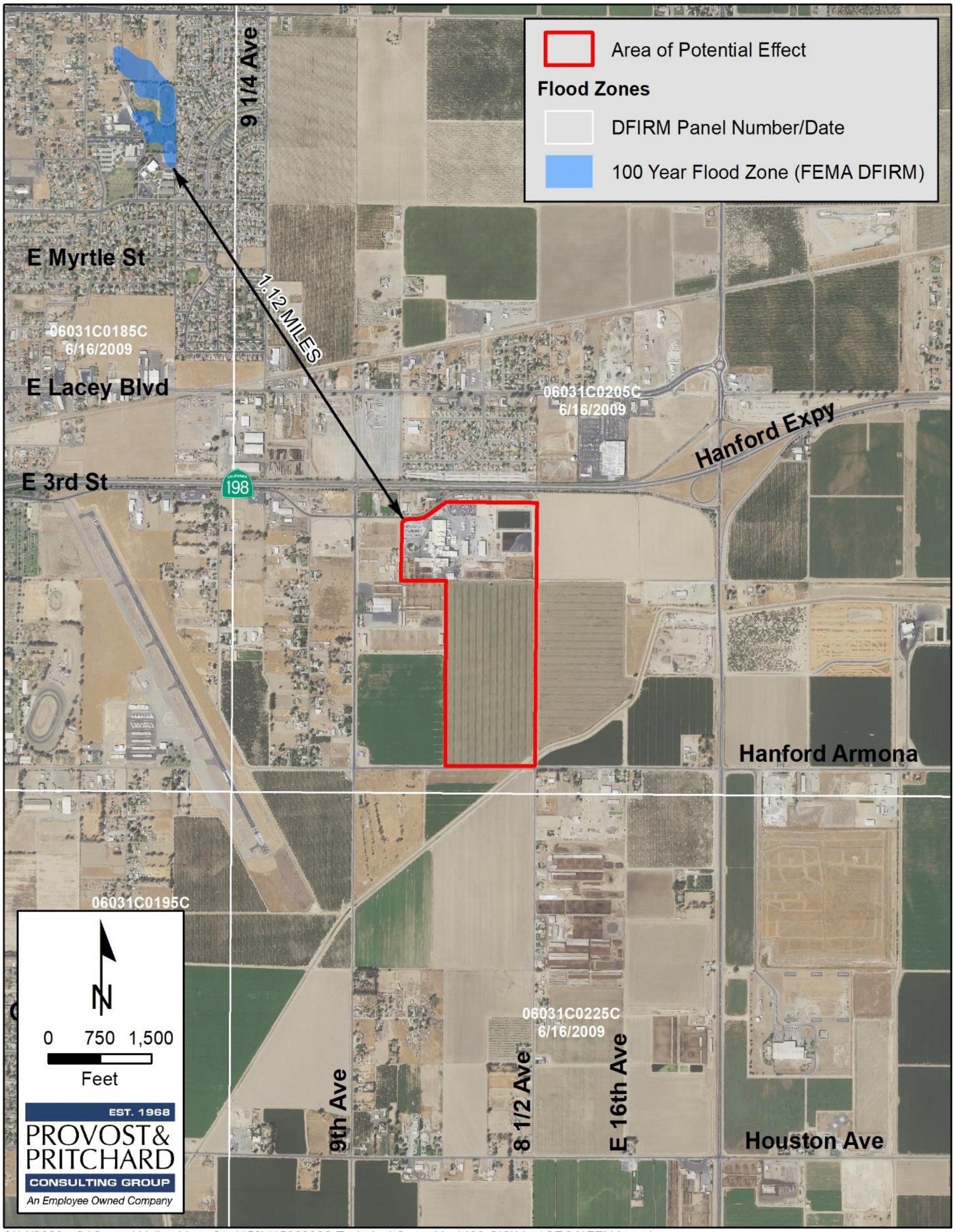

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Figure 3-3. FEMA Flood Map

3.12 Land Use and Planning

Table 3-26. Land Use and Planning Impacts

Land Use and Planning Impacts					
Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

3.12.1 Environmental Setting and Baseline Conditions

General Plan Land Use Designations and Zone Districts are illustrated in **Figure 3-4** and **Figure 3-5**, respectively.

3.12.2 Impact Assessment

a) Would the project physically divide an established community?

No Impact. The Project will not create barriers where public rights-of-way exist. No rights-of-way are proposed to be abandoned. Therefore, there is no impact.

b) Would the project cause a significant environmental conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant Impact. The Project consists of uses allowed by the Kings County Development Code in the AG-20[48] and IH[49] zone districts. Table 4-1 of Article 4 (Agricultural Zoning Districts) of the Development Code allows for agricultural produce processing, packing, and shipping facilities including slaughterhouses, as well as livestock processing and/or rendering facilities, subject to the approval of a Conditional Use Permit. Table 8-1 of Article 8 (Industrial Zoning Districts) of the Development Code allows for stockyards and slaughterhouses, also subject to the approval of a Conditional Use Permit. Conditional Use Permits requires consistency with the General Plan in order to be approved.[50] The proposed uses are supported by the following General Plan policies:

- LU Policy B3.1.1: Allow permanent agricultural service and processing facilities in areas designated General Agriculture, while restricting these types of services in Limited Agriculture and Exclusive Agriculture designated areas.
- LU Policy C1.1.3: Allow development of existing residential, commercial, and industrial designated land within the Rural Interface areas of Kings County.

[48] County of Kings. Article 4. Agricultural Zoning Districts. Website: https://www.countyofkings.com/home/showpublisheddocument/24151/637329332752630000. Accessed April 2021.
[49] County of Kings. *Article 8. Industrial Zoning Districts.* Website: https://www.countyofkings.com/home/showpublisheddocument/19851/636874762654370000. Accessed April 2021.
[50] County of Kings. *Article 17. Conditional Use Permits.* Website: https://www.countyofkings.com/home/showpublisheddocument/19833/636874762624970000. Accessed April 2021.

Through regulatory requirements, project design and features, as well as conditions of approval, the Project will comply with all General Plan policies and regulations that have been adopted for the purpose of avoiding and/or mitigating environmental effects. Impacts will be less than significant.

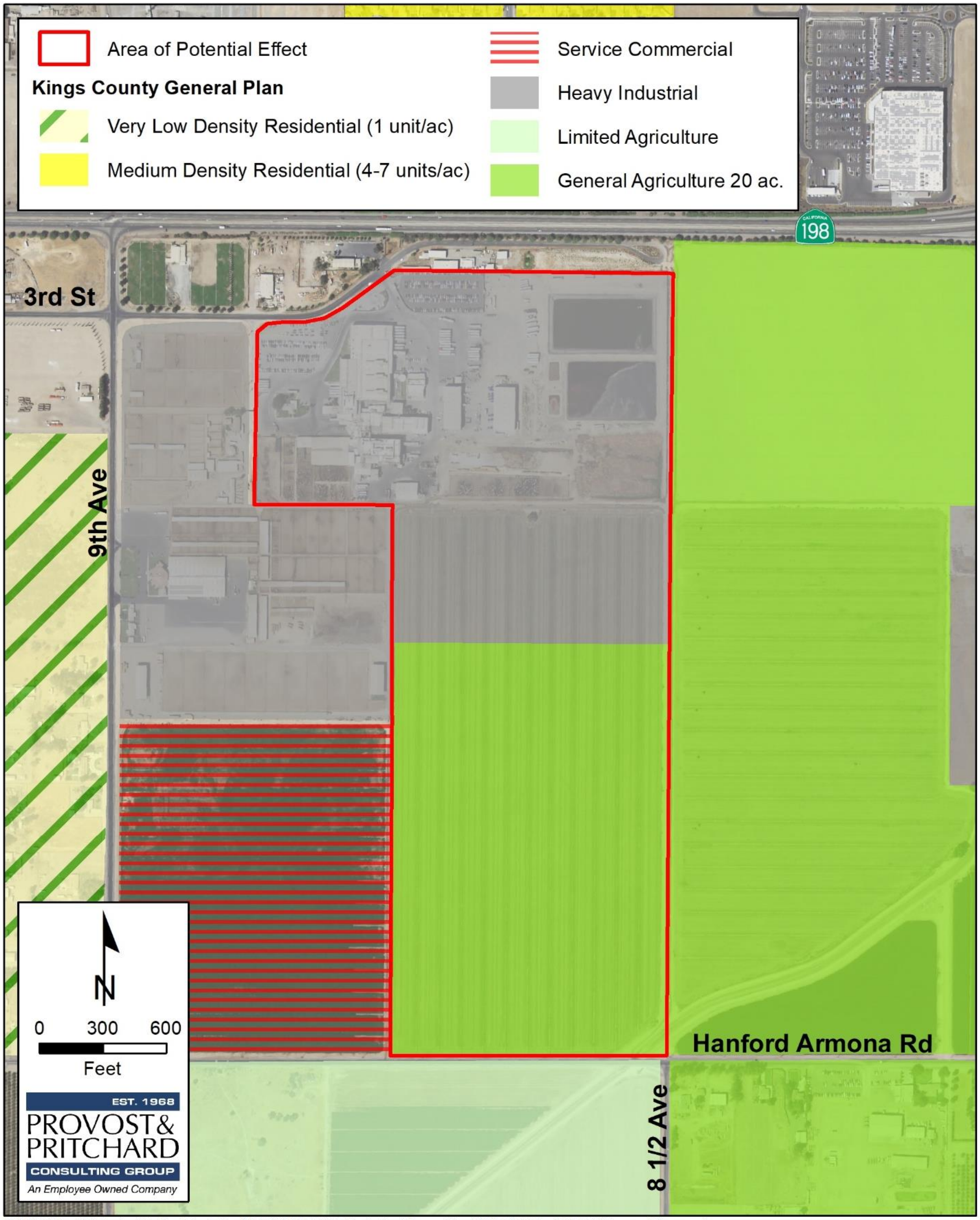

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Figure 3-4. Kings County General Plan map

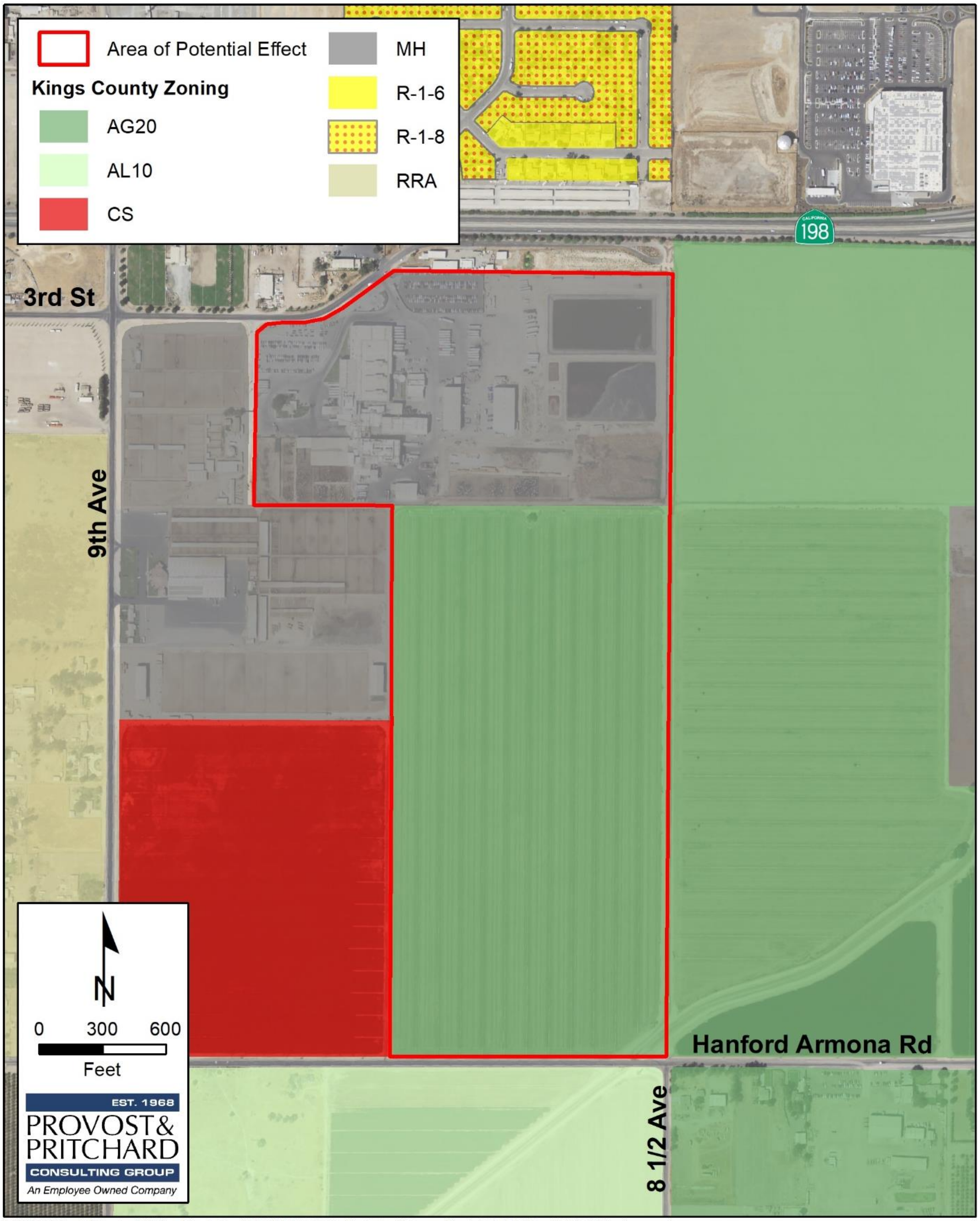

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Figure 3-5. Kings County Zoning Map

3.13 Mineral Resources

Table 3-27. Mineral Resources Impacts

Mineral Resources Impacts						
Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

3.13.1 Environmental Setting and Baseline Conditions

Minerals are defined as any naturally occurring chemical elements or compounds formed from inorganic processes and organic substances. Minable minerals, or an "ore deposit," are defined as a deposit of ore or mineral having a value materially in excess of the cost of developing, mining, and processing the mineral and reclaiming the area. The Project site is mapped as MRZ-3 (The significance of mineral deposits cannot be determined from the available data) by the California Geological Survey Mineral Resources Project. The Project site is not in an Open Space Overlay Zone.[51]

3.13.2 Impact Assessment

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

No Impact. The project site is mapped as MRZ-3, meaning the significance of mineral deposits cannot be determined from available data. The nearest area designated MRZ-2, that is, where significant mineral resources are known or very likely, is approximately 28 miles east of the Project site. No mineral resource zones and no active or inactive mines mapped by the Office of Mine Reclamation are on or near the Project site[52][53]. Therefore, there would be no impact to known or locally-important mineral resources.

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

No Impact. The General Plan does not delineate locally-important mineral resource sites. Therefore, there would be no impact.

[51] County of Kings Development Code. Article 10, Overlay Zones. Website: https://www.countyofkings.com/home/showpublisheddocument?id=19819 accessed March 2021.
[52] California Department of Conservation. Mineral Lands Classification. Website; https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc accessed March 2021.
[53] California Department of Conservation. Mines Online. Website https://maps.conservation.ca.gov/mol/index.html accessed March 2021.

3.14 Noise

Table 3-28. Noise Impacts

Noise Impacts					
Would the project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive ground borne vibration or ground borne noise levels?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

3.14.1 Environmental Setting and Baseline Conditions

The project is located near the southern boundary of the City of Hanford within Kings County, CA. The Project area is bounded by Overland Stockyard and farmland to the east and west, Third Street to the north, and Hanford-Armona Road to the south. Sensitive receptors include two residences on-site, as well as one located 100 feet west of the Project site.

3.14.2 Regulatory Setting

3.14.2.1 Federal

Federal Vibration Policies: The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to ground-borne vibration levels of 0.5 PPV without experiencing structural damage[54]. The FTA has identified the human annoyance response to vibration levels 75 to 80 VdB.

3.14.2.2 State

There are no State regulations, plans, programs or guidelines associated with noise that are applicable to the proposed Project.

3.14.2.3 Local

The Noise Element of the 2035 Kings County General Plan serves as the primary policy statement for the unincorporated areas of the County to maintain and improve the noise environment in the County. It should be noted that the County does not have specific zoning or general plan requirements related to vibration.

[54] U.S. Department of Transportation, Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual,* September 2018. Page 118. Website: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed March 2021.

Table 3-29 shows the County maximum allowable noise exposure from Transportation Noise Sources. **Table 3-30** shows the County maximum allowable noise exposure from Stationary Noise Sources (non-transportation noise). The information presented in **Table 3-29** and **Table 3-30** comes from the Noise element for the Kings County General Plan.[55]

Table 3-29. Noise Standards for New Uses Affected by Transportation Noise Sources

Noise Standards for New Uses Affected by Transportation Noise Sources			
New Land Use	Sensitive[1] Outdoor Area	Sensitive Interior Area	Notes
Residential	60	45	5
Residence in Ag Zones	65	45	6
Transient lodging	65	45	3,5
Hospitals, Nursing Homes	60	45	3,4,5
Theaters, Auditoriums	--	35	3
Churches, meeting Halls, schools, Libraries, etc.	60	40	3
Office Buildings	65	50	3
Commercial Buildings	65	50	3
Playgrounds, Parks, etc.	70	--	3
Industry	65	50	3

Notes:
1. Sensitive areas are defined in the acoustic terminology section.
2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
3. Where there are no sensitive exterior spaces proposed for these uses, only the interior noise level standard shall apply.
4. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable on it at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
5. If this use is affected by railroad or aircraft noise, a maximum (Lmax) noise level standard of 70 dB shall be applied to all sleeping rooms with windows closed to reduce the potential for sleep disturbance during nightime noise events.
6. Due to the noise-generating nature of agricultural activities, it is understood that residences constructed on agriculturally designated land uses may be exposed to elevated noise levels. As a result, a 65 dB CNEL exterior noise level standard is applied to noise-sensitive outdoor areas of these uses.
dB= Decibels
CNEL= Community Noise Equivalent Level
Source: Kings County 2035 General Plan

Table 3-30. Non-Transportation Noise Standards

Non-Transportation Noise Standards				
Receiving Land Use	Average (Leq)/Maximum (Lmax)[1]			Notes
	Outdoor Area[2]		Interior[3]	
	Daytime	Nighttime	Daytime/Nighttime	
All Residential	55/75	50/70	35/55	
Transient lodging	55/75	--	35/55	5,6
Hospitals, Nursing Homes	55/75	--	35/55	6
Theaters, Auditoriums	--	--	30/50	6
Churches, meeting halls, schools, Libraries, etc.	55/75	--	35/60	6

[55] County of Kings, *2035 Kings County General Plan,* page N-38, January 26, 2010. Website: https://www.countyofkings.com/home/showdocument?id=13517 accessed March 2021

Non-Transportation Noise Standards				
Receiving Land Use	Average (Leq)/Maximum (Lmax)[1]			Notes
	Outdoor Area[2]		Interior[3]	
	Daytime	Nighttime	Daytime/Nighttime	
Office Buildings	60/75	--	45/65	6
Commercial Buildings	55/75	--	45/65	6
Playgrounds, Parks, etc.	65/75	--	--	6
Industry	60/80	--	50/70	6

Notes: Items 1-6 Ibid.

General Plan Noise Element Policy C1.2.2 exempts from the above noise standards land uses including "Agricultural activities, operations and facilities conducted or used for commercial agricultural purposes in a manner consistent with proper and accepted customs and standards." As previously mentioned, the proposed uses are considered agricultural support activities.

3.14.3 Impact Assessment

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

Less than Significant Impact with Mitigation Incorporated.

Operational Noise

The northern portion of the Project site is planned Industrial, and the south portion is planned Agricultural. There are no noise standards for Agricultural land uses. Because operational noise of the rendering plant, pet food facility, and freezer cooler building portion of the Project are considered agricultural activities under Table 4-1 of the Development Code, operational noise from those sources are exempt from General Plan noise standards pursuant to Noise Element Policy C1.2.2, and thus are not discussed further.

Noise generated from the Industrial land use portion of the site currently consists of mechanical equipment such as roof-mounted fans, motors, and blowers. The facility currently has at least six (6) loading docks accessible from 8 ¾ Avenue. The Project would construct a processing expansion facility and would require the relocation of the loading docks to where they would access the property from Third Street. Noise would be generated from new mechanical equipment, such as chillers, which are expected to generate 80dB when measured from 50 feet away. Due to distance to the nearest sensitive receptor (approximately 230 feet away from the nearest proposed enclosed building), noise would be minimally received, approximately 66dB by the sensitive receptor. Noise would be further reduced due to roof placement of chillers. Delivery noise would be significantly reduced along 8 ¾ Avenue, resulting in a less than significant impact.

Construction Noise

There are two sensitive receptors, residential buildings, located on the Project site. These residential buildings are within close proximity to both the Phase 1 Trucking Parking Area and Phase 2 Processing Expansion Building. The Project site is located approximately 100 feet east of the nearest single-family residence which is not associated with this project, and adjacent to agricultural lands. Construction of the Project will occur during weekdays during daytime hours. The Federal Highway Administration (FHWA) has compiled noise measurement data regarding the noise-generating characteristics of various types of construction equipment. The table below provides a summary of these typical noise levels of construction equipment as measured at a distance of 50 feet from the operating equipment.

Table 3-31. Typical Noise Levels of Construction Equipment

Type of Equipment	Specification Maximum Sound Levels for Analysis (50 feet)
Auger Drill Rig	85
Backhoe	80
Compactor	80
Dozer	85
Excavator	85
Grader	85

The Project is likely to use construction equipment whose sound levels will exceed acceptable General Plan standards when measured at the sensitive receptors, a significant impact. Implementation of **NOI-1** will ensure noise-related best management practices are implemented, and noise impacts remain less than significant.

Mitigation Measure

NOI-1 (Noise Attenuation). To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the proposed project:

- The construction contractor shall locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.
- The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- The construction contractor shall designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. The construction contractor shall conspicuously post a telephone number for the disturbance coordinator at the construction site.
- Noise producing construction activities shall be restricted to the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday. No construction shall be permitted on Sundays and holidays.

b) Would the project result in generation of excessive ground borne vibration or ground borne noise levels?

Less than Significant Impact with Mitigation. Impact equipment such as large vibratory rollers produce groundborne vibration levels ranging up to 0.21 inches per second (in/sec) peak particle velocity (PPV) at 25 feet from the operating equipment. Construction of the Phase 1 Truck Parking Area and Phase 2 Processing Expansion building will likely require use of these equipment, and are anticipated to be used within close proximity of the on-site residential buildings, which are sensitive receptors. Vibration caused from construction could cause damage to those buildings, a significant impact. Off-site buildings, which are located more than 25 feet away, would receive much less than the 0.5 inches per second PPV necessary to cause a significant impact.

Implementation of **NOI-2,** Vibration-Based Repairs, however will ensure that all damage caused by the Project will be repaired to their pre-construction condition, and thus vibration-based impacts will be less than significant.

Mitigation Measure

NOI-2 (Vibration-Based Repairs). Prior to commencement of construction of the Phase 1 Truck Parking Area and Phase 2 Processing Expansion, the Project Architect or Engineer shall create a visual inventory consisting of photos and/or video of the on-site residential building nearest to the building proposed to be constructed. After construction is complete, a second visual inventory shall be taken, and all repairs to the residential building shall be made to bring the building back to its pre-construction condition.

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

Less than Significant Impact. The Project site located within a 55dB noise contour of the Hanford Municipal Airport. Acceptable noise levels are not established for agricultural land uses, thus the Industry land use noise standards are applied. Outdoor noise levels would not exceed the Industry land use exterior noise standard of 60 dB L_{eq} and 80 L_{max}. Due to project layout, mechanical equipment would be roof-mounted and fewer heavy duty truck trips would travel down 8 ¾ Avenue, where sensitive receptors exist, and would receive approximately 66dB from such mechanical equipment. The Noise Element states that residential building facades with open windows provide approximately 10 to 15 dB of noise reduction. Given the building energy efficiency requirements of the California Energy Code, building construction practices would conservatively provide a minimum 10 dB reduction, reducing indoor noise levels to acceptable standards. Impacts would be less than significant.

3.15 Population and Housing

Table 3-32. Population and Housing Impacts

Population and Housing Impacts					
Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.15.1 Environmental Setting and Baseline Conditions

Since 1980, Kings County's population has increased at an annual average growth rate of 3.8 percent. However, much of the increase is inflated due to the opening of Avenal State Prison (1987), Corcoran State Prison I and II (1988), the California Substance Abuse Treatment Facility (1997), and expansion of Naval Air Station Lemoore (NAS Lemoore). Discounting military and correctional institutions, Countywide population still increased at a rate of approximately two percent annually since 1980[56].

3.15.2 Impact Assessment

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

Less than Significant Impact. Approximately 190 employees are necessary to implement the Project. The Project does not propose new homes. The Project would convert one type of employment-generating land use for another. While industrial land uses are typically more employment dense than agricultural uses, the 2016-2024 Housing Element for Kings County and the City of Hanford indicates both jurisdictions have sufficient capacity in residential land inventory to support the increase in employment, estimated to be less than 0.02% of the total county employment population. Impacts will be less than significant.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project does not propose to demolish any housing, therefore the Project would not displace people or housing. There will be no impact.

[56] County of Kings, *Kings County 2035 General Plan,* January 26, 2010, Page I-4. Website: https://www.countyofkings.com/home/showdocument?id=3108, accessed March 2021.

3.16 Public Services

Table 3-33. Public Services Impacts

Public Services Impacts					
	Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 public services:				
	Fire protection?	☐	☐	☒	☐
	Police protection?	☐	☐	☒	☐
	Schools?	☐	☐	☒	☐
	Parks?	☐	☐	☐	☒
	Other public facilities?	☐	☐	☒	☐

3.16.1 Environmental Setting and Baseline Conditions

Fire Protection: The existing Fire Station No. 4 is located approximately 1.7 miles away. The second closest Kings County facility is Fire Station No. 5, approximately 5 miles west. The Fire Department uses the National Fire Protection Association (NFPA) standard for fire protection services, which requires 1.2 firefighters per 1,000 residents. In addition, the Fire Department considers any development outside the five miles response zone to be an impact to fire protection services.

Police Protection: The Project would be served by the Kings County Sherriff's office. The closest station, Hanford Station, is 3.2 miles northwest of the Project area. A Sheriff Department's goal is to provide one officer per 1,000 residents.

Schools: The Project is located in the Kit Carson Elementary School District and Hanford Joint Union High School District. The closest schools of each respective district is 2 miles northeast and 3 miles northwest.

Parks: The nearest County park is Hickey Park, less than 9 miles northwest of the Project area. The County's Quimby Act parkland to population ratio is two acres per 1,000 residents. The County currently has 130.7 acres, and with General Plan build-out of 44,788 residents, this standard has already been met.

Other Public Facilities: The closest active non-hazardous landfill site in Kings County is the Waste Management Kettleman Hills facility which is approximately 33 miles southwest of the Project area.[57]

[57] County of Kings *2035 General Plan,* January 26, 2010, pages LU-9 through LU-10. https://www.countyofkings.com/home/showdocument?id=15995, Accessed March 2021.

3.16.2 Regulatory Setting

3.16.2.1 Federal

There are no federal regulations, plans, programs or guidelines associated with public services that are applicable to the Project.

3.16.2.2 State

There are no State regulations, plans, programs or guidelines associated with recreation that are applicable to the Project.

3.16.2.3 Local

Kings County General Plan Policies: The 2035 Kings County General Plan Health and Safety Element has the following goal related to public services:

- Goal C2: Support Countywide safety through adequate law enforcement, quality fire protection, emergency preparedness, and accessibility in times of emergency.

3.16.3 **Impact Assessment**

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

Less than Significant Impacts. The Project would not result in any substantial adverse impacts to Public Services. Public agencies that would serve the Project Site reviewed the Project in order to provide their requirements that would need to be implemented in order to properly provide service to the Project. No agency required expansion of public facilities or construction of new facilities, such as police or fire stations, parks, schools, libraries, or other government facilities, and thus no significant impacts would occur. The Project will be required to pay its fair share of development impact fees which will cover its portion of public services necessary to service the site at time of issuance of building permits. Impacts will be less than significant.

Fire protection

The existing Fire Station No. 4 is located approximately 1.7 miles away. The second closest Kings County facility is Fire Station No. 5, approximately 5 miles west. The Fire Department uses the National Fire Protection Association (NFPA) standard for fire protection services, which requires 1.2 firefighters per 1,000 residents. In addition, the Fire Department considers any development outside the five miles response zone to be an impact to fire protection services. The Fire Department had expressed no concerns of servicing the Project. The Project will be required to pay its fair share of development impact fees which will cover its portion of public services necessary to service the site at time of issuance of building permits.

Police protection

The Project would be served by the Kings County Sherriff's office. The closest station, Hanford Station, is 3.2 miles northwest of the Project area. The expansion of the project and addition of 190 employees at full build out will not be a significant impact to police protection services.

Schools

The Project is located in the Kit Carson Elementary School District and Hanford Joint Union High School District. The closest schools of each respective district is approximately 2 miles northeast and 3 miles northwest.

Parks

The nearest County park is Hickey Park, less than 9 miles northwest of the Project area. The expansion of the project and addition of 190 employees at full build out will not be a significant impact to County parks.

3.17 Recreation

Table 3-34. Recreation Impacts

Recreation Impacts					
	Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.17.1 Environmental Setting and Baseline Conditions

Kings County currently owns and maintains three parks (Burris, Hickey, and Kingston) which are located in the northern portions of the County and surrounded by agricultural areas. The nearest County park is Hickey Park, less than 9 miles northwest of the Project area. The County's Quimby Act parkland to population ratio is two acres per 1,000 residents. The County currently has 130.7 acres, and with General Plan build-out of 44,788 residents, this standard has already been met.

3.17.2 Regulatory Setting

There are no federal, State, or local regulations, plans, programs or guidelines associated with recreation that are applicable to the Project.

3.17.3 Impact Assessment

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

No Impact. The Project is anticipated to add approximately 190 employees at Project buildout. . However the number of employees residing in Kings County exceed the number of jobs available and it is anticipated that the new employees would most likely reside locally (within the city or county). Therefore, the growth in employees would not directly induce population growth by bringing substantial numbers of new jobs to the project vicinity, or result in associated increases in demand for housing or goods and services. There are not any residential parks close to the project site. The site is zoned Agricultural and Industrial and the closest residential area is north of the Highway. The Project is located less than 9 miles away from the nearest County park, and thus the likelihood that employees would use County parks is minimal. The Project will be required to pay all impact fees towards public services and facilities impacted, and therefore there will be no impact.

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

No Impact. See Impact 3.17.3.a). The proposed project would not include the construction or expansion of recreational facilities, which could physically effect the environment, and therefore there will be no impact.

3.18 Transportation

Table 3-35. Transportation Impacts

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

3.18.1 Environmental Settings and Baseline Conditions

Road improvements in the vicinity are composed of asphalt paving, and dirt shoulders. There are no sidewalks, bicycle lanes, or bus stops within the vicinity of the Project site. The nearest bus stop is 1.5 walking miles away at Third and White Streets in Hanford.

3.18.1.1 Local

Kings County General Plan Policies: The 2035 Kings County General Plan has the following goals and objectives for traffic and circulation:

- Goal A1: Provide a coordinated countywide circulation system with a variety of safe and efficient transportation alternatives and modes that interconnect cities, community districts, adult education facilities, and adjoining cities in neighboring counties, and meets the growing needs of residents, visitors, and businesses.
  - Objective A1.3: Maintain an adequate LOS for County roadways and ensure proper maintenance occurs along critical routes for emergency response vehicles.
    - C Policy A1.3.1: Maintain and manage County roadway systems to maintain a minimum Level of Service Standard "D" or better on all major roadways and arterial intersections.
    - C Policy A1.3.2: Require proposed developments that have the potential to generate 100 peak hour trips or more to conduct a traffic impact study that follows the most recent methodology outlined in Caltrans Guide to the Preparation of Traffic Impact Studies.
    - C Policy A1.3.5: Require new development to pay its fair share of costs for street and traffic improvements based on traffic generated and its impact to traffic levels of service.
- Goal C1: Integrate through the County's regional transportation system, an efficient and coordinated goods and people moving network of highways, railroads, public transit, and non-motorized options that reduce overall fuel consumption and associated air emissions.

- C Policy C1.3.3: Encourage and support the enhancement and marketing of transit and vanpool services as a viable transportation alternative and transportation control measure to improve air quality.

The County establishes the following Level of Service threshold volumes:

Table 3-36. Level of Service Thresholds

Roadway Type (Associated Facilities)	Level of Service by Average Daily Trips				
	A	B	C	D	E
4-Lane Freeway (SR 198)	23,800	39,600	55,200	67,100	74,600
2-Lane Facility (SR 43, Third Street, Hanford-Armona)	----	4,200	13,800	16,400	16,900

The City of Hanford maintains traffic counts for street segments within their Sphere of Influence[58]. Nearby street segments, and their traffic counts, are as follows (daily traffic, both directions):

- Third Street, east of 10th Avenue – 2,807 vehicles
- State Route 198, east of 10th and west of State Route 43 – 27,000 vehicles
- State Route 43, south of State Route 198 – 7,400 vehicles
- Hanford-Armona Road, west of 9 1/8 Avenue – 192 vehicles

3.18.2 Impact Assessment

a) Would the project conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than Significant Impact. The Project proposes to construct a new access point from Hanford-Armona Road to serve the Project. Construction traffic associated with the Project excavation of soil, grading, site preparation, and construction of the new facilities would be temporary. Operational traffic will consist of employee trips, truck trips and as-needed maintenance trips.

A Trip Generation memo prepared (**Appendix E**) indicated the Project would generate an additional 614 average daily trips, with 84 and 81 trips occurring the peak AM and PM times, respectively. General Plan Circulation Element Policy A1.3.2 states that projects that generate 100 or more peak hour trips to conduct a Traffic Impact Study, however the Project generates less than this amount. The following intersections were requested by the County to be analyzed and the Project's impacts to those intersections are described below (in AM/PM format):

- 9th Avenue at Hanford-Armona Road
  - No Project: LOS A/A
  - With Project: LOS A/A
- 9th Avenue at State Route 198
  - No Project: LOS D/C
  - With Project: LOS D/C
- 9th Avenue at Third Street
  - No Project: LOS B/A
  - With Project: LOS B/A
- State Route 43 at Hanford-Armona Road
  - No Project: LOS C/C
  - With Project: LOS C/C

[58] City of Hanford. Traffic Counts Volume Summary. 2019. Website: https://www.ci.hanford.ca.us/document_center/Public%20Works/Engineering/Volume%20Summary%202019.pdf. Accessed March 2021.

Based on trip generation and a Level of Service analysis, the Project would not have a significant adverse effect to existing intersections in the area. Given the traffic counts and level of service thresholds described above, the addition of Project trips would not result in a worse Level of Service volume. Furthermore, Public Resources Code (PRC) Section 21099(b)(2) states that automobile delay, described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment.

There are no pedestrian, transit, or bicycle facilities in the vicinity of the area. The Project will be conditioned to dedicate and construct all necessary right-of-way improvements that are reasonably related and roughly proportional to the development proposed, including those depicted in the Kings County General Plan Circulation Element, the 2019 Kings County Regional Active Transportation Plan, and the 2011 Kings County Regional Bicycle Plan. Therefore, the Project would not conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

The Project will be required to pay to the City of Hanford development impact fees for its fair share of transportation-related impacts to the transportation network it maintains prior to issuance of building permits that will generate vehicular trips. Impacts will be less than significant.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)?

Less than Significant Impact. The Project is anticipated to require 190 additional employees. The Project site is located in Transportation Analysis Zone (TAZ) 2611 of the California Statewide Travel Demand Model, maintained by Caltrans. TAZ 2611 has a home-based work vehicle miles traveled per employee of 12.33, whereas the countywide average is 12.20. The Office of Planning & Research recommends, but does not require, that a 15 percent reduction in vehicle miles traveled from the regional average would result in a less than significant impact. The County has not formally adopted a threshold of significance. As the Project site already employs over 100 individuals, it is already subject to the SJVAPCD Rule 9410, Employer Based Trip Reduction, which requires large employers, in incorporated cities of 10,000 people or more, or in unincorporated areas where 50% of their workforce works more than 2,040 hours, the Project Proponent is required by the Rule to select and implement a cafeteria menu of measures to reduce employee vehicle miles traveled. Each measure is assigned an amount of points, based on its air quality-reducing potential, and employers are required to implement an amount of measures based on their employee count. These air quality measures have a direct relationship to the reduction of VMT. These measures that the Project Proponent can select from, and described in their entirety, as follows:

- Marketing Strategies
    - Healthy Air Living Partner
    - Employer rideshare event
    - Employer rideshare and alternative transportation meetings
    - Employer rideshare and alternative transportation focus group(s)
    - Onsite transit information center
    - Rideshare and alternative transportation bulletin boards
    - Attendance at a marketing class/focus group
    - Employer rideshare newsletter
    - "Best Workplaces for Commuters" Recognition
    - Rideshare flyer
    - CEO communication
    - Employer-adopted policy statement supporting employee ridesharing and alternative transportation
    - Rideshare orientation for new employees
    - Register with a local rideshare agency
    - Other measures approved by the District
- Program Support Strategies

- Internal Guaranteed Ride Home Service
  - For Production Workers
  - For staff who are not Production Workers (i.e., office staff)
- Internal ride matching
- Personalized commute assistance
- Ride match bulletin board
- External employee ride matching services
- External Guaranteed Ride Home Service
- Other measures approved by the District

- Transportation, Alternative Schedules, and Incentives Strategy
  - Onsite food service, or within ¼ mile of worksite
  - Onsite child care, or within ¼ mile of worksite
  - Showers and/or Lockers onsite
  - Onsite break room and kitchenette
  - Electric vehicle recharging
  - Onsite bicycle repair
  - Onsite ATM
  - Onsite vending machines
  - Bicycle racks
  - Health facilities, or within ¼ mile of worksite
  - Employer-provided bicycles
  - Fitness area and/or classes, or within ¼ mile of worksite
  - Lunch delivery
  - Check cashing
  - Direct deposit
  - Break and/or lunch activities
  - Dry cleaning
  - Postal service, or post office within ¼ mile of worksite
  - Onsite picnic tables
  - Maps to local conveniences
  - Other measures approved by the District

This air quality regulatory requirement provides a co-benefit by ensuring vehicle miles traveled are reduced. Implementation of Rule 9410 on average reduces impacts by 18%[59].Therefore, impacts will be less than significant.

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

Less than Significant Impact. The Project is required by Kings County Public Works Standards to provide the necessary turning radii for fire apparatus and other large equipment expected to traverse the site. Thus, there will be a less than significant impact.

d) Would the project result in inadequate emergency access?

Less than Significant Impact. The Project is required to comply with all Public Works Standards and California Fire Code standards regarding access drive widths and access spacing standards with regards to access points onto the subject property. Therefore, there will be a less than significant impact.

[59] San Joaquin Valley Air Pollution Control District. *Memo to Air District Board: Adopt Proposed Rule 9410 (Employer Based Trip Reduction)*. Website: http://www.valleyair.org/programs/rule9410tripreduction/Documents/signed%20GB%20memo.pdf. Accessed April 2021.

3.19 Tribal Cultural Resources

Table 3-37. Tribal Cultural Resources Impacts

Tribal Cultural Resources Impacts				
Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public 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.	☐	☒	☐	☐

3.19.1 Environmental Setting and Baseline Conditions

The Project lies within the homeland of the Southern Valley Yokuts. At the time of first contact with the Spanish missionaries, the Yokuts people, which also includes northern valley and foothill groups, collectively inhabited the San Joaquin Valley as well as the eastern foothills of the Sierra Nevada from the Fresno River southward to the Kern River.

3.19.2 Regulatory Setting

3.19.2.1 Federal

There are no federal regulations, plans, programs, and guidelines associated with tribal cultural resources that are applicable to the Project.

3.19.2.2 State

California Environmental Quality Act and the CEQA Guidelines (PRC 21000, **et seq.*****; CCR Title 14, Chapter 3, Section 15000.*** **et seq.*****)***

CEQA is applicable to discretionary actions by State or local lead agencies. Under CEQA, lead agencies must analyze impacts to cultural resources, generally and Tribal Cultural Resources, specifically. This section discusses impacts to cultural resources directly related to Native American Tribes of the Project area. The distinction for Tribal Cultural Resources is that they are described as 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.

3.19.2.3 Local

No local policies regarding tribal cultural resources apply to the Project.

3.19.3 Impact Assessment

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

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

a-ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public 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.

Less than Significant Impacts with Mitigation Incorporated. A record search of site files and maps was conducted in August of 2020 at the Southern San Joaquin Valley Information Center, California State University, Bakersfield. These investigations determined that there have been no previous cultural resource studies conducted with the project area. There have been six studies conducted within the one half-mile radius. There is one recorded historic resource known to exist within the project area, P-16-000086, Lakeside Ditch. The records search determined that there are no recorded archaeological resources within the Project area.

Kings County, as a public lead agency has received a formal request for notification from the Santa Rosa Rancheria Tachi Yokut Tribe, pursuant to AB 52. The County complied and no response was received.

Although the proposed project would not result in potentially significant impacts to known tribal cultural resources, there is always the possibility that previously undiscovered tribal cultural resources are present within the project site. Ground disturbing activities such as trenching and grading could damage or destroy previously undiscovered tribal cultural resources, which would result in a potentially significant impact. In the event cultural materials or human remains are unearthed during excavation or construction Mitigation Measures are recommended which would reduce the impact to a level of less than significant.

Mitigation Measures

See **CUL-1** through **CUL-2**, described above in **Section 3.6**.

3.20 Utilities and Service Systems

Table 3-38. Utilities and Service Systems Impacts

Utilities and Service Systems Impacts					
Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d)	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

3.20.1 Environmental Setting and Baseline Conditions

3.20.1.1 Water Supply

The Project site is currently served by an existing groundwater well used for existing processes. The 80-acre portion of the Project site currently occupied by farmland uses, specifically alfalfa, is also served by groundwater. According to the 2017 Census of Agriculture, alfalfa in California uses an average of 3.9 acre-feet per acre[60], or a total of 312 acre-feet annually on the Project site, specifically.

3.20.1.2 Wastewater Collection and Treatment

Existing wastewater is produced from various stages of plant production and collected in nine individual sumps which each drain to one central aerated collection sump (central sump). Wastewater is produced from the live cattle wash, kill floor, tripe processing, carcass washes, condensers, boiler room, boning room, storm drains, truck washes, plant sanitation, and other processing activities. Blood, hides, and other solid waste are collected separately and shipped off site for processing, reuse, or disposal.

Wastewater collects in a central sump, where water levels are regulated by a float level which activates a pump, and the wastewater is pumped through two incline hydrostatic wedge wire screens to remove solid material.

[60] United States Department of Agriculture. 2017 Census of Agriculture. Table 36: Field Water Distribution for Selected Crops Harvested in the Open and Irrigated Pastureland: 2018 and 2013. Website: https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/Farm_and_Ranch_Irrigation_Survey/fris.pdf. Accessed February 2021.

The wastewater then moves into the two Dissolved Air Flotation (DAF) units and into two concrete lined settling ponds where solids are further separated from the wastewater. The settling ponds have a combined storage capacity of approximately 198,200 gallons. Flow meter measurements and influent samples are taken by a 24-hour composite sampler as water enters the settling ponds.

Two large double synthetic lined storage ponds were constructed in 2013 for the purpose of storage and equalization of wastewater prior to reuse for agricultural irrigation water. After settling, the wastewater is fed to Pond 1 and 2 for storage. Combined storage of these two ponds totals 25,725,140 gallons. Effluent is pumped out of Pond 2 and beneficially reused for irrigation of approximately 1,500 acres of forage crops (alfalfa, corn, sorghum) known as the land application area (LAA). Facility wastewater flow is expected to average less than 0.962 million gallons per day. Effluent is applied the LAA at agronomic rates as a source of irrigation water and crop nutrients.

Wastewater reuse is regulated by the Central Valley Regional Water Quality Control Board via Waste Discharge Requirements (WDR) and Monitoring and Reporting Program (MRP) R5-2008-0017. Comprehensive testing (flow, water quality, observations, etc.) is completed on pond influent, pond effluent, groundwater monitoring wells, facility source water wells, the land application area, and more. Quarterly reports on all monitoring activities are submitted to the Regional Board.

The addition of rendering processes and the resulting wastewater generated is being addressed with a new Report of Waste Discharge to be submitted to the Regional Board and will result in a new WDR and MRP. The Report of Waste Discharge is in the review process. This project is not expected to require an increase in any pretreatment processes or land application area.

3.20.1.3 Solid Waste & Landfills

The Kings Waste and Recycling Authority (KWRA) was formed in September 1989 by agreement between the cities of Lemoore, Hanford, Corcoran, and the County to provide a regional approach to all waste management activities in the County. Solid waste is first directed to the KWRA facility and then transferred to Chemical Waste Management, Inc.'s Kettleman Hills Facility, which operates both municipal waste and hazardous waste landfills at their site west of Interstate 5 along SR 41.

Non-recyclable materials are transferred to the B-17 Landfill Unit at the Chemical Waste Management, Inc. (CWMI) Kettleman Hills Facility located on SR-41 in Kettleman Hills. The B-17 Landfill Unit has a maximum disposal rate of 2,000 tons per day, and currently accepts an average of 1,350 tons per day.

The Waste Management Kettleman Hills B-17 Landfill 2016 Airspace Report lists a remaining capacity of approximately 15,843,300 cubic yards for B-17[61].

3.20.2 Impact Assessment

a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact. The existing facility currently has existing connections to electric power, natural gas, and telecommunication facilities. The Project will not require the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas or telecommunications facilities. All the necessary utilities are either existing or previously planned for incrementally and the construction of such will not have a significant impact on the environment. Water utilities will be extended from the existing on-site well. Wastewater will be continued to be treated on-site. The proposed

[61] CalRecycle. Waste Management Kettleman Hills B-17 Landfill 2016 Airspace Report. Website: https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/912. Accessed March 2021.

drainage retention pond is sized for full development of the site and will not need to be enlarged. All of these features are a part of this Project and thus are analyzed throughout this Initial Study.

The project includes installation of an electric power substation facility consisting of substation transformers, switches, metering and a power control building on the site adjacent to Hanford Armona Road. The facility will be fed from Utility power transmission lines. The location of this connection and transmission line extension will be per the Utility. The power substation facility is required to provide adequate electrical power supply to the facility for full build out and falls within the Project area of potential effect. No utility-specific significant impacts were identified. Therefore, the impact would be less than significant.

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

No Impact. The existing site has two (2) operational wells that will serve the Project, and the Project will convert an existing approximately 80-acre of irrigated farmland that currently uses approximately 312 acre-feet per year to an industrial use that will consume approximately 126,000 gallons per day (or approximately 141.23 acre-feet per year) of groundwater. Therefore, net water consumption would decrease by approximately 170 acre-feet per year. For every year the Project is in operation, an approximately 170 acre-feet per year, or 120% of Project consumption, could be "banked", and thus there will have a sufficient water supply to serve the Project and reasonably foreseeable future development. Therefore, there is no impact.

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

No Impact. Wastewater is proposed to be processed on-site, and the project would not require the service of a wastewater treatment provider. The wastewater treatment system will be designed by a Professional Engineer in accordance with all federal, state, and local regulations. There will be no impact.

d) Would the project 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?

Less than Significant Impact. Project construction will generate minimal amounts of solid waste. Any construction debris that is not recycled will be received at the KWRA. The Project is anticipated to generate approximately 1,250 pounds of additional solid waste on a daily basis, however post-rendering material will be utilized in subsequent processes to create value-added products. Impacts will be less than significant.

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact. Implementation of the Project will generate approximately 1,250 pounds of additional solid waste daily. Any rendering material sent off-site will now be processed on-site, resulting in a no net increase for off-site disposal. Post-rendering material is anticipated to be further processed on-site in Phase II, further reducing solid waste generation. Lastly, the Project would continue to comply with any federal, State, and local regulations regarding solid waste. Impacts will be less than significant.

3.21 Wildfire

Table 3-39. Wildfire Impacts

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

3.21.1 Environmental Setting and Baseline Conditions

The Project is in an unzoned (not in a Moderate, High, or Very High Fire Hazard Severity Zone) Local Responsibility Area, adjacent to a Moderate Fire Hazard Severity Zone[62], and is approximately 36 miles away from a zoned State Responsibility Area. The nearest Very High Fire Hazard Severity Zone is approximately 42 miles southeast.[63]

3.21.2 Impact Assessment

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

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

No Impact. The Project is not located in or near a Very High Fire Hazard Severity Zone or in a State Responsibility Area, and thus there is no impact.

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

No Impact. The Project is not located in or near a Very High Fire Hazard Severity Zone or in a State Responsibility Area, and thus there is no impact.

[62] CALFIRE. Draft Fire Hazard Severity Zones in LRA: Kings County. https://osfm.fire.ca.gov/media/6689/fhszl06_1_map16.pdf accessed March 2021.
[63] CALFIRE. Fire Hazard Severity Zones in SRA: Kings County. https://osfm.fire.ca.gov/media/6690/fhszs_map16.pdf accessed March 2021.

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?

No Impact. The Project is not located in or near a Very High Fire Hazard Severity Zone or in a State Responsibility Area, and thus there is no impact.

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

No Impact. The Project is not located in or near a Very High Fire Hazard Severity Zone or in a State Responsibility Area, and thus there is no impact.

3.22 CEQA Mandatory Findings of Significance

Table 3-40. Mandatory Findings of Significance Impacts

Mandatory Findings of Significance Impacts					
Does the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

3.22.1 Environmental Settings and Baseline Conditions

The Project site currently consists of farmland, adjacent to rural residential, and the existing Central Valley Meat Facility that is proposed to be expanded as part of the Project.

3.22.2 Impact Assessment

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

Less than Significant with Mitigation Incorporated. The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the Project, with incorporation of mitigation measures, will have a less than significant effect on the environment. The potential for impacts to agriculture, air quality, biological resources, cultural resources, geology and soils, greenhouse gases, hazards and hazardous materials, hydrology, noise, and tribal cultural resources from the implementation of the Project will be less than significant with the incorporation of the mitigation measures discussed in **Chapter 4**. Accordingly, the Project will involve no potential for significant impacts through the degradation of the quality of the environment, the reduction in the habitat or population of fish or wildlife, including endangered plants or animals, the elimination of a plant or animal community or example of a major period of California history or prehistory.

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

Less than Significant Impact. CEQA Guidelines Section 15064(h) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of cumulative effects of a project must be conducted in connection with the effects of past projects, other current projects, and probable future projects. The Project will include the construction of an expanded meat processing facility and rendering plant to vertically integrate its processes.

The Project would not result in significant direct or indirect population growth.. Therefore, implementation of the Project would not result in significant cumulative impacts and all potential impacts would be reduced to less than significant through the implementation of mitigation measures and basic regulatory requirements incorporated into future Project design.

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

Less than Significant with Mitigation Incorporated. The Project will not result in substantial adverse effects on human beings, either directly or indirectly. With implementation of the mitigation measures discussed in **Chapter 4** and the implementation of Best Management Practices and general safety protocols during construction and maintenance of the Project, impacts will be less than significant.

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3.23 Determination: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

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

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

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

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

Signature ______________________ Date ______________________

Printed Name/Position ______________________

3.23 Determination: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

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

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

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

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

Chuck King
Signature

May 17, 2021
Date

Chuck Kinney – Deputy Director Planning
Printed Name/Position

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Chapter 4 Mitigation Monitoring and Reporting Program

This Mitigation Monitoring and Reporting Program (MMRP) has been formulated based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) for the Central Valley Meat Company Facility Project (Project) in the County of Kings. The MMRP lists mitigation measures recommended in the IS/MND for the Project and identifies monitoring and reporting requirements.

Table 4-1 presents the mitigation measures identified for the proposed Project. Each mitigation measure is numbered with a symbol indicating the topical section to which it pertains, a hyphen, and the impact number. For example, AIR-2 would be the second mitigation measure identified in the Air Quality analysis of the IS/MND.

The first column of **Table 4-1** identifies the mitigation measure. The second column, entitled "When Monitoring is to Occur," identifies the time the mitigation measure should be initiated. The third column, "Frequency of Monitoring," identifies the frequency of the monitoring of the mitigation measure. The fourth column, "Agency Responsible for Monitoring," names the party ultimately responsible for ensuring that the mitigation measure is implemented. The last two columns will be used respectively by the County to verify the method utilized to confirm or implement compliance with mitigation measures and identify the individual(s) responsible to confirm mitigation measures have been complied with and monitored.

Table 4-1. Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
Agricultural Resources					
AG-1 (General Plan Policy B1.2.2)					
Prior to issuance of building permits, the Project Proponent shall mitigate for the loss of Farmland of Statewide Importance at a ratio of 1:1 with restrictive covenants, which are effective for the life of this project. The agricultural land preserved under the restrictive covenants shall be of equal or greater quality as defined by the CDC's FMMP (i.e., if Farmland of Statewide Importance is converted then the agricultural land preserved must not be in a classification indicating a lower quality than Farmland of Statewide Importance).	Prior to issuance of building permits	N/A	County of Kings		
Air Quality					
AQ-1 (Dust Control Plan)					
Pursuant to SJVAPCD Regulation VIII, Rule 8021 Section 6.3, the Project shall submit a Dust Control Plan (DCP) to the Air Pollution Control Officer (APCO) prior to the start of construction activities at the site. The DCP shall describe all fugitive dust control measures to be implemented before, during, and after any dust-generating activity. The DCP shall contain all the information described in Section 6.3.6 of the rule and identify applicable dust control measures contained in Rules 8031, 8041, 8051, 8061, and 8071. Construction activities shall not commence until the APCO has approved or conditionally approved the DCP for implementation. The Applicant shall provide written notification to the APCO via fax, e-mail, or mail within 10 days prior to commencement of earthmoving and other construction activities.	Prior to start of construction activities				
AQ-2 (Particulate Matter)					
Prior to issuance of an Authority to Construct/Permit to Operate, the Project will mitigate PM10 and PM2.5 through consultation with the SJVAPCD to refine the modeling analyses or surrender ERCs or a VERA.	Prior to issuance of an Authority to Construct/Permit to Operate				
AQ-3 (Clean Construction Fleet)					
During construction, all earthmoving equipment used during site preparation and grading activities will be part of a "Clean Fleet" equipped with Tier 4 diesel engines that substantially reduce DPM emissions compared to older fleet equipment with lower-Tier engines (i.e., Tiers 1, 2, or 3).	During construction activities				

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
Biological Resources					
NEST-1a (Avoidance)					
The Project's construction activities shall occur, if feasible, between September 16 and January 31 (outside of nesting bird season) in an effort to avoid impacts to nesting birds.	Prior to commencement or recommencement of construction activities	Once, prior to the start of construction	County of Kings		
NEST-1b (Pre-construction Surveys)					
If activities must occur within nesting bird season (February 1 to September 15), a qualified biologist shall conduct pre-construction surveys for Swainson's hawk nests onsite and within a 0.5-mile radius. These surveys will be conducted in accordance with the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee, 2000) or current guidance. In addition to the focused Swainson's hawk surveys, a qualified biologist shall conduct a pre-construction survey for all other nesting birds within 14 days prior to the start of construction. The survey shall include the proposed work area and surrounding lands within 50 feet. All raptor nests will be considered "active" upon the nest-building stage.	Prior to the start of construction	Once, prior to the start of construction	County of Kings		
NEST-1c (Establish Buffers)					
On discovery of any active nests near work areas, the biologist shall determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. Specifically, a 0.5-mile disturbance-free buffer shall be implemented around active Swainson's hawk nests. Construction buffers shall be identified with flagging, fencing, or other easily visible means, and shall be maintained until the biologist has determined that the nestlings have fledged and are no longer dependent on the nest.	Prior to the start of construction and during construction	Once, prior to the start of construction or as determined by biologist	County of Kings		
WEAP-1d (WEAP Training)					
On discovery of any special status bird species, all personnel associated with Project construction shall attend mandatory Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, prior to initiating construction activities (including staging and mobilization). The specifics of this program shall include identification of the special status species and suitable habitats, a description of the regulatory status and general ecological characteristics of the species, and review of the limits of	During construction activities	Ongoing during construction	County of Kings		

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information, along with photographs or illustrations of the special status species, shall also be prepared for distribution to all contractors, their employees, and all other personnel involved with construction of the Project. All employees shall sign a form documenting that they have attended WEAP training and understand the information presented to them.					
Cultural and Tribal Cultural Resources					
CUL-1: Protection of Cultural Resources					
In order to avoid the potential for impacts to historic and prehistoric archaeological resources, the following measures shall be implemented, as necessary, in conjunction with the construction of each phase of the Project: a. Cultural Resources Alert on Project Plans. The project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources. b. Pre-Construction Briefing. The project proponent shall retain Santa Rosa Rancheria Cultural Staff to provide a pre-construction Cultural Sensitivity Training to construction staff regarding the discovery of cultural resources and the potential for discovery during ground disturbing activities, which will include information on potential cultural material finds and on the procedures to be enacted if resources are found. c. Stop Work Near any Discovered Cultural Resources. The project proponent shall retain a professional archaeologist on an "on-call" basis during ground disturbing construction for the project to review, identify and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified cultural resources be discovered during construction of the project, the project proponent shall cease work within 100 feet of the resources, and Kings County Community Development Agency (CDA) shall be notified immediately. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under CEQA. d. Mitigation for Discovered Cultural Resources. If the professional archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the project proponent and other appropriate parties of the evaluation and recommended mitigation measures to mitigate the impact to a less-than-significant level. Mitigation measures	During construction activities and in the event potential archaeological artifacts or resources are uncovered	Daily during construction activities	CVM with assistance of a qualified cultural subconsultant		

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
may include avoidance, preservation in-place, recordation, additional archaeological testing and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the Kings County CDA. The archaeologist shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System, Southern San Joaquin Valley Information Center. The resources shall be photo documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation Department. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken. e. Native American Monitoring. Prior to any ground disturbance, the project proponent shall offer the Santa Rosa Rancheria Tachi Yokut Tribe the opportunity to provide a Native American Monitor during ground disturbing activities during construction. Tribal participation would be dependent upon the availability and interest of the Tribe. f. Disposition of Cultural Resources. Upon coordination with the Kings County Community Development Agency, any pre-historic archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded applicable cultural resources laws and guidelines.					
CUL-2: Protection of Buried Human Remains					
In order to avoid the potential for impacts to buried human remains, the following measures shall be implemented, as necessary, in conjunction with the construction of each phase of the Project: a. Pursuant to State Health and Safety Code Section 7050.5(e) and Public Resources Code Section 5097.98, if human bone or bone of unknown origin is found at any time during on- or off-site construction, all work shall stop in the vicinity of the find and the Kings County Coroner shall be notified immediately. If the remains are determined to be Native American, the Coroner shall notify the California State Native American Heritage Commission (NAHC), who shall identify the person believed to be the Most Likely Descendant (MLD). The project proponent and MLD, with the assistance of the archaeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon treatment shall address the appropriate	During construction activities and in the event human remains are uncovered	Daily during construction activities	CVM with assistance of a qualified cultural subconsultant		

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. California Public Resources Code allows 48 hours for the MLD to make their wishes known to the landowner after being granted access to the site. If the MLD and the other parties do not agree on the reburial method, the project will follow Public Resources Code Section 5097.98(e) which states that ". . . the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance." b. Any findings shall be submitted by the archaeologist in a professional report submitted to the project applicant, the MLD, the Kings County Community Development Agency, and the California Historical Resources Information System, Southern San Joaquin Valley Information Center.					
Geology and Soils					
GEO-1 (Paleontological Resources)					
During any ground disturbance activities, if paleontological resources are encountered, all work within 25 feet of the find shall halt until a qualified paleontologist as defined by the Society of Vertebrate Paleontology Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010), can evaluate the find and make recommendations regarding treatment. Paleontological resource materials may include resources such as fossils, plant impressions, or animal tracks preserved in rock. The qualified paleontologist shall contact the Natural History Museum of Los Angeles County or other appropriate facility regarding any discoveries of paleontological resources. If the qualified paleontologist determines that the discovery represents a potentially significant paleontological resource, additional investigations and fossil recovery may be required to mitigate adverse impacts from project implementation. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Construction in that area shall not resume until the resource appropriate measures are recommended or the materials are determined to be less than significant. If the resource is significant and fossil recovery is the identified form of treatment, then the fossil shall be deposited in an accredited and					

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
permanent scientific institution. Copies of all correspondence and reports shall be submitted to the Lead Agency.					
Greenhouse Gases					
GHG-1 (Cap-and-Trade)					
If the facility's stationary source GHG emissions exceed 25,000 MTCO2e in any given year, CVM will enroll its facility in the CARB Cap-and-Trade Program and shall cause its annual net emissions to not exceed 25,000 MT CO2e for that year.	During facility operations	Continuously			
GHG-2 (Trip Minimization and Efficiency):					
The Project shall comply with San Joaquin Valley Air Pollution Control District Rule 9410. All facility-owned truck fleets shall be Near-Zero Emissions or better.	During facility operations	Continuously			
Hazards and Hazardous Materials					
HAZ-1 (Protection from Hazardous Materials)					
In order to protect the public from potential release of hazardous materials, the project applicant shall prepare and implement a new Hazardous Materials Business Plan (HMBP) in accordance with the requirements of the Kings County Public Health Department's Environmental Health Services Division and the Hazardous Materials Release Response Plan and Inventory Act of 1985. Under this state law, the applicant is required to prepare an HMBP to be submitted to the Kings County Public Health Department, Environmental Health Services Division, which is the Certified Unified Program Agency (CUPA) for Kings County. The HMBP shall include a hazardous material inventory, emergency response procedures, training program information, and basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of at the proposed project site, and procedures for handling and disposing of unanticipated hazardous materials encountered during construction. The HMBP shall include an inventory of the hazardous waste generated on-site, and would specify procedures for proper disposal. As required, hazardous waste would be transported by a licensed hauler and disposed of at a licensed facility. According to the HMBP reporting requirements, workers must be trained to respond to releases of hazardous materials in accordance with state and federal laws and regulations governing hazardous materials and hazardous waste (e.g., HAZWOPER training required by OSHA). Any accidental release of small quantities of hazardous materials shall be promptly contained and abated in accordance with applicable regulatory requirements and reported to the Environmental	During facility operations	Continuously			

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
Health Services Division. As the CUPA for Kings County, the Environmental Health Services Division of the County Public Health Department is responsible for implementation and enforcement of HMBPs. Implementation of the HMBP for the project would ensure that minor spills or releases of hazardous materials would not pose a significant risk to the public or the environment.					
Hydrology					
HYD-1 (Stormwater Quality Protection)					
Prior to construction grading the applicant shall be required to file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) to comply with the General Permit and prepare a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall be prepared by a Qualified SWPPP Developer (QSD) and shall detail the Best Management Practices (BMPs) to control pollutants that shall be implemented and complied with during the construction phase of the project. Construction contracts for the project shall include the requirement to implement the BMPs in accordance with the SWPPP. Example BMPs may include the following: • Existing vegetation will be preserved to the maximum extent practicable. Clearing and grubbing will only be performed in areas where new foundations, utilities, or internal access drives are planned. • All soil compaction and subgrade preparation specifications will be performed in accordance with the site-specific recommendations of a California-licensed Geotechnical Engineer, and will be based on his or her field exploration prior to construction. • Disturbed areas will be seeded upon completion of construction in order to protect exposed soils from erosion by wind and water. Upon completion of an earth disturbance activity, disturbed areas will be covered with a minimum uniform 70 percent perennial vegetative cover, with a density capable of resisting accelerated erosion and sedimentation, or be returned to pre-construction conditions. • A tackifier with a non-seeded mix, or the establishment of a visible crust through control means, will be used to temporarily stabilize disturbed areas until soil can be prepared for revegetation. • A non-combustible surface will surround the project site to provide a stabilized surface for post-construction access. Nonvegetative stabilization methods, such as gravel mulch, will be used to provide a stabilized, 12-foot-wide access corridor.					

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
• A stabilized construction entrance/exit will be maintained at the construction site entrance/exit to reduce tracking of sediment by construction traffic. The entrance/exit will be constructed consistent with the detail included with the Erosion and Sediment Control Drawings (ESCDs). • The construction access route into the site will be maintained to prevent erosion and to control tracking of mud and soil material onto adjacent roads. The ESCDs will specify the construction access location. A regular maintenance program will replace sediment-clogged stabilization material with new stabilization material as required. • Excess mud will be removed from construction vehicle wheels prior to exiting the site to prevent excessive tracking of mud onto the roadway. • Road sweeping and vacuuming will occur as necessary during construction to keep street surfaces clear of soil and debris. Washing sediment onto streets will not occur. • During windy conditions (forecast or actual wind conditions of approximately 25 mph or greater), or during wind speeds prescribed in the Dust Control Plan, whichever is less, dust control will be applied to disturbed areas, including construction access driveways, to adequately control wind erosion. Water will be applied to disturbed soil areas of the project site using water trucks as required by weather conditions to control dust. Water application rates will be minimized as necessary to prevent runoff and ponding. • Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding, or alternate methods. • Maintain sufficient quantities of temporary sediment control materials on-site throughout the duration of the project.					
Noise					
NOI-1 (Noise Attenuation)					
To reduce potential construction noise impacts, the following multi-part mitigation measure shall be implemented for the proposed project: • The construction contractor shall locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site. • The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the					

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance
distance between construction related noise sources and noise-sensitive receptors nearest the project site during all project construction. • The construction contractor shall designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. The construction contractor shall conspicuously post a telephone number for the disturbance coordinator at the construction site. • Noise producing construction activities shall be restricted to the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday. No construction shall be permitted on Sundays and holidays.					
NOI-2 (Vibration-Based Repairs)					
Prior to commencement of construction of the Phase 1 Truck Parking Area and Phase 2 Processing Expansion, the Project Architect or Engineer shall cause a visual inventory consisting of photos and/or video of the on-site residential building nearest to the building proposed to be constructed. After construction is complete, a second visual inventory shall be taken, and all repairs to the residential building shall be made to bring the building back to its pre-construction condition.					

Appendix A

Air Quality and Greenhouse Gas Emissions Evaluation Report

Air Quality and Greenhouse Gas Technical Report

Central Valley Meat Company

10431 8 3/4 Avenue
Hanford, CA 93230

April 2021

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Air Quality and Greenhouse Gas Technical Report

Prepared for:

Central Valley Meat Company
10431 8 3/4 Avenue
Hanford, CA 93230

April 2021

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List of Acronyms, Abbreviations, and Symbols

AAQA	Ambient Air Quality Analysis
AB	Assembly Bill
ADMRT	Air Dispersion Modeling and Risk Tool
AP-42	EPA Compilation of Air Pollutant Emission Factors
APCO	Air Pollution Control Officer
ARM2	Ambient Ratio Method 2
ATC	Authority to Construct
BAAQMD	Bay Area Air Quality Management District
BAU	Business as Usual
bhp	Brake Horsepower
BMP	Best Management Practice
BPIPPRM	Building Profile Input Program for PRIME
BPS	Best Performance Standards
CA	California
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standard
CalEEMod	California Emissions Estimator Model®
CAP	[San Joaquin Valley] Clean Air Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAP	Climate Change Action Plan
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cfm	Cubic Feet per Minute
CH_4	Methane
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CREED	Citizens for Responsible Equitable Development
CVM	Central Valley Meat Company
DCP	Dust Control Plan
DPM	Diesel Particulate Matter
e.g.	Exempli gratia, a Latin phrase meaning "for example"
EF	Emission Factor
EIR	Environmental Impact Report
EO	Executive Order
ERC	Emission Reduction Credit

et al.	Et alia, a Latin phrase meaning "and the others"
ft^2	Square Foot
GAMAQI	[SJVAPCD] Guidance for Assessing and Mitigating Air Quality Impacts
GC/MS	Gas Chromatography/Mass Spectrometry
GHG	Greenhouse Gas
GLC	Ground-Level Concentration
g/s	Gram per Second
GWP	Global Warming Potential
H_2S	Hydrogen Sulfide
H&SC	[California] Health & Safety Code
HARP2	Hotspots Analysis and Reporting Program, Version 2
HI	Hazard Index
HIA	Acute Hazard Index
HIC	Chronic Hazard Index
hp	Horsepower
hr	Hour
HRA	Health Risk Assessment
HRBC	Harris Ranch Beef Company
HSR	High-Speed Rail
i.e.	Id est, a Latin phrase meaning "that is"
IPCC	International Panel on Climate Change
KCAG	Kings County Association of Governments
km	Kilometer
lb	Pound
LCFS	Low Carbon Fuel Standard
LNG	Liquified Natural Gas
m	Meter
m^2	Square Meter
m^3	Cubic Meter
MBM	Meat and Bone Meal
MEIR	Maximally Exposed Individual Resident
MEIW	Maximally Exposed Individual Worker
mg	Milligram
MMBtu	Million British Thermal Units
mmscf	Million Standard Cubic Feet
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MT	Metric Ton
NAAQS	National Ambient Air Quality Standard
NG	Natural Gas
NH_3	Ammonia

N_2O	Nitrous Oxide
NO_x	Oxides of Nitrogen
NO_2	Nitrogen Dioxide
NSR	New Source Review
NZE	Near-Zero Emission
O_3	Ozone
OEHHA	[California] Office of Environmental Health Hazard Assessment
PAH	Polycyclic Aromatic Hydrocarbon
Pb	Lead
PG&E	Pacific Gas and Electric Company
PM	Particulate Matter
$PM_{2.5}$	Fine Particulate Matter (Less Than 2.5 Microns in Size)
PM_{10}	Respirable Particulate Matter (Less Than 10 Microns in Size)
PMI	Point of Maximum Impact
ppm	Parts per Million
PTE	Potential to Emit
PTO	Permit to Operate
PVMRM	Plume Volume Molar Ratio Method
REL	Reference Exposure Level
ROG	Reactive Organic Gas
RTO	Regenerative Thermal Oxidizer
RTP	Regional Transportation Plan
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCR	Selective Catalytic Reduction
SCS	Sustainable Communities Strategy
SIL	Significant Impact Level
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLAMS	State and Local Air Monitoring Station
SO_2	Sulfur Dioxide
SO_x	Oxides of Sulfur
SU/SD	Startup and Shutdown
TAC	Toxic Air Contaminant
TDS	Total Dissolved Solids
tpy	Tons per Year
TRU	Transportation Refrigeration Unit
U.S.	United States
U.S. EPA	United States Environmental Protection Agency
USGS	United States Geological Survey

UTM	Universal Transverse Mercator
VCAPCD	Ventura County Air Pollution Control District
VERA	Voluntary Emission Reduction Agreement
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
WAF	Worker Adjustment Factor
WGS84	World Geodetic System 1984
yr	Year
ZOI	Zone of Impact
°C	Degrees Centigrade
°F	Degrees Fahrenheit
µm	Micron
$\mu g/m^3$	Microgram per Cubic Meter
%	Percent
X/Q	Average Pollutant Concentration Normalized by Source Strength

Air Quality and Greenhouse Gas Technical Report

1.0 INTRODUCTION

Central Valley Meat Company (CVM) is proposing a long-term build-out of the existing CVM facility in Hanford, CA. The proposed Project will include a rendering facility, a pet food manufacturing facility, a non-tanning hide processing facility, a cooler and freezer distribution facility, expansion of the beef processing facility, and various ancillary buildings.

This Air Quality and Greenhouse Gas (GHG) Technical Report has been prepared by Yorke Engineering, LLC (Yorke) in support of the Mitigated Negative Declaration (MND) being prepared by Kings County Community Development Agency (the County), the California Environmental Quality Act (CEQA) lead agency.

This Technical Report analyzes the impacts on air quality from criteria pollutant, toxic air contaminant (TAC), and GHG emissions due to the proposed Project's construction and operations. This report outlines the Health Risk Assessment (HRA) modeling to determine the health impacts due to the TACs from the construction and operational phases and the Ambient Air Quality Analysis (AAQA) modeling for the operational activities to determine if the criteria pollutant emissions would cause or contribute significantly to a violation of a National Ambient Air Quality Standard (NAAQS) or California Ambient Air Quality Standard (CAAQS).

CEQA [Public Resources Code §21000 et seq. and Title 14 California Code of Regulations (CCR) §15000 et seq.] requires evaluation of the environmental impacts of proposed projects against the four Air Quality and two GHG significance criteria from the County CEQA guidance, which is based on Appendix G of the CEQA Guidelines. The proposed Project was evaluated against these criteria and determined to have a less than significant impact after mitigation due to Project emissions.

1.1 Project Description

The first phase of the proposed Project consists of the addition of a new rendering plant and ancillary buildings, followed by the additional building features outlined in Table 1-1.

Table 1-1: Proposed Project Building Features

Building Feature	Timing (year)	CEQA Phase	Building Area (ft^2)	Daily Employees	Daily Trucks	Daily On-Site Mules
Rendering Plant	1	1	45,728	20	80	35
Brine Evaporation Pond	1	1	123,150	–	–	–
WWTP	1	1	5,000	–	–	–
Pet Food Facility	3-4	1	15,000	20	2	1
Dry Storage Expansion	2	1	8,000	–	–	–
Cooler Expansion	4-5	1	4,687	3	–	–
Hide Building	3-4	1	28,080	25	2	2
Livestock Canopy	1	1	106,755	–	–	–

Building Feature	Timing (year)	CEQA Phase	Building Area (ft^2)	Daily Employees	Daily Trucks	Daily On-Site Mules
Guard Shack	1	1	468	–	–	–
Driveway from H-A Road	1	1	0	-	–	–
Drainage Retention Pond	1	1	0	–	–	–
Truck Wash Building	3	1	5,600	–	–	–
Truck Wash Ramp	1	1	4,950	–	–	–
Scale House	1	1	336	–	–	–
Auto Parking	1	1	110,057	–	–	–
Truck Parking	1	1	130,334	–	–	–
Freezer/Cooler Building	6	2	186,756	50	38	19
Processing Expansion	6	2	103,482	75	15	0

The new CVM Rendering facility is intended to service the critical needs of its two affiliated beef processing plants, CVM and Harris Ranch Beef Company (HRBC), which currently would account for approximately half of the design capacity, although the facility will be sized to also accept raw material from other regional beef suppliers up to approximately 7,000 head of cattle per day.

The proposed Rendering facility shall consist of an enclosed meat rendering facility and support facilities, such as a scale office, maintenance garage, employee welfare, and wastewater lagoons. The Rendering facility has submitted an application for an Authority to Construct (ATC) to the San Joaquin Valley Air Pollution Control District (SJVAPCD) for the installation of a meat rendering operation, a meat and bone meal (MBM) loadout operation, and four natural gas-fired boilers. Raw materials will be transported from the CVM meat processing facility via on-site diesel “mules” (non-road cart/trailer towing vehicles) and from the HRBC facility in Selma, CA, via facility-owned near-zero emission (NZE) trucks fueled with liquified natural gas (LNG) or compressed natural gas (CNG) with catalytic exhaust controls for minimizing emissions. Currently, most of the trucks with material needing rendering from Selma and Hanford travel to Los Angeles; these would now take the material to the new CVM Rendering facility in Hanford. This will result in an overall reduction in trucking mileage from the current CVM and HRBC rendering operations.

The Pet Food facility will make pet treats, such as chewy bones. The facility will process up to 100,000 pounds per day of raw materials supplied from the Rendering and Meat Processing facilities. The pet food dryers/ovens will run off the steam from the Rendering plant. Odors from the dryers will be controlled by a 5 million British thermal units per hour (MMBtu/hr) natural gas regenerative thermal oxidizer (RTO). Raw materials will be transported from the Meat Processing and Rendering facility via on-site mules and from the HRBC facility in Selma via NZE trucks.

The fleshing of the hides will occur in the Hide building, which consists of stripping the fat off the hides, sending the fat to the rendering plant, and soaking the hides in salt water. No tanning of the hides will occur at this facility. Odors will be controlled by conducting all activities inside the building and minimizing raw material storage on-site. Raw materials will be transported from CVM via on-site mules and from HRBC in Selma via NZE trucks. Salted hides will be transported to Long Beach and Oakland, CA. Transport of fat to the Rendering facility will be via on-site mules.

The Freezer/Cooler building, or Distribution Center, will service the Processing Expansion trucking needs and will consolidate and re-allocate loads from the HRBC facility for distribution. All trucks that visit the Freezer/Cooler Building will be equipped with transportation refrigeration units (TRUs) that will operate for about 30-60 minutes during unloading and up to 4 hours for precool for loading. Finished product will be transported from HRBC in Selma via NZE trucks and from CVM via on-site mules. The addition of the Distribution Center will shift finished product truck travel from Selma to Hanford out to various locations in the western United States.

The Processing Expansion will consolidate ground beef processing for three facilities. This will add capacity at the existing meat processing facility in Hanford and decrease the Selma and Vernon facilities' ground beef processing capacity. The trucks that transport raw materials from the Selma and Vernon facilities will be facility-owned NZE trucks. Shipments that would have previously gone to Vernon from the existing Hanford meat processing facility will now be moved on-site by electric forklift, which will result in an overall reduction in trucking due to this expansion.

The Livestock Canopy will expand the current canopy area to provide additional shade for the existing cattle stockyard.

There is no additional trucking associated with the ancillary building features.

The Project consolidates and redistributes trucks that would otherwise have traveled similar distances between the CVM and HRBC facilities and end users. Table 1-2 shows the difference between current CVM and HRBC operations for the same activities (pre-project) and the Project maximum weekly trucking activity. The post-project rendering truck trips include the maximum design capacity, which doubles the current rendering-related truck trips, although the overall mileage traveled decreases. A detailed breakdown of the mileage estimation is included with the operational emission calculations.

Overall Project-related truck mileage increases slightly compared to current CVM and HRBC operations. To assess the emissions associated with each facility in the Project at full buildout, emissions were estimated for the entire off-site truck travel distances, even though the Project consolidates and redistributes trucks that would otherwise have traveled similar distances between the CVM and HRBC facilities and end users.

The Project will include a non-retail fueling station consisting of five fueling positions serving red (not for highway use) diesel (7,000 gallons), B20 biodiesel (12,000 gallons), and diesel exhaust fluid (3,000 gallons), all stored in aboveground tanks.

CVM proposes a maximum operating schedule of 24 hours per day, 7 days per week, and 365 days per year, although CVM anticipates the typical schedule to be 18 hours per day, 6 days per week for all facilities.

Table 1-2: Projected Weekly Trucking Associated with Each Facility

Facility	Pre-Project Trucks	Pre-Project Miles	Post-Project Trucks	Post-Project Miles
Rendering Facility	213	55,487	587	54,903
Pet Food Facility	0	0	6	1,064
Processing Expansion	94	39,745	86	38,605
Hide Facility	12	5,046	18	2,743
Freezer/Cooler Distribution Center	114	57,000	342	60,762
Total	**433**	**157,278**	**1,039**	**158,077**

1.2 Project Location and Surrounding Land Uses

The proposed Project is located at 10431 8 3/4 Avenue in Hanford, CA. Figure 1-1 shows the existing CVM facility, the property boundary, and surrounding area. The facility is located within the jurisdiction of the SJVAPCD.

The existing full-line beef processing facility is located on the northern portion of the CVM site, and the Project features will be to the south. The proposed Project layout is presented in Figure 1-2. The proposed layout of the Rendering facility can be seen in Figure 1-3.

The CVM site is surrounded by similar agricultural/livestock uses, except to the north of the existing beef processing facility and north of highway CA-198, where there is a residential neighborhood. The nearest resident is the security guards' house located within the CVM property, west of the existing processing building and north of the existing livestock canopy. The nearest off-site resident is a single-family home immediately west of the existing processing facility. The nearest schools are in Hanford, northwest of the facility more than one mile away. The closest offsite workplace where workers regularly congregate is the Overland Stock Yard, directly west of the new Rendering facility.

1.3 Current Operations

The existing full-line beef processing facility is located on the northern portion of the CVM site in Hanford, CA, as shown in Figures 1-1 and 1-2. The existing SJVAPCD permit (Facility ID C-2282) covers four 19.95 MMBtu/hr) natural gas boilers, one 1,919 horsepower (hp) diesel emergency generator, and one 250 hp diesel fire pump.

Figure 1-1: Facility Location and Surrounding Area

Figure 1-2: Project Layout

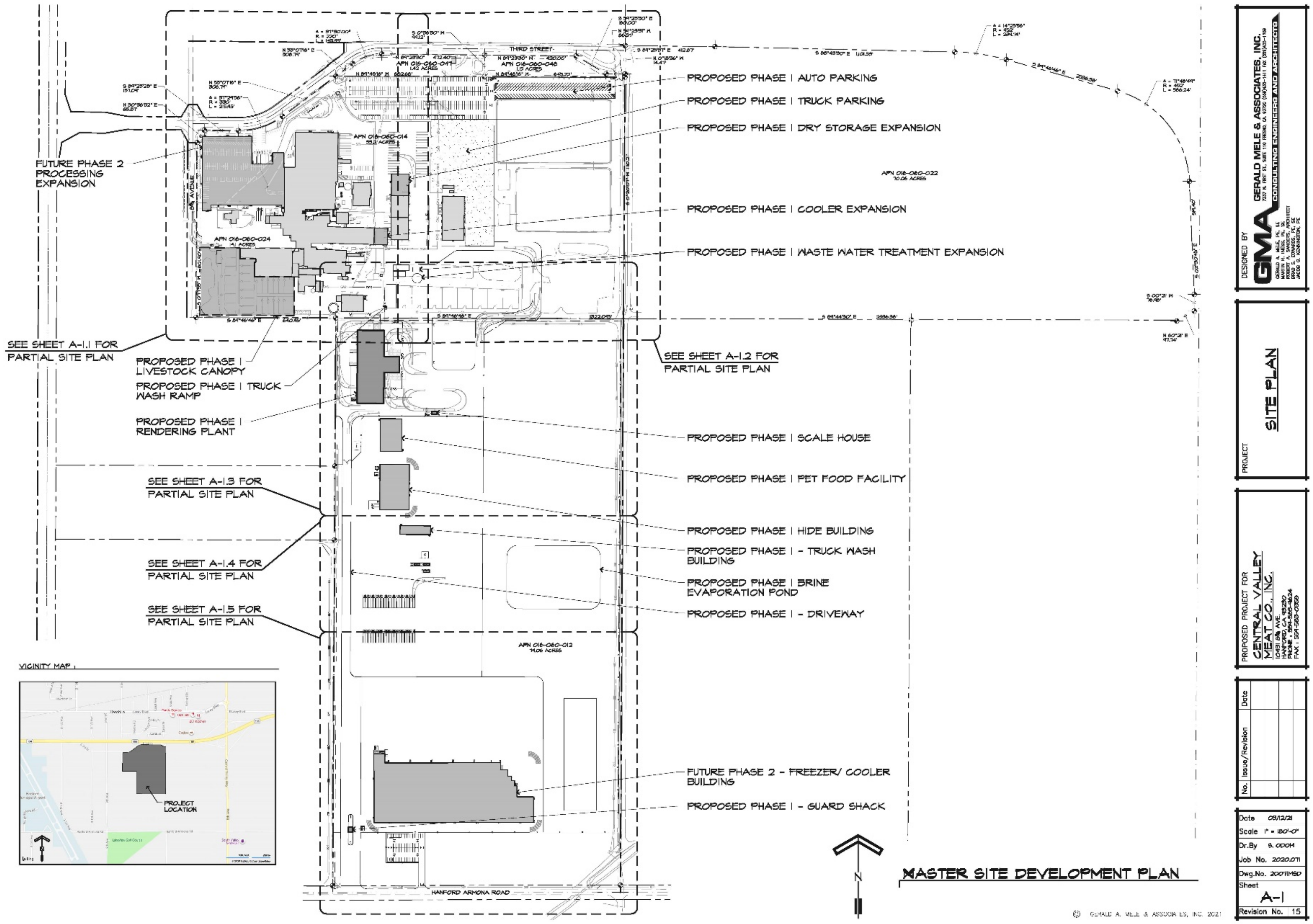
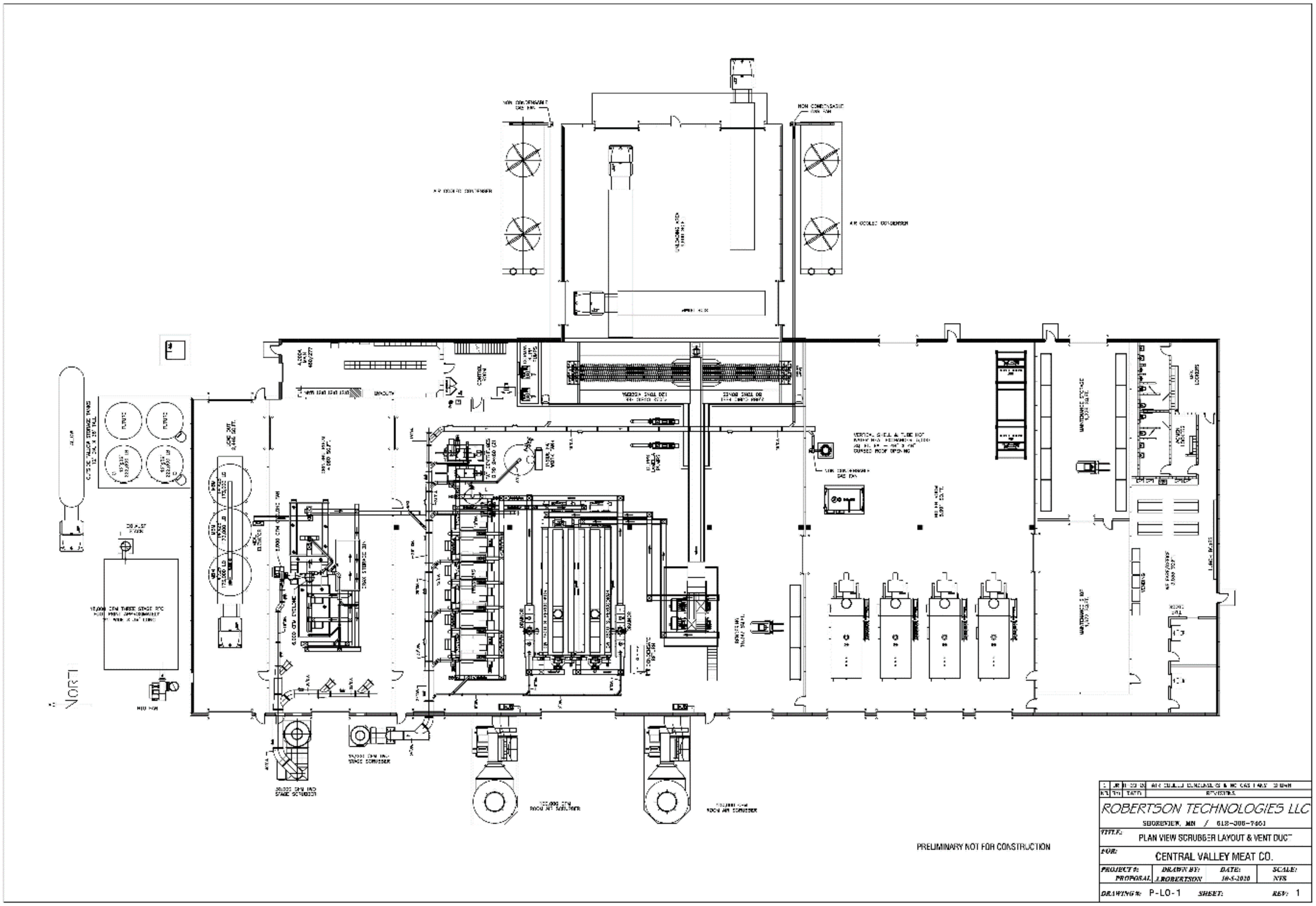


Figure 1-3: Rendering Facility Layout



2.0 EXISTING AIR QUALITY SETTING

2.1 Existing Air Quality

The Clean Air Act of 1970 (CAA) identified certain pollutants where exposure to these substances can cause health effects, such as heart or lung disease, respiratory damage, or premature death, and property damage. The United States Environmental Protection Agency (U.S. EPA) has established health-based NAAQS for seven air pollutants, commonly referred to as "criteria pollutants." California has also adopted CAAQS for these seven pollutants, which are, in some cases, more stringent than the NAAQS, and which include standards for four additional air pollutants. These pollutants are called criteria pollutants because standards (i.e., criteria) have been established for each to protect the public health (primary standards) and welfare (secondary standards).

2.1.1 Criteria Pollutant Attainment Status

The NAAQS established by the U.S. EPA apply to all areas throughout the nation. In most cases, the NAAQS define the maximum acceptable concentration that may be reached, but not exceeded more than once per year. The CAAQS are in some cases more stringent than the NAAQS and are not to be exceeded. These standards are designed to protect the public with a reasonable margin of safety. Areas that meet the ambient standards are designated as "attainment", areas where the measured concentrations exceed the ambient standards are designated "nonattainment", and areas where insufficient data exist to make a determination are "unclassified".

The San Joaquin Valley Air Basin (SJVAB) is currently designated as attainment for the NAAQS and CAAQS for nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and lead (Pb). The air basin is designated as nonattainment for federal and State standards for ozone (O_3), respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$). Within the SJVAB, the emissions and resultant concentrations of criteria pollutants have declined due to stringent control requirements promulgated by the SJVAPCD, California Air Resources Board (CARB), and U.S. EPA. However, the NAAQS and/or CAAQS established for O_3, PM_{10}, and $PM_{2.5}$ are still exceeded in the SJVAB.

Attaining air quality standards in the San Joaquin Valley has proven to be challenging due to the unique topographical and meteorological conditions found in the region. The valley encompasses nearly 25,000 square miles and is surrounded by mountain ranges to the west, east, and south. The airflow through the valley can be constrained by these mountain ranges, leading to limited dispersion. During the winter, high-pressure systems can cause the atmosphere to become stagnant for longer periods of time, where wind flow is calm and air movement is minimal. These stagnant weather systems can also cause severe nighttime temperature inversions, which exacerbate the buildup of air contaminants.

Despite these challenges, significant progress has been made in attaining the NAAQS and improving public health for valley citizens. Due to the efforts made by San Joaquin Valley businesses and residents and stringent regulatory programs by the SJVAPCD and CARB, the valley's emissions are at historically low levels, and air quality over the past few years has been better than any other time on record. Emissions from stationary sources have been reduced by 85%, cancer risk from exposure to TACs has been reduced by 95%, population exposure to elevated $PM_{2.5}$ levels has been reduced by 85%, and population exposure to elevated O_3 levels has been reduced by 90% (SJVAPCD 2018c).

The NAAQS and CAAQS are summarized in Table 2-1, along with the current air quality designations for the SJVAB.

Table 2-1: Ambient Air Quality Standards and SJVAB Attainment Status

Pollutant and Averaging Period		NAAQS	CAAQS	SJVAB Attainment Status	
				NAAQS	CAAQS
O_3	1-Hour	–	0.09 ppm	–	Nonattainment
	8 Hour	0.070 ppm	0.070 ppm	Nonattainment	Nonattainment
NO_2	1-Hour	0.100 ppm	0.18 ppm	Attainment	Attainment
	Annual	0.053 ppm	0.030 ppm	Attainment	Attainment
CO	1-Hour	35 ppm	20 ppm	Attainment	Attainment
	8-Hour	9 ppm	9.0 ppm	Attainment	Attainment
PM_{10}	24-Hour	150 µg/m^3	50 µg/m^3	Attainment	Nonattainment
	Annual	–	20 µg/m^3	–	Nonattainment
$PM_{2.5}$	24-Hour	35 µg/m^3	–	Nonattainment	–
	Annual	12.0 µg/m^3	12 µg/m^3	Nonattainment	Nonattainment
SO_2	1-Hour	0.075 ppm	0.25 ppm	Attainment	Attainment
	24-Hour	0.14 ppm	0.04 ppm	Attainment	Attainment
	Annual	0.03 ppm	–	Attainment	–
Pb	Month	–	1.5 µg/m^3	–	Attainment
	Quarter	1.5 µg/m^3	–	Attainment	–

ppm = parts per million; µg/m^3 = micrograms per cubic meter.

Source: SJVAPCD 2021.

2.1.2 Local Air Quality Background

CARB and the SJVAPCD operate a regional monitoring network that measures the ambient concentrations of criteria pollutants and TACs. The monitoring sites in the network include instruments that measure ambient levels of gaseous and particulate air pollutants. The air quality trends at these monitoring stations are typically considered to be representative of the ambient air quality in the surrounding areas. Local air quality within a given area is affected by how pollutants are dispersed into the atmosphere, the types and quantities of emissions released, prevailing wind patterns, and atmospheric conditions.

Background air quality representative of the proposed Project area was determined from maximum concentrations recorded at nearby monitoring stations operated by CARB or the SJVAPCD. Monitored concentrations within the project area at the closest monitoring stations to the Project for the most recent 3 years available are summarized in Table 2-2.

Table 2-2: Background Concentrations

Pollutant	Averaging Time	Standard	Monitoring Station	Ambient Background Data (µg/m^3)				AAQS	Exceeds Standard?	Background Concentration Notes
				2017	2018	2019	Summary			
NO_2	1-Hour	Federal	Hanford-S Irwin Street	82.1	97.0	93.2	90.8	188	No	The design value (=3 year average of 98th percentile of 1-hour daily max).
		California	Hanford-S Irwin Street	107.2	107.2	118.6	118.6	339	No	Highest of most recent 3 years.
	Annual	Federal	Hanford-S Irwin Street	15.3	17.2	15.3	17.2	100	No	Highest of most recent 3 years.
		California	Hanford-S Irwin Street	17.2	15.3	15.3	17.2	57	No	Highest of most recent 3 years.
CO	1-Hour	Federal	Fresno - Garland	2,725.5	2,555.4	2,315.5	2,725.5	40,000	No	Highest of most recent 3 years.
		California	Fresno - Garland	2,725.5	2,555.4	2,315.5	2,725.5	23,000	No	Highest of most recent 3 years.
	8-Hour	Federal	Fresno - Garland	2,213.0	2,329.5	1,747.1	2,329.5	10,000	No	Highest of most recent 3 years.
		California	Fresno - Garland	2,213.0	2,329.5	1,747.1	2,329.5	10,000	No	Highest of most recent 3 years.
SO_2	1-Hour	Federal	Fresno - Garland	13.0	14.6	14.6	14.1	196	No	The design value (=3 year average of 99th percentile of 1-hr daily max).
		California	Fresno - Garland	20.5	19.2	23.7	23.7	655	No	Highest of most recent 3 years.
	3-Hour	Federal Secondary	Fresno - Garland	12.0	13.6	12.8	13.6	1,300	No	Highest of most recent 3 years.
		California	–	–	–	–	–	–	–	No standard exists.
	24-Hour	Federal	–	–	–	–	–	–	–	Rescinded.
		California	Fresno - Garland	12.0	13.6	12.8	13.6	105	No	Highest of most recent 3 years. Uses 3-hour since no 24-hour data.

Pollutant	Averaging Time	Standard	Monitoring Station	Ambient Background Data (µg/m^3)				AAQS	Exceeds Standard?	Background Concentration Notes
				2017	2018	2019	Summary			
PM_{10}	24-Hour	Federal	Hanford-S Irwin Street	298.4	174.2	211.7	298.4	150	Yes	Highest of most recent 3 years.
		California	Hanford-S Irwin Street	148.8	181.1	220.5	220.5	50	Yes	Highest of most recent 3 years.
	Annual	Federal	–	–	–	–	–	–	–	No standard exists.
		California	Hanford-S Irwin Street	47.2	47.9	45.2	47.9	20	Yes	Highest of most recent 3 years.
$PM_{2.5}$	24-Hour	Federal	Hanford-S Irwin Street	113.4	107.8	48.2	113.4	35	Yes	Highest of most recent 3 years.
		California	–	–	–	–	–	–	–	No standard exists.
	Annual	Federal	Hanford-S Irwin Street	17.1	17.7	12.1	17.7	12	Yes	Highest of most recent 3 years.
		California	Hanford-S Irwin Street	16.8	N/A	12.1	16.8	12	Yes	Highest of most recent 3 years.

NO_2 and PM_{10} data from CARB iADAM Air Quality Data Statistics (CARB 2021). CO and SO_2 data from EPA AirData (EPA 2021).

3.0 EMISSIONS

This section provides a discussion and summary of the projected criteria pollutant and TAC emissions associated with construction and operation of the proposed Project. GHG emissions are discussed in Section 6. The SJVAPCD quantitative significance thresholds for CEQA shown in Table 3-1 were used to evaluate project emissions impacts (SJVAPCD 2015a, 2018a).

Table 3-1: SJVAPCD CEQA Thresholds of Significance

Pollutant	Annual Threshold[1] (tons/year)	APR-2030 Threshold[2] (pounds/day)
VOC	10	100
NO_x	10	100
CO	100	100
SO_x	27	100
PM_{10}	15	100
$PM_{2.5}$	15	100
TACs (including carcinogens and non-carcinogens)[3]	Maximally Exposed Individual Risk equals or exceeds 20 in one million	
	Acute Hazard Index equals or exceeds 1 for the Maximally Exposed Individual	
	Chronic Hazard Index equals or exceeds 1 for the Maximally Exposed Individual	
GHGs	Implement Best Performance Standards (BPS)	
	Reduce Project GHG Emissions by 29% over Business as Usual	

Sources: SJVAPCD 2015a, 2018a.

[1] Construction or operation (permitted or non-permitted).

[2] Stationary source or development projects (APR-2030).

[3] Carcinogens include Diesel Particulate Matter (DPM) as PM_{10} in diesel engine exhaust.

3.1 Construction Emissions

The construction and general operational sources[1] (area, energy, mobile, waste, and water conveyance) analysis was performed using the California Emissions Estimation Model® (CalEEMod) version 2016.3.2, the official statewide land use computer model designed to provide a uniform platform for estimating potential criteria pollutant and GHG emissions associated with both construction and operations of land use projects under CEQA. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The mobile source emission factors used in the model, which are published by CARB, include the Pavley standards and Low Carbon Fuel standards. The model also identifies project design features, regulatory measures, and mitigation measures to reduce criteria pollutant and GHG emissions, along with calculating the benefits achieved from the selected measures. CalEEMod was developed by the California Air Pollution Control Officers Association

[1] Generally non-permitted sources; permitted industrial stationary source emissions are quantified separately in Section 3.2 below.

(CAPCOA) in collaboration with the South Coast Air Quality Management District (SCAQMD), the Bay Area Air Quality Management District (BAAQMD), the SJVAPCD, and other California air districts. Default land use data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) were provided by the various California air districts to account for local requirements and conditions. As the official assessment methodology for land use projects in California, CalEEMod is relied upon herein for construction and operational emissions quantification, which forms the basis for the impact analysis. Appendix A contains the CalEEMod input parameters and output files.

For the two Project Phases, construction would occur over five non-contiguous years in three Stages: Stage 1 (2021-2022); Stage 2 (2023); and Stage 3 (2027-2028). Based on information received from the Applicant, land use data used for CalEEMod input is presented in Tables 3-2, 3-3, and 3-4 for project construction Stages 1, 2, and 3, respectively.

3.1.1 Criteria Pollutants from Project Construction

A project's construction phase produces many types of emissions, but PM_{10} (including $PM_{2.5}$) in fugitive dust and diesel engine exhaust are the pollutants of greatest concern. Fugitive dust emissions can result from a variety of construction activities, including excavation, grading, demolition, vehicle travel on paved and unpaved surfaces, and vehicle exhaust. Construction-related emissions can cause substantial increases in localized concentrations of PM_{10}, as well as affecting PM_{10} compliance with ambient air quality standards on a regional basis. Particulate emissions from construction activities can lead to adverse health effects as well as nuisance concerns such as reduced visibility and soiling of exposed surfaces. The use of diesel-powered construction equipment emits ozone precursors oxides of nitrogen (NO_x) and reactive organic gases (ROG) as well as diesel particulate matter (DPM), the latter being a composite of TACs containing a variety of hazardous substances. Large construction projects using multiple large earthmoving equipment are evaluated to determine if operations may exceed the District's daily threshold for NO_x emissions and could temporarily expose area residents to hazardous levels of DPM. Use of architectural coatings and other materials associated with finishing buildings may also emit ROGs and TACs. CEQA significance thresholds address the impacts of construction activity emissions on local and regional air quality. Thresholds are also provided for other potential impacts related to project construction, such as TACs.

The SJVAPCD's approach to CEQA analyses of fugitive dust impacts is to require implementation of effective and comprehensive dust control measures under Regulation VIII – Fugitive PM_{10} Prohibitions – rather than to require detailed quantification of emissions. PM_{10} emitted during construction can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors, making quantification difficult. Despite this variability in emissions, experience has shown that there are several feasible control measures that can be reasonably implemented to significantly reduce fugitive dust emissions from construction. The SJVAPCD has determined that implementing Best Management Practices (BMPs), primarily through frequent water application, constitutes sufficient mitigation to reduce PM_{10} impacts to a level considered less than significant.

Table 3-2: Land Use Data for CalEEMod Input – Stage 1

Project Element	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage (footprint)	Square Feet (est.)
Rendering Plant	Industrial	Manufacturing	46.30	1,000 ft^2	1.06	46,298
Brine Evaporation Pond	Parking	Other Non-Asphalt Surfaces	123.15	1,000 ft^2	2.83	123,150
WWTP	Industrial	Manufacturing	5.00	1,000 ft^2	0.11	5,000
Dry Storage Expansion	Industrial	Unrefrigerated Warehouse – No Rail	8.00	1,000 ft^2	0.18	8,000
Livestock Canopy	Parking	Other Non-Asphalt Surfaces	106.76	1,000 ft^2	2.45	106,755
Guard Shack	Commercial	General Office Building	0.47	1,000 ft^2	0.01	468
Driveway from H-A Road	Parking	Other Asphalt Surfaces	0.00	1,000 ft^2	0.00	0
Drainage Retention Pond	Parking	Other Non-Asphalt Surfaces	0.00	1,000 ft^2	0.00	0
Truck Wash Ramp	Parking	Other Asphalt Surfaces	4.95	1,000 ft^2	0.11	4,950
Scale House	Industrial	Manufacturing	0.34	1,000 ft^2	0.01	336
Auto Parking	Parking	Other Asphalt Surfaces	110.06	1,000 ft^2	2.53	110,057
Truck Parking	Parking	Other Asphalt Surfaces	130.33	1,000 ft^2	2.99	130,334
Project Site					**12.29**	**535,348**

Sources: Applicant 2021, CalEEMod version 2016.3.2.

Climate Zone 3 – San Joaquin Valley.

Table 3-3: Land Use Data for CalEEMod Input – Stage 2

Project Element	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage (footprint)	Square Feet (est.)
Freezer/Cooler Building (Distribution Center)	Industrial	Refrigerated Warehouse – No Rail	186.76	1000 ft^2	4.29	186,756
Processing Expansion	Industrial	Manufacturing	115.48	1000 ft^2	2.38	115,476
Project Site					**6.66**	**290,238**

Sources: Applicant 2021, CalEEMod version 2016.3.2.
Climate Zone 3 – San Joaquin Valley.

Table 3-4: Land Use Data for CalEEMod Input – Stage 3

Project Element	Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage (footprint)	Square Feet (est.)
Freezer/Cooler Building (Distribution Center)	Industrial	Refrigerated Warehouse – No Rail	186.76	1000 ft^2	4.29	186,756
Processing Expansion	Industrial	Manufacturing	115.48	1000 ft^2	2.38	115,476
Project Site					**6.66**	**290,238**

Sources: Applicant 2021, CalEEMod version 2016.3.2.
Climate Zone 3 – San Joaquin Valley.

3.1.2 Results of Construction Criteria Emissions Analyses

Tables 3-5 and 3-6 show mitigated construction criteria emissions evaluated against SJVAPCD annual and daily significance thresholds, respectively.

Table 3-5: Construction Mobile and Area Sources Summary – Annual Mitigated

Mobile and Area Sources	NO_x (tons/yr)	SO_x (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)	CO (tons/yr)	VOC (tons/yr)
Stage 1 Construction	2.22	0.01	0.20	0.10	2.53	0.78
Stage 2 Construction	1.19	0.00	0.07	0.05	1.42	0.53
Stage 3 Construction	1.58	0.01	0.20	0.10	2.48	2.12
Construction Maxima	**2.22**	**0.01**	**0.20**	**0.10**	**2.53**	**2.12**
SJVAPCD CEQA Threshold	**10**	**27**	**15**	**15**	**100**	**10**
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Sources: SJVAPCD 2015a, CalEEMod version 2016.3.2.

Table 3-6: Construction Mobile and Area Sources Summary – Daily Mitigated

Mobile and Area Sources	NO_x (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)	CO (lb/day)	VOC (lb/day)
Stage 1 Construction	23.2	0.1	7.5	4.0	33.6	53.6
Stage 2 Construction	11.5	0.0	2.3	1.2	13.4	37.3
Stage 3 Construction	13.5	0.0	7.2	4.0	21.2	93.6
Construction Maxima	**23.2**	**0.1**	**7.5**	**4.0**	**33.6**	**93.6**
SJVAPCD CEQA Threshold	**100**	**100**	**100**	**100**	**100**	**100**
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Sources: SJVAPCD 2015a, CalEEMod version 2016.3.2.

3.2 Operational Criteria Pollutant Emissions

Operational emissions from the Project consist of stationary source emissions from the new rendering facility and Pet Food facility RTO, mobile sources (trucks, mules, TRUs, and workers), and building operations (heating/cooling, landscaping, etc.). The following sections describe the emission calculations for each source type.

3.2.1 Rendering Facility Stationary Source Criteria Pollutant Emissions

3.2.1.1 Meat Rendering Operation

The emissions from the meat rendering operation are controlled by multiple emissions control devices.

The first portion of the meat rendering operation involves cooking the raw material, which separates it into liquids (fats) and solids (crax). Emissions from the cookers, presses, centrifuges, fat tank, Sweco screen, crax transfer conveyer, drainers, and condensers are captured and vented to a two-stage scrubber, which consists of a venturi scrubber and a packed bed scrubber connected in series, followed by an RTO.

The cooking process is expected to emit volatile organic compounds (VOCs), PM_{10}, and reduced sulfur compounds. The reduced sulfur compounds are expected to be completely oxidize to oxides of sulfur (SO_x) by the RTO. The Venturi/packed bed scrubbers and RTO system are designed for a combined reduction of VOC emissions by 99%. PM_{10} emissions are expected from the droplets of fat released in the cooking process. CVM proposes to use the same emission factors for the VOC, PM_{10}, and SO_x emissions per ton of raw material that were obtained from the recent SJVAPCD ATC for facility C-9251. In addition, the RTO combusts natural gas fuel as supplemental fuel, which results in the emissions of NO_x, SO_x, PM_{10}, CO, and VOC.

The second portion of the meat rendering operation is the solids or crax processing, which takes place in the grinding room and results in PM_{10} emissions. The crax processing is performed in an enclosed equipment and is vented to a cyclone, followed by a two-stage Venturi/packed bed scrubber system. Standard U.S. EPA AP-42 emission factors were used to estimate the PM emissions from the solids processing. (EPA 1995)

The third source type associated with the rendering operation is the fugitive emissions from the cooker room, raw material unloading area, raw material receiving pit, and two pre-crushers, which are captured and controlled by two room air scrubbers. The room air scrubbers are designed to primarily control fugitive odors, released as VOCs, and PM_{10}. The PM_{10} emission factor was derived using the following calculation, based on the estimated total dissolved solids (TDS) captured in the scrubber water.

<u>Room Air Packed Bed Scrubbers PM_{10} Emission Factor</u>

Scrubber Design:

Exhaust flowrate of each scrubber = 100,000 cfm

Scrubber water circulation = 1 Mgal/min

Drift rate = 0.0005%

TDS = 5,000 mg/liter

$$Scrubber\ PM_{10}\ EF = \frac{5{,}000\ mg}{L} \times \frac{5}{10^6} \times \frac{2.2046\ lb}{10^6\ mg} \times \frac{3.785\ L}{0.001\ Mgal} = 0.002086\frac{lb}{Mgal}$$

Emission calculation basis:

- Exhaust flowrate for each of the two room air scrubbers: 100,000 cfm;
- Maximum daily rendering throughput: 2,333 tons of raw material per day (equivalent to twice the annual average daily throughput);
- Maximum annual rendering throughput: 425,730 tons of raw material per year;
- Maximum daily protein solids processed: 663 tons of MBM per day (equivalent to twice the annual average daily throughput);
- Maximum annual protein solids processed: 120,989 tons of MBM per day;
- RTO burner rating: 5 MMBtu/hr; and
- Maximum operating schedule: 24 hours per day and 365 days per year.

The Project emission factors (EF2), their references, and the Project potential to emit (PE2) values are summarized in Tables 3-7, 3-8, and 3-9 below. Appendix B provides further details regarding the emission factor basis and emission calculations for the stationary sources.

Table 3-7: Criteria Pollutant Emissions – Rendering Operation – RTO

Criteria Pollutant	EF2	Emission Factor Source	Daily PE2 (lb/day)	Annual PE2 (lb/year)
NO_x	0.036 lb/MMBtu	30 ppm @ 3% O_2 – Vendor Guarantee	4.3	1,577
$SO_{x\text{-}NG}$	0.00285 lb/MMBtu	SJVAPCD APR-1720	0.3	125
$SO_{x\text{-}rendering}$	0.0335 lb/ton of raw material	Proposed based on similar operation	78.1	14,262
$PM_{10\text{-}NG}$	0.0076 lb/MMBtu	EPA AP-42, Table 1.4-1	0.9	333
$PM_{10\text{-}rendering}$	0.0033 lb/ton of raw material	Proposed based on similar operation	7.7	1,405
CO	0.084 lb/MMBtu	EPA AP-42, Table 1.4-2	10.1	3,679
VOC_{NG}	0.0055 lb/MMBtu	EPA AP-42, Table 1.4-2	0.7	241
$VOC_{rendering}$	0.0052 lb/ton of raw material	Proposed based on similar operation	12.1	2,214

Table 3-8: PM_{10} Emissions – Rendering Operation – Solids Processing

Activity	EF2 (lb/ton of MBM produced)	Emission Factor Source	Daily PE2 (lb/day)	Annual PE2 (lb/year)
Conveyor to Crax Bin	0.000008	EPA AP-42, Table 9.9.1-2, Animal Feed mills – Shipping – uncontrolled, adjusted by cyclone (90% control) and venturi scrubber (90% control)	0.005	1
Crax Bin to Grinding Process	0.000008		0.005	1
Grinding	0.003350	EPA AP-42, Table 9.9.1-2, Animal Feed mills – Hammermill – controlled by Cyclone, assuming 50% of PM is PM_{10} and adjusted by venturi scrubber (90% control)	2.221	405
Screening	0.003350		2.221	405
Recycle Line to Hammermill	0.000008	EPA AP-42, Table 9.9.1-2, Animal Feed mills – Shipping – uncontrolled, adjusted by cyclone (90% control) and venturi scrubber (90% control)	0.005	1
Conveyor to Storage MBM Silos	0.000008		0.005	1

Table 3-9: Criteria Pollutant Emissions – Rendering – Room Air Scrubbers Combined

Criteria Pollutant	EF2	Emission Factor Source	Daily PE2 (lb/day)	Annual PE2 (lb/year)
PM_{10}	0.0002086 lb/Mgal	Scrubber Design	0.6	219
VOC	1 ppm as CH_4	Proposed EF	12.1	4,432

3.2.1.2 Loadout Operation

The MBM is stored in one of the three storage silos. Each storage silo is equipped with a bin vent filter for PM control. Emissions from filling the silos via bucket elevators are enclosed and vented to the bin vents with 99% PM_{10} control efficiency. Emissions of PM_{10} are also expected during the loadout operation, where the MBM is transferred to the trucks in an enclosed loadout room. The EF2, their references, and the PE2 values are summarized in Table 3-10 and conservatively do not account for the controls from the bin vent filters or loadout in an enclosed room.

Emission calculation basis:

- Maximum daily throughput for the loadout operation: 663 tons of MBM per day (equivalent to twice the annual average daily throughput);
- Maximum annual throughput for the loadout operation: 120,989 tons of MBM per day; and
- Maximum operating schedule: 24 hours per day and 365 days per year.

Table 3-10: PM_{10} Emissions – Loadout Operation

Criteria Pollutant	EF2 (lb/ton of MBM loaded)	Emission Factor Source	Daily PE2 (lb/day)	Annual PE2 (lb/year)
$PM_{10\text{-silo loading}}$	0.000008	EPA AP-42, Table 9.9.1-2, Animal Feed Mills – Uncontrolled Shipping adjusted by bin vent (99% control)	0.5	98
$PM_{10\text{-loadout}}$	0.0008	EPA AP-42, Table 9.9.1-2, Animal Feed Mills – Uncontrolled Shipping		

3.2.1.3 Four Boilers

The boilers combust natural gas fuel, which results in the emission of VOCs, NO_x, CO, PM_{10}, and SO_x. NO_x is controlled with a selective catalytic reduction (SCR) system. Prior to the boiler/SCR system reaching steady-state operations, NO_x and CO emissions may be higher during startup and shutdown (SU/SD) periods. The EF2, their references, and the PE2 values are summarized in Table 3-11 and include steady-state and SU/SD factors for NO_x and CO.

Emission calculation basis:

- Four identical boilers, each with a 61.991 MMBtu/hr (maximum rating) burner;
- Maximum SU/SD time for each boiler = 1.5 hours per day;
- Maximum number of SU/SD periods for each boiler = 365 per year; and
- Maximum operating schedule: 24 hours per day and 365 days per year.

Table 3-11: Criteria Pollutant Emissions Per Boiler

Criteria Pollutant	EF2 (lb/MMBtu)	Emission Factor Source	Daily PE2 (lb/day)	Annual PE2 (lb/year)
$NO_{x\text{-steady-state}}$	0.00304	2.5 ppm @ 3% O_2 – Vendor Guarantee	7.6	2,784
$NO_{x\text{-SU/SD}}$	0.03642	30 ppm @ 3% O_2 – Vendor Guarantee		
SO_x	0.00285	District Policy APR-1720	4.2	1,548
PM_{10}	0.003	District Practice	4.5	1,629
$CO_{\text{steady-state}}$	0.03695	50 ppm @ 3% O_2	58.4	21,319
$CO_{\text{SU/SD}}$	0.0739	100 ppm @ 3% O_2		
VOC	0.0055	EPA AP-42, Table 1.4-2	8.2	2,987
NH_3	0.00449	10 ppm @ 3% O_2	6.7	2,438

3.2.1.4 Total Rendering Facility Emissions

Table 3-12 shows the aggregated potential to emit (PTE) for the rendering facility.

Table 3-12: Rendering Facility Aggregated Potential to Emit

Permit Unit	NO_x (lb/year)	SO_x (lb/year)	PM_{10} (lb/year)	$PM_{2.5}$[1] (lb/year)	CO (lb/year)	VOC (lb/year)
Meat Rendering Operation	2,334	14,447	2,931	1,834	5,445	7,002
MBM Loadout Operation	0	0	98	54	0	0
Boiler 1	2,784	1,548	1,629	1,629	21,319	2,987
Boiler 2	2,784	1,548	1,629	1,629	21,319	2,987
Boiler 3	2,784	1,548	1,629	1,629	21,319	2,987
Boiler 4	2,784	1,548	1,629	1,629	21,319	2,987
Totals	**13,469**	**20,637**	**9,546**	**8,405**	**85,707**	**18,949**

[1] The $PM_{2.5}/PM_{10}$ ratio for diesel combustion emissions is based on CARB's PM speciation profiles for Gas- and Oil-Fired Stationary Combustion (10/15), the $PM_{2.5}/PM_{10}$ ratio for natural gas combustion is assumed to be 1 and the $PM_{2.5}/PM_{10}$ ratio for rendering process emissions is assumed to be 0.55, based on CARB CEPAM Version 1.05 for food and agriculture, other.

3.2.2 Pet Food Facility Stationary Source Criteria Pollutant Emissions

A 5 MMBtu/hr natural gas RTO will be installed to control possible odorous emissions from pet food production. Criteria pollutant emissions will occur from the combustion of the natural gas in the RTO.

The RTOEF2, their references, and the PE2 values are summarized in Table 3-13. Appendix B provides further details regarding the stationary source emission calculations.

Table 3-13: Criteria Pollutant Emissions – Pet Food Facility – RTO

Criteria Pollutant	EF2	Emission Factor Source	Daily PE2 (lb/day)	Annual PE2 (lb/year)
NO_x	0.036 lb/MMBtu	30 ppm @ 3% O_2 – Vendor Guarantee	4.32	1,577
SO_x	0.00285 lb/MMBtu	SJVAPCD APR-1720	0.34	125
PM_{10}	0.0076 lb/MMBtu	EPA AP-42, Table 1.4-1	0.91	333
CO	0.084 lb/MMBtu	EPA AP-42, Table 1.4-2	10.08	3,679
VOC	0.0055 lb/MMBtu	EPA AP-42, Table 1.4-2	0.66	241

3.2.3 Mobile Source Criteria Pollutant Emissions

3.2.3.1 On-Road Mobile Source Emissions

On-road mobile source emissions result from employee travel to and from the facility, routine business travel, delivery of raw materials to the facility, and shipment of products from the facility. On-road vehicle emissions include exhaust emissions of criteria pollutants NO_x, SO_x, PM_{10}, $PM_{2.5}$, CO, VOCs, and TACs from the combustion of fuels (gasoline, diesel, and CNG or LNG).

To assess the emissions associated with facility-related sources at full buildout, emissions were estimated for the entire off-site truck travel distances, even though the Project consolidates and redistributes trucks that would otherwise have traveled similar distances between the CVM and HRBC facilities and end users. At full build-out, operation of the facility will require up to 1,039 truck trips per week to deliver raw materials and ship products.

Vehicle emissions were estimated using the CARB-developed model EMFAC2017, which is recommended by State and local agencies to calculate emissions from on-road mobile sources. EMFAC2017 incorporates the fleet characteristics representative of the population of vehicles operated within the San Joaquin Valley, incorporating regulations adopted by CARB that require emissions from on-road vehicles to be significantly reduced in the future. These changes are reflected in decreasing emissions over time. However, as is generally accepted practice, mobile source emissions are estimated for the earliest possible year of facility operation as a worst-case scenario. (CARB 2017)

On-road vehicle emissions were estimated using EMFAC2017 (version 1.0.2) emission factors for the SJVAPCD region, calendar year 2022, for vehicles classified using the following EMFAC2007 categories:

- Light Duty Automobiles (LDA) (employee vehicles);
- Light Duty Trucks 1 & 2 (LDT1, LDT2) (employee vehicles);
- Heavy-Heavy Duty Trucks, diesel fuel (HHDT-DSL); and
- Heavy-Heavy Duty Trucks, natural gas fuel (HHDT-NG).

Appendix C provides the detailed mobile source emission calculations.

3.2.3.2 Off-Road Emissions

The operational emissions from the facility will include emissions from "captive" off-road mobile source equipment, mules, and forklifts used for moving process materials around the facility. Off-road emissions sources also include TRUs attached to refrigerated truck trailers. Off-road emissions include exhaust emissions of criteria pollutants NO_x, SO_x, PM_{10}, $PM_{2.5}$, CO, VOCs, and TACs from the combustion of fuels (diesel and propane). The off-road emissions, as quantified, occur within the facility boundary (fenceline).

Exhaust emissions from off-road equipment were estimated based on the type of engine used to power the equipment, the size of the engine [i.e., brake horsepower (bhp)], the engine load, and the operating hours. This information was obtained from equipment manufacturers or was determined using EPA-recommended procedures or factors. Engine exhaust emissions were calculated using U.S. EPA non-road engine emission factors for the EPA "Tier" of the engine powering the equipment. Emissions from diesel-powered mules and TRUs were estimated on the basis of EPA Tier 4 final emission factors for the engine application. Emissions from propane forklifts were estimated using EPA AP-42 (Compilation of Air Pollutant Emissions Factors, Fifth Edition, Volume 1, Chapter 3.2) emission factors for gaseous fuel internal combustion engines. (EPA 1995)

3.2.3.3 Fugitive Dust Emissions

Operations that involve the movement of material or that expose or disturb erodible surfaces may generate fugitive dust. During Project operations, fugitive dust is generated by a variety of activities, such as the transport of materials on paved roads, which causes some entrainment of surface dust into ambient air.

Fugitive dust emissions are characterized by the aerodynamic size of the dust particles. Particles with diameters larger than 10 microns, due to their higher mass, settle out of the air relatively quickly under gravitational influence and are not transported over large distances. Particles with diameters less than 10 microns may remain suspended and may be transported off-site by winds, where they contribute to ambient concentration of particulate matter (PM_{10} and $PM_{2.5}$).

Most of the PM_{10} and $PM_{2.5}$ emissions generated during operations will result from vehicle travel on paved roads, both on-site (facility-owned) and off-site (publicly owned). All on-site vehicle travel surfaces and parking areas will be paved as BMP for everyday operations.

The procedures used for calculating fugitive dust emissions from transportation vary depending on the type of activity. Accordingly, fugitive dust emissions were calculated using EPA-recommended equations that generate "predictive emission factors" that are unique to the given activity. The equations and default recommendations were obtained from EPA AP-42, Fifth Edition (EPA 1995). Fugitive dust emissions were estimated for travel on paved roads (BMP) as required for employee commute, business travel, delivery of raw materials to the facility, and shipment of products from the facility.

Particulate emissions occur whenever a vehicle travels on a paved roadway surface. The emissions result from resuspension of silt that accumulates on the roadway surface (silt loading). Emissions from travel on paved roads are estimated using the method described in EPA AP-42, Fifth Edition, Chapter 13.2 (EPA 1995), which relies on the vehicle miles traveled (VMT), the roadway silt loading for each type of roadway traveled, and average vehicle weight, with a correction to account for the frequency of rain (which suppresses emissions). Given that off-site roads are public, control of the roadway surface and generation of fugitive dust for silt loading is beyond the control of the facility, and no reductions in emissions are anticipated from the control of this source category. However, on-site roads are maintained as part of the facility and will be periodically cleaned (BMP) using a street sweeper to control (reduce) silt loading.

Operational emissions from mobile sources are summarized in Tables 3-14 and 3-15 on an annual and daily basis, respectively.

Table 3-14: Operational Mobile Source Criteria Pollutant Emissions – Annual

Mobile Sources	NO_x (tons/yr)	SO_x (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)	CO (tons/yr)	VOC (tons/yr)
Vehicle Exhaust – On-Site	0.91	0.003	0.01	0.01	1.64	0.27
Vehicle Exhaust – Near Off-Site	0.06	0.0003	0.001	0.001	0.06	0.01
Vehicle Exhaust – Highway	19.77	0.09	0.37	0.36	3.46	0.80
Road Dust – On-Site	–	–	0.24	0.06	–	–
Road Dust – Near Off-Site	–	–	0.12	0.03	–	–
Road Dust – Highway	–	–	5.44	1.33	–	–
Total	**20.74**	**0.10**	**6.17**	**1.78**	**5.16**	**1.08**

Table 3-15: Operational Mobile Source Criteria Pollutant Emissions – Daily

Mobile Sources	NO_x (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)	CO (lb/day)	VOC (lb/day)
Vehicle Exhaust – On-Site	5.00	0.02	0.03	0.03	8.99	1.48
Vehicle Exhaust – Near Off-Site	0.33	0.001	0.003	0.003	0.33	0.04
Road Dust – On-Site	–	–	1.34	0.33	–	–
Road Dust – Near Off-Site	–	–	0.67	0.17	–	–
Total	**5.33**	**0.02**	**2.05**	**0.53**	**9.32**	**1.52**

3.2.4 Building Operations Criteria Pollutant Emissions

The term "project operations" refers to the full range of activities that can or may generate criteria pollutant, GHG, and TAC emissions when the project is functioning in its intended use. For industrial projects and some commercial projects, equipment operation and manufacturing processes, i.e., permitted stationary sources, can be of greatest concern from an emissions standpoint. There are also emissions generated from the basic operation of the buildings from sources such as natural gas usage for water heaters, heating and cooling, and general maintenance activities such as painting and landscaping. These building operational emissions were estimated in CalEEMod along with the construction emissions for each stage.

3.2.5 Fueling Station Criteria Pollutant Emissions

Emissions from the diesel fueling station were estimated based on annual throughput using the SCAQMD emissions factor for liquid storage tanks. Table 3-16 presents the annual VOC emissions. Detailed calculations are presented in Appendix B.

Table 3-16: Fueling Station Criteria Pollutant Annual Emissions

Device Description	Process Rate (gal/yr)	VOC Emission Factor (lb/1,000 gal)	VOC Emissions (lb/yr)
Diesel Storage Tanks	372,000	0.0280	10.42

3.2.6 Summary of Project Operational Criteria Pollutant Emissions

The proposed Project criteria pollutant emissions are summarized in Tables 3-17 and 3-18 on an annual and daily basis, respectively.

Table 3-17: Project Criteria Pollutant Annual Emissions

Category	Source	NO_x (tpy)	SO_x (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	CO (tpy)	VOC (tpy)
Permitted Sources							
Rendering Facility	Rendering Operations	1.17	7.22	1.47	0.92	2.72	3.50
	Loadout Operations	–	–	0.05	0.03	–	–
	Boilers	5.57	3.10	3.26	3.26	40.13	5.97
Pet Food Facility	RTO	0.79	0.06	0.17	0.17	1.84	0.12
Fueling Station	Diesel Tanks	–	–	–	–	–	0.005
Total Permitted Activities Emissions		***7.52***	***10.38***	***4.94***	***4.37***	***44.69***	***9.60***
SJVAPCD CEQA Threshold		***10***	***27***	***15***	***15***	***100***	***10***
Above Threshold?		***No***	***No***	***No***	***No***	***No***	***No***
Non-Permitted Sources							
Mobile Sources	Vehicle Exhaust – On-Site	0.91	0.003	0.01	0.01	1.64	0.27
	Vehicle Exhaust – Near Off-Site	0.06	0.0003	0.001	0.001	0.06	0.01
	Vehicle Exhaust – Highway	19.77	0.09	0.37	0.36	3.46	0.80
	Road Dust – On-Site	–	–	0.24	0.06	–	–
	Road Dust – Near Off-Site	–	–	0.12	0.03	–	–
	Road Dust – Highway	–	–	5.44	1.33	–	–
Building Operations	Natural Gas and Maintenance	0.22	0.001	0.02	0.02	0.19	1.98
Total Non-Permitted Activities Emissions		***20.96***	***0.09***	***6.20***	***1.81***	***5.35***	***3.06***
SJVAPCD CEQA Threshold		***10***	***27***	***15***	***15***	***100***	***10***
Above Threshold?		***Yes***	***No***	***No***	***No***	***No***	***No***

Note: Mobile sources include all off-site travel.

Table 3-18: Project Criteria Pollutant Daily Emissions

Category	Source	NO_x (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)	CO (lb/day)	VOC (lb/day)
Permitted Sources							
Rendering Facility	Rendering Operations	6.39	78.65	14.11	8.37	14.92	25.25
	Loadout Operations	–	–	0.54	0.29	–	–
	Boilers	30.51	16.96	17.85	17.85	219.89	32.73
Pet Food Facility	RTO	4.32	0.34	0.91	0.91	10.08	0.66
Fueling Station	Diesel Tanks	–	–	–	–	–	0.03
Total Permitted Activities Emissions		***41.22***	***95.96***	***33.41***	***27.43***	***244.89***	***58.67***
SJVAPCD CEQA Threshold		***100***	***100***	***100***	***100***	***100***	***100***
Above Threshold?		***No***	***No***	***No***	***No***	***Yes***	***No***
Non-Permitted Sources							
Mobile Sources	Vehicle Exhaust – On-Site	5.00	0.02	0.03	0.03	8.99	1.48
	Vehicle Exhaust – Near Off-Site	0.33	0.001	0.003	0.003	0.33	0.04
	Road Dust – On-Site	–	–	1.34	0.33	–	–
	Road Dust – Near Off-Site	–	–	0.67	0.17	–	–
Building Operations	Natural Gas and Maintenance	1.20	0.01	0.09	0.09	1.05	10.84
Total Non-Permitted Activities Emissions		***6.53***	***0.03***	***2.13***	***0.62***	***10.37***	***12.36***
SJVAPCD CEQA Threshold		***100***	***100***	***100***	***100***	***100***	***100***
Above Threshold?		***No***	***No***	***No***	***No***	***No***	***No***

Note: Mobile sources include ¼ mile travel near off-site per SJVAPCD Policy APR-2030.

3.3 Construction Toxic Air Contaminant Emissions

Diesel-powered construction equipment emits DPM, a composite of TACs containing a variety of hazardous substances. It was conservatively assumed that 100% of the PM_{10} engine exhaust emissions are DPM. The construction-related DPM emissions for the entire construction period from the construction equipment, on-site diesel truck, and near off-site (¼mile) truck travel are presented in Table 3-19.

Table 3-19: DPM Emissions – Entire Construction Period

Sources	Stage 1 Construction (lb)	Stage 2 Construction (lb)	Stage 3 Construction (lb)	Total Construction Emissions (lb)	Average Annual Construction Emissions (lb/yr)
Construction Equipment	214.82	96.16	103.82	414.80	59.26
On-Site Trucks	1.55	0.03	0.18	1.75	0.25
Off-Site Trucks	0.52	0.01	0.06	0.58	0.08

3.4 Operational Toxic Air Contaminant Emissions

TACs are air pollutants that may be present in ambient air in relatively low concentrations but have characteristics such as toxicity or persistence that may make them a hazard to human health. These TACs include volatile and semi-volatile organic compounds, heavy metals, and others.

The emissions of TACs may be calculated using process information for a given activity and an appropriate emission factor, or the emissions may be calculated by "speciating" the PM_{10} and/or VOC emissions using a profile that identifies the weight fraction of the TAC constituent in the parent compound. Both approaches were used to estimate TAC emissions from the proposed Project, as discussed in the following sections.

TAC emissions are limited to on-site emissions and near-site emissions (i.e., emissions that occur within ¼ mile from the facility). The TAC calculation methodology is explained in the following sections.

3.4.1 Rendering Facility Stationary Source TAC Emissions

3.4.1.1 Meat Rendering Operation

The first portion of the meat rendering operation, the cooking process, results in reduced sulfur compound emissions in the form of hydrogen sulfide (H_2S), a TAC. The RTO will effectively convert the H_2S to SO_x, and no TAC emissions are expected from the meat cooking process. Thus, TAC emissions associated with the RTO come from the combustion of natural gas.

The fugitive H_2S emissions from the cooking process are controlled by the two 100,000 cubic feet per minute (cfm) room air packed bed scrubbers.

The TAC emission factors and emissions associated with the rendering operation are shown in Tables 3-20 and 3-21. Detailed stationary source TAC emission calculations are provided in Appendix B.

Table 3-20: TAC Emissions – Rendering Operation – RTO

TAC	EF2 (lb/mmscf)	Hourly PE2 (lb/hr)	Annual PE2 (lb/yr)
Acetaldehyde	4.30E-03	2.15E-05	1.88E-01
Acrolein	2.70E-03	1.35E-05	1.18E-01
Benzene	8.00E-03	4.00E-05	3.50E-01
Ethyl Benzene	9.50E-03	4.75E-05	4.16E-01
Formaldehyde	1.70E-02	8.50E-05	7.45E-01
Hexane	6.30E-03	3.15E-05	2.76E-01
Naphthalene	3.00E-04	1.50E-06	1.31E-02
PAHs (excluding Naphthalene)	1.00E-04	5.00E-07	4.38E-03
Propylene	7.31E-01	3.66E-03	3.20E+01
Toluene	3.66E-02	1.83E-04	1.60E+00
Xylenes (mixed)	2.72E-02	1.36E-04	1.19E+00

Emission factor source: "Natural Gas Fired External Combustion Equipment for units less than 10 MMBtu/hr" in the May 2001 update of the Ventura County Air Pollution Control District (VCAPCD) AB 2588 Combustion Emission Factors.

Table 3-21: TAC Emissions – Rendering Operation – Both Room Air Scrubbers Combined

TAC	EF2 (g/m^3)	Hourly PE2 (lb/hr)	Annual PE2(lb/yr)
H_2S	0.0000234	0.02	153.4

Emission factor source: Characterization of gaseous odorous emissions from a rendering plant by GC/MS and treatment by biofiltration, Anet et al, 10 Oct 2013, Table 3 – Average H_2S Concentration, assuming 1% fugitive process emissions and adjusted by scrubber H_2S control efficiency of 85%.

3.4.1.2 Loadout Operation

Pursuant to guidance on food-grade products and pre-cleaned material, the PM_{10} emissions from pre-cleaned grain products are considered non-hazardous per SJVAPCD policy. Material that is pre-cleaned is assumed to have had all PM_{10} (dust/soil) removed, and therefore has eliminated the exposure to heavy metals. Since the MBM being processed in the loadout operation has been pre-cleaned, the PM_{10} emissions from this process are considered non-hazardous and TAC emissions are not expected. Therefore, there are no TAC emissions from the loadout operation.

3.4.1.3 Four Boilers

The boilers combust natural gas fuel, which results in emissions of TACs. For TAC calculations, the toxic pollutant emission factors are obtained from "Natural Gas Fired External Combustion Equipment" in the May 2001 update of the VCAPCD AB 2588 Combustion Emission Factors for units between 10 and 100 MMBtu/hr.

Emission calculation basis:

- Four identical boilers, each with a 61.991 MMBtu/hr (maximum rating) burner; and
- Maximum operating schedule: 24 hours per day and 365 days per year.

The TAC emission factors and emissions are shown in Table 3-22.

Table 3-22: TAC Emission Factors and Potential to Emit for Each Boiler

TAC	EF2 (lb/mmscf)	Hourly PE2 (lb/hr)	Annual PE2 (lb/yr)
Acetaldehyde	3.10E-03	1.92E-04	1.68E+00
Acrolein	2.70E-03	1.67E-04	1.47E+00
Benzene	5.80E-03	3.60E-04	3.15E+00
Ethyl Benzene	6.90E-03	4.28E-04	3.75E+00
Formaldehyde	1.23E-02	7.62E-04	6.68E+00
Hexane	4.60E-03	2.85E-04	2.50E+00
Naphthalene	3.00E-04	1.86E-05	1.63E-01
PAHs (excluding Naphthalene)	1.00E-04	6.20E-06	5.43E-02
Propylene	5.30E-01	3.29E-02	2.88E+02
Toluene	2.65E-02	1.64E-03	1.44E+01
Xylenes (mixed)	1.97E-02	1.22E-03	1.07E+01

Emission factor source: "Natural Gas Fired External Combustion Equipment" for units between 10 and 100 MMBtu/hr in the May 2001 update of VCAPCD AB 2588 Combustion Emission Factors.

3.4.2 Pet Food Facility Stationary Source TAC Emissions

Similar to the rendering facility, TAC emissions associated with the Pet Food facility RTO come from the combustion of natural gas. Table 3-23 presents the TAC emission factors and emissions associated with the pet food RTO operation.

Table 3-23: TAC Emissions – Pet Food Facility – RTO

TAC	EF2 (lb/mmscf)	Hourly PE2 (lb/hr)	Annual PE2 (lb/year)
Acetaldehyde	4.30E-03	2.15E-05	1.88E-01
Acrolein	2.70E-03	1.35E-05	1.18E-01
Benzene	8.00E-03	4.00E-05	3.50E-01
Ethyl Benzene	9.50E-03	4.75E-05	4.16E-01
Formaldehyde	1.70E-02	8.50E-05	7.45E-01
Hexane	6.30E-03	3.15E-05	2.76E-01
Naphthalene	3.00E-04	1.50E-06	1.31E-02
PAHs (excluding Naphthalene)	1.00E-04	5.00E-07	4.38E-03
Propylene	7.31E-01	3.66E-03	3.20E+01
Toluene	3.66E-02	1.83E-04	1.60E+00
Xylenes (mixed)	2.72E-02	1.36E-04	1.19E+00

Emission factor source: "Natural Gas Fired External Combustion Equipment for units less than 10 MMBtu/hr" in the May 2001 update of VCAPCD AB 2588 Combustion Emission Factors.

3.4.3 Mobile Source TAC Emissions

Mobile source TAC emissions are characterized as DPM, a composite TAC containing a variety of hazardous substances. Operational DPM emissions from diesel fuel combustion in on-road vehicles (trucks), off-road vehicles (mules), and non-road equipment (TRUs) are conservatively based on PM_{10} emissions in engine exhaust, assuming that 100% of the PM_{10} emissions are DPM.

3.4.4 Building Operations TAC Emissions

In the context of overall facility emissions, incremental TAC emissions associated with the operation of the buildings, e.g., natural gas combustion, are considered negligible.

3.4.1 Fueling Station TAC Emissions

TAC emissions from the diesel fueling station were estimated based on the annual VOC emissions and using the SJVAPCD TAC Emission Profile 23 for diesel storage tanks. Emissions are negligible.

3.4.2 Summary of Project Operational TAC Emissions

The proposed Project TAC emissions are summarized in Table 3-24. Detailed emission calculations are provided in Appendix B for the stationary sources and Appendix C for the mobile sources. For diesel-powered vehicles and equipment, exhaust emissions comprise both on-site and near off-site proximity.

Table 3-24: Operational TAC Emissions

Pollutant	CAS	Rendering Facility			Pet Food Facility	Fueling Station	Mobile Sources	Total Emissions
		RTO	Two Room Air Scrubbers	Four Boilers	RTO	Diesel Tanks	Diesel Vehicles and Equipment	
		Annual Emissions (lb/yr)						
DPM	9901	–	–	–	–	–	11.5	**11.5**
H_2S	7783064	–	153.4	–	–	–	–	**153.4**
Acetaldehyde	75070	0.279	–	6.734	0.188	–	–	**7.2**
Acrolein	107028	0.175	–	5.865	0.118	–	–	**6.2**
Benzene	71432	0.519	–	12.599	0.350	0.009	–	**13.5**
Ethylbenzene	100414	0.616	–	14.988	0.416	–	–	**16.0**
Formaldehyde	50000	1.102	–	26.718	0.745	–	–	**28.6**
Hexane	110543	0.408	–	9.992	0.276	–	–	**10.7**
Naphthalene	91203	0.019	–	0.652	0.013	–	–	**0.7**
PAHs (excl. naphthalene)	1151	0.006	–	0.217	0.004	–	–	**0.2**
Propylene	115071	47.386	–	1151.2	32.0	–	–	**1,230.7**
Toluene	108883	2.373	–	57.562	1.603	0.050	–	**61.6**
Xylenes	1330207	1.763	–	42.792	1.191	0.044	–	**45.8**
Ammonia	7664417	–	–	9753.0	–	–	–	**9,753.0**
Total TACs (lb/yr)								**11,339.1**

3.5 Construction Greenhouse Gas Emissions

Table 3-25 presents the GHG emissions resulting from project construction, as estimated by CalEEMod. The bulk of construction GHG emissions are from diesel fuel combustion in on-road vehicles and off-road equipment.

Table 3-25: Construction Mobile and Area Sources Summary – GHG Emissions

Mobile and Area Sources	CO_2 (MT/yr)	CH_4 (MT/yr)	N_2O (MT/yr)	CO_2e (MT/yr)
Stage 1 Construction	619.85	0.08	0.00	621.96
Stage 2 Construction	232.28	0.04	0.00	233.17
Stage 3 Construction	536.57	0.09	0.00	538.72
Maxima	**619.85**	**0.09**	**0.00**	**621.96**

Source: CalEEMod version 2016.3.2.

3.6 Operational Greenhouse Gas Emissions

3.6.1 Rendering and Pet Food Facilities Stationary Source GHG Emissions

GHG emissions were estimated from stationary source natural gas combustion (boilers and RTOs) using emission factors from the Code of Federal Regulations (CFR) Title 40, Part 98, Subpart C, Tables C-1 and C-2 and Global Warming Potentials (GWP) from 40 CFR Part 98, Subpart A, Table A-1. GHG emissions from the Rendering and Pet Food facilities are presented in Table 3-26. Stationary source GHG emission calculations are provided in Appendix B.

3.6.2 Mobile Source GHG Emissions

For on-road mobile sources (light-duty worker vehicles, diesel trucks, NZE trucks), emissions of carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) were output from EMFAC2017. In turn, the 40 CFR Part 98, Subpart A, Table A-1 GWPs (1, 25, and 298, respectively) were used to calculate carbon dioxide equivalents (CO_2e) from on-road mobile sources. For off-road mobile sources (mules, TRUs, forklifts), GHG emissions were calculated per 40 CFR Part 98, Subpart C, Tables C-1 and C-2 and GWPs per 40 CFR Part 98, Subpart A, Table A-1. These determinations are shown in Appendix C.

3.6.3 Building Operations GHG Emissions

Direct and indirect GHG emissions associated with building operations and maintenance were estimated using CalEEMod (Appendix A). Direct GHG emissions occur on-site, such as natural gas combustion for space heating and domestic water heating. Indirect GHG emissions occur off-site, such as electric power generation used for building operations, water conveyance/treatment, and waste treatment.

3.6.4 Fueling Station

GHG emissions associated with the diesel fueling station were considered negligible due to the low vapor pressure of diesel fuel at storage temperatures.

3.6.5 Summary of Project Operational GHG Emissions

Table 3-26 presents the total Project direct and indirect GHG emissions. Direct emissions are from the stationary sources, vehicles, and non-permitted natural gas combustion for building operations and maintenance. Indirect emissions are associated with electric power production (off-site generation) for the electricity used for building operations and water pumping and GHG emissions from landfilling of non-hazardous wastes. All facility water needs will be supplied via an on-site well.

Table 3-26: Operational Annual GHG Emissions

Category	Source	CO_2	CH_4	N_2O	CO_2e
		Annual Emissions (MT/yr)			
Direct Emissions					
Rendering Facility	Boilers	115,255	2.17	0.20	115,374
	RTO	3,440	0.06	0.01	3,443
Pet Food Facility	RTO	2,324	0.04	0.004	2,326
Annual Stationary Source Emissions		**121,019**	**2.3**	**0.2**	**121,143**
Mobile Sources	Vehicle Exhaust – On-Site	428	0.31	0.01	440
	Vehicle Exhaust – Near Off-Site	76	0.04	0.00	78
	Vehicle Exhaust – Highway[1]	–	–	–	–
Building Operations	Natural Gas and Maintenance	238	0.00	0.00	239
Annual Land Use Emissions		**742**	**0.4**	**0.01**	**757**
Indirect Emissions					
Building Operations	Electricity, Water, and Waste	2,063	5.0	0.05	2,203
Annual Project Indirect Emissions		**2,063**	**5.0**	**0.05**	**2,203**

1. Highway mileage and associate GHG emissions pre-project and post-project are net zero.
2. MT/yr = metric tons per year.

4.0 MODELING AND RISK ASSESSMENT

CEQA requires that the environmental impacts of a proposed project be identified and assessed. If these impacts are found to be significant, the impacts must be mitigated to the extent feasible. The SJVAPCD has developed CEQA thresholds for determination of significance and determination if AAQA modeling is required; these criteria are described further in Section 5. Based on these significance thresholds, an AAQA was conducted for operations, but is not needed for construction activities to evaluate the significance of the project-related impacts.

The modeling analyses discussed in this section include criteria pollutant AAQA modeling with respect to the NAAQS and CAAQS for operational activities and two separate health risk assessments (HRAs) for construction and operations.

The methodology used to develop the AAQA and HRAs is described below and based on SJVAPCD guidance documents and policies, in particular "Guidance for Air Dispersion Modeling" (SJVAPCD 2006) and SJVAPCD policies APR-1925 and APR-2030, and consultation with SJVAPCD CEQA modeling staff. The AERMOD dispersion model was used as the basis for both the AAQA and HRAs.

4.1 Dispersion Modeling

4.1.1 Air Dispersion Model

Air dispersion models calculate the atmospheric transport and fate of pollutants from the emissions source. The models calculate the concentration of selected pollutants at specific downwind ground-level points, such as residential or off-site workplace receptors. The transformation (fate) of an airborne pollutant, its movement with the prevailing winds (transport), its crosswind and vertical movement due to atmospheric turbulence (dispersion), and its removal due to dry and wet deposition are influenced by the pollutant's physical and chemical properties and meteorological and environmental conditions. Factors such as distance from the source to the receptor, meteorological conditions, intervening land use and terrain, pollutant release characteristics, and background pollutant concentrations affect the predicted air concentration of an air pollutant. Air dispersion models take all of these factors into consideration when calculating downwind ground-level pollutant concentrations.

The air dispersion model used was AERMOD version 19191 with the Lakes Environmental Software implementation/user interface, AERMOD View™ version 9.9.0.

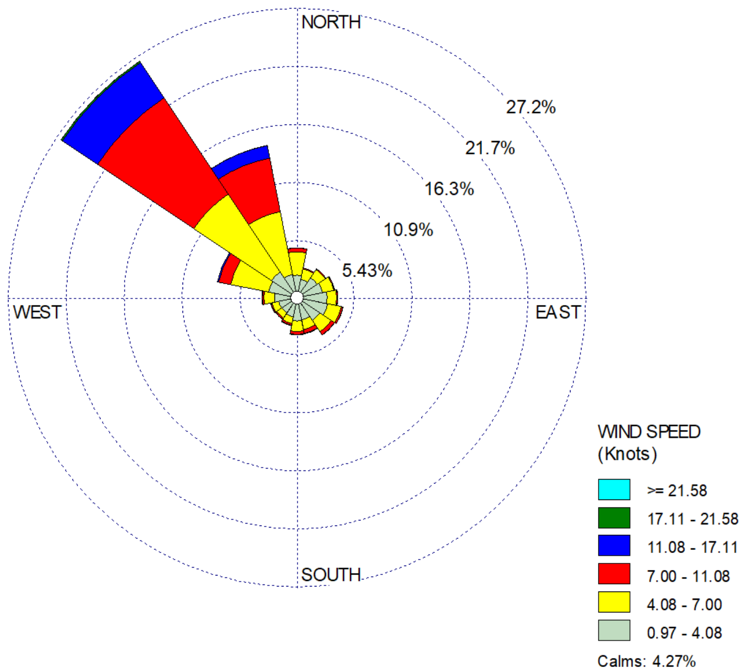
4.1.2 Modeling Options

AERMOD View™ allows the user to select from a variety of dispersion options. For this project, "Regulatory Default" options were used unless otherwise directed by the SJVAPCD guidance and noted below.

4.1.3 Meteorological Data

AERMOD-ready pre-processed meteorological data files were obtained directly from the SJVAPCD for the Hanford Municipal Airport station. This station is the nearest meteorological station and most representative of the conditions at the facility. Figure 4-1 presents the wind rose showing the meteorological data for the years 2013-2017. Each petal of the rose represents the frequency and relative strength with which a wind blows from that direction.

Figure 4-1: Hanford Municipal Airport Wind Rose 2013-2017



4.1.4 Receptor Grids and Modeling Domain

Satellite maps within AERMOD View™ were used for developing the property boundary and receptor grid. This program uses the World Geodetic System 1984 (WGS84) Datum for displaying Universal Transverse Mercator (UTM) coordinates. The facility is located in Zone 11.

The modeling domain was sufficiently large to include all areas off-site that might be greater than the NAAQS/CAAQS or Significant Impact Level (SIL) and the cancer and non-cancer risk Zones of Impact (ZOIs). The ZOI for cancer risk is assumed to be all receptors within the 1 x 10^{-6} cancer risk isopleth, and each ZOI for non-cancer risk (chronic non-cancer, 8-hour chronic non-cancer, and acute non-cancer) is assumed to include all receptors within the 0.5 Hazard Index (HI) isopleths.

Modeling results were obtained at various locations around the facility. These receptor locations were identified as the facility boundary ("fenceline"), a grid network of receptors to establish the potential impact area, and discrete receptors that were positioned at specific locations of interest. All receptors were set to ground-level; the HRA did not include flagpole receptors.

The facility boundary encompasses the existing CVM facility and the proposed Project expansion area. Per SJVAPCD guidance, a cascading grid of receptors was used to ensure that impacts will be below the appropriate CEQA thresholds at all locations off-site. These gridded receptors were located as follows:

- Fenceline receptors spaced every 25 meters;
- 25-meter spacing from the fenceline out to 100 meters;
- 50-meter spacing from 100 to 500 meters;
- 100-meter spacing from 500 to 1,000 meters;
- 250-meter spacing from 1,000 to 1,500 meters; and
- 500-meter spacing from 1,500 to 2,000 meters.

Additional discrete Cartesian receptors were used to evaluate the locations of the closest residential receptors, sensitive receptors, and off-site workplaces. The nearest resident is the security guards' house located within the CVM property, west of the existing processing building and north of the existing livestock canopy. There is also a temporary mobile home trailer north of the existing dry storage building, this was included as a residential receptor, but could be moved if elevated impacts are predicted at this location.

The nearest off-site resident is a single-family home immediately west of the existing processing facility. The nearest schools are in Hanford, northwest of the facility more than one mile away. The closest off-site workplace is the Overland Stock Yard just west of the Rendering facility. The main structure where off-site workers regularly congregate is approximately 265 meters to the west of the new Rendering facility, although off-site workers periodically access the barns/shade structures, which are approximately 100 meters from the nearest Rendering facility stack.

Figure 4-2 shows the locations of all receptors used in the modeling and the property line.

4.1.5 Terrain Options and Modeling Domain

The AERMOD runs used the regulatory default elevated terrain option. Terrain data was imported directly into AERMOD View™ using the WebGIS import feature. The terrain data was from the United States Geological Survey (USGS) National Elevation Dataset (NED) and had a spatial resolution of approximately 10 meters. The terrain data files were processed by AERMOD View™ using AERMAP Version 18081, and elevations were assigned to receptors, buildings, and emissions sources accordingly.

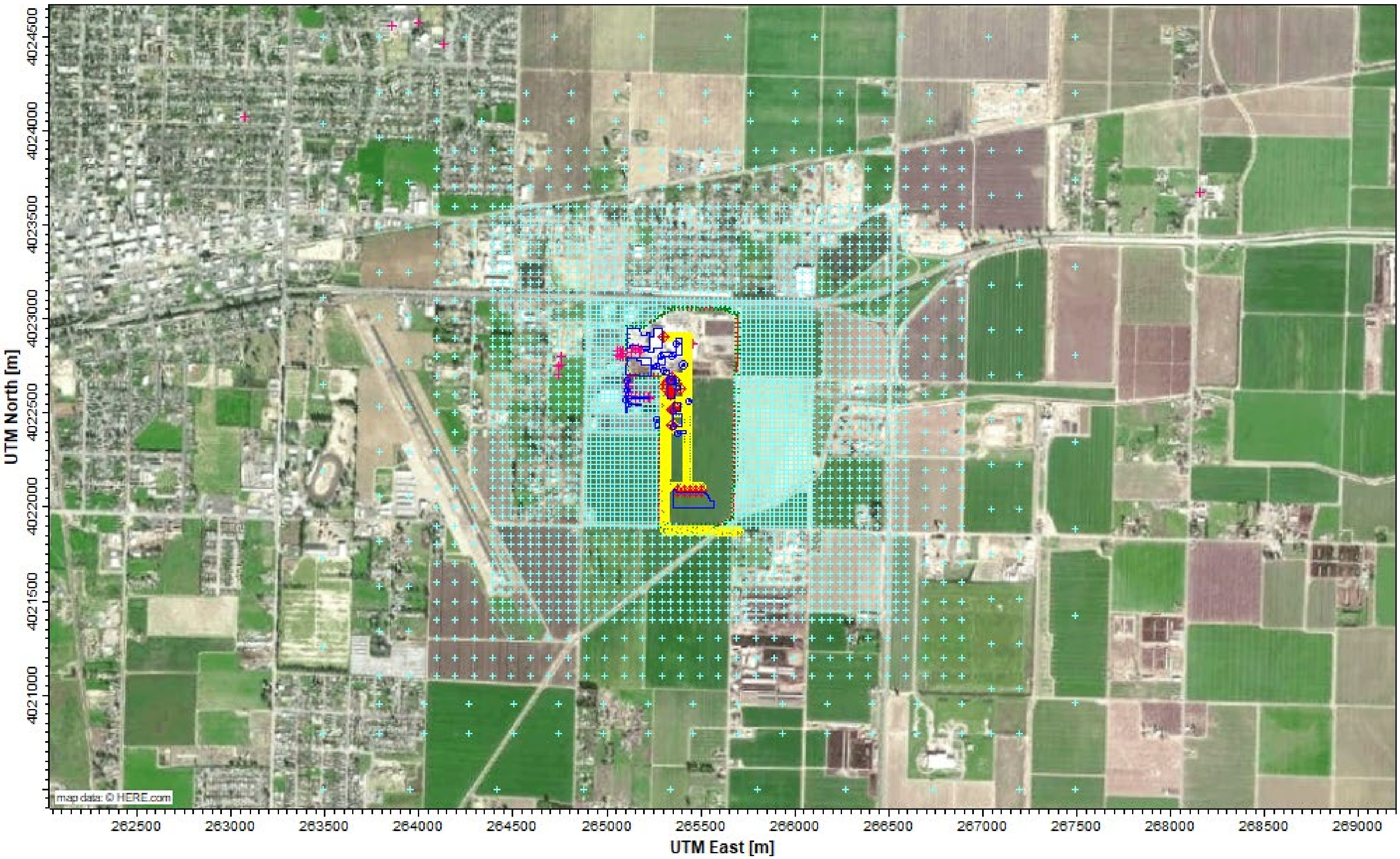
All geographical coordinates referenced in this section and the appendices are in the UTM coordinate system with WGS84 Zone 11.

4.1.6 Urban/Rural Dispersion

AERMOD allows for the use of urban or rural dispersion coefficients. The determination of whether the facility is in an urban or rural area followed the Auer method noted in the References section of 40 CFR Part 51, Appendix W. The Auer method requires drawing a circle with a 3-kilometer radius centered on the centroid of the emissions source locations and classifying the land use types within the circle as urban or rural according to a set of criteria. If 50% or more of the land use types within the circle meet the urban criteria, the facility is considered to be in an urban area.

As shown in Figure 4-3, the area within 3 kilometers of the Project is rural. More than 50% of the land use types within the circle meet the criteria to be classified as rural. Therefore, the modeling used rural dispersion coefficients.

Figure 4-2: Fenceline and Receptor Locations



Blue Cross: Uniform Receptor Grid
Pink Cross: Discrete Receptor (Residence, Sensitive, Worker)

Figure 4-3: Land Use within 3 km of Project

Red Circle: 3-km Distance from Project

4.1.7 Buildings

The modeling includes existing and future on-site and off-site structures expected to have the potential to result in downwash effects. Building downwash effects were assessed for all emissions sources using the Building Profile Input Program for PRIME (BPIPPRM).

Building locations are shown in Figures 4-4 and 4-5. Building locations and dimensions are included with the AERMOD project files.

4.1.8 Deposition

Deposition was accounted for in the multi-pathway exposure assessment in the HRA, as necessary, but not in the air dispersion modeling. In addition, wet and dry pollutant depletion was not used.

4.1.9 Source Information and Release Parameters

For the HRAs, AERMOD was run with a unit emission rate [1 gram per second (g/s)] for each source to calculate the concentration of TACs from each source per unit emission rate, known as X/Q (Chi/Q), for 1-hour and period (annual) averaging time options per receptor. The modeled X/Q concentration was calculated for each source, at each receptor, for each averaging time for input into the Hotspots Analysis and Reporting Program, version 2 (HARP2).

4.1.9.1 Construction

HRA modeling was conducted for construction for the DPM exhaust from the construction equipment and delivery trucks. The construction HRA encompassed all stages of construction spanning the 7-year period.

Per SJVAPCD guidance, vehicle travel emissions were included in the HRA for travel on-site and up to ¼ mile off-site. The vehicle DPM exhaust emissions were modeled as line volume sources using the parameters outlined in the SJVAPCD guidance and unit emissions.

The construction equipment was modeled as volume sources located in the areas where the construction activities are expected to occur. The X/Q is obtained for source groupings that encompass Stage 1, 2 and 3 construction volume sources. Emissions for each construction equipment volume source in AERMOD were proportioned based on the number of construction volume sources per Stage. The emissions from the construction volume sources add up to 1 g/s per Stage.

Figure 4-4 shows the locations of the sources included in the construction modeling.

4.1.9.2 Operations

Modeling was conducted for the full buildout scenario to ensure maximum Project-related impacts were assessed. This includes the Rendering Plant, Pet Food Plant, and mules, trucking, and worker vehicles exhaust and paved road with all building features. Figure 4-5 shows the locations of each source.

All stationary sources were modeled as a point sources, including the Rendering Plant sources (boilers, scrubbers, RTO, and solids scrubber) and the Pet Food facility RTO. The

Rendering Plant truck loadout was modeled as two volume sources representing the truck bay doors.

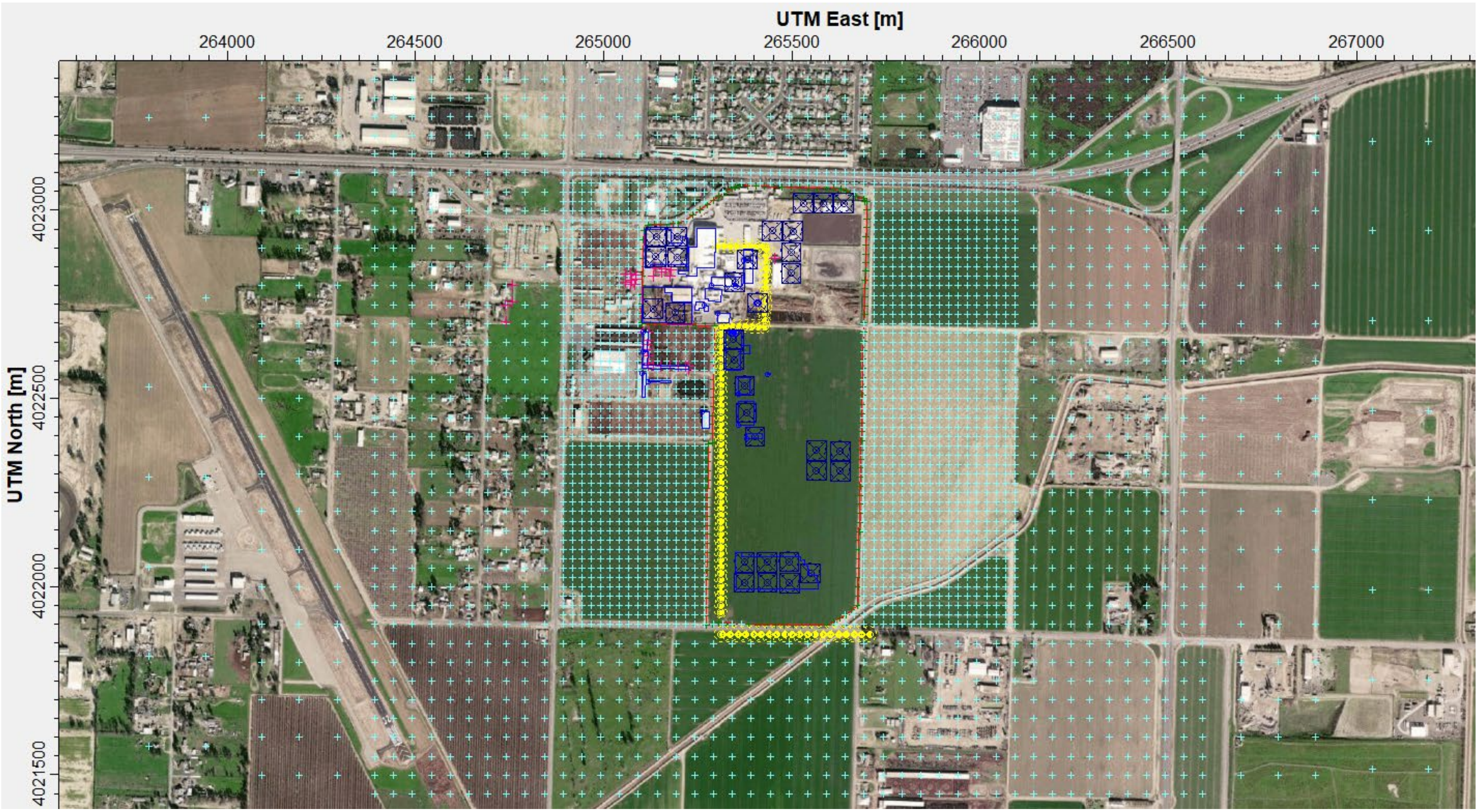
The mules, on-site and off-site trucks, and worker vehicles exhaust and paved road dust were modeled as line volume sources. Truck and worker idling and the TRUs were modeled as a series of point sources per SJVAPCD modeling guidance. Numerous sources were used for each area to differentiate emissions from the distinct activities, such as vehicle exhaust, paved road dust, etc. Per SJVAPCD guidance, off-site vehicle travel was included for a distance of ¼ mile for both the AAQA and HRAs.

The release parameters utilized for each source are provided in Appendix D and were provided by the Applicant or derived from SJVAPCD guidance.

For the AAQA, emissions for each criteria pollutant and source were used in AERMOD. Maximum hourly NO_2, CO, and SO_2 emissions were used for all averaging periods. Maximum daily emissions were used in modeling the 24-hour and annual $PM_{2.5}$ and PM_{10} concentrations. The use of the short-term maximum emissions for all averaging times will overestimate the long-term concentrations.

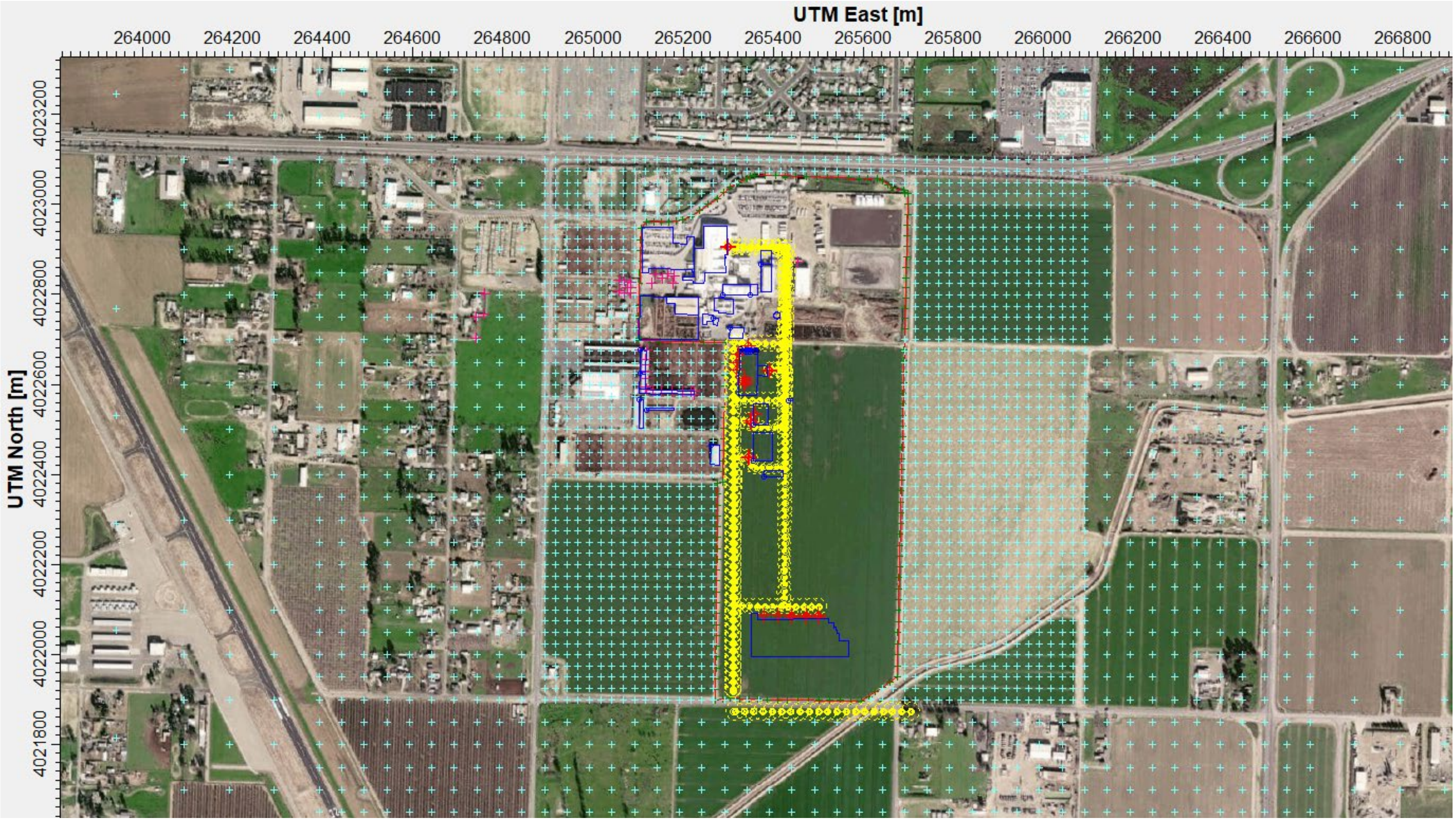
For the HRA, AERMOD was run with a unit emission rate for each source for 1-hour and period averaging times.

Figure 4-4: Construction Source, Building, and Fenceline Locations



Red Line: Facility Boundary
Blue Polygon: Building
Blue Circle Inside Square: Emission Volume Source
Yellow: Emission Line Volume Source
Blue Cross: Uniform Receptor Grid
Pink Cross: Discrete Receptor (Residence, Sensitive, Worker)

Figure 4-5: Operational Source, Building, and Fenceline Locations



Red Line: Facility Boundary
Blue Polygon: Building
Red Cross: Emission Point Source
Blue Circle Inside Square: Emission Volume Source
Yellow: Emission Line Volume Source
Blue Cross: Uniform Receptor Grid
Pink Cross: Discrete Receptor (Residence, Sensitive, Worker)

4.2 Ambient Air Quality Analysis

If project criteria pollutant emissions exceed the mass emission significance thresholds in the SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) and policy APR-2030, then modeling is required to demonstrate compliance with the NAAQS and CAAQS for five primary criteria pollutants, i.e., NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$ (O_3 or VOC modeling is not required for individual projects).

As shown in Table 3-18, Project-related CO emissions exceed the daily SJVAPCD CEQA significance threshold of 100 pounds per day. As shown in Table 3-17, emissions of NO_x from mobile sources that do not require permits exceed the annual SJVAPCD CEQA significance threshold of 10 tons per year. Since Project emissions exceed these thresholds, an AAQA is required for the proposed Project for all five criteria pollutants.

The purpose of the AAQA is to evaluate whether or not criteria pollutant emissions resulting from the proposed Project will cause or contribute significantly to a violation of the CAAQS or NAAQS. AERMOD was used to simulate the atmospheric transport and dispersion of airborne pollutants and to quantify the maximum expected ground-level concentrations (GLCs) from Project emissions. The air quality modeling methodology described in this section is based on SJVAPCD policies APR-1925 (SJVAPCD 2019), APR-2030 (SJVAPCD 2018a), and Guidance for Air Dispersion Modeling (SJVAPCD 2006).

The AAQA follows the SJVAPCD APR-1925 Level 2 approach for all pollutants except NO_2, where each pollutant is modeled separately using maximum emission rates for the appropriate averaging time. Step 1 combines the modeled concentration with a conservative background concentration for comparison to the AAQS. If the Project plus background concentration is less than the AAQS, then Project emissions have a less than significant impact. This Step 1 technique was used to assess the impacts of the proposed Project's CO and SO_2 emissions.

Per SJVAPCD guidance, for pollutants where the background concentration is already greater than the standard, Step 2 compares the maximum modeled concentration to the corresponding SIL. If the Project concentration is less than the SIL, then Project emissions do not contribute significantly to a violation of the CAAQS or NAAQS. SIL modeling was conducted for PM_{10} and $PM_{2.5}$ since the background concentrations of these pollutants have been greater than the AAQS, as described in Section 2.1.2. The CVM facility is a minor source for $PM_{2.5}$, so the modeling examined only primarily emitted $PM_{2.5}$ for comparison to the SIL.

NO_2 modeling for the 1-hour and annual NAAQS followed the SJVAPCD Level 3 and EPA Tier 3 technique outlined in the EPA NO_2 clarification memo (EPA 2014), using the Plume Volume Molar Ratio Method (PVMRM).

An EPA Tier 1 assessment conservatively assumes that all NO_x converts to NO_2. An EPA Tier 2 assessment applies the Ambient Ratio Method 2 (ARM2), which assumes the conversion of 20-90% of NO_x to NO_2. For an EPA Tier 3 assessment the PVMRM option accounts for the role of ambient O_3 in limiting the conversion of emitted NO_x – which occurs mostly in the form of nitric oxide (NO) – to NO_2, the pollutant regulated by ambient standards. The input data to the AERMOD-PVMRM model were provided by the SJVAPCD and include representative hourly O_3 and NO_2 monitoring data for the time period corresponding to the meteorological input record. Since O_3 and NO_2 data were not processed for 2017, the NO_2 modeling encompassed 2013-2016.

NO_2/NO_x in-stack ratios for each source type were obtained from the SJVAPCD PVMRM guidance document (SJVAPCD 2010).

The NO_2 modeling used hourly O_3 and hourly NO_2 data paired in time with the meteorological data to estimate the total Project plus background concentration within AERMOD so that the statistical nature of the NAAQS could be incorporated into the calculations.

4.2.1 Background Air Quality

Dispersion modeling to evaluate compliance with air quality standards requires the use of measured air pollutant concentrations to account for the contributions of regional emissions, i.e., emissions sources not explicitly included in the model simulations.

Table 2-2 presents the maximum observed ambient background data for each pollutant and averaging time at the nearest representative monitoring station for the most recent data available. The tabulated values were used to represent background levels for the indicated pollutants and averaging times in the AAQA to evaluate compliance with the CAAQS or NAAQS. The monitoring data indicate that air quality in the Project area complies with all NAAQS and CAAQS for NO_2, CO, and SO_2. However, the CAAQS and NAAQS are periodically exceeded in the Project area for $PM_{2.5}$ and PM_{10}.

The NO_2 modeling used hourly background NO_2 data paired in time with the meteorological and O_3 data to estimate the total Project plus background concentration within AERMOD.

4.2.2 Analysis Scenario and Emission Rates

The NO_2, CO, and SO_2 modeling was conducted using the highest 1-hour emission rate for all averaging times. This approach is conservative for longer averaging times, especially the annual average. The PM_{10} and $PM_{2.5}$ modeling used the highest 24-hour emission rate for all averaging times. Emissions are outlined in Section 3 and contained in the electronic modeling files. The maximum buildout scenario was evaluated for air quality impacts; this approach ensures that the maximum air quality impacts have been identified.

4.2.3 AAQA Results

Table 4-1 presents the maximum model-predicted concentrations from the proposed Project emissions, maximum background concentrations, and the sum of these concentrations in comparison to the SO_2 and CO NAAQS and CAAQS. The NO_2 modeling results in Table 4-1 incorporates the background NO_2 concentrations in the model calculations. The AAQA modeling results presented in Table 4-1 demonstrate that the Project would not cause an exceedance of the NO_2, SO_2, or CO NAAQS or CAAQS.

Since background PM_{10} concentrations are greater than the 24-hour and annual CAAQS and background $PM_{2.5}$ concentrations are greater than the NAAQS and CAAQS, the modeled concentrations are compared to the SILs.

Table 4-2 shows that the model-predicted PM_{10} and $PM_{2.5}$ concentrations from the stationary sources exceed the 24-hour and annual SILs. The emissions from fugitive dust sources resulted in model-predicted concentrations less than the PM_{10} and $PM_{2.5}$ fugitive dust SILs. The main sources contributing to the PM_{10} and $PM_{2.5}$ concentrations are the four boilers at the rendering plant. CVM intends to typically operate two to three boilers, reserving one as a backup; thus, the actual concentrations would be significantly less than the modeled concentrations.

Per policy APR-1925, if modeling shows project impacts to be above the NAAQS, CAAQS, or SIL, then the project can surrender offsets in the form of Emission Reduction Credits (ERCs) or Voluntary Emission Reduction Agreements (VERAs) to mitigate project emissions. CVM proposes to mitigate the PM_{10} and $PM_{2.5}$ predicted impacts through compliance with the SJVAPCD Policy APR-1925 including the surrender of ERCs or a VERA. Through the implementation of mitigation, the proposed Project would not cause a violation of the NAAQS or CAAQS or contribute substantially to an existing air quality violation, and therefore will have a less than significant impact on air quality.

Table 4-1: AAQA Modeling Results for Project Operations

Pollutant	Averaging Time	Federal or State Standard	Modeled Concentration (μg/m³)	Background Concentration (μg/m³)	Modeled + Background Concentration (μg/m³)	AAQS (μg/m³)	Exceed Standard?
NO_2	1-Hour	Federal[1]	173.9	--	173.9	188	No
		California[2]	233.8	--	233.8	339	No
	Annual	Federal	27.4	17.2	44.6	100	No
		California	27.4	17.2	44.6	57	No
CO	1-Hour	Federal	240.5	2,725.5	2,966	40,000	No
		California	240.5	2,725.5	2,966	23,000	No
	8-Hour	Federal	169.4	2,329.5	2,499	10,000	No
		California	169.4	2,329.5	2,499	10,000	No
SO_2	1-Hour	Federal[3]	66.0	14.1	80.2	196	No
		California	69.6	23.7	93.3	655	No
	3-Hour	Federal Secondary	56.6	13.6	70.1	1,300	No
	24-Hour	California	21.4	13.6	35.0	105	No
PM_{10}	24-Hour	Federal	See SIL Analysis	298.4	-	150	Background Over the CAAQS and/or NAAQS, Go To Step 2 SIL Analysis
		California	See SIL Analysis	220.5	-	50	
	Annual	California	See SIL Analysis	47.9	-	20	
$PM_{2.5}$	24-Hour	Federal	See SIL Analysis	113.4	-	35	
	Annual	Federal	See SIL Analysis	17.7	-	12	
		California	See SIL Analysis	16.8	-	12	

1. The modeled concentration presented is the design value (the model predicted eighth highest value) including the NO_2 background concentration as calculated in AERMOD.

2. The modeled concentration presented is the model predicted maximum hourly value including the NO_2 background concentration as calculated in AERMOD.

3. The modeled concentration presented is the design value (the model predicted fourth highest value).

Table 4-2: PM_{10} and $PM_{2.5}$ SIL Modeling Results for Project Operations

Pollutant	Averaging Time	Modeled Concentration (μg/m³)	SIL (μg/m³)	Exceed SIL?
PM_{10}	24-Hour	9.75	5.0	Yes
	Annual	1.10	1.0	Yes
$PM_{2.5}$	24-Hour	9.71	1.2	Yes
	Annual	0.91	0.2	Yes
Fugitive PM_{10}	24-Hour	4.24	10.4	No
	Annual	1.08	2.08	No
Fugitive $PM_{2.5}$	24-Hour	2.12	2.5	No
	Annual	0.32	0.63	No

4.3 Health Risk Assessment

The HRA followed the SJVAPCD Policy 1906 (SJVAPCD 2018b) Tier 2 refined project modeling techniques, which are based on the Office of Environmental Health Hazard Assessment (OEHHA) Tier 1 technique (OEHHA 2015), with the exceptions noted in the following sections. (SJVAPCD 2015b)

For the HRA, AERMOD was run with all sources emitting unit emissions (1 g/s) to obtain the X/Q values that are necessary for input into HARP2. The health risk calculations were performed using the HARP2 Air Dispersion Modeling and Risk Tool (ADMRT), version 21081. The X/Q values that were determined for each source using AERMOD were imported into HARP2 and used in conjunction with hourly and annual emissions to determine the GLC for each pollutant. The GLCs were then used to estimate the long-term cancer health risk to an individual and non-cancer chronic and acute health indices.

The Point of Maximum Impact (PMI), Maximally Exposed Individual Resident (MEIR), Maximally Exposed Individual Worker (MEIW), and maximum impact at a sensitive receptor were calculated for cancer risk and non-cancer chronic and acute health indices. The PMI is a location within the modeling grid where the model calculates the highest (worst-case) health risk. The PMI may or may not be a habitable location. A description of the health risk indices and associated calculations conducted in HARP2 is provided below. Table 4-3 provides a listing of the HARP2 options that were selected for the analysis.

HRA modeling was conducted for both construction and operations. The HARP2 results are presented in Appendix E for the construction scenario and in Appendix F for the operational scenario.

4.3.1 Exposure Pathways

The HRA included a multi-pathway assessment. The relevant multi-pathway components of all substances with multi-pathway effects were included in the health risk calculations as shown in Table 4-3 for the different receptor types. The grid, residential, and sensitive receptors will all be evaluated as residential in HARP2.

Due to the rural location of the Project, the pig/chicken/egg pathways were selected. To determine the pig/chicken drinking water parameters, it was assumed that there are 10 water troughs close to the facility and the water in each trough is exchanged once a day.

Immediately to the west of the CVM facility is the Overland Stockyard, where cattle are sold at auction. Therefore, the beef/cow pathway was selected and the nearest receptor within the stockyard was set as the pasture pathway location. To determine the beef/cow drinking water parameters, it was assumed that there are 20 water troughs close to the facility and the water in each trough is exchanged once a day. Since all cattle nearby are only temporarily in these locations, the drinking water fraction was set at 1 week out of 52 (= 0.02), and no grazing was selected.

Table 4-3: HARP2 Model Options

Parameter	Assumptions				Comments
Multi-Pathway					
Inhalation	Res	☒	Work	☒	–
Soil	Res	☒	Work	☒	–
Dermal	Res	☒	Work	☒	"Mixed" climate
Mother's Milk	Res	☒	Work	☐	–
Drinking Water	Res	☐	Work	☐	–
Fish	Res	☐	Work	☐	–
Homegrown Produce	Res	☒	Work	☐	Default for "Households that Farm"
Beef/Dairy	Res	☒	Work	☐	Nearest receptor within the neighboring stockyard will be set as the pasture pathway location.
Pigs, Chickens, and/or Eggs	Res	☒	Work	☐	Default fraction from diet
Deposition Velocity	0.02 m/s				Per SJVAPCD APR-1906
Residential Cancer Risk Assumptions – Operations					
Exposure Duration	70 years				–
Fraction of Time at Home	Third Trimester to 16 years: Off 16 years to 30 years: Off				Per SJVAPCD guidance
Inhalation Rate Basis	Long-term 24-hour				Per SJVAPCD guidance
Analysis Option	OEHHA Derived Method				–
Worker Cancer Risk Assumptions – Operations					
Exposure Duration	40 years				–
Analysis Option	OEHHA Derived Method				–
Inhalation Rate Basis	Long-term 24-hour				–
Worker Adjustment Factor	1				Continuous operations
Residential and Worker Non-Cancer Risk Assumptions – Operations					
Analysis Option	OEHHA Derived Method				–
Inhalation Rate Basis	Long-term 24-hour				–
Worker Adjustment Factor	1				Continuous operations

Parameter	Assumptions	Comments
Residential Cancer Risk Assumptions – Construction		
Exposure Duration	7 years	–
Fraction of Time at Home	Third Trimester to 7 years: Off	Per SJVAPCD guidance
Inhalation Rate Basis	Long-term 24-hour	Per SJVAPCD guidance
Analysis Option	OEHHA Derived Method	–
Worker Cancer Risk Assumptions – Construction		
Exposure Duration	7 years	–
Analysis Option	OEHHA Derived Method	–
Inhalation Rate Basis	Long-term 24-hour	Per SJVAPCD guidance
Worker Adjustment Factor	4.2	8 hours/day, 5 days/week
Residential and Worker Non-Cancer Risk Assumptions – Construction		
Analysis Option	OEHHA Derived Method	–
Inhalation Rate Basis	Long-term 24-hour	–
Worker Adjustment Factor	4.2	8 hours/day, 5 days/week

4.3.2 Cancer Risk

4.3.2.1 Construction

Since the construction activities will last up to 7 years, cancer risk was estimated for a 7-year period using the average annual DPM emissions over the entire construction period for both residential and off-site workers.

Based on the SJVAPCD's recommendations, the OEHHA Derived calculation method was used to estimate all cancer risks at residential/sensitive/grid and off-site worker receptors. The "OEHHA Derived" method uses high-end exposure parameters for the top two exposure pathways and mean exposure parameters for the remaining pathways for cancer risk estimates. Per SJVAPCD Policy APR-1906 guidance, a deposition velocity of 0.02 meters per second was used. Construction is expected to occur 8 hours per day, 5 days per week; therefore, the Worker Adjustment Factor (WAF) was set to 4.2 (= 24/8 x 7/5) in HARP2.

4.3.2.2 Operations

Cancer risk is the estimated probability of a maximally exposed individual potentially contracting cancer as a result of exposure to TACs over a period of time. Per SJVAPCD Policy 1906 and HRA guidance (SJVAPCD 2018 and 2015), this HRA estimated cancer risk over a 70-year lifetime for residential, sensitive, and PMI grid receptor locations and 40 years for off-site worker receptor locations.

Based on the SJVAPCD's recommendations, the OEHHA Derived calculation method was used to estimate all cancer risks at residential/sensitive/grid and off-site worker receptors. The "OEHHA Derived" method uses high-end exposure parameters for the top two exposure pathways and mean exposure parameters for the remaining pathways for cancer risk estimates. Per SJVAPCD Policy APR-1906 guidance, a deposition velocity of 0.02 meters per second was used. The facility is being permitted to operate up to 24 hours per day, 7 days per week; therefore, the WAF was set to 1 in HARP2.

4.3.3 Chronic Hazard Index

Some TACs may have non-cancer health risk due to a long-term (chronic) exposure. The Chronic Hazard Index (HIC) is the sum of the individual substance HICs for all TACs affecting the same target organ system. Chronic risk was calculated using the OEHHA Derived Method at all off-site receptors for an annual exposure duration. This analysis used the exposure pathways outlined in Table 4-3.

4.3.4 Acute Hazard Risk

Some TACs may have non-cancer health risk due to short-term (acute) exposures. Acute Hazard Index (HIA) is the sum of the individual substance HIAs for all TACs affecting the same target organ system. Acute risk was calculated at all receptors for an exposure duration of 1 hour.

Since DPM does not have an acute reference exposure level (REL), no acute risks were estimated for the construction scenario.

4.3.5 HRA Results

4.3.5.1 Construction

Table 4-4 presents a summary of the construction HRA results at the PMI, MEIR, MEIW, and maximally exposed sensitive receptor. Appendix D presents more detailed tables of the HARP2 modeling results for construction for each health risk, at each receptor type, broken down by pollutant and source.

The results show that, for all receptor types and locations, the predicted health risks are less than the SJVAPCD cancer significance threshold and well below the non-cancer thresholds. The cancer risk PMI occurs at the facilities western fenceline near the Overland Stockyard. The cancer risk at the MEIR occurs at the on-site temporary mobile home resident located north of the existing dry storage building. DPM emissions from the construction equipment contributes to the majority of the cancer risk.

Table 4-4: Construction Health Risk Assessment Results

Health Risk	PMI	MEIR	Maximum Sensitive Receptor	MEIW	SJVAPCD CEQA Threshold
Cancer Risk (In One Million)	20.34	19.48	0.22	1.79	20
HIC	0.008	0.007	0.0001	0.003	1

4.3.5.2 Operations

The results of the HRA from the Project operational emissions at full buildout are summarized in Table 4-5. Appendix E presents more detailed tables of the HARP2 modeling results for operations for each health risk, at each receptor type, broken down by pollutant and source.

The results show that, for all receptor types and locations, the predicted health risks are less than the SJVAPCD cancer significance threshold and well below the non-cancer thresholds. The cancer risk PMI and MEIR occur at the same location, the on-site temporary mobile home resident located north of the existing dry storage building. DPM emissions from the mules contributes to the majority of the cancer risk at this location.

Table 4-5: Operational Health Risk Assessment Results

Health Risk	PMI	MEIR	Maximum Sensitive Receptor	MEIW	SJVAPCD CEQA Threshold
Cancer Risk (In One Million)	8.66	8.66	0.68	0.28	20
HIC	0.009	0.003	0.0002	0.002 (Annual) 0.0003 (8-Hour)	1
HIA	0.054	0.012	0.003	0.015	1

5.0 AIR QUALITY SIGNIFICANCE FINDINGS

The project features that would serve to mitigate impacts, including required mitigation measures, are summarized in this section. The CEQA Checklist questions related to air quality from the County CEQA Guidelines, based on Appendix G of the CEQA Guidelines, are also addressed herein.

5.1 Project Features

As discussed, the following project features will be incorporated into the project design:

- As required by SJVAPCD Regulation VIII, Rule 8021 Section 6.3, an approved Dust Control Plan will be implemented during project construction;
- Dedicated, newer off-road earthmoving equipment will employ Tier 4 engines for all site preparation and grading activities;
- NZE trucks will be used for fleet vehicles between CVM and HRBC;
- An RTO will be installed at the Pet Food facility to minimize odors; and
- An effective odor control system will be installed at the Rendering Facility to minimize odors, including multiple scrubbers, an RTO, and indoor unloading and loading of raw and finished materials.

5.2 CEQA Significance Criteria

The County CEQA Appendix G air quality questions state that a project would have a significant air quality impact if it would (County 2021):

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 nonattainment under an applicable federal or State ambient air quality standard;

c) Expose sensitive receptors to substantial pollutant concentrations; or

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

The SJVAPCD CEQA guidance document notes that construction and operations emissions should be compared to both the annual and daily SJVAPCD CEQA thresholds for determination of significance. The SJVAPCD CEQA thresholds are outlined in the GAMAQI and policy APR-2030 (SJVAPCD 2018a). Table 5-1 presents the SJVAPCD thresholds.

SJVAPCD guidelines also set a daily construction and operational permitted and non-permitted emission threshold of 100 pounds per day of any criteria pollutant, above which the applicant is required to determine potentially significant impacts from either construction or operational emissions (SJVAPCD 2013 and 2018a). If the daily or annual Project emissions exceed any of these thresholds, then the SJVAPCD requires an AAQA to show that the Project would not have a significant impact.

Table 5-1: SJVAPCD CEQA Thresholds of Significance

Pollutant	Annual Threshold[1] (tons/year)	APR-2030 Threshold[2] (pounds/day)
VOC	10	100
NO_x	10	100
CO	100	100
SO_x	27	100
PM_{10}	15	100
$PM_{2.5}$	15	100
TACs (including carcinogens and non-carcinogens)[3]	Maximally Exposed Individual risk equals or exceeds 20 in one million	
	Acute Hazard Index equals or exceeds 1 for the Maximally Exposed Individual	
	Chronic Hazard Index equals or exceeds 1 for the Maximally Exposed Individual	
GHGs	Implement Best Performance Standards (BPS)	
	Reduce Project GHG Emission by 29% over Business as Usual	

Sources: SJVAPCD 2015a, 2018a.

[1] Construction or operation (permitted or non-permitted).

[2] Stationary source or development projects (APR-2030).

[3] Carcinogens include DPM as PM_{10} in diesel engine exhaust.

As shown in Tables 3-5 and 3-6, all construction criteria emissions are below SJVAPCD annual and daily significance thresholds for construction Stages 1, 2, and 3, respectively. Tables 3-17 and 3-18 compare the Project permitted and non-permitted operational emissions to the annual and daily CEQA significance thresholds. Only CO emissions exceed the daily threshold for permitted sources. NO_x emissions exceed the annual non-permitted source thresholds. These NO_x emissions are primarily from the exhaust from the mobile sources for off-site highway travel and include full buildout truck mileage for each facility, even though there is only a nominal net project-related increase compared to current CVM and HRBC operations.

Since on-site CO emissions exceed the CEQA thresholds, an AAQA was conducted for the Project as discussed in Section 4.2.

Each of the CEQA air quality checklist questions are discussed below.

5.3 Impact AQ-1

Would the Project conflict with or obstruct implementation of the applicable air quality plan?

5.3.1 Discussion

The SJVAB is in nonattainment with State and federal O_3 and $PM_{2.5}$ standards and State PM_{10} standards; for all other pollutants, the SJVAB is either attainment or unclassified status. Due to the nonattainment status, the SJVAPCD periodically updates the San Joaquin Valley Clean Air Plan (CAP) to meet State and federal requirements and/or to incorporate the latest technical information. The CAP is the District's contribution to the State Implementation Plan (SIP), which is submitted to the U.S. EPA for approval under the CAA.

The SJVAPCD has adopted two current plans:

- The 2016 Plan for the 2008 8-hour Ozone Standard – This plan addresses strategies and actions necessary to improve the valley's air quality and meet the federal air quality standards for O_3; and
- The 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards – This plan addresses strategies and actions necessary to improve the valley's air quality and meet the newest federal air quality standards for $PM_{2.5}$.

Operation of the proposed Project would not conflict with the SJVAPCD air quality planning goals because project elements would be required to comply with all applicable SJVAPCD rules and CARB regulations during construction and operations [e.g., New Source Review (NSR), permitting requirements, prohibitions, visible emissions, nuisance, fugitive dust, architectural coatings, gas-fired heating equipment, etc.].

As further discussed in Impact AQ-2, the Applicant will work with the SJVAPCD to mitigate operational PM_{10} and $PM_{2.5}$ emissions in compliance with SJVAPCD Policy APR-1925, including the surrender of ERCs or a VERA. ERCs and VERAs fund emission-reducing projects off-site, but are located within the SJVAPCD's boundaries. Such projects can include replacing old high-emitting agricultural equipment, scrapping old cars (e.g., vehicles that fail smog tests and repairs would not be cost-effective), and other incentive projects, such as repowering.

Therefore, the Project would not conflict with or obstruct implementation of the applicable air quality plan, and the overall impact would be less than significant.

5.3.2 Proposed Mitigation

Construction Mitigation Measure AQ-1: Pursuant to SJVAPCD Regulation VIII, Rule 8021 Section 6.3, the Project shall submit a Dust Control Plan (DCP) to the Air Pollution Control Officer (APCO) prior to the start of construction activities at the site. The DCP shall describe all fugitive dust control measures to be implemented before, during, and after any dust-generating activity. The DCP shall contain all the information described in Section 6.3.6 of the rule and identify applicable dust control measures contained in Rules 8031, 8041, 8051, 8061, and 8071. Construction activities shall not commence until the APCO has approved or conditionally approved the DCP for implementation. The Applicant shall provide written notification to the APCO via fax, e-mail, or mail within 10 days prior to commencement of earthmoving and other construction activities. When exposure to dust is unavoidable for workers who will be disturbing the top 2 to 12 inches of soil, the construction contractor shall provide workers with National Institute for Occupational Safety and Health (NIOSH)-approved respiratory protection with particulate filters rated N95, N99, N100, P100, or HEPA, as recommended in the California Department of Public Health publication "Preventing Work-Related Coccidioidomycosis (Valley fever)."

Operations Mitigation Measure AQ-2: The Project will mitigate PM_{10} and $PM_{2.5}$ through consultation with the SJVAPCD to comply with the requirements of SJVAPCD Policy APR-1925, including the surrender of ERCs or a VERA.

5.3.3 Level of Significance After Mitigation

Through the implementation of emissions control plans, compliance with the SJVAPCD's NSR and other regulatory requirements, and the surrender of ERCs or a VERA to mitigate operational PM_{10} and $PM_{2.5}$ emissions, the proposed Project will not conflict with or obstruct implementation of the applicable air quality plans. Therefore, the Project will have a less than significant impact on ambient air quality.

5.4 Impact AQ-2

Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable federal or State ambient air quality standard?

5.4.1 Discussion

The SJVAB is nonattainment with respect to State and federal O_3 and $PM_{2.5}$ standards and State PM_{10} standards. The project would emit O_3 precursors (VOC and NO_x) and PM_{10} and $PM_{2.5}$ emissions.

The County and SJVAPCD CEQA guidance requires project construction and operations emissions to be compared to the CEQA mass thresholds shown in Table 5-1 for determination of significance. If all emissions are below these thresholds, then a project would not cause or contribute to a violation of any CAAQS or NAAQS. If emissions exceed these thresholds, an AAQA should be conducted to show that the project would not cause or contribute to a violation of any CAAQS or NAAQS.

As shown in Tables 3-5 and 3-6, construction emissions are below both the daily and annual SJVAPCD CEQA thresholds; therefore, construction emissions would have a less than significant cumulative impact on air quality. As shown in Tables 3-17 and 3-18, except for CO daily permitted and NOx annual non-permitted operational emissions, all other pollutants are below the annual and daily CEQA significance thresholds.

Due to the elevated CO and NOx emissions, a detailed AAQA was prepared for the proposed Project for NO_2, SO_2, CO, PM_{10}, and $PM_{2.5}$, and the results are presented in Section 4.2.3. The AAQA demonstrates that the Project will not cause an exceedance of the NO_2, SO_2, or CO NAAQS or CAAQS.

Since background PM_{10} and $PM_{2.5}$ concentrations are greater than the NAAQS and CAAQS, the modeled concentrations are compared to the SILs. The model-predicted PM_{10} and $PM_{2.5}$ concentrations from all on-site stationary and mobile exhaust sources are greater than the SILs, and the concentrations from road dust sources are less than the PM_{10} and $PM_{2.5}$ fugitive dust SILs.

Per SJVAPCD policy APR-1925, if modeling shows project impacts are above the applicable AAQS or SIL, then the project can surrender offsets in the form of ERCs or VERAs to mitigate project emissions. The Project will mitigate PM_{10} and $PM_{2.5}$ emissions by working with the SJVAPCD to comply with the requirements of SJVAPCD Policy

APR-1925, including the surrender of ERCs or a VERA; therefore, the Project will have a less than significant impact on air quality.

5.4.1.1 Particulate Matter Health Effects

Respirable Particulate Matter. PM_{10} consists of particulate matter, fine dusts, and aerosols. When inhaled, particles larger than 10 microns generally are caught in the nose and throat and do not enter the lungs. PM_{10} can enter the large upper branches of the lungs just below the throat, where they are caught and removed (by coughing, spitting, or swallowing).

The primary sources of PM_{10} include dust from paved and unpaved roads, construction, and demolition operations. Lesser sources of PM_{10} include wind erosion, agricultural operations, residential wood combustion, smoke, tailpipe emissions, and industrial sources. These sources have different constituents and, therefore, varying effects on health. Road dust is composed of many particles other than soil dust. It also includes engine exhaust, tire rubber, oil, and truck load spills. DPM contains many toxic particles and elemental carbon (soot) and is considered a TAC in California. Airborne particles can both absorb and adsorb toxic substances and can be inhaled and become lodged in the lungs. Once in the lungs, the toxic substances can be absorbed into the bloodstream and carried throughout the body. Concentrations of PM_{10} tend to be lower during the winter months because weather greatly affects PM_{10} concentrations, mainly due to “washout” by rain. During rain, concentrations are relatively low, and on windy days, PM_{10} levels can be high. Photochemical aerosols formed by chemical reactions with manmade emissions may also influence PM_{10} concentrations.

Elevated ambient particulate levels are associated with premature death, an increased number of asthma attacks, reduced lung function, aggravation of bronchitis, respiratory disease, cancer, and other serious health effects. Short-term exposure to particulates can lead to coughing, minor throat irritation, and a reduction in lung function. Long-term exposure can be more harmful. The U.S. EPA estimates that 8% of urban nonsmoker lung cancer risk is due to PM_{10} in soot from diesel trucks, buses, and cars. Additional studies by the EPA and the Harvard School of Public Health estimate that 50,000 to 60,000 deaths per year in the United States are caused by particulates. Particles of PM_{10} collect in the upper portion of the respiratory system, affecting the bronchial tubes, nose, and throat. They contribute to aggravation of asthma, premature death, increased number of asthma attacks, bronchitis, reduced lung function, respiratory disease, aggravation of respiratory and cardiovascular disease, alteration of lung tissue and structure, changes in respiratory defense mechanisms, and cancer.

Fine Particulate Matter. $PM_{2.5}$ is a mixture of particulate matter, fine dusts, and aerosols. Particles of $PM_{2.5}$ can enter the deepest portions of the lungs where gas exchange occurs between the air and the blood stream. These are the most dangerous particles because the lungs have no efficient mechanisms for removing them. If these particles are soluble in water, they pass directly into the blood stream within minutes. If they are not soluble in water, they are retained deep in the lungs and can remain there permanently. This increases the risks of long-term disease, including chronic respiratory disease, cancer, and increased and premature death. Other effects include increased respiratory stress and disease, decreased lung function, alterations in lung tissue and structure, and alterations in respiratory tract defense mechanisms. According to a recent study by CARB, exposure to ambient $PM_{2.5}$ can be associated with about 14,000 to 24,000 premature annual deaths statewide. Particulates can also damage materials and reduce visibility.

Particles of $PM_{2.5}$ are emitted from activities, such as industrial and residential combustion processes, wood burning, and diesel- and gasoline-powered vehicles. They are also formed in the atmosphere from precursor gases such as SO_2, NO_x, ammonia (NH_3), and VOCs that are emitted from combustion activities and become particles as a result of chemical transformations in the air (secondary particles).

5.4.1.2 Cumulative Effects

The only known project that will occur at the same time near CVM is the construction of the High-Speed Rail (HSR) line on the eastern side of Highway 43, approximately 1 mile east of CVM, and the relocation of Fire Station No. 4 approximately 1.25 miles to the southeast of CVM. Emissions associated with these projects will occur primarily during construction, which has a limited duration. The PM emissions from the construction will be primarily from fugitive dust from earth moving, and most of those particles tend to fall out within 500 feet; therefore, it is unlikely that there would be a cumulatively considerable net increase of PM from these projects. Further, these construction projects must comply with SJVAPCD Regulation VIII in the same manner as described below for the CVM project.

Other existing sources of fugitive PM emissions in the project area include agricultural activities and associated unpaved road dust, which could cause cumulative effects from time to time, particularly in dry, windy conditions. However, due to the intermittent and short-term weather-related occurrences of these types of sources, no significant long-term cumulative air quality impacts are anticipated.

5.4.2 Proposed Mitigation

Construction Mitigation Measure AQ-1: Pursuant to SJVAPCD Regulation VIII, Rule 8021 Section 6.3, the Project shall submit a DCP to the APCO prior to the start of construction activities at the site. The DCP shall describe all fugitive dust control measures to be implemented before, during, and after any dust-generating activity. The DCP shall contain all the information described in Section 6.3.6 of the rule and identify applicable dust control measures contained in Rules 8031, 8041, 8051, 8061, and 8071. Construction activities shall not commence until the APCO has approved or conditionally approved the DCP for implementation. The Project shall provide written notification to the APCO via fax, e-mail, or mail within 10 days prior to commencement of earthmoving and other construction activities. When exposure to dust is unavoidable for workers who will be disturbing the top 2 to 12 inches of soil, the construction contractor shall provide workers with National Institute for Occupational Safety and Health (NIOSH)-approved respiratory protection with particulate filters rated N95, N99, N100, P100, or HEPA, as recommended in the California Department of Public Health publication “Preventing Work-Related Coccidioidomycosis (Valley fever).”

Operations Mitigation Measure AQ-2: The Project will mitigate PM_{10} and $PM_{2.5}$ through consultation with the SJVAPCD to comply with the requirements of SJVAPCD Policy APR-1925, including the surrender of ERCs or a VERA.

5.4.3 Level of Significance After Mitigation

Based on the analyses and mitigation provided, the Project is not expected to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable NAAQS or CAAQS. Therefore, the Project will have a less than significant cumulative impact on air quality.

5.5 Impact AQ-3

Would the Project expose sensitive receptors to substantial pollutant concentrations?

5.5.1 Discussion

The SJVAPCD has set CEQA thresholds of significance through policy APR-1906 for TAC emissions based on the results of an HRA. The threshold for the maximally exposed individual is a predicted cancer risk that is less than or equal to 20 in one million and acute or chronic non-cancer risk predicted to be less than 1.0 (SJVAPCD 2018b).

To assess the potential acute, chronic, and carcinogenic health risks from the project, construction and an operational HRAs were conducted, as described in Section 4.3.

The results of the construction HRA are summarized in Table 4-4, which shows that predicted health risks are below the CEQA thresholds. The results of the operational HRA are summarized in Table 4-5, which shows that predicted health risks are below the CEQA thresholds.

Soil disturbance during construction activities would have the potential to expose workers and other persons near the project site to Valley fever, which is a respiratory fungal infection caused by two species of coccidioides (kok-sid-e-OY-deze) organisms. These fungi are found in soil in certain regions of the United States, particularly the southwest, including the San Joaquin Valley. The fungi spores can be entrained into the air by anything that disturbs the soil, such as farming, construction, and high winds. When inhaled, the fungi can cause Valley fever, also known as acute coccidioidomycosis (kok-sid-e-oy-doh-my-KOH-sis). Mild cases of Valley fever usually resolve on their own. In more-severe cases, doctors treat the infection with antifungal medications. Valley fever is the initial form of coccidioidomycosis infection. This initial, acute illness can develop into a more serious disease, including chronic and disseminated coccidioidomycosis. Symptoms of Valley fever include: fatigue (tiredness); cough; fever; shortness of breath; headache; night sweats; muscle aches or joint pain; and rashes on upper body or legs. These symptoms can be similar to those of other common illnesses, which may cause delays in getting patients correctly diagnosed and treated.

For many people, symptoms disappear after weeks or months without any treatment; however, healthcare providers may prescribe antifungal medications for some people to reduce symptoms or prevent the infection from getting worse. People who have severe lung infections or infections that have spread to other parts of the body always need antifungal treatment and may need hospitalization.

Anyone who lives in or travels to an area where the fungus lives is at risk of contracting Valley fever. Valley fever can affect people of any age but is most common in adults aged 60 and older. Additionally, certain groups of people may be at higher risk for developing the severe forms of Valley fever, such as: people who have weakened immune systems (e.g., HIV/AIDS, organ transplants, medications such as corticosteroids or tumor necrosis factor inhibitors); pregnant women; diabetics; and certain racial groups (e.g., Black or Filipino) (CDC and Mayo 2021). Mitigation Measure AQ-1 addresses protection against Valley fever for construction workers.

5.5.2 Proposed Mitigation

The Project will implement many design features that will minimize and mitigate emissions, including installation of scrubbers and RTOs at the Rendering and Pet Food facilities, use of NZE fleet trucks, and electric forklifts.

Construction Mitigation Measure AQ-1: Pursuant to SJVAPCD Regulation VIII, Rule 8021 Section 6.3, the Project shall submit a DCP to the APCO prior to the start of construction activities at the site. The DCP shall describe all fugitive dust control measures to be implemented before, during, and after any dust-generating activity. The DCP shall contain all the information described in Section 6.3.6 of the rule and identify applicable dust control measures contained in Rules 8031, 8041, 8051, 8061, and 8071. Construction activities shall not commence until the APCO has approved or conditionally approved the DCP for implementation. The Project shall provide written notification to the APCO via fax, e-mail, or mail within 10 days prior to commencement of earthmoving and other construction activities. When exposure to dust is unavoidable for workers who will be disturbing the top 2 to 12 inches of soil, the construction contractor shall provide workers with National Institute for Occupational Safety and Health (NIOSH)-approved respiratory protection with particulate filters rated N95, N99, N100, P100, or HEPA, as recommended in the California Department of Public Health publication "Preventing Work-Related Coccidioidomycosis (Valley fever)."

Construction Mitigation Measure AQ-3: During construction, all earthmoving equipment used during site preparation and grading activities will be part of a "Clean Fleet" equipped with Tier 4 diesel engines that substantially reduce DPM emissions compared to older fleet equipment with lower-Tier engines (i.e., Tiers 1, 2, or 3).

5.5.3 Level of Significance After Mitigation

Based on the results of the construction and operational phase HRAs, the Project will not expose sensitive receptors to substantial pollutant concentrations or health risks. Therefore, the Project will have a less than significant impact on sensitive receptors.

5.6 Impact AQ-4

Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

5.6.1 Discussion

While odors rarely cause physical harm, they can be unpleasant, often generating citizen complaints. The SJVAPCD GAMAQI outlines the screening level for potential odor sources as 1 mile for rendering plants, food processing facilities, and feed lots to assess this criterion. The SJVAPCD also recommends reviewing historical odor complaints in the vicinity of the project.

Although the area surrounding the CVM facility is primarily rural, there are scattered houses within 1 mile, including a residential neighborhood north of Highway 198.

According to the SJVAPCD GAMAQI, a significant odor problem is defined as more than one confirmed complaint per year averaged over a 3-year period, or three unconfirmed complaints per year averaged over a 3-year period. An unconfirmed complaint means that either the odor/air contaminant release could not be detected or the source/facility could not be determined.

In the past 36 months, the SJVAPCD has received one complaint about odor nuisance related to the existing CVM facility. In response to the complaint, the District performed an odor survey of the facility and the surrounding area; however, the District was unable to confirm the odor to substantiate the complaint. Therefore, this one unconfirmed complaint falls below the significance threshold of three unconfirmed complaints per year averaged over a 3-year period.

The existing CVM meat processing facility is considered a potentially odor-generating source, and SJVAPCD records show it does not produce odors that adversely affect a substantial number of people.

Although the Project will add new possible sources of odors, potential odors will be minimized through significant odor control systems; thus, the potential for odorous emissions is similar to the existing CVM facility, and based on SJVAPCD records, it is expected that the Project will not produce odors that adversely affect a substantial number of people.

For sources permitted by the SJVAPCD, such as the Rendering Facility and the RTO at the Pet Food Facility, Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance, or annoyance to the public. To comply with this rule, CVM proposes to install state-of-the-art odor control systems at the Rendering and Pet Food facilities as described in the mitigation section below.

5.6.2 Proposed Mitigation

CVM proposes to install the following design features in the form of odor control systems or odor minimization procedures at the Rendering facility:

- Emissions from the cookers and ancillary equipment will be vented through a Venturi/packed bed scrubber and RTO to control odors;
- Cooker and unloading area emissions will be controlled by two room air Venturi/packed bed scrubbers;
- Solids processing odors will be controlled by a Venturi/packed bed scrubber;
- Tallow will be pumped through a sealed loading system into sealed truck tanks;
- All loading and unloading of raw and finished product will be conducted inside the building with doors closed; and
- There will be no outside storage of raw or finished product.

The combination of these odor control systems will effectively mitigate odors from the Rendering facility.

CVM proposes to install an RTO to control potential odors from the Pet Food facility. In addition, there will be no outside storage of raw or finished product.

To control the potential for odors at the Hide Plant, all activities will occur inside the building, including all storage of raw and finished products. Only fleshing and salting of fresh hides will occur at the Hide Building.

The Processing Expansion will add a ground beef processing area to the existing CVM processing plant. All processing will occur inside, and storage of raw and finished products will occur inside the building.

The new Livestock Canopy will accommodate the same number of cattle as currently, thus there is no potential for new odors.

No additional odor sources are anticipated from the other building features of the Project.

5.6.3 Level of Significance After Mitigation

Based on the odor minimization design features that will be implemented at the Project, the Project is not expected to create objectionable odors affecting a substantial number of people. Therefore, the proposed Project will have a less than significant impact related to emissions which cause odors.

6.0 GREENHOUSE GAS ANALYSIS

This section presents information related to the analysis of GHG emissions from the proposed Project and the consistency of the Project with relevant plans and programs that are applicable to the project area. The impact assessment is based upon a review of relevant literature and technical reports that include, but are not limited to, information and guidelines by CARB, the U.S. EPA, and the SJVAPCD, as well as the applicable CEQA provisions.

Global climate change is a change in the average weather of the earth, measured by wind patterns, storms, precipitation, and temperature. Although historical records show that dramatic fluctuations in temperature have occurred in the past, such as during previous ice ages, some data indicate that the current temperature record differs from previous climate changes in both rate and magnitude (IPCC 2007).

The global scientific community has expressed a high confidence that the recent observed climate change is predominantly man-made and that climate change could lead to adverse changes around the globe (IPCC 2007). Consequently, the following section analyzes potential GHG emissions that may occur while implementing the proposed Project.

CARB and the U.S. EPA regulate GHG emissions within the State of California and the United States, respectively. While CARB has the primary regulatory responsibility within California for GHG emissions, local agencies, like SJVAPCD and the County, can also adopt policies for GHG emission reduction.

Climate change impacts are inherently global and cumulative, and not project-specific. The SJVAPCD's GAMAQI observes: "It is widely recognized that no single project could generate sufficient GHG emissions to noticeably change global climate temperature. However, the combination of GHG emissions from past, present and future projects could contribute substantially to global climate change. Thus, project specific GHG emissions should be evaluated in terms of whether or not they would result in a cumulatively significant impact on global climate change".

6.1 CEQA Greenhouse Gas Regulations

6.1.1 California

The State of California has made the reduction of GHG emissions a priority and reducing GHG emissions in California has been the focus of the State government for approximately two decades. GHG emission targets established by the State legislature include reducing statewide GHG emissions to 1990 levels by 2020 [Assembly Bill (AB) 32] and reducing them to 40% below 1990 levels by 2030 [Senate Bill (SB) 32 of 2016]. Executive Order (EO) S-3-05 calls for statewide GHG emissions to be reduced to 80% below 1990 levels by 2050. EO B-55-18 calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter. These targets are in line with the scientifically established levels needed in the United States to limit the rise in global temperature to no more than 2 degrees Celsius (°C), the warming threshold at which major climate disruptions, such as "super droughts" and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5°C.

On October 20, 2011, CARB approved the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation (Cap-and-Trade Program) as part of the AB 32 implementation measures. Cap-and-Trade is a market-based regulation that is designed to reduce GHGs from multiple sources. It is viewed as an environmentally effective and economically efficient response to climate change. Cap-and-Trade sets a firm limit, or cap, on GHG emissions from all sources in the Cap-and-Trade Program and minimizes the compliance costs of achieving AB 32 goals. The initial cap was established in 2013 for the electrical sector and any large industrial source emitting more than 25,000 MT/yr CO_2e. Beginning in 2015, the cap was expanded to include GHG emissions from the combustion of transportation fuels and natural gas. The cap declines approximately 3% each year. In the market, a price on carbon is established for GHGs. Trading and market forces create incentives to reduce GHGs below allowable levels through investments in technological innovation in clean technologies.

Numerous initiatives by the State of California will reduce statewide GHG emissions and certain emissions associated with the Project, including the Pavley rules that will reduce emissions from automobiles, regulations that will reduce emissions from heavy duty trucks, the Low Carbon Fuel Standard (LCFS) that will reduce emissions from heavy duty trucks and off-road mobile equipment, and the CARB rules discussed above (e.g., AB 32, AB 341).

In addition to regulations that address tailpipe emissions and transportation fuels, the State legislature has passed regulations to address the amount of driving by on-road vehicles. Since the passage of SB 375 in 2008, CARB requires metropolitan planning organizations (MPOs) to adopt plans showing reduction in GHG emissions from passenger cars and light-duty trucks in their respective regions for 2020 and 2035. These plans link land use and housing allocation to transportation planning and related mobile-source emissions.

SB 32 (2016) amended provisions of AB 32, the California Global Warming Solutions Act of 2006 [Health and Safety Code (H&SC) Division 25.5] to require CARB to reduce statewide GHG emissions to 40% below 1990 levels by 2030, which supports the long-term target of carbon neutrality by 2045 (EO B-55-18). Thus, GHG mass emissions thresholds in many California air districts are effectively discounted to 60% of their originally adopted values.

6.1.2 SJVAPCD

In August 2008, the SJVAPCD adopted its Climate Change Action Plan (CCAP). The CCAP directed the District to develop guidance to assist CEQA lead agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project GHG emissions on global climate change (SJVAPCD 2008). In December 2009, the SJVAPCD Board approved two guidance documents:

- Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA ("Land Use GHG Guidance") (SJVAPCD 2009a); and
- District Policy: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency (SJVAPCD 2009b).

These policies provide that "Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the Project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions" (SJVAPCD 2009b). Under the guidance, projects implementing Best Performance Standards (BPS) would have less than significant impacts for GHG emissions, as would projects that reduce or mitigate their GHG emissions by at least 29% as compared to business as usual (BAU).

On June 25, 2014, the SJVAPCD issued a guidance document titled "CEQA Determinations of Significance for Projects Subject to CARB's GHG Cap-and-Trade Regulation" (Policy APR-2025; "CEQA Cap-and-Trade Policy") (SJVAPCD 2014). This policy is to be followed when the District is "providing technical guidance to lead agencies and the public regarding significance of project specific GHG emissions." The policy states the District's conclusion that "GHG emission increases subject to CARB's Cap-and-Trade Regulation would have a less than significant individual and cumulative impact on global climate change." Noting that GHG emissions from combustion of transportation fuels are covered under the Cap-and-Trade Program beginning in 2015, the policy also states that "GHG emission increases caused by fuel use (other than jet fuels) are determined to have a less than significant impact on global climate change under CEQA."

Under the District's 2014 policy for stationary source impacts, "the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change" (SJVAPCD 2014). This policy employs a tiered approach to determining the CEQA significance of a project's GHG emissions. The first level is compliance with an approved GHG emission reduction plan that is specified in law and supported by a CEQA-compliant environmental review document. The SJVAPCD has determined that GHG emissions covered under the Cap-and-Trade Program cannot constitute significant increases under CEQA, for two reasons. First, the Cap-and-Trade Program is an approved GHG mitigation plan that meets the requirements set forth in the District's policy on stationary source GHG emission impacts (SJVAPCD 2014, pages 4-5). Second, any increase in GHG emissions from affected sectors must be accounted for under the statewide GHG emissions cap in the Cap-and-Trade Program, and that cap decreases over time. As a result, the Cap-and-Trade Program will fully mitigate any project emission increases for emissions included under the cap (SJVAPCD 2014).

Where an approved GHG emission reduction program is not in place, or the Project will not comply with it, the guidance documents next rely on the use of performance-based standards, otherwise known as BPS, as a basis for assessing the significance of project GHG emissions on global climate change under CEQA. BPS consist of established specifications or project design elements that are used as a method of determining the significance of project-specific GHG emission impacts. BPS are defined as the most effective achieved-in-practice means of reducing or limiting GHG emissions from a GHG emissions source. BPS for stationary source projects include equipment type, equipment design, and operational and maintenance practices for the identified service, operation, or emissions unit class or category (SJVAPCD 2009c).

The District recommends use of BPS for assessing climate change impacts to streamline the process of determining significance under CEQA. BPS are not intended as a required emission reduction measure. Under SJVAPCD guidance, projects implementing BPS would be determined to have a less than cumulatively significant impact on global climate change.

Projects that do not comply with an approved GHG emission reduction plan or use BPS must demonstrate a 29% reduction in GHG emissions from BAU in order to be determined to have a less than cumulatively significant impact on global climate change. BAU is determined by multiplying 2002-2004 emission factors by the activity expected to occur in 2020. The guidance does not limit a Lead Agency's authority to establish its own process and guidance for determining significance of project-related impacts on global climate change (SJVAPCD 2009a).

While no appellate court decision has yet addressed reliance on statewide GHG Cap-and-Trade Program compliance as a method of determining the significance of project GHG emissions for CEQA purposes, several cases have addressed the so-called BAU methodology, which is similarly based on AB 32 compliance. Under the BAU approach, GHG emissions from a project are considered to have an insignificant impact if they are more than 29% below modeled emissions under a BAU scenario, where 29% is roughly the magnitude of the statewide GHG reduction anticipated to be achieved in compliance with AB 32 by 2020.

Reliance on the BAU-based significance threshold was specifically upheld as a proper exercise of agency discretion in Citizens for Responsible Equitable Environmental Development v. City of Chula Vista (2011) 197 Cal. App. 4th 327, 336-37 (CREED). Two subsequent cases concurred with the approach in CREED: Friends of Oroville v. City of Oroville (2013) 219 Cal. App. 4th 832, 841-42; and Center for Biological Diversity v. Dept. of Fish and Wildlife (2014) 224 Cal. App. 4th 1105. Though Friends of Oroville criticized the Lead Agency's application of the BAU-based threshold in that particular case, the court found the methodology to be appropriate in itself. See Friends of Oroville, 219 Cal. App. 4th at 841: "The problem is the City improperly applied this proper standard in concluding that the Project's environmental impacts from GHG emissions are less than significant. [CREED] exemplifies the model, showing us a proper way to apply the Assembly Bill 32 threshold-of-significance standard." The Center for Biological Diversity case is currently pending appeal before the California Supreme Court.

By analogy to the BAU cases, a project's compliance with the Cap-and-Trade Regulation is also an appropriate means of determining the significance of the Project's GHG emissions because in either case, the 29% reduction in emissions anticipated by AB 32 will occur. As CARB set the statewide annual GHG allowance cap at levels low enough to assure that the overall AB 32 statewide emission reduction goal would be achieved, compliance with the Cap-and-Trade Regulation assures that a project will not cause a GHG emissions increase that would cause the State to miss its GHG emission reduction goals.

6.1.3 Kings County

In 2018, the Kings County Association of Governments (KCAG), the local MPO, adopted a Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which identifies transportation objectives to meet GHG reduction goals (KCAG 2018).

The 2035 Kings County General Plan defines goals, objectives, and policies that will guide the physical growth, use, and development of land in the County through the year 2035 (County 2010).

6.2 GHG Emissions Significance Criteria

The County CEQA Appendix G GHG questions state that a project would have significant impacts on GHG emissions if it would (County 2021):

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

b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The County has not developed a quantitative threshold of significance for GHG emissions, but the SJVAPCD has adopted guidance documents for assessing and mitigating GHG impacts on global climate change. Rather than establishing specific numeric thresholds of significance (as in the case of criteria pollutant emissions), the SJVAPCD guidance utilizes a few approaches to assess cumulative impacts on global climate change. Mainly, a project can demonstrate compliance with an approved GHG emissions reduction program (such as CARB's statewide GHG Cap-and-Trade Program) or a project can demonstrate implementation of BPS to reduce GHG emissions.

The SJVAPCD's CEQA Cap-and-Trade Policy recommends that projects that are required to comply with CARB's GHG Cap-and-Trade Program be determined to have a less than cumulatively significant impact on global climate change. This policy is included in the SJVAPCD's December 2009 CEQA GHG policies and the 2019 GAMAQI, which states that a project whose emissions have been reduced or mitigated consistent with AB 32 should be considered to have a less than significant impact on global climate change (SJVAPCD 2019).

Finally, in a recent court decision regarding the Newhall[2] project, the court has identified the following "pathways to compliance" that Lead Agencies may use to determine the significance of a project's GHG emissions:

1. BAU Model: While the Court cautioned that the Scoping Plan may not be appropriate at the project level, the BAU model might be used to determine what level of reduction from BAU a new land use development at the proposed location must contribute in order to comply with statewide goals pursuant to AB 32.
2. Compliance with Regulatory Programs Designed to Reduce GHG Emissions: The Court suggests that a Lead Agency could rely on a showing of compliance with regulatory programs designed to reduce GHG emissions in order to demonstrate consistency with AB 32's goals. The Court clarifies that a significance analysis based on compliance with such statewide regulations only goes to impacts within the area governed by the regulations.

[2] In its recent decision, Center for Biological Diversity v. Department of Fish and Wildlife (2015) 62 Cal.4th 204 (Newhall), the California Supreme Court evaluated the California Department of Fish and Wildlife's (CDFW's) analysis of potential impacts caused by GHG emissions contained in the EIR for the proposed land development called Newhall Ranch (California Supreme Court 2015). In the Newhall EIR, the CDFW analyzed the required GHG emission reduction under AB 32 using the BAU comparison as its sole criterion of significance.

3. Local Climate Action Plan or Other "Geographically Specific Greenhouse Gas Emission Reduction Plans": The Court points out that these plans may provide a basis for the tiering or streamlining of project-level CEQA analysis, so long as the plan is "sufficiently detailed and adequately supported."
4. Regional SCS: The Court also articulates that a Lead Agency need not additionally analyze GHG emissions from automobiles and light trucks in CEQA documents for certain residential, mixed use, and transit priority projects that are consistent with an applicable SCS adopted pursuant to SB 375.
5. Numerical GHG Significance Thresholds: Although noting that use of numerical thresholds is not required, the Court favorably cited the BAAQMD GHG significance thresholds based on compliance with AB 32, which use a "service population" GHG ratio threshold for land use projects and a 10,000-MT CO_2e annual GHG emission threshold for industrial projects. The Court remanded for further consideration the application of the 29% overall Scoping Plan metric, which is used by several air districts and, like the favorably cited BAAQMD metric, is based on meeting the GHG emission reduction goal of AB 32.
6. EOs S-3-05 and B-30-15: Regarding these two EOs, the Court cautioned that those Environmental Impact Reports (EIRs) taking a goal-consistency approach to CEQA significance may "in the near future" need to consider the project's effects on meeting emission reduction targets beyond 2020.

As discussed below, to demonstrate the Project's consistency with AB 32's statewide GHG reduction goals, this analysis utilizes the "compliance regulatory programs" and "regional sustainable community strategy" pathways to compliance identified by the Newhall court.

For informational purposes, this analysis also evaluates the Project's consistency with EOs S-3-05 and B-30-15, as discussed below.

6.3 Impact GHG-1

Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

6.3.1 Discussion

For purposes of Impact GHG-1, this analysis evaluates project compliance with regulatory programs designed to reduce GHG emissions and that contribute to the achievement of AB 32's goals as the primary significance criterion, in accordance with Newhall.

Construction Emissions. GHG emissions will occur during construction activities associated with the Project. Off-road equipment assumed to be used during construction includes graders, dozers, scrapers, off-highway trucks, compactors, and rollers. On-road mobile sources assumed to be used during construction include haul trucks (e.g., concrete, gravel), delivery vehicles, and employee commute vehicles. Construction GHG emissions are presented in Table 3-25.

Operational Emissions. GHG emissions from the operation of the Project include direct emissions from stationary sources, mobile sources (e.g., trucks, mules, TRUs, and worker vehicles), and building natural gas usage, and indirect emissions associated with electricity usage for building operations and water pumping. Direct and indirect operational emissions are shown in Table 3-26.

This Project consolidates and redistributes trucks that would otherwise have traveled similar distances between the CVM and HRBC facilities and end users. Table 1-2 in the project description shows that there is a nominal project-related trucking mileage increase; as such, off-site truck travel GHG emissions are estimated to be zero.

Since stationary source GHG emissions are generated by stationary combustion and are greater than 25,000 MT/yr, the facility will comply with the Cap-and-Trade Program, and all stationary source GHG emissions will be mitigated through the Cap-and-Trade Program.

SJVAPCD CEQA guidance states the "GHG emission increases subject to CARB's Cap-and-Trade Regulation would have a less than significant individual and cumulative impact on global climate change." Therefore, the Project's stationary source GHG emissions would have a less than significant impact on the environment.

As shown in Table 3-26, Project-related mobile source and building operations direct and indirect GHG emissions were estimated to be 2,960 MT/yr (i.e., 757+2,203). Although the SJVAPCD does not have numeric significance thresholds for GHG emissions, the guidance does allow that thresholds in other areas can be used for evaluating impacts. Therefore, the GHG emissions not covered in Cap-and-Trade were compared to the significance threshold of 10,000 MT/yr CO_2e, which is the threshold for industrial projects in the SCAQMD and BAAQMD, as well as other air districts. The estimated GHG emissions from this project are well below that threshold, and hence considered less than significant.

SB 32 (2016) amended provisions of AB 32 (2006), to require CARB to reduce statewide GHG emissions to 40% below 1990 levels by 2030, which supports the long-term target of carbon neutrality by 2045 (EO B-55-18). Thus, GHG mass emissions thresholds in many California air districts are effectively discounted to 60% of their originally adopted values.

Based on the foregoing, and in accordance with the "compliance with regulatory standards" pathway to compliance identified by the Newhall court, the proposed Project will be consistent with California's adopted California Climate Change Scoping Plan, CARB's GHG Cap-and-Trade Program, and other applicable adopted standards and regulations. Therefore, the Project will have a less than significant impact on the environment.

6.3.2 Mitigation Measures

CVM will provide direct mitigation for the stationary source GHG emissions through compliance with the California Cap-and-Trade Program.

6.3.3 Level of Significance after Mitigation

The Project will be consistent with California's adopted California Climate Change Scoping Plan, CARB's GHG Cap-and-Trade Program, and other applicable adopted standards and regulations. Therefore, the Project will have a less than significant impact on the environment.

6.4 Impact GHG-2

Would the Project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

6.4.1 Discussion

In addition to the discussion for Impact GHG-1 that shows the Project would comply with CARB's GHG Cap-and-Trade Program, the following describes other applicable plans.

Consistent with Newhall, under the SJVAPCD's CEQA guidance for GHG impacts, a project would not have a significant GHG impact if it is consistent with an applicable plan to reduce GHG emissions and a CEQA-compliance analysis was completed for the GHG reduction plan.

The KCAG's RTP was adopted in 2018 and provides regional-scale measures to regulate, monitor, and control GHG emissions in Kings County. The RTP is an applicable plan adopted for the purpose of reducing GHGs from transportation sectors in Kings County. For the County, CARB Scenario D – Balanced Solution – was selected by KCAG as the preferred Sustainable Communities Strategy (SCS) scenario, which is planned to meet or exceed GHG reduction targets.

The RTP is based on an analysis that considers the entire County and includes all projects involving changes in regional growth and land use in Kings County, as well as the countywide vehicle traffic projections. Cumulative GHG emissions analyzed in the RTP were compared to regional GHG thresholds and analyzed under statewide plans and regulations. This analysis concluded that the projected increase in GHG emissions from existing conditions to 2042 would primarily be due to changes in regional growth/land use; however, the RTP achieves GHG emission reduction targets from mobile sources by implementing a mix of land use strategies, transportation management, economic factors, and road projects.

The Project will implement trip minimization and energy-efficient features consistent with the County's General Plan. In accord with the County's RTP/SCS, the Project will implement clean truck programs and carpooling or alternative commuting options.

The Project, which concerns improvements to a facility that existed before the 2018 adoption of the RTP, is consistent with the land use and transportation management strategies and assumptions set forth in the RTP. This is because its existence, as a large employer in an unincorporated area near Hanford, was considered in the development of the RTP. Accordingly, pursuant to the "consistency with an applicable SCS" pathway to compliance identified by the Newhall court, the Project's impacts related to GHG emissions can be considered less than significant on the project level because the 2018 RTP/SCS Balanced Solution GHG emission reduction targets of 5% for 2020 and 10% for 2035 would be met.

6.4.2 Mitigation Measures

CVM will provide direct mitigation for the stationary source GHG emissions through compliance with the California Cap-and-Trade Program.

6.4.3 Level of Significance after Mitigation

The Project will be consistent with local GHG plans, including the KCAG's RTP and the County's General Plan. Therefore, the Project's GHG emissions will have a less than significant impact on the environment.

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APPENDIX A – CALEEMOD OUTPUT FILES

Central Valley Meats CEQA Phase 1

San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.47	1000sqft	0.01	470.00	0
Manufacturing	51.63	1000sqft	1.19	51,630.00	0
Unrefrigerated Warehouse-No Rail	8.00	1000sqft	0.18	8,000.00	0
Other Asphalt Surfaces	245.34	1000sqft	5.63	245,340.00	0
Other Non-Asphalt Surfaces	229.91	1000sqft	5.28	229,910.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.7 **Precipitation Freq (Days)** 45

Climate Zone 3 **Operational Year** 2023

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MWhr) 641.35 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Architectural coating timeline updated to match schedule.

Off-road Equipment - Additional equipment added to account for pond digging.

Grading - Updated Total Acres Graded with information from site plan drawings.

Vehicle Trips - Worker trips updated with true employee values and consolidated under manufacturing.

Water And Wastewater - Water usage has been updated with engineering plans.

Construction Off-road Equipment Mitigation - Crawler Tractors, Excavators, Graders, Rubber Tired Dozers, Rubber Tired Loaders, Scrapers, and Tractors/Loaders/Backhoes updated to enginer Tier 4 to reflect actual equipment. Will be watering area 3x daily during construction and conducting street sweeping to achieve PM reductions.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstructionPhase	NumDays	20.00	40.00
tblGrading	AcresOfGrading	75.00	7.01
tblGrading	AcresOfGrading	5.00	5.28
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	1.49	0.39
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	0.62	0.19
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	3.82	0.39
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	83,534.86	0.00
tblWater	IndoorWaterUseRate	11,939,437.50	16,790,000.00
tblWater	IndoorWaterUseRate	0.00	5,475,000.00
tblWater	IndoorWaterUseRate	1,850,000.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2641	2.5439	2.0016	5.1800e-003	0.3264	0.0994	0.4258	0.1378	0.0926	0.2304	0.0000	464.9592	464.9592	0.0791	0.0000	466.9369
2022	0.8098	2.5931	2.5058	6.8800e-003	0.2275	0.0908	0.3183	0.0617	0.0852	0.1470	0.0000	619.8453	619.8453	0.0844	0.0000	621.9555
Maximum	**0.8098**	**2.5931**	**2.5058**	**6.8800e-003**	**0.3264**	**0.0994**	**0.4258**	**0.1378**	**0.0926**	**0.2304**	**0.0000**	**619.8453**	**619.8453**	**0.0844**	**0.0000**	**621.9555**

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					
2021	0.1687	1.3862	2.0592	5.1800e-003	0.1546	0.0430	0.1976	0.0626	0.0409	0.1035	0.0000	464.9589	464.9589	0.0791	0.0000	466.9366
2022	0.7789	2.2242	2.5312	6.8800e-003	0.1334	0.0700	0.2034	0.0386	0.0662	0.1048	0.0000	619.8450	619.8450	0.0844	0.0000	621.9551
Maximum	**0.7789**	**2.2242**	**2.5312**	**6.8800e-003**	**0.1546**	**0.0700**	**0.2034**	**0.0626**	**0.0662**	**0.1048**	**0.0000**	**619.8450**	**619.8450**	**0.0844**	**0.0000**	**621.9551**

	ROG	**NOx**	**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	**11.76**	**29.72**	**-1.84**	**0.00**	**48.00**	**40.61**	**46.11**	**49.24**	**39.76**	**44.78**	**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	6-1-2021	8-31-2021	1.4492	0.4140
2	9-1-2021	11-30-2021	1.0015	0.8411
3	12-1-2021	2-28-2022	0.9356	0.7903
4	3-1-2022	5-31-2022	0.9234	0.7821
5	6-1-2022	8-31-2022	0.9220	0.7808
6	9-1-2022	9-30-2022	0.2403	0.2111
		Highest	1.4492	0.8411

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3176	4.0000e-005	4.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.5700e-003	9.5700e-003	3.0000e-005	0.0000	0.0102
Energy	6.6200e-003	0.0602	0.0506	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003	0.0000	221.1208	221.1208	8.2900e-003	2.6600e-003	222.1199
Mobile	5.6300e-003	0.0550	0.0609	3.3000e-004	0.0208	1.9000e-004	0.0210	5.5800e-003	1.8000e-004	5.7600e-003	0.0000	30.4051	30.4051	1.5400e-003	0.0000	30.4435
Waste						0.0000	0.0000		0.0000	0.0000	14.6113	0.0000	14.6113	0.8635	0.0000	36.1989
Water						0.0000	0.0000		0.0000	0.0000	7.0637	35.1000	42.1636	0.7271	0.0175	65.5437
Total	**0.3298**	**0.1152**	**0.1164**	**6.9000e-004**	**0.0208**	**4.7900e-003**	**0.0256**	**5.5800e-003**	**4.7800e-003**	**0.0104**	**21.6750**	**286.6354**	**308.3104**	**1.6005**	**0.0201**	**354.3162**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3176	4.0000e-005	4.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.5700e-003	9.5700e-003	3.0000e-005	0.0000	0.0102
Energy	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	211.0725	211.0725	7.9200e-003	2.5300e-003	212.0256
Mobile	5.6300e-003	0.0550	0.0609	3.3000e-004	0.0208	1.9000e-004	0.0210	5.5800e-003	1.8000e-004	5.7600e-003	0.0000	30.4051	30.4051	1.5400e-003	0.0000	30.4435
Waste						0.0000	0.0000		0.0000	0.0000	9.4973	0.0000	9.4973	0.5613	0.0000	23.5293
Water						0.0000	0.0000		0.0000	0.0000	5.6509	28.0872	33.7381	0.5817	0.0140	52.4423
Total	**0.3295**	**0.1122**	**0.1139**	**6.7000e-004**	**0.0208**	**4.5600e-003**	**0.0253**	**5.5800e-003**	**4.5500e-003**	**0.0101**	**15.1483**	**269.5743**	**284.7226**	**1.1524**	**0.0165**	**318.4508**

	ROG	NOx	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	**0.10**	**2.60**	**2.17**	**2.90**	**0.00**	**4.80**	**0.90**	**0.00**	**4.81**	**2.22**	**30.11**	**5.95**	**7.65**	**27.99**	**17.99**	**10.12**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2021	6/14/2021	5	10	
2	Grading	Grading	6/15/2021	7/26/2021	5	30	
3	Building Construction	Building Construction	7/27/2021	9/19/2022	5	300	
4	Paving	Paving	9/20/2022	11/14/2022	5	40	
5	Architectural Coating	Architectural Coating	11/14/2022	12/9/2022	5	20	

Acres of Grading (Site Preparation Phase): 5.28

Acres of Grading (Grading Phase): 7.01

Acres of Paving: 10.91

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 90,150; Non-Residential Outdoor: 30,050; Striped Parking Area: 28,515 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	1	8.00	212	0.43
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	10	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	225.00	88.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	45.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 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					0.0931	0.0000	0.0931	0.0500	0.0000	0.0500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0251	0.2674	0.1423	2.9000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	25.1809	25.1809	8.1400e-003	0.0000	25.3845
Total	**0.0251**	**0.2674**	**0.1423**	**2.9000e-004**	**0.0931**	**0.0127**	**0.1058**	**0.0500**	**0.0117**	**0.0616**	**0.0000**	**25.1809**	**25.1809**	**8.1400e-003**	**0.0000**	**25.3845**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	3.2000e-004	3.3100e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.8662	0.8662	2.0000e-005	0.0000	0.8668
Total	**4.9000e-004**	**3.2000e-004**	**3.3100e-003**	**1.0000e-005**	**1.0000e-003**	**1.0000e-005**	**1.0100e-003**	**2.7000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8662**	**0.8662**	**2.0000e-005**	**0.0000**	**0.8668**

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					0.0363	0.0000	0.0363	0.0195	0.0000	0.0195	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5100e-003	0.0152	0.1558	2.9000e-004		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	25.1809	25.1809	8.1400e-003	0.0000	25.3845
Total	**3.5100e-003**	**0.0152**	**0.1558**	**2.9000e-004**	**0.0363**	**4.7000e-004**	**0.0368**	**0.0195**	**4.7000e-004**	**0.0200**	**0.0000**	**25.1809**	**25.1809**	**8.1400e-003**	**0.0000**	**25.3845**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	3.2000e-004	3.3100e-003	1.0000e-005	5.7000e-004	1.0000e-005	5.7000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	0.8662	0.8662	2.0000e-005	0.0000	0.8668
Total	**4.9000e-004**	**3.2000e-004**	**3.3100e-003**	**1.0000e-005**	**5.7000e-004**	**1.0000e-005**	**5.7000e-004**	**1.6000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.8662**	**0.8662**	**2.0000e-005**	**0.0000**	**0.8668**

3.3 Grading - 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					0.0941	0.0000	0.0941	0.0501	0.0000	0.0501	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0629	0.6960	0.4632	9.3000e-004		0.0298	0.0298		0.0274	0.0274	0.0000	81.7425	81.7425	0.0264	0.0000	82.4034
Total	**0.0629**	**0.6960**	**0.4632**	**9.3000e-004**	**0.0941**	**0.0298**	**0.1238**	**0.0501**	**0.0274**	**0.0775**	**0.0000**	**81.7425**	**81.7425**	**0.0264**	**0.0000**	**82.4034**

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	7.7000e-004	7.9300e-003	2.0000e-005	2.4000e-003	2.0000e-005	2.4100e-003	6.4000e-004	2.0000e-005	6.5000e-004	0.0000	2.0789	2.0789	5.0000e-005	0.0000	2.0803
Total	**1.1700e-003**	**7.7000e-004**	**7.9300e-003**	**2.0000e-005**	**2.4000e-003**	**2.0000e-005**	**2.4100e-003**	**6.4000e-004**	**2.0000e-005**	**6.5000e-004**	**0.0000**	**2.0789**	**2.0789**	**5.0000e-005**	**0.0000**	**2.0803**

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					0.0367	0.0000	0.0367	0.0195	0.0000	0.0195	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0114	0.0495	0.4950	9.3000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	81.7424	81.7424	0.0264	0.0000	82.4033
Total	**0.0114**	**0.0495**	**0.4950**	**9.3000e-004**	**0.0367**	**1.5200e-003**	**0.0382**	**0.0195**	**1.5200e-003**	**0.0210**	**0.0000**	**81.7424**	**81.7424**	**0.0264**	**0.0000**	**82.4033**

3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	7.7000e-004	7.9300e-003	2.0000e-005	1.3600e-003	2.0000e-005	1.3800e-003	3.8000e-004	2.0000e-005	4.0000e-004	0.0000	2.0789	2.0789	5.0000e-005	0.0000	2.0803
Total	**1.1700e-003**	**7.7000e-004**	**7.9300e-003**	**2.0000e-005**	**1.3600e-003**	**2.0000e-005**	**1.3800e-003**	**3.8000e-004**	**2.0000e-005**	**4.0000e-004**	**0.0000**	**2.0789**	**2.0789**	**5.0000e-005**	**0.0000**	**2.0803**

3.4 Building Construction - 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					
Off-Road	0.1084	0.9936	0.9448	1.5300e-003		0.0546	0.0546		0.0514	0.0514	0.0000	132.0333	132.0333	0.0319	0.0000	132.8296
Total	**0.1084**	**0.9936**	**0.9448**	**1.5300e-003**		**0.0546**	**0.0546**		**0.0514**	**0.0514**	**0.0000**	**132.0333**	**132.0333**	**0.0319**	**0.0000**	**132.8296**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0162	0.5531	0.1009	1.4100e-003	0.0333	1.5600e-003	0.0348	9.6100e-003	1.4900e-003	0.0111	0.0000	134.1836	134.1836	0.0103	0.0000	134.4397
Worker	0.0499	0.0327	0.3392	9.8000e-004	0.1025	7.1000e-004	0.1032	0.0273	6.5000e-004	0.0279	0.0000	88.8739	88.8739	2.3500e-003	0.0000	88.9326
Total	**0.0661**	**0.5858**	**0.4401**	**2.3900e-003**	**0.1358**	**2.2700e-003**	**0.1381**	**0.0369**	**2.1400e-003**	**0.0390**	**0.0000**	**223.0575**	**223.0575**	**0.0126**	**0.0000**	**223.3723**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0860	0.7346	0.9570	1.5300e-003		0.0387	0.0387		0.0367	0.0367	0.0000	132.0331	132.0331	0.0319	0.0000	132.8294
Total	**0.0860**	**0.7346**	**0.9570**	**1.5300e-003**		**0.0387**	**0.0387**		**0.0367**	**0.0367**	**0.0000**	**132.0331**	**132.0331**	**0.0319**	**0.0000**	**132.8294**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0162	0.5531	0.1009	1.4100e-003	0.0215	1.5600e-003	0.0231	6.7300e-003	1.4900e-003	8.2200e-003	0.0000	134.1836	134.1836	0.0103	0.0000	134.4397
Worker	0.0499	0.0327	0.3392	9.8000e-004	0.0582	7.1000e-004	0.0589	0.0164	6.5000e-004	0.0170	0.0000	88.8739	88.8739	2.3500e-003	0.0000	88.9326
Total	**0.0661**	**0.5858**	**0.4401**	**2.3900e-003**	**0.0797**	**2.2700e-003**	**0.0820**	**0.0231**	**2.1400e-003**	**0.0252**	**0.0000**	**223.0575**	**223.0575**	**0.0126**	**0.0000**	**223.3723**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1587	1.4523	1.5218	2.5000e-003		0.0752	0.0752		0.0708	0.0708	0.0000	215.5045	215.5045	0.0516	0.0000	216.7952
Total	**0.1587**	**1.4523**	**1.5218**	**2.5000e-003**		**0.0752**	**0.0752**		**0.0708**	**0.0708**	**0.0000**	**215.5045**	**215.5045**	**0.0516**	**0.0000**	**216.7952**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0245	0.8549	0.1519	2.2800e-003	0.0543	2.2000e-003	0.0565	0.0157	2.1000e-003	0.0178	0.0000	216.8980	216.8980	0.0161	0.0000	217.3009
Worker	0.0755	0.0477	0.5043	1.5500e-003	0.1673	1.1200e-003	0.1684	0.0445	1.0300e-003	0.0455	0.0000	139.8228	139.8228	3.4200e-003	0.0000	139.9083
Total	**0.1000**	**0.9025**	**0.6562**	**3.8300e-003**	**0.2215**	**3.3200e-003**	**0.2249**	**0.0601**	**3.1300e-003**	**0.0633**	**0.0000**	**356.7208**	**356.7208**	**0.0195**	**0.0000**	**357.2092**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1277	1.0834	1.5472	2.5000e-003		0.0545	0.0545		0.0518	0.0518	0.0000	215.5042	215.5042	0.0516	0.0000	216.7949
Total	**0.1277**	**1.0834**	**1.5472**	**2.5000e-003**		**0.0545**	**0.0545**		**0.0518**	**0.0518**	**0.0000**	**215.5042**	**215.5042**	**0.0516**	**0.0000**	**216.7949**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0245	0.8549	0.1519	2.2800e-003	0.0351	2.2000e-003	0.0373	0.0110	2.1000e-003	0.0131	0.0000	216.8980	216.8980	0.0161	0.0000	217.3009
Worker	0.0755	0.0477	0.5043	1.5500e-003	0.0949	1.1200e-003	0.0960	0.0267	1.0300e-003	0.0277	0.0000	139.8228	139.8228	3.4200e-003	0.0000	139.9083
Total	**0.1000**	**0.9025**	**0.6562**	**3.8300e-003**	**0.1300**	**3.3200e-003**	**0.1333**	**0.0377**	**3.1300e-003**	**0.0408**	**0.0000**	**356.7208**	**356.7208**	**0.0195**	**0.0000**	**357.2092**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0221	0.2225	0.2916	4.6000e-004		0.0114	0.0114		0.0105	0.0105	0.0000	40.0551	40.0551	0.0130	0.0000	40.3790
Paving	7.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0294**	**0.2225**	**0.2916**	**4.6000e-004**		**0.0114**	**0.0114**		**0.0105**	**0.0105**	**0.0000**	**40.0551**	**40.0551**	**0.0130**	**0.0000**	**40.3790**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	6.8000e-004	7.2300e-003	2.0000e-005	2.4000e-003	2.0000e-005	2.4100e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	2.0046	2.0046	5.0000e-005	0.0000	2.0059
Total	**1.0800e-003**	**6.8000e-004**	**7.2300e-003**	**2.0000e-005**	**2.4000e-003**	**2.0000e-005**	**2.4100e-003**	**6.4000e-004**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**2.0046**	**2.0046**	**5.0000e-005**	**0.0000**	**2.0059**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0221	0.2225	0.2916	4.6000e-004		0.0114	0.0114		0.0105	0.0105	0.0000	40.0551	40.0551	0.0130	0.0000	40.3789
Paving	7.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0294**	**0.2225**	**0.2916**	**4.6000e-004**		**0.0114**	**0.0114**		**0.0105**	**0.0105**	**0.0000**	**40.0551**	**40.0551**	**0.0130**	**0.0000**	**40.3789**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	6.8000e-004	7.2300e-003	2.0000e-005	1.3600e-003	2.0000e-005	1.3800e-003	3.8000e-004	1.0000e-005	4.0000e-004	0.0000	2.0046	2.0046	5.0000e-005	0.0000	2.0059
Total	**1.0800e-003**	**6.8000e-004**	**7.2300e-003**	**2.0000e-005**	**1.3600e-003**	**2.0000e-005**	**1.3800e-003**	**3.8000e-004**	**1.0000e-005**	**4.0000e-004**	**0.0000**	**2.0046**	**2.0046**	**5.0000e-005**	**0.0000**	**2.0059**

3.6 Architectural Coating - 2022

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					
Archit. Coating	0.5170					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.5190**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6200e-003	1.0200e-003	0.0109	3.0000e-005	3.6000e-003	2.0000e-005	3.6200e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	3.0069	3.0069	7.0000e-005	0.0000	3.0088
Total	**1.6200e-003**	**1.0200e-003**	**0.0109**	**3.0000e-005**	**3.6000e-003**	**2.0000e-005**	**3.6200e-003**	**9.6000e-004**	**2.0000e-005**	**9.8000e-004**	**0.0000**	**3.0069**	**3.0069**	**7.0000e-005**	**0.0000**	**3.0088**

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					
Archit. Coating	0.5170					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.5190**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6200e-003	1.0200e-003	0.0109	3.0000e-005	2.0400e-003	2.0000e-005	2.0600e-003	5.7000e-004	2.0000e-005	6.0000e-004	0.0000	3.0069	3.0069	7.0000e-005	0.0000	3.0088
Total	**1.6200e-003**	**1.0200e-003**	**0.0109**	**3.0000e-005**	**2.0400e-003**	**2.0000e-005**	**2.0600e-003**	**5.7000e-004**	**2.0000e-005**	**6.0000e-004**	**0.0000**	**3.0069**	**3.0069**	**7.0000e-005**	**0.0000**	**3.0088**

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	5.6300e-003	0.0550	0.0609	3.3000e-004	0.0208	1.9000e-004	0.0210	5.5800e-003	1.8000e-004	5.7600e-003	0.0000	30.4051	30.4051	1.5400e-003	0.0000	30.4435
Unmitigated	5.6300e-003	0.0550	0.0609	3.3000e-004	0.0208	1.9000e-004	0.0210	5.5800e-003	1.8000e-004	5.7600e-003	0.0000	30.4051	30.4051	1.5400e-003	0.0000	30.4435

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Manufacturing	20.14	20.14	9.81	54,480	54,480
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	20.14	20.14	9.81	54,480	54,480

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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694
Manufacturing	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694
Other Asphalt Surfaces	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694
Other Non-Asphalt Surfaces	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694
Unrefrigerated Warehouse-No Rail	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	148.7968	148.7968	6.7300e-003	1.3900e-003	149.3799
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	155.5745	155.5745	7.0300e-003	1.4600e-003	156.1841
NaturalGas Mitigated	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	62.2757	62.2757	1.1900e-003	1.1400e-003	62.6457
NaturalGas Unmitigated	6.6200e-003	0.0602	0.0506	3.6000e-004		4.5800e-003	4.5800e-003		4.5800e-003	4.5800e-003	0.0000	65.5463	65.5463	1.2600e-003	1.2000e-003	65.9358

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	6133.5	3.0000e-005	3.0000e-004	2.5000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3273	0.3273	1.0000e-005	1.0000e-005	0.3293
Manufacturing	1.07752e+006	5.8100e-003	0.0528	0.0444	3.2000e-004		4.0100e-003	4.0100e-003		4.0100e-003	4.0100e-003	0.0000	57.5005	57.5005	1.1000e-003	1.0500e-003	57.8422
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	0.0000	0.0000
Other Non-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	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	144640	7.8000e-004	7.0900e-003	5.9600e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	7.7185	7.7185	1.5000e-004	1.4000e-004	7.7644
Total		**6.6200e-003**	**0.0602**	**0.0506**	**3.6000e-004**		**4.5700e-003**	**4.5700e-003**		**4.5700e-003**	**4.5700e-003**	**0.0000**	**65.5463**	**65.5463**	**1.2600e-003**	**1.2000e-003**	**65.9358**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	5773.39	3.0000e-005	2.8000e-004	2.4000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3081	0.3081	1.0000e-005	1.0000e-005	0.3099
Manufacturing	1.02476e+006	5.5300e-003	0.0502	0.0422	3.0000e-004		3.8200e-003	3.8200e-003		3.8200e-003	3.8200e-003	0.0000	54.6852	54.6852	1.0500e-003	1.0000e-003	55.0102
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	0.0000	0.0000
Other Non-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	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	136466	7.4000e-004	6.6900e-003	5.6200e-003	4.0000e-005		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	7.2823	7.2823	1.4000e-004	1.3000e-004	7.3256
Total		**6.3000e-003**	**0.0572**	**0.0481**	**3.4000e-004**		**4.3500e-003**	**4.3500e-003**		**4.3500e-003**	**4.3500e-003**	**0.0000**	**62.2756**	**62.2756**	**1.2000e-003**	**1.1400e-003**	**62.6457**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	4286.4	1.2470	6.0000e-005	1.0000e-005	1.2519
Manufacturing	455377	132.4743	5.9900e-003	1.2400e-003	132.9934
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	75120	21.8533	9.9000e-004	2.0000e-004	21.9389
Total		**155.5745**	**7.0400e-003**	**1.4500e-003**	**156.1841**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	4075.28	1.1855	5.0000e-005	1.0000e-005	1.1902
Manufacturing	435365	126.6526	5.7300e-003	1.1800e-003	127.1489
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	72044.8	20.9587	9.5000e-004	2.0000e-004	21.0408
Total		**148.7968**	**6.7300e-003**	**1.3900e-003**	**149.3799**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3176	4.0000e-005	4.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.5700e-003	9.5700e-003	3.0000e-005	0.0000	0.0102
Unmitigated	0.3176	4.0000e-005	4.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.5700e-003	9.5700e-003	3.0000e-005	0.0000	0.0102

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	0.0517					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2654					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.6000e-004	4.0000e-005	4.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.5700e-003	9.5700e-003	3.0000e-005	0.0000	0.0102
Total	**0.3176**	**4.0000e-005**	**4.9200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.5700e-003**	**9.5700e-003**	**3.0000e-005**	**0.0000**	**0.0102**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0517					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2654					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.6000e-004	4.0000e-005	4.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.5700e-003	9.5700e-003	3.0000e-005	0.0000	0.0102
Total	**0.3176**	**4.0000e-005**	**4.9200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.5700e-003**	**9.5700e-003**	**3.0000e-005**	**0.0000**	**0.0102**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	33.7381	0.5817	0.0140	52.4423
Unmitigated	42.1636	0.7271	0.0175	65.5437

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0 / 0.0511988	0.0521	0.0000	0.0000	0.0523
Manufacturing	16.79 / 0	31.7562	0.5483	0.0132	49.3870
Other Asphalt Surfaces	5.475 / 0	10.3553	0.1788	4.2900e-003	16.1044
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**42.1636**	**0.7271**	**0.0175**	**65.5437**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0 / 0.0480757	0.0490	0.0000	0.0000	0.0491
Manufacturing	13.432 / 0	25.4050	0.4386	0.0105	39.5096
Other Asphalt Surfaces	4.38 / 0	8.2842	0.1430	3.4300e-003	12.8836
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**33.7381**	**0.5817**	**0.0140**	**52.4423**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	9.4973	0.5613	0.0000	23.5293
Unmitigated	14.6113	0.8635	0.0000	36.1989

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0.44	0.0893	5.2800e-003	0.0000	0.2213
Manufacturing	64.02	12.9955	0.7680	0.0000	32.1958
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	7.52	1.5265	0.0902	0.0000	3.7818
Total		**14.6113**	**0.8635**	**0.0000**	**36.1989**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0.286	0.0581	3.4300e-003	0.0000	0.1438
Manufacturing	41.613	8.4471	0.4992	0.0000	20.9272
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	4.888	0.9922	0.0586	0.0000	2.4582
Total		**9.4973**	**0.5613**	**0.0000**	**23.5293**

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

Central Valley Meats CEQA Phase 1

San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.47	1000sqft	0.01	470.00	0
Manufacturing	51.63	1000sqft	1.19	51,630.00	0
Unrefrigerated Warehouse-No Rail	8.00	1000sqft	0.18	8,000.00	0
Other Asphalt Surfaces	245.34	1000sqft	5.63	245,340.00	0
Other Non-Asphalt Surfaces	229.91	1000sqft	5.28	229,910.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.7 **Precipitation Freq (Days)** 45

Climate Zone 3 **Operational Year** 2023

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MWhr) 641.35 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Architectural coating timeline updated to match schedule.

Off-road Equipment - Additional equipment added to account for pond digging.

Grading - Updated Total Acres Graded with information from site plan drawings.

Vehicle Trips - Worker trips updated with true employee values and consolidated under manufacturing.

Water And Wastewater - Water usage has been updated with engineering plans.

Construction Off-road Equipment Mitigation - Crawler Tractors, Excavators, Graders, Rubber Tired Dozers, Rubber Tired Loaders, Scrapers, and Tractors/Loaders/Backhoes updated to enginer Tier 4 to reflect actual equipment. Will be watering area 3x daily during construction and conducting street sweeping to achieve PM reductions.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstructionPhase	NumDays	20.00	40.00
tblGrading	AcresOfGrading	75.00	7.01
tblGrading	AcresOfGrading	5.00	5.28
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	1.49	0.39
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	0.62	0.19
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	3.82	0.39
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	83,534.86	0.00
tblWater	IndoorWaterUseRate	11,939,437.50	16,790,000.00
tblWater	IndoorWaterUseRate	0.00	5,475,000.00
tblWater	IndoorWaterUseRate	1,850,000.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.1216	53.5413	31.4916	0.0710	18.8316	2.5413	21.3728	10.0456	2.3380	12.3836	0.0000	7,067.3836	7,067.3836	1.9473	0.0000	7,088.7392
2022	53.6182	25.1780	24.1716	0.0701	2.4448	0.8442	3.2890	0.6620	0.7944	1.4564	0.0000	6,976.7713	6,976.7713	0.8378	0.0000	6,997.7170
Maximum	**53.6182**	**53.5413**	**31.4916**	**0.0710**	**18.8316**	**2.5413**	**21.3728**	**10.0456**	**2.3380**	**12.3836**	**0.0000**	**7,067.3836**	**7,067.3836**	**1.9473**	**0.0000**	**7,088.7392**

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					
2021	2.7806	23.0022	33.6123	0.0710	7.3804	0.7178	7.4754	3.9291	0.6817	4.0241	0.0000	7,067.3836	7,067.3836	1.9473	0.0000	7,088.7392
2022	53.6182	21.2114	24.4449	0.0701	1.4293	0.6528	2.0502	0.4128	0.6071	1.0028	0.0000	6,976.7713	6,976.7713	0.8378	0.0000	6,997.7170
Maximum	**53.6182**	**23.0022**	**33.6123**	**0.0710**	**7.3804**	**0.7178**	**7.4754**	**3.9291**	**0.6817**	**4.0241**	**0.0000**	**7,067.3836**	**7,067.3836**	**1.9473**	**0.0000**	**7,088.7392**

	ROG	**NOx**	**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	**3.99**	**43.83**	**-4.30**	**0.00**	**58.59**	**59.52**	**61.37**	**59.45**	**58.85**	**63.68**	**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	1.7428	5.0000e-004	0.0547	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1172	0.1172	3.1000e-004		0.1249
Energy	0.0363	0.3299	0.2771	1.9800e-003		0.0251	0.0251		0.0251	0.0251		395.9038	395.9038	7.5900e-003	7.2600e-003	398.2565
Mobile	0.0400	0.3218	0.3976	2.0500e-003	0.1264	1.1300e-003	0.1276	0.0339	1.0600e-003	0.0350		209.5319	209.5319	9.8800e-003		209.7790
Total	**1.8191**	**0.6522**	**0.7294**	**4.0300e-003**	**0.1264**	**0.0264**	**0.1528**	**0.0339**	**0.0263**	**0.0602**		**605.5529**	**605.5529**	**0.0178**	**7.2600e-003**	**608.1604**

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	1.7428	5.0000e-004	0.0547	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1172	0.1172	3.1000e-004		0.1249
Energy	0.0345	0.3135	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1488	376.1488	7.2100e-003	6.9000e-003	378.3840
Mobile	0.0400	0.3218	0.3976	2.0500e-003	0.1264	1.1300e-003	0.1276	0.0339	1.0600e-003	0.0350		209.5319	209.5319	9.8800e-003		209.7790
Total	**1.8173**	**0.6358**	**0.7155**	**3.9300e-003**	**0.1264**	**0.0251**	**0.1516**	**0.0339**	**0.0251**	**0.0590**		**585.7978**	**585.7978**	**0.0174**	**6.9000e-003**	**588.2879**

	ROG	NOx	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	**0.10**	**2.52**	**1.90**	**2.48**	**0.00**	**4.74**	**0.82**	**0.00**	**4.75**	**2.08**	**0.00**	**3.26**	**3.26**	**2.14**	**4.96**	**3.27**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2021	6/14/2021	5	10	
2	Grading	Grading	6/15/2021	7/26/2021	5	30	
3	Building Construction	Building Construction	7/27/2021	9/19/2022	5	300	
4	Paving	Paving	9/20/2022	11/14/2022	5	40	
5	Architectural Coating	Architectural Coating	11/14/2022	12/9/2022	5	20	

Acres of Grading (Site Preparation Phase): 5.28

Acres of Grading (Grading Phase): 7.01

Acres of Paving: 10.91

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 90,150; Non-Residential Outdoor: 30,050; Striped Parking Area: 28,515 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	1	8.00	212	0.43
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	10	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	225.00	88.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	45.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 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					18.6262	0.0000	18.6262	9.9911	0.0000	9.9911			0.0000			0.0000
Off-Road	5.0113	53.4823	28.4599	0.0573		2.5399	2.5399		2.3367	2.3367		5,551.4371	5,551.4371	1.7955		5,596.3233
Total	**5.0113**	**53.4823**	**28.4599**	**0.0573**	**18.6262**	**2.5399**	**21.1661**	**9.9911**	**2.3367**	**12.3279**		**5,551.4371**	**5,551.4371**	**1.7955**		**5,596.3233**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1103	0.0590	0.7664	2.1000e-003	0.2054	1.3800e-003	0.2067	0.0545	1.2700e-003	0.0557		209.3485	209.3485	5.6000e-003		209.4886
Total	**0.1103**	**0.0590**	**0.7664**	**2.1000e-003**	**0.2054**	**1.3800e-003**	**0.2067**	**0.0545**	**1.2700e-003**	**0.0557**		**209.3485**	**209.3485**	**5.6000e-003**		**209.4886**

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					7.2642	0.0000	7.2642	3.8966	0.0000	3.8966			0.0000			0.0000
Off-Road	0.7029	3.0460	31.1598	0.0573		0.0937	0.0937		0.0937	0.0937	0.0000	5,551.4371	5,551.4371	1.7955		5,596.3233
Total	**0.7029**	**3.0460**	**31.1598**	**0.0573**	**7.2642**	**0.0937**	**7.3579**	**3.8966**	**0.0937**	**3.9903**	**0.0000**	**5,551.4371**	**5,551.4371**	**1.7955**		**5,596.3233**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1103	0.0590	0.7664	2.1000e-003	0.1161	1.3800e-003	0.1175	0.0326	1.2700e-003	0.0338		209.3485	209.3485	5.6000e-003		209.4886
Total	**0.1103**	**0.0590**	**0.7664**	**2.1000e-003**	**0.1161**	**1.3800e-003**	**0.1175**	**0.0326**	**1.2700e-003**	**0.0338**		**209.3485**	**209.3485**	**5.6000e-003**		**209.4886**

3.3 Grading - 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					6.2699	0.0000	6.2699	3.3370	0.0000	3.3370			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**6.2699**	**1.9853**	**8.2552**	**3.3370**	**1.8265**	**5.1635**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0883	0.0472	0.6131	1.6800e-003	0.1643	1.1000e-003	0.1654	0.0436	1.0100e-003	0.0446		167.4788	167.4788	4.4800e-003		167.5908
Total	**0.0883**	**0.0472**	**0.6131**	**1.6800e-003**	**0.1643**	**1.1000e-003**	**0.1654**	**0.0436**	**1.0100e-003**	**0.0446**		**167.4788**	**167.4788**	**4.4800e-003**		**167.5908**

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					2.4453	0.0000	2.4453	1.3014	0.0000	1.3014			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**0.7616**	**3.3000**	**32.9991**	**0.0620**	**2.4453**	**0.1015**	**2.5468**	**1.3014**	**0.1015**	**1.4030**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0883	0.0472	0.6131	1.6800e-003	0.0929	1.1000e-003	0.0940	0.0261	1.0100e-003	0.0271		167.4788	167.4788	4.4800e-003		167.5908
Total	**0.0883**	**0.0472**	**0.6131**	**1.6800e-003**	**0.0929**	**1.1000e-003**	**0.0940**	**0.0261**	**1.0100e-003**	**0.0271**		**167.4788**	**167.4788**	**4.4800e-003**		**167.5908**

3.4 Building Construction - 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					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2786	9.5834	1.6378	0.0251	0.5965	0.0269	0.6233	0.1718	0.0257	0.1975		2,629.883 6	2,629.883 6	0.1878		2,634.578 0
Worker	0.9930	0.5312	6.8978	0.0189	1.8483	0.0124	1.8607	0.4903	0.0114	0.5017		1,884.136 1	1,884.136 1	0.0504		1,885.397 0
Total	**1.2716**	**10.1146**	**8.5355**	**0.0440**	**2.4448**	**0.0393**	**2.4840**	**0.6620**	**0.0371**	**0.6991**		**4,514.019 7**	**4,514.019 7**	**0.2382**		**4,519.975 0**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5090	12.8876	16.7900	0.0269		0.6785	0.6785		0.6446	0.6446	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	**1.5090**	**12.8876**	**16.7900**	**0.0269**		**0.6785**	**0.6785**		**0.6446**	**0.6446**	**0.0000**	**2,553.363 9**	**2,553.363 9**	**0.6160**		**2,568.764 3**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2786	9.5834	1.6378	0.0251	0.3841	0.0269	0.4110	0.1196	0.0257	0.1453		2,629.883 6	2,629.883 6	0.1878		2,634.578 0
Worker	0.9930	0.5312	6.8978	0.0189	1.0451	0.0124	1.0575	0.2931	0.0114	0.3045		1,884.136 1	1,884.136 1	0.0504		1,885.397 0
Total	**1.2716**	**10.1146**	**8.5355**	**0.0440**	**1.4293**	**0.0393**	**1.4685**	**0.4128**	**0.0371**	**0.4499**		**4,514.019 7**	**4,514.019 7**	**0.2382**		**4,519.975 0**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.333 6**	**2,554.333 6**	**0.6120**		**2,569.632 2**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2588	9.0878	1.5090	0.0249	0.5965	0.0232	0.6197	0.1718	0.0222	0.1940		2,605.686 5	2,605.686 5	0.1809		2,610.208 1
Worker	0.9187	0.4745	6.2992	0.0182	1.8483	0.0120	1.8603	0.4903	0.0110	0.5013		1,816.751 3	1,816.751 3	0.0450		1,817.876 7
Total	**1.1775**	**9.5623**	**7.8082**	**0.0431**	**2.4448**	**0.0352**	**2.4800**	**0.6620**	**0.0333**	**0.6953**		**4,422.437 8**	**4,422.437 8**	**0.2259**		**4,428.084 8**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3736	11.6491	16.6367	0.0269		0.5857	0.5857		0.5568	0.5568	0.0000	2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	**1.3736**	**11.6491**	**16.6367**	**0.0269**		**0.5857**	**0.5857**		**0.5568**	**0.5568**	**0.0000**	**2,554.333 6**	**2,554.333 6**	**0.6120**		**2,569.632 2**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2588	9.0878	1.5090	0.0249	0.3841	0.0232	0.4074	0.1196	0.0222	0.1419		2,605.686 5	2,605.686 5	0.1809		2,610.208 1
Worker	0.9187	0.4745	6.2992	0.0182	1.0451	0.0120	1.0571	0.2931	0.0110	0.3042		1,816.751 3	1,816.751 3	0.0450		1,817.876 7
Total	**1.1775**	**9.5623**	**7.8082**	**0.0431**	**1.4293**	**0.0352**	**1.4645**	**0.4128**	**0.0333**	**0.4460**		**4,422.437 8**	**4,422.437 8**	**0.2259**		**4,428.084 8**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.660 3	2,207.660 3	0.7140		2,225.510 4
Paving	0.3688					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4716**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.660 3**	**2,207.660 3**	**0.7140**		**2,225.510 4**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0613	0.0316	0.4200	1.2200e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		121.1168	121.1168	3.0000e-003		121.1918
Total	**0.0613**	**0.0316**	**0.4200**	**1.2200e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**121.1168**	**121.1168**	**3.0000e-003**		**121.1918**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.660 3	2,207.660 3	0.7140		2,225.510 4
Paving	0.3688					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4716**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.660 3**	**2,207.660 3**	**0.7140**		**2,225.510 4**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0613	0.0316	0.4200	1.2200e-003	0.0697	8.0000e-004	0.0705	0.0195	7.4000e-004	0.0203		121.1168	121.1168	3.0000e-003		121.1918
Total	**0.0613**	**0.0316**	**0.4200**	**1.2200e-003**	**0.0697**	**8.0000e-004**	**0.0705**	**0.0195**	**7.4000e-004**	**0.0203**		**121.1168**	**121.1168**	**3.0000e-003**		**121.1918**

3.6 Architectural Coating - 2022

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					
Archit. Coating	51.6971					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**51.9016**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1837	0.0949	1.2598	3.6500e-003	0.3697	2.4000e-003	0.3721	0.0981	2.2100e-003	0.1003		363.3503	363.3503	9.0000e-003		363.5753
Total	**0.1837**	**0.0949**	**1.2598**	**3.6500e-003**	**0.3697**	**2.4000e-003**	**0.3721**	**0.0981**	**2.2100e-003**	**0.1003**		**363.3503**	**363.3503**	**9.0000e-003**		**363.5753**

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					
Archit. Coating	51.6971					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**51.9016**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1837	0.0949	1.2598	3.6500e-003	0.2090	2.4000e-003	0.2114	0.0586	2.2100e-003	0.0608		363.3503	363.3503	9.0000e-003		363.5753
Total	**0.1837**	**0.0949**	**1.2598**	**3.6500e-003**	**0.2090**	**2.4000e-003**	**0.2114**	**0.0586**	**2.2100e-003**	**0.0608**		**363.3503**	**363.3503**	**9.0000e-003**		**363.5753**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	0.0400	0.3218	0.3976	2.0500e-003	0.1264	1.1300e-003	0.1276	0.0339	1.0600e-003	0.0350		209.5319	209.5319	9.8800e-003		209.7790
Unmitigated	0.0400	0.3218	0.3976	2.0500e-003	0.1264	1.1300e-003	0.1276	0.0339	1.0600e-003	0.0350		209.5319	209.5319	9.8800e-003		209.7790

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Manufacturing	20.14	20.14	9.81	54,480	54,480
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	20.14	20.14	9.81	54,480	54,480

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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694
Manufacturing	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694
Other Asphalt Surfaces	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694
Other Non-Asphalt Surfaces	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694
Unrefrigerated Warehouse-No Rail	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0345	0.3135	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1488	376.1488	7.2100e-003	6.9000e-003	378.3840
NaturalGas Unmitigated	0.0363	0.3299	0.2771	1.9800e-003		0.0251	0.0251		0.0251	0.0251		395.9038	395.9038	7.5900e-003	7.2600e-003	398.2565

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	16.8041	1.8000e-004	1.6500e-003	1.3800e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		1.9770	1.9770	4.0000e-005	4.0000e-005	1.9887
Manufacturing	2952.1	0.0318	0.2894	0.2431	1.7400e-003		0.0220	0.0220		0.0220	0.0220		347.3064	347.3064	6.6600e-003	6.3700e-003	349.3703
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	0.0000
Other Non-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	0.0000
Unrefrigerated Warehouse-No Rail	396.274	4.2700e-003	0.0389	0.0326	2.3000e-004		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003		46.6205	46.6205	8.9000e-004	8.5000e-004	46.8975
Total		**0.0363**	**0.3299**	**0.2771**	**1.9800e-003**		**0.0251**	**0.0251**		**0.0251**	**0.0251**		**395.9038**	**395.9038**	**7.5900e-003**	**7.2600e-003**	**398.2565**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.0158175	1.7000e-004	1.5500e-003	1.3000e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		1.8609	1.8609	4.0000e-005	3.0000e-005	1.8719
Manufacturing	2.80757	0.0303	0.2753	0.2312	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.3022	330.3022	6.3300e-003	6.0600e-003	332.2650
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	0.0000
Other Non-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	0.0000
Unrefrigerated Warehouse-No Rail	0.373878	4.0300e-003	0.0367	0.0308	2.2000e-004		2.7900e-003	2.7900e-003		2.7900e-003	2.7900e-003		43.9857	43.9857	8.4000e-004	8.1000e-004	44.2471
Total		**0.0345**	**0.3135**	**0.2633**	**1.8800e-003**		**0.0238**	**0.0238**		**0.0238**	**0.0238**		**376.1488**	**376.1488**	**7.2100e-003**	**6.9000e-003**	**378.3840**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	1.7428	5.0000e-004	0.0547	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1172	0.1172	3.1000e-004		0.1249
Unmitigated	1.7428	5.0000e-004	0.0547	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1172	0.1172	3.1000e-004		0.1249

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	0.2833					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4545					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0600e-003	5.0000e-004	0.0547	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1172	0.1172	3.1000e-004		0.1249
Total	**1.7428**	**5.0000e-004**	**0.0547**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1172**	**0.1172**	**3.1000e-004**		**0.1249**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2833					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4545					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0600e-003	5.0000e-004	0.0547	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1172	0.1172	3.1000e-004		0.1249
Total	**1.7428**	**5.0000e-004**	**0.0547**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1172**	**0.1172**	**3.1000e-004**		**0.1249**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Central Valley Meats CEQA Phase 1

San Joaquin Valley Unified APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.47	1000sqft	0.01	470.00	0
Manufacturing	51.63	1000sqft	1.19	51,630.00	0
Unrefrigerated Warehouse-No Rail	8.00	1000sqft	0.18	8,000.00	0
Other Asphalt Surfaces	245.34	1000sqft	5.63	245,340.00	0
Other Non-Asphalt Surfaces	229.91	1000sqft	5.28	229,910.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.7 **Precipitation Freq (Days)** 45

Climate Zone 3 **Operational Year** 2023

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MWhr) 641.35 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Architectural coating timeline updated to match schedule.

Off-road Equipment - Additional equipment added to account for pond digging.

Grading - Updated Total Acres Graded with information from site plan drawings.

Vehicle Trips - Worker trips updated with true employee values and consolidated under manufacturing.

Water And Wastewater - Water usage has been updated with engineering plans.

Construction Off-road Equipment Mitigation - Crawler Tractors, Excavators, Graders, Rubber Tired Dozers, Rubber Tired Loaders, Scrapers, and Tractors/Loaders/Backhoes updated to enginer Tier 4 to reflect actual equipment. Will be watering area 3x daily during construction and conducting street sweeping to achieve PM reductions.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstructionPhase	NumDays	20.00	40.00
tblGrading	AcresOfGrading	75.00	7.01
tblGrading	AcresOfGrading	5.00	5.28
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	ST_TR	1.49	0.39
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	SU_TR	0.62	0.19
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	11.03	0.00
tblVehicleTrips	WD_TR	3.82	0.39
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	83,534.86	0.00
tblWater	IndoorWaterUseRate	11,939,437.50	16,790,000.00
tblWater	IndoorWaterUseRate	0.00	5,475,000.00
tblWater	IndoorWaterUseRate	1,850,000.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.1149	53.5523	31.4000	0.0679	18.8316	2.5413	21.3728	10.0456	2.3380	12.3836	0.0000	6,757.4640	6,757.4640	1.9467	0.0000	6,779.2784
2022	53.6036	25.3399	23.4954	0.0671	2.4448	0.8452	3.2900	0.6620	0.7953	1.4574	0.0000	6,675.2552	6,675.2552	0.8563	0.0000	6,696.6618
Maximum	**53.6036**	**53.5523**	**31.4000**	**0.0679**	**18.8316**	**2.5413**	**21.3728**	**10.0456**	**2.3380**	**12.3836**	**0.0000**	**6,757.4640**	**6,757.4640**	**1.9467**	**0.0000**	**6,779.2784**

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					
2021	2.7347	23.1927	33.5206	0.0679	7.3804	0.7188	7.4754	3.9291	0.6827	4.0241	0.0000	6,757.4640	6,757.4640	1.9467	0.0000	6,779.2784
2022	53.6036	21.3734	23.7688	0.0671	1.4293	0.6528	2.0512	0.4128	0.6071	1.0038	0.0000	6,675.2552	6,675.2552	0.8563	0.0000	6,696.6618
Maximum	**53.6036**	**23.1927**	**33.5206**	**0.0679**	**7.3804**	**0.7188**	**7.4754**	**3.9291**	**0.6827**	**4.0241**	**0.0000**	**6,757.4640**	**6,757.4640**	**1.9467**	**0.0000**	**6,779.2784**

	ROG	**NOx**	**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	**4.05**	**43.51**	**-4.36**	**0.00**	**58.59**	**59.50**	**61.37**	**59.45**	**58.83**	**63.67**	**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	1.7428	5.0000e-004	0.0547	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1172	0.1172	3.1000e-004		0.1249
Energy	0.0363	0.3299	0.2771	1.9800e-003		0.0251	0.0251		0.0251	0.0251		395.9038	395.9038	7.5900e-003	7.2600e-003	398.2565
Mobile	0.0318	0.3276	0.3676	1.8900e-003	0.1264	1.1400e-003	0.1276	0.0339	1.0700e-003	0.0350		193.3050	193.3050	0.0105		193.5679
Total	**1.8109**	**0.6580**	**0.6993**	**3.8700e-003**	**0.1264**	**0.0264**	**0.1528**	**0.0339**	**0.0263**	**0.0603**		**589.3260**	**589.3260**	**0.0184**	**7.2600e-003**	**591.9493**

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	1.7428	5.0000e-004	0.0547	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1172	0.1172	3.1000e-004		0.1249
Energy	0.0345	0.3135	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1488	376.1488	7.2100e-003	6.9000e-003	378.3840
Mobile	0.0318	0.3276	0.3676	1.8900e-003	0.1264	1.1400e-003	0.1276	0.0339	1.0700e-003	0.0350		193.3050	193.3050	0.0105		193.5679
Total	**1.8091**	**0.6415**	**0.6855**	**3.7700e-003**	**0.1264**	**0.0252**	**0.1516**	**0.0339**	**0.0251**	**0.0590**		**569.5709**	**569.5709**	**0.0180**	**6.9000e-003**	**572.0768**

	ROG	NOx	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	0.10	2.50	1.98	2.58	0.00	4.73	0.82	0.00	4.75	2.07	0.00	3.35	3.35	2.06	4.96	3.36

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2021	6/14/2021	5	10	
2	Grading	Grading	6/15/2021	7/26/2021	5	30	
3	Building Construction	Building Construction	7/27/2021	9/19/2022	5	300	
4	Paving	Paving	9/20/2022	11/14/2022	5	40	
5	Architectural Coating	Architectural Coating	11/14/2022	12/9/2022	5	20	

Acres of Grading (Site Preparation Phase): 5.28

Acres of Grading (Grading Phase): 7.01

Acres of Paving: 10.91

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 90,150; Non-Residential Outdoor: 30,050; Striped Parking Area: 28,515 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crawler Tractors	1	8.00	212	0.43
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Rubber Tired Loaders	1	8.00	203	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	10	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	225.00	88.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	45.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 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					18.6262	0.0000	18.6262	9.9911	0.0000	9.9911			0.0000			0.0000
Off-Road	5.0113	53.4823	28.4599	0.0573		2.5399	2.5399		2.3367	2.3367		5,551.4371	5,551.4371	1.7955		5,596.3233
Total	**5.0113**	**53.4823**	**28.4599**	**0.0573**	**18.6262**	**2.5399**	**21.1661**	**9.9911**	**2.3367**	**12.3279**		**5,551.4371**	**5,551.4371**	**1.7955**		**5,596.3233**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1036	0.0700	0.6519	1.8500e-003	0.2054	1.3800e-003	0.2067	0.0545	1.2700e-003	0.0557		184.1524	184.1524	4.9200e-003		184.2754
Total	**0.1036**	**0.0700**	**0.6519**	**1.8500e-003**	**0.2054**	**1.3800e-003**	**0.2067**	**0.0545**	**1.2700e-003**	**0.0557**		**184.1524**	**184.1524**	**4.9200e-003**		**184.2754**

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					7.2642	0.0000	7.2642	3.8966	0.0000	3.8966			0.0000			0.0000
Off-Road	0.7029	3.0460	31.1598	0.0573		0.0937	0.0937		0.0937	0.0937	0.0000	5,551.4371	5,551.4371	1.7955		5,596.3233
Total	**0.7029**	**3.0460**	**31.1598**	**0.0573**	**7.2642**	**0.0937**	**7.3579**	**3.8966**	**0.0937**	**3.9903**	**0.0000**	**5,551.4371**	**5,551.4371**	**1.7955**		**5,596.3233**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1036	0.0700	0.6519	1.8500e-003	0.1161	1.3800e-003	0.1175	0.0326	1.2700e-003	0.0338		184.1524	184.1524	4.9200e-003		184.2754
Total	**0.1036**	**0.0700**	**0.6519**	**1.8500e-003**	**0.1161**	**1.3800e-003**	**0.1175**	**0.0326**	**1.2700e-003**	**0.0338**		**184.1524**	**184.1524**	**4.9200e-003**		**184.2754**

3.3 Grading - 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					6.2699	0.0000	6.2699	3.3370	0.0000	3.3370			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**6.2699**	**1.9853**	**8.2552**	**3.3370**	**1.8265**	**5.1635**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0829	0.0560	0.5215	1.4800e-003	0.1643	1.1000e-003	0.1654	0.0436	1.0100e-003	0.0446		147.3219	147.3219	3.9400e-003		147.4203
Total	**0.0829**	**0.0560**	**0.5215**	**1.4800e-003**	**0.1643**	**1.1000e-003**	**0.1654**	**0.0436**	**1.0100e-003**	**0.0446**		**147.3219**	**147.3219**	**3.9400e-003**		**147.4203**

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					2.4453	0.0000	2.4453	1.3014	0.0000	1.3014			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**0.7616**	**3.3000**	**32.9991**	**0.0620**	**2.4453**	**0.1015**	**2.5468**	**1.3014**	**0.1015**	**1.4030**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0829	0.0560	0.5215	1.4800e-003	0.0929	1.1000e-003	0.0940	0.0261	1.0100e-003	0.0271		147.3219	147.3219	3.9400e-003		147.4203
Total	**0.0829**	**0.0560**	**0.5215**	**1.4800e-003**	**0.0929**	**1.1000e-003**	**0.0940**	**0.0261**	**1.0100e-003**	**0.0271**		**147.3219**	**147.3219**	**3.9400e-003**		**147.4203**

3.4 Building Construction - 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					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2935	9.6752	1.9463	0.0243	0.5965	0.0279	0.6243	0.1718	0.0267	0.1984		2,546.7285	2,546.7285	0.2123		2,552.0355
Worker	0.9321	0.6299	5.8669	0.0166	1.8483	0.0124	1.8607	0.4903	0.0114	0.5017		1,657.3716	1,657.3716	0.0443		1,658.4786
Total	**1.2257**	**10.3051**	**7.8133**	**0.0410**	**2.4448**	**0.0403**	**2.4850**	**0.6620**	**0.0381**	**0.7001**		**4,204.1001**	**4,204.1001**	**0.2566**		**4,210.5141**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5090	12.8876	16.7900	0.0269		0.6785	0.6785		0.6446	0.6446	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.5090**	**12.8876**	**16.7900**	**0.0269**		**0.6785**	**0.6785**		**0.6446**	**0.6446**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2935	9.6752	1.9463	0.0243	0.3841	0.0279	0.4120	0.1196	0.0267	0.1463		2,546.728 5	2,546.728 5	0.2123		2,552.035 5
Worker	0.9321	0.6299	5.8669	0.0166	1.0451	0.0124	1.0575	0.2931	0.0114	0.3045		1,657.371 6	1,657.371 6	0.0443		1,658.478 6
Total	**1.2257**	**10.3051**	**7.8133**	**0.0410**	**1.4293**	**0.0403**	**1.4695**	**0.4128**	**0.0381**	**0.4508**		**4,204.100 1**	**4,204.100 1**	**0.2566**		**4,210.514 1**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.333 6**	**2,554.333 6**	**0.6120**		**2,569.632 2**

3.4 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2729	9.1620	1.7973	0.0241	0.5965	0.0242	0.6207	0.1718	0.0231	0.1949		2,522.767 8	2,522.767 8	0.2049		2,527.889 7
Worker	0.8640	0.5623	5.3347	0.0160	1.8483	0.0120	1.8603	0.4903	0.0110	0.5013		1,598.153 8	1,598.153 8	0.0394		1,599.139 9
Total	**1.1369**	**9.7243**	**7.1320**	**0.0401**	**2.4448**	**0.0362**	**2.4810**	**0.6620**	**0.0342**	**0.6962**		**4,120.921 6**	**4,120.921 6**	**0.2443**		**4,127.029 6**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3736	11.6491	16.6367	0.0269		0.5857	0.5857		0.5568	0.5568	0.0000	2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	**1.3736**	**11.6491**	**16.6367**	**0.0269**		**0.5857**	**0.5857**		**0.5568**	**0.5568**	**0.0000**	**2,554.333 6**	**2,554.333 6**	**0.6120**		**2,569.632 2**

3.4 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2729	9.1620	1.7973	0.0241	0.3841	0.0242	0.4083	0.1196	0.0231	0.1428		2,522.767 8	2,522.767 8	0.2049		2,527.889 7
Worker	0.8640	0.5623	5.3347	0.0160	1.0451	0.0120	1.0571	0.2931	0.0110	0.3042		1,598.153 8	1,598.153 8	0.0394		1,599.139 9
Total	**1.1369**	**9.7243**	**7.1320**	**0.0401**	**1.4293**	**0.0362**	**1.4655**	**0.4128**	**0.0342**	**0.4469**		**4,120.921 6**	**4,120.921 6**	**0.2443**		**4,127.029 6**

3.5 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.660 3	2,207.660 3	0.7140		2,225.510 4
Paving	0.3688					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4716**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.660 3**	**2,207.660 3**	**0.7140**		**2,225.510 4**

3.5 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0576	0.0375	0.3557	1.0700e-003	0.1232	8.0000e-004	0.1240	0.0327	7.4000e-004	0.0334		106.5436	106.5436	2.6300e-003		106.6093
Total	**0.0576**	**0.0375**	**0.3557**	**1.0700e-003**	**0.1232**	**8.0000e-004**	**0.1240**	**0.0327**	**7.4000e-004**	**0.0334**		**106.5436**	**106.5436**	**2.6300e-003**		**106.6093**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.3688					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4716**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.5 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0576	0.0375	0.3557	1.0700e-003	0.0697	8.0000e-004	0.0705	0.0195	7.4000e-004	0.0203		106.5436	106.5436	2.6300e-003		106.6093
Total	**0.0576**	**0.0375**	**0.3557**	**1.0700e-003**	**0.0697**	**8.0000e-004**	**0.0705**	**0.0195**	**7.4000e-004**	**0.0203**		**106.5436**	**106.5436**	**2.6300e-003**		**106.6093**

3.6 Architectural Coating - 2022

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					
Archit. Coating	51.6971					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**51.9016**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1728	0.1125	1.0669	3.2100e-003	0.3697	2.4000e-003	0.3721	0.0981	2.2100e-003	0.1003		319.6308	319.6308	7.8900e-003		319.8280
Total	**0.1728**	**0.1125**	**1.0669**	**3.2100e-003**	**0.3697**	**2.4000e-003**	**0.3721**	**0.0981**	**2.2100e-003**	**0.1003**		**319.6308**	**319.6308**	**7.8900e-003**		**319.8280**

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					
Archit. Coating	51.6971					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**51.9016**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.6 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1728	0.1125	1.0669	3.2100e-003	0.2090	2.4000e-003	0.2114	0.0586	2.2100e-003	0.0608		319.6308	319.6308	7.8900e-003		319.8280
Total	**0.1728**	**0.1125**	**1.0669**	**3.2100e-003**	**0.2090**	**2.4000e-003**	**0.2114**	**0.0586**	**2.2100e-003**	**0.0608**		**319.6308**	**319.6308**	**7.8900e-003**		**319.8280**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0318	0.3276	0.3676	1.8900e-003	0.1264	1.1400e-003	0.1276	0.0339	1.0700e-003	0.0350		193.3050	193.3050	0.0105		193.5679
Unmitigated	0.0318	0.3276	0.3676	1.8900e-003	0.1264	1.1400e-003	0.1276	0.0339	1.0700e-003	0.0350		193.3050	193.3050	0.0105		193.5679

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Manufacturing	20.14	20.14	9.81	54,480	54,480
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	20.14	20.14	9.81	54,480	54,480

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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694
Manufacturing	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694
Other Asphalt Surfaces	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694
Other Non-Asphalt Surfaces	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694
Unrefrigerated Warehouse-No Rail	0.517262	0.031316	0.171418	0.114437	0.017015	0.004840	0.021467	0.112166	0.001792	0.001507	0.005146	0.000939	0.000694

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0345	0.3135	0.2633	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.1488	376.1488	7.2100e-003	6.9000e-003	378.3840
NaturalGas Unmitigated	0.0363	0.3299	0.2771	1.9800e-003		0.0251	0.0251		0.0251	0.0251		395.9038	395.9038	7.5900e-003	7.2600e-003	398.2565

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	16.8041	1.8000e-004	1.6500e-003	1.3800e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		1.9770	1.9770	4.0000e-005	4.0000e-005	1.9887
Manufacturing	2952.1	0.0318	0.2894	0.2431	1.7400e-003		0.0220	0.0220		0.0220	0.0220		347.3064	347.3064	6.6600e-003	6.3700e-003	349.3703
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	0.0000
Other Non-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	0.0000
Unrefrigerated Warehouse-No Rail	396.274	4.2700e-003	0.0389	0.0326	2.3000e-004		2.9500e-003	2.9500e-003		2.9500e-003	2.9500e-003		46.6205	46.6205	8.9000e-004	8.5000e-004	46.8975
Total		**0.0363**	**0.3299**	**0.2771**	**1.9800e-003**		**0.0251**	**0.0251**		**0.0251**	**0.0251**		**395.9038**	**395.9038**	**7.5900e-003**	**7.2600e-003**	**398.2565**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.0158175	1.7000e-004	1.5500e-003	1.3000e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		1.8609	1.8609	4.0000e-005	3.0000e-005	1.8719
Manufacturing	2.80757	0.0303	0.2753	0.2312	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.3022	330.3022	6.3300e-003	6.0600e-003	332.2650
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	0.0000
Other Non-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	0.0000
Unrefrigerated Warehouse-No Rail	0.373878	4.0300e-003	0.0367	0.0308	2.2000e-004		2.7900e-003	2.7900e-003		2.7900e-003	2.7900e-003		43.9857	43.9857	8.4000e-004	8.1000e-004	44.2471
Total		**0.0345**	**0.3135**	**0.2633**	**1.8800e-003**		**0.0238**	**0.0238**		**0.0238**	**0.0238**		**376.1488**	**376.1488**	**7.2100e-003**	**6.9000e-003**	**378.3840**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	1.7428	5.0000e-004	0.0547	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1172	0.1172	3.1000e-004		0.1249
Unmitigated	1.7428	5.0000e-004	0.0547	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1172	0.1172	3.1000e-004		0.1249

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	0.2833					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4545					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0600e-003	5.0000e-004	0.0547	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1172	0.1172	3.1000e-004		0.1249
Total	**1.7428**	**5.0000e-004**	**0.0547**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1172**	**0.1172**	**3.1000e-004**		**0.1249**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2833					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4545					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0600e-003	5.0000e-004	0.0547	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1172	0.1172	3.1000e-004		0.1249
Total	**1.7428**	**5.0000e-004**	**0.0547**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1172**	**0.1172**	**3.1000e-004**		**0.1249**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Central Valley Meats CEQA Phase 2

San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	48.68	1000sqft	1.12	48,680.00	0
Refrigerated Warehouse-No Rail	4.69	1000sqft	0.11	4,690.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Architectural coating timeline updated to match schedule.

Vehicle Trips - All new employees consolidated under Manufacturing and accounted for per employment plan.

Water And Wastewater - Water use updated with engineering values.

Construction Off-road Equipment Mitigation - Conducting watering and street sweeping to reduce PM emissions. Graders, Rubber Tired Dozers, Tractors/Loaders/Backhoes engines changed to Tier 4 to reflect plan.

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	PhaseEndDate	11/13/2023	11/27/2023
tblVehicleTrips	ST_TR	1.49	0.99
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	0.62	0.49
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	3.82	0.99
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	11,257,250.00	11,862,500.00
tblWater	IndoorWaterUseRate	1,084,562.50	7,300,000.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.5412	1.3254	1.4059	2.7600e-003	0.0402	0.0552	0.0955	0.0147	0.0532	0.0679	0.0000	232.2810	232.2810	0.0357	0.0000	233.1735
Maximum	**0.5412**	**1.3254**	**1.4059**	**2.7600e-003**	**0.0402**	**0.0552**	**0.0955**	**0.0147**	**0.0532**	**0.0679**	**0.0000**	**232.2810**	**232.2810**	**0.0357**	**0.0000**	**233.1735**

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					
2023	0.5297	1.1853	1.4200	2.7600e-003	0.0205	0.0483	0.0688	7.3000e-003	0.0469	0.0542	0.0000	232.2807	232.2807	0.0357	0.0000	233.1733
Maximum	**0.5297**	**1.1853**	**1.4200**	**2.7600e-003**	**0.0205**	**0.0483**	**0.0688**	**7.3000e-003**	**0.0469**	**0.0542**	**0.0000**	**232.2807**	**232.2807**	**0.0357**	**0.0000**	**233.1733**

	ROG	**NOx**	**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	**2.13**	**10.57**	**-1.00**	**0.00**	**48.97**	**12.55**	**27.89**	**50.27**	**11.91**	**20.20**	**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	1-2-2023	4-1-2023	0.4467	0.3833
2	4-2-2023	7-1-2023	0.4581	0.4220
3	7-2-2023	9-30-2023	0.4581	0.4220
		Highest	0.4581	0.4220

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2456	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.5000e-004	9.5000e-004	0.0000	0.0000	1.0200e-003
Energy	5.4800e-003	0.0498	0.0419	3.0000e-004		3.7900e-003	3.7900e-003		3.7900e-003	3.7900e-003	0.0000	213.1442	213.1442	8.2200e-003	2.4800e-003	214.0892
Mobile	0.0120	0.1244	0.1272	7.4000e-004	0.0497	4.3000e-004	0.0502	0.0134	4.0000e-004	0.0138	0.0000	69.0467	69.0467	3.5700e-003	0.0000	69.1360
Waste						0.0000	0.0000		0.0000	0.0000	13.1477	0.0000	13.1477	0.7770	0.0000	32.5729
Water						0.0000	0.0000		0.0000	0.0000	6.0794	30.1641	36.2435	0.6258	0.0150	56.3656
Total	**0.2631**	**0.1742**	**0.1696**	**1.0400e-003**	**0.0497**	**4.2200e-003**	**0.0540**	**0.0134**	**4.1900e-003**	**0.0176**	**19.2271**	**312.3560**	**331.5831**	**1.4146**	**0.0175**	**372.1647**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2456	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.5000e-004	9.5000e-004	0.0000	0.0000	1.0200e-003
Energy	5.2100e-003	0.0474	0.0398	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003	0.0000	204.6258	204.6258	7.9100e-003	2.3800e-003	205.5320
Mobile	0.0120	0.1244	0.1272	7.4000e-004	0.0497	4.3000e-004	0.0502	0.0134	4.0000e-004	0.0138	0.0000	69.0467	69.0467	3.5700e-003	0.0000	69.1360
Waste						0.0000	0.0000		0.0000	0.0000	8.5460	0.0000	8.5460	0.5051	0.0000	21.1724
Water						0.0000	0.0000		0.0000	0.0000	4.8635	24.1313	28.9948	0.5006	0.0120	45.0925
Total	**0.2628**	**0.1718**	**0.1675**	**1.0200e-003**	**0.0497**	**4.0300e-003**	**0.0538**	**0.0134**	**4.0000e-003**	**0.0174**	**13.4095**	**297.8048**	**311.2143**	**1.0172**	**0.0144**	**340.9339**

	ROG	**NOx**	**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	**0.10**	**1.40**	**1.21**	**1.92**	**0.00**	**4.50**	**0.35**	**0.00**	**4.53**	**1.08**	**30.26**	**4.66**	**6.14**	**28.09**	**17.76**	**8.39**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/3/2023	5	2	
2	Grading	Grading	1/4/2023	1/9/2023	5	4	
3	Building Construction	Building Construction	1/10/2023	10/16/2023	5	200	
4	Paving	Paving	10/17/2023	10/30/2023	5	10	
5	Architectural Coating	Architectural Coating	10/31/2023	11/27/2023	5	20	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 80,055; Non-Residential Outdoor: 26,685; Striped Parking Area: 0 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Central Valley Meats CEQA Phase 2 - San Joaquin Valley Unified APCD Air District, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	22.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2023

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					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1300e-003	0.0124	6.6400e-003	2.0000e-005		5.1000e-004	5.1000e-004		4.7000e-004	4.7000e-004	0.0000	1.5114	1.5114	4.9000e-004	0.0000	1.5236
Total	**1.1300e-003**	**0.0124**	**6.6400e-003**	**2.0000e-005**	**5.8000e-003**	**5.1000e-004**	**6.3100e-003**	**2.9500e-003**	**4.7000e-004**	**3.4200e-003**	**0.0000**	**1.5114**	**1.5114**	**4.9000e-004**	**0.0000**	**1.5236**

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	1.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0515	0.0515	0.0000	0.0000	0.0515
Total	**3.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0515**	**0.0515**	**0.0000**	**0.0000**	**0.0515**

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					2.2600e-003	0.0000	2.2600e-003	1.1500e-003	0.0000	1.1500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-004	9.1000e-004	8.6700e-003	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.5114	1.5114	4.9000e-004	0.0000	1.5236
Total	**2.1000e-004**	**9.1000e-004**	**8.6700e-003**	**2.0000e-005**	**2.2600e-003**	**3.0000e-005**	**2.2900e-003**	**1.1500e-003**	**3.0000e-005**	**1.1800e-003**	**0.0000**	**1.5114**	**1.5114**	**4.9000e-004**	**0.0000**	**1.5236**

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0515	0.0515	0.0000	0.0000	0.0515
Total	**3.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0515**	**0.0515**	**0.0000**	**0.0000**	**0.0515**

3.3 Grading - 2023

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					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8700e-003	0.0204	0.0111	3.0000e-005		8.4000e-004	8.4000e-004		7.7000e-004	7.7000e-004	0.0000	2.4762	2.4762	8.0000e-004	0.0000	2.4962
Total	**1.8700e-003**	**0.0204**	**0.0111**	**3.0000e-005**	**9.8300e-003**	**8.4000e-004**	**0.0107**	**5.0500e-003**	**7.7000e-004**	**5.8200e-003**	**0.0000**	**2.4762**	**2.4762**	**8.0000e-004**	**0.0000**	**2.4962**

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	3.0000e-005	3.5000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1029	0.1029	0.0000	0.0000	0.1030
Total	**5.0000e-005**	**3.0000e-005**	**3.5000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1029**	**0.1029**	**0.0000**	**0.0000**	**0.1030**

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					3.8300e-003	0.0000	3.8300e-003	1.9700e-003	0.0000	1.9700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-004	1.4900e-003	0.0143	3.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	2.4762	2.4762	8.0000e-004	0.0000	2.4962
Total	**3.4000e-004**	**1.4900e-003**	**0.0143**	**3.0000e-005**	**3.8300e-003**	**5.0000e-005**	**3.8800e-003**	**1.9700e-003**	**5.0000e-005**	**2.0200e-003**	**0.0000**	**2.4762**	**2.4762**	**8.0000e-004**	**0.0000**	**2.4962**

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	3.0000e-005	3.5000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.1029	0.1029	0.0000	0.0000	0.1030
Total	**5.0000e-005**	**3.0000e-005**	**3.5000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.1029**	**0.1029**	**0.0000**	**0.0000**	**0.1030**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1523	1.1710	1.2611	2.2100e-003		0.0515	0.0515		0.0497	0.0497	0.0000	181.5991	181.5991	0.0308	0.0000	182.3701
Total	**0.1523**	**1.1710**	**1.2611**	**2.2100e-003**		**0.0515**	**0.0515**		**0.0497**	**0.0497**	**0.0000**	**181.5991**	**181.5991**	**0.0308**	**0.0000**	**182.3701**

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8700e-003	0.0726	0.0138	2.4000e-004	5.9700e-003	7.0000e-005	6.0400e-003	1.7200e-003	7.0000e-005	1.7900e-003	0.0000	23.2725	23.2725	1.2200e-003	0.0000	23.3030
Worker	7.3700e-003	4.4800e-003	0.0483	1.6000e-004	0.0176	1.1000e-004	0.0177	4.6700e-003	1.0000e-004	4.7800e-003	0.0000	14.1524	14.1524	3.2000e-004	0.0000	14.1604
Total	**9.2400e-003**	**0.0771**	**0.0621**	**4.0000e-004**	**0.0236**	**1.8000e-004**	**0.0237**	**6.3900e-003**	**1.7000e-004**	**6.5700e-003**	**0.0000**	**37.4249**	**37.4249**	**1.5400e-003**	**0.0000**	**37.4634**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1438	1.0682	1.2694	2.2100e-003		0.0461	0.0461		0.0448	0.0448	0.0000	181.5989	181.5989	0.0308	0.0000	182.3698
Total	**0.1438**	**1.0682**	**1.2694**	**2.2100e-003**		**0.0461**	**0.0461**		**0.0448**	**0.0448**	**0.0000**	**181.5989**	**181.5989**	**0.0308**	**0.0000**	**182.3698**

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8700e-003	0.0726	0.0138	2.4000e-004	3.8600e-003	7.0000e-005	3.9300e-003	1.2100e-003	7.0000e-005	1.2800e-003	0.0000	23.2725	23.2725	1.2200e-003	0.0000	23.3030
Worker	7.3700e-003	4.4800e-003	0.0483	1.6000e-004	9.9800e-003	1.1000e-004	0.0101	2.8100e-003	1.0000e-004	2.9100e-003	0.0000	14.1524	14.1524	3.2000e-004	0.0000	14.1604
Total	**9.2400e-003**	**0.0771**	**0.0621**	**4.0000e-004**	**0.0138**	**1.8000e-004**	**0.0140**	**4.0200e-003**	**1.7000e-004**	**4.1900e-003**	**0.0000**	**37.4249**	**37.4249**	**1.5400e-003**	**0.0000**	**37.4634**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2200e-003	0.0312	0.0440	7.0000e-005		1.5400e-003	1.5400e-003		1.4200e-003	1.4200e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.2200e-003**	**0.0312**	**0.0440**	**7.0000e-005**		**1.5400e-003**	**1.5400e-003**		**1.4200e-003**	**1.4200e-003**	**0.0000**	**5.8862**	**5.8862**	**1.8700e-003**	**0.0000**	**5.9329**

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.3000e-004	1.4300e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4181	0.4181	1.0000e-005	0.0000	0.4184
Total	**2.2000e-004**	**1.3000e-004**	**1.4300e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4181**	**0.4181**	**1.0000e-005**	**0.0000**	**0.4184**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6600e-003	0.0243	0.0446	7.0000e-005		1.1900e-003	1.1900e-003		1.1000e-003	1.1000e-003	0.0000	5.8862	5.8862	1.8700e-003	0.0000	5.9329
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.6600e-003**	**0.0243**	**0.0446**	**7.0000e-005**		**1.1900e-003**	**1.1900e-003**		**1.1000e-003**	**1.1000e-003**	**0.0000**	**5.8862**	**5.8862**	**1.8700e-003**	**0.0000**	**5.9329**

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	1.3000e-004	1.4300e-003	0.0000	2.9000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.4181	0.4181	1.0000e-005	0.0000	0.4184
Total	**2.2000e-004**	**1.3000e-004**	**1.4300e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**3.0000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.4181**	**0.4181**	**1.0000e-005**	**0.0000**	**0.4184**

3.6 Architectural Coating - 2023

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					
Archit. Coating	0.3711					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**0.3730**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	8.0000e-005	8.8000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2573	0.2573	1.0000e-005	0.0000	0.2575
Total	**1.3000e-004**	**8.0000e-005**	**8.8000e-004**	**0.0000**	**3.2000e-004**	**0.0000**	**3.2000e-004**	**8.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2573**	**0.2573**	**1.0000e-005**	**0.0000**	**0.2575**

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					
Archit. Coating	0.3711					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**0.3730**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	8.0000e-005	8.8000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.2573	0.2573	1.0000e-005	0.0000	0.2575
Total	**1.3000e-004**	**8.0000e-005**	**8.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.2573**	**0.2573**	**1.0000e-005**	**0.0000**	**0.2575**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Mitigated	0.0120	0.1244	0.1272	7.4000e-004	0.0497	4.3000e-004	0.0502	0.0134	4.0000e-004	0.0138	0.0000	69.0467	69.0467	3.5700e-003	0.0000	69.1360
Unmitigated	0.0120	0.1244	0.1272	7.4000e-004	0.0497	4.3000e-004	0.0502	0.0134	4.0000e-004	0.0138	0.0000	69.0467	69.0467	3.5700e-003	0.0000	69.1360

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	48.19	48.19	23.85	130,549	130,549
Refrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	48.19	48.19	23.85	130,549	130,549

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
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Refrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.527283	0.030499	0.173802	0.106831	0.014644	0.004405	0.020987	0.111827	0.001768	0.001413	0.005010	0.000913	0.000619
Refrigerated Warehouse-No Rail	0.527283	0.030499	0.173802	0.106831	0.014644	0.004405	0.020987	0.111827	0.001768	0.001413	0.005010	0.000913	0.000619

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	153.0299	153.0299	6.9200e-003	1.4300e-003	153.6295
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	158.8916	158.8916	7.1800e-003	1.4900e-003	159.5142
NaturalGas Mitigated	5.2100e-003	0.0474	0.0398	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003	0.0000	51.5960	51.5960	9.9000e-004	9.5000e-004	51.9026
NaturalGas Unmitigated	5.4800e-003	0.0498	0.0419	3.0000e-004		3.7900e-003	3.7900e-003		3.7900e-003	3.7900e-003	0.0000	54.2526	54.2526	1.0400e-003	9.9000e-004	54.5750

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					
Manufacturing	1.01595e+006	5.4800e-003	0.0498	0.0418	3.0000e-004		3.7800e-003	3.7800e-003		3.7800e-003	3.7800e-003	0.0000	54.2151	54.2151	1.0400e-003	9.9000e-004	54.5372
Refrigerated Warehouse-No Rail	703.5	0.0000	3.0000e-005	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0375	0.0375	0.0000	0.0000	0.0378
Total		**5.4800e-003**	**0.0498**	**0.0419**	**3.0000e-004**		**3.7800e-003**	**3.7800e-003**		**3.7800e-003**	**3.7800e-003**	**0.0000**	**54.2526**	**54.2526**	**1.0400e-003**	**9.9000e-004**	**54.5750**

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					
Manufacturing	966210	5.2100e-003	0.0474	0.0398	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003	0.0000	51.5607	51.5607	9.9000e-004	9.5000e-004	51.8671
Refrigerated Warehouse-No Rail	661.29	0.0000	3.0000e-005	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0353	0.0353	0.0000	0.0000	0.0355
Total		**5.2100e-003**	**0.0474**	**0.0398**	**2.8000e-004**		**3.6000e-003**	**3.6000e-003**		**3.6000e-003**	**3.6000e-003**	**0.0000**	**51.5960**	**51.5960**	**9.9000e-004**	**9.5000e-004**	**51.9026**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	429358	124.9051	5.6500e-003	1.1700e-003	125.3945
Refrigerated Warehouse-No Rail	116828	33.9866	1.5400e-003	3.2000e-004	34.1198
Total		**158.8916**	**7.1900e-003**	**1.4900e-003**	**159.5142**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	410489	119.4160	5.4000e-003	1.1200e-003	119.8839
Refrigerated Warehouse-No Rail	115547	33.6138	1.5200e-003	3.1000e-004	33.7455
Total		**153.0299**	**6.9200e-003**	**1.4300e-003**	**153.6295**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2456	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.5000e-004	9.5000e-004	0.0000	0.0000	1.0200e-003
Unmitigated	0.2456	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.5000e-004	9.5000e-004	0.0000	0.0000	1.0200e-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	tons/yr										MT/yr					
Architectural Coating	0.0371					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2084					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.5000e-004	9.5000e-004	0.0000	0.0000	1.0200e-003
Total	**0.2456**	**0.0000**	**4.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**9.5000e-004**	**9.5000e-004**	**0.0000**	**0.0000**	**1.0200e-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	tons/yr										MT/yr					
Architectural Coating	0.0371					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2084					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	4.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.5000e-004	9.5000e-004	0.0000	0.0000	1.0200e-003
Total	**0.2456**	**0.0000**	**4.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**9.5000e-004**	**9.5000e-004**	**0.0000**	**0.0000**	**1.0200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	28.9948	0.5006	0.0120	45.0925
Unmitigated	36.2435	0.6258	0.0150	56.3656

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	11.8625 / 0	22.4365	0.3874	9.3000e-003	34.8930
Refrigerated Warehouse-No Rail	7.3 / 0	13.8070	0.2384	5.7200e-003	21.4726
Total		**36.2435**	**0.6258**	**0.0150**	**56.3656**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	9.49 / 0	17.9492	0.3099	7.4400e-003	27.9144
Refrigerated Warehouse-No Rail	5.84 / 0	11.0456	0.1907	4.5800e-003	17.1781
Total		**28.9948**	**0.5006**	**0.0120**	**45.0924**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.5460	0.5051	0.0000	21.1724
Unmitigated	13.1477	0.7770	0.0000	32.5729

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	60.36	12.2525	0.7241	0.0000	30.3551
Refrigerated Warehouse-No Rail	4.41	0.8952	0.0529	0.0000	2.2178
Total		**13.1477**	**0.7770**	**0.0000**	**32.5729**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	39.234	7.9642	0.4707	0.0000	19.7308
Refrigerated Warehouse-No Rail	2.8665	0.5819	0.0344	0.0000	1.4416
Total		**8.5460**	**0.5051**	**0.0000**	**21.1724**

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

Central Valley Meats CEQA Phase 2

San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	48.68	1000sqft	1.12	48,680.00	0
Refrigerated Warehouse-No Rail	4.69	1000sqft	0.11	4,690.00	0

1.2 Other Project Characteristics

Urbanization Urban

Wind Speed (m/s) 2.7

Precipitation Freq (Days) 45

Climate Zone 3

Operational Year 2025

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MWhr) 641.35

CH4 Intensity (lb/MWhr) 0.029

N2O Intensity (lb/MWhr) 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Architectural coating timeline updated to match schedule.

Vehicle Trips - All new employees consolidated under Manufacturing and accounted for per employment plan.

Water And Wastewater - Water use updated with engineering values.

Construction Off-road Equipment Mitigation - Conducting watering and street sweeping to reduce PM emissions. Graders, Rubber Tired Dozers, Tractors/Loaders/Backhoes engines changed to Tier 4 to reflect plan.

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	PhaseEndDate	11/13/2023	11/27/2023
tblVehicleTrips	ST_TR	1.49	0.99
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	0.62	0.49
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	3.82	0.99
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	11,257,250.00	11,862,500.00
tblWater	IndoorWaterUseRate	1,084,562.50	7,300,000.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	37.3123	12.4719	13.3022	0.0263	5.8653	0.5163	6.3731	2.9711	0.4986	3.4383	0.0000	2,432.7924	2,432.7924	0.5403	0.0000	2,441.7060
Maximum	**37.3123**	**12.4719**	**13.3022**	**0.0263**	**5.8653**	**0.5163**	**6.3731**	**2.9711**	**0.4986**	**3.4383**	**0.0000**	**2,432.7924**	**2,432.7924**	**0.5403**	**0.0000**	**2,441.7060**

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					
2023	37.3123	11.4436	13.3853	0.0263	2.2990	0.4633	2.3275	1.1624	0.4500	1.1908	0.0000	2,432.7924	2,432.7924	0.5403	0.0000	2,441.7060
Maximum	**37.3123**	**11.4436**	**13.3853**	**0.0263**	**2.2990**	**0.4633**	**2.3275**	**1.1624**	**0.4500**	**1.1908**	**0.0000**	**2,432.7924**	**2,432.7924**	**0.5403**	**0.0000**	**2,441.7060**

	ROG	NOx	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**	**8.25**	**-0.62**	**0.00**	**60.80**	**10.28**	**63.48**	**60.88**	**9.73**	**65.37**	**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	1.3459	5.0000e-005	5.4300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0117	0.0117	3.0000e-005		0.0124
Energy	0.0300	0.2731	0.2294	1.6400e-003		0.0208	0.0208		0.0208	0.0208		327.6890	327.6890	6.2800e-003	6.0100e-003	329.6363
Mobile	0.0852	0.7283	0.8298	4.6300e-003	0.3024	2.5400e-003	0.3049	0.0811	2.3800e-003	0.0835		474.7203	474.7203	0.0228		475.2906
Total	**1.4612**	**1.0014**	**1.0646**	**6.2700e-003**	**0.3024**	**0.0233**	**0.3257**	**0.0811**	**0.0232**	**0.1042**		**802.4210**	**802.4210**	**0.0291**	**6.0100e-003**	**804.9393**

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	1.3459	5.0000e-005	5.4300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0117	0.0117	3.0000e-005		0.0124
Energy	0.0286	0.2597	0.2182	1.5600e-003		0.0197	0.0197		0.0197	0.0197		311.6428	311.6428	5.9700e-003	5.7100e-003	313.4947
Mobile	0.0852	0.7283	0.8298	4.6300e-003	0.3024	2.5400e-003	0.3049	0.0811	2.3800e-003	0.0835		474.7203	474.7203	0.0228		475.2906
Total	**1.4597**	**0.9880**	**1.0533**	**6.1900e-003**	**0.3024**	**0.0223**	**0.3247**	**0.0811**	**0.0221**	**0.1032**		**786.3747**	**786.3747**	**0.0288**	**5.7100e-003**	**788.7977**

	ROG	NOx	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	0.10	1.34	1.05	1.28	0.00	4.33	0.31	0.00	4.36	0.97	0.00	2.00	2.00	1.06	4.99	2.01

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/3/2023	5	2	
2	Grading	Grading	1/4/2023	1/9/2023	5	4	
3	Building Construction	Building Construction	1/10/2023	10/16/2023	5	200	
4	Paving	Paving	10/17/2023	10/30/2023	5	10	
5	Architectural Coating	Architectural Coating	10/31/2023	11/27/2023	5	20	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 80,055; Non-Residential Outdoor: 26,685; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	22.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2023

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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.1339	12.4250	6.6420	0.0172		0.5074	0.5074		0.4668	0.4668		1,666.057 3	1,666.057 3	0.5388		1,679.528 2
Total	**1.1339**	**12.4250**	**6.6420**	**0.0172**	**5.7996**	**0.5074**	**6.3070**	**2.9537**	**0.4668**	**3.4205**		**1,666.057 3**	**1,666.057 3**	**0.5388**		**1,679.528 2**

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0303	0.0151	0.2045	6.2000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		62.1846	62.1846	1.4300e-003		62.2203
Total	**0.0303**	**0.0151**	**0.2045**	**6.2000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**62.1846**	**62.1846**	**1.4300e-003**		**62.2203**

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					2.2618	0.0000	2.2618	1.1519	0.0000	1.1519			0.0000			0.0000
Off-Road	0.2106	0.9126	8.6714	0.0172		0.0281	0.0281		0.0281	0.0281	0.0000	1,666.0573	1,666.0573	0.5388		1,679.5282
Total	**0.2106**	**0.9126**	**8.6714**	**0.0172**	**2.2618**	**0.0281**	**2.2899**	**1.1519**	**0.0281**	**1.1800**	**0.0000**	**1,666.0573**	**1,666.0573**	**0.5388**		**1,679.5282**

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0303	0.0151	0.2045	6.2000e-004	0.0372	4.1000e-004	0.0376	0.0104	3.8000e-004	0.0108		62.1846	62.1846	1.4300e-003		62.2203
Total	**0.0303**	**0.0151**	**0.2045**	**6.2000e-004**	**0.0372**	**4.1000e-004**	**0.0376**	**0.0104**	**3.8000e-004**	**0.0108**		**62.1846**	**62.1846**	**1.4300e-003**		**62.2203**

3.3 Grading - 2023

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					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865		1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.9335**	**10.1789**	**5.5516**	**0.0141**	**4.9143**	**0.4201**	**5.3343**	**2.5256**	**0.3865**	**2.9121**		**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0303	0.0151	0.2045	6.2000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		62.1846	62.1846	1.4300e-003		62.2203
Total	**0.0303**	**0.0151**	**0.2045**	**6.2000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**62.1846**	**62.1846**	**1.4300e-003**		**62.2203**

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					1.9166	0.0000	1.9166	0.9850	0.0000	0.9850			0.0000			0.0000
Off-Road	0.1725	0.7475	7.1557	0.0141		0.0230	0.0230		0.0230	0.0230	0.0000	1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.1725**	**0.7475**	**7.1557**	**0.0141**	**1.9166**	**0.0230**	**1.9396**	**0.9850**	**0.0230**	**1.0080**	**0.0000**	**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0303	0.0151	0.2045	6.2000e-004	0.0372	4.1000e-004	0.0376	0.0104	3.8000e-004	0.0108		62.1846	62.1846	1.4300e-003		62.2203
Total	**0.0303**	**0.0151**	**0.2045**	**6.2000e-004**	**0.0372**	**4.1000e-004**	**0.0376**	**0.0104**	**3.8000e-004**	**0.0108**		**62.1846**	**62.1846**	**1.4300e-003**		**62.2203**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.5233**	**11.7104**	**12.6111**	**0.0221**		**0.5145**	**0.5145**		**0.4968**	**0.4968**		**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.7200	0.1287	2.4800e-003	0.0610	7.1000e-004	0.0617	0.0176	6.8000e-004	0.0183		259.9969	259.9969	0.0127		260.3144
Worker	0.0833	0.0415	0.5624	1.7200e-003	0.1807	1.1400e-003	0.1819	0.0479	1.0500e-003	0.0490		171.0078	171.0078	3.9200e-003		171.1058
Total	**0.1017**	**0.7615**	**0.6911**	**4.2000e-003**	**0.2417**	**1.8500e-003**	**0.2436**	**0.0655**	**1.7300e-003**	**0.0672**		**431.0047**	**431.0047**	**0.0166**		**431.4203**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4382	10.6821	12.6941	0.0221		0.4614	0.4614		0.4483	0.4483	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.4382**	**10.6821**	**12.6941**	**0.0221**		**0.4614**	**0.4614**		**0.4483**	**0.4483**	**0.0000**	**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0184	0.7200	0.1287	2.4800e-003	0.0393	7.1000e-004	0.0400	0.0122	6.8000e-004	0.0129		259.9969	259.9969	0.0127		260.3144
Worker	0.0833	0.0415	0.5624	1.7200e-003	0.1022	1.1400e-003	0.1033	0.0287	1.0500e-003	0.0297		171.0078	171.0078	3.9200e-003		171.1058
Total	**0.1017**	**0.7615**	**0.6911**	**4.2000e-003**	**0.1415**	**1.8500e-003**	**0.1433**	**0.0409**	**1.7300e-003**	**0.0426**		**431.0047**	**431.0047**	**0.0166**		**431.4203**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6446	6.2357	8.8024	0.0136		0.3084	0.3084		0.2846	0.2846		1,297.6880	1,297.6880	0.4114		1,307.9725
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6446**	**6.2357**	**8.8024**	**0.0136**		**0.3084**	**0.3084**		**0.2846**	**0.2846**		**1,297.6880**	**1,297.6880**	**0.4114**		**1,307.9725**

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0492	0.0245	0.3323	1.0100e-003	0.1068	6.7000e-004	0.1075	0.0283	6.2000e-004	0.0290		101.0500	101.0500	2.3200e-003		101.1080
Total	**0.0492**	**0.0245**	**0.3323**	**1.0100e-003**	**0.1068**	**6.7000e-004**	**0.1075**	**0.0283**	**6.2000e-004**	**0.0290**		**101.0500**	**101.0500**	**2.3200e-003**		**101.1080**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5312	4.8646	8.9131	0.0136		0.2377	0.2377		0.2199	0.2199	0.0000	1,297.6880	1,297.6880	0.4114		1,307.9725
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5312**	**4.8646**	**8.9131**	**0.0136**		**0.2377**	**0.2377**		**0.2199**	**0.2199**	**0.0000**	**1,297.6880**	**1,297.6880**	**0.4114**		**1,307.9725**

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0492	0.0245	0.3323	1.0100e-003	0.0604	6.7000e-004	0.0611	0.0169	6.2000e-004	0.0176		101.0500	101.0500	2.3200e-003		101.1080
Total	**0.0492**	**0.0245**	**0.3323**	**1.0100e-003**	**0.0604**	**6.7000e-004**	**0.0611**	**0.0169**	**6.2000e-004**	**0.0176**		**101.0500**	**101.0500**	**2.3200e-003**		**101.1080**

3.6 Architectural Coating - 2023

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					
Archit. Coating	37.1055					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**37.2972**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0152	7.5500e-003	0.1023	3.1000e-004	0.0329	2.1000e-004	0.0331	8.7200e-003	1.9000e-004	8.9100e-003		31.0923	31.0923	7.1000e-004		31.1102
Total	**0.0152**	**7.5500e-003**	**0.1023**	**3.1000e-004**	**0.0329**	**2.1000e-004**	**0.0331**	**8.7200e-003**	**1.9000e-004**	**8.9100e-003**		**31.0923**	**31.0923**	**7.1000e-004**		**31.1102**

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					
Archit. Coating	37.1055					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**37.2972**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0152	7.5500e-003	0.1023	3.1000e-004	0.0186	2.1000e-004	0.0188	5.2100e-003	1.9000e-004	5.4000e-003		31.0923	31.0923	7.1000e-004		31.1102
Total	**0.0152**	**7.5500e-003**	**0.1023**	**3.1000e-004**	**0.0186**	**2.1000e-004**	**0.0188**	**5.2100e-003**	**1.9000e-004**	**5.4000e-003**		**31.0923**	**31.0923**	**7.1000e-004**		**31.1102**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0852	0.7283	0.8298	4.6300e-003	0.3024	2.5400e-003	0.3049	0.0811	2.3800e-003	0.0835		474.7203	474.7203	0.0228		475.2906
Unmitigated	0.0852	0.7283	0.8298	4.6300e-003	0.3024	2.5400e-003	0.3049	0.0811	2.3800e-003	0.0835		474.7203	474.7203	0.0228		475.2906

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	48.19	48.19	23.85	130,549	130,549
Refrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	48.19	48.19	23.85	130,549	130,549

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
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Refrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.527283	0.030499	0.173802	0.106831	0.014644	0.004405	0.020987	0.111827	0.001768	0.001413	0.005010	0.000913	0.000619
Refrigerated Warehouse-No Rail	0.527283	0.030499	0.173802	0.106831	0.014644	0.004405	0.020987	0.111827	0.001768	0.001413	0.005010	0.000913	0.000619

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0286	0.2597	0.2182	1.5600e-003		0.0197	0.0197		0.0197	0.0197		311.6428	311.6428	5.9700e-003	5.7100e-003	313.4947
NaturalGas Unmitigated	0.0300	0.2731	0.2294	1.6400e-003		0.0208	0.0208		0.0208	0.0208		327.6890	327.6890	6.2800e-003	6.0100e-003	329.6363

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					
Manufacturing	2783.43	0.0300	0.2729	0.2292	1.6400e-003		0.0207	0.0207		0.0207	0.0207		327.4622	327.4622	6.2800e-003	6.0000e-003	329.4082
Refrigerated Warehouse-No Rail	1.9274	2.0000e-005	1.9000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.2268	0.2268	0.0000	0.0000	0.2281
Total		**0.0300**	**0.2731**	**0.2294**	**1.6400e-003**		**0.0208**	**0.0208**		**0.0208**	**0.0208**		**327.6890**	**327.6890**	**6.2800e-003**	**6.0000e-003**	**329.6363**

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					
Manufacturing	2.64715	0.0286	0.2595	0.2180	1.5600e-003		0.0197	0.0197		0.0197	0.0197		311.4296	311.4296	5.9700e-003	5.7100e-003	313.2803
Refrigerated Warehouse-No Rail	0.00181175	2.0000e-005	1.8000e-004	1.5000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.2132	0.2132	0.0000	0.0000	0.2144
Total		**0.0286**	**0.2597**	**0.2182**	**1.5600e-003**		**0.0197**	**0.0197**		**0.0197**	**0.0197**		**311.6428**	**311.6428**	**5.9700e-003**	**5.7100e-003**	**313.4947**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	1.3459	5.0000e-005	5.4300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0117	0.0117	3.0000e-005		0.0124
Unmitigated	1.3459	5.0000e-005	5.4300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0117	0.0117	3.0000e-005		0.0124

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	0.2033					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1421					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-004	5.0000e-005	5.4300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0117	0.0117	3.0000e-005		0.0124
Total	**1.3459**	**5.0000e-005**	**5.4300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0117**	**0.0117**	**3.0000e-005**		**0.0124**

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	0.2033					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1421					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-004	5.0000e-005	5.4300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0117	0.0117	3.0000e-005		0.0124
Total	**1.3459**	**5.0000e-005**	**5.4300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0117**	**0.0117**	**3.0000e-005**		**0.0124**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Central Valley Meats CEQA Phase 2

San Joaquin Valley Unified APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	48.68	1000sqft	1.12	48,680.00	0
Refrigerated Warehouse-No Rail	4.69	1000sqft	0.11	4,690.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Architectural coating timeline updated to match schedule.

Vehicle Trips - All new employees consolidated under Manufacturing and accounted for per employment plan.

Water And Wastewater - Water use updated with engineering values.

Construction Off-road Equipment Mitigation - Conducting watering and street sweeping to reduce PM emissions. Graders, Rubber Tired Dozers, Tractors/Loaders/Backhoes engines changed to Tier 4 to reflect plan.

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	PhaseEndDate	11/13/2023	11/27/2023
tblVehicleTrips	ST_TR	1.49	0.99
tblVehicleTrips	ST_TR	1.68	0.00
tblVehicleTrips	SU_TR	0.62	0.49
tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	3.82	0.99
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	11,257,250.00	11,862,500.00
tblWater	IndoorWaterUseRate	1,084,562.50	7,300,000.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	37.3114	12.4830	13.2351	0.0260	5.8653	0.5164	6.3731	2.9711	0.4986	3.4383	0.0000	2,403.9838	2,403.9838	0.5401	0.0000	2,412.9271
Maximum	**37.3114**	**12.4830**	**13.2351**	**0.0260**	**5.8653**	**0.5164**	**6.3731**	**2.9711**	**0.4986**	**3.4383**	**0.0000**	**2,403.9838**	**2,403.9838**	**0.5401**	**0.0000**	**2,412.9271**

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					
2023	37.3114	11.4547	13.3182	0.0260	2.2990	0.4633	2.3275	1.1624	0.4501	1.1908	0.0000	2,403.9838	2,403.9838	0.5401	0.0000	2,412.9271
Maximum	**37.3114**	**11.4547**	**13.3182**	**0.0260**	**2.2990**	**0.4633**	**2.3275**	**1.1624**	**0.4501**	**1.1908**	**0.0000**	**2,403.9838**	**2,403.9838**	**0.5401**	**0.0000**	**2,412.9271**

	ROG	**NOx**	**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**	**8.24**	**-0.63**	**0.00**	**60.80**	**10.28**	**63.48**	**60.88**	**9.73**	**65.37**	**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	1.3459	5.0000e-005	5.4300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0117	0.0117	3.0000e-005		0.0124
Energy	0.0300	0.2731	0.2294	1.6400e-003		0.0208	0.0208		0.0208	0.0208		327.6890	327.6890	6.2800e-003	6.0100e-003	329.6363
Mobile	0.0675	0.7388	0.7658	4.2800e-003	0.3024	2.5600e-003	0.3049	0.0811	2.4000e-003	0.0835		438.5906	438.5906	0.0245		439.2029
Total	**1.4435**	**1.0119**	**1.0007**	**5.9200e-003**	**0.3024**	**0.0233**	**0.3257**	**0.0811**	**0.0232**	**0.1042**		**766.2912**	**766.2912**	**0.0308**	**6.0100e-003**	**768.8517**

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	1.3459	5.0000e-005	5.4300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0117	0.0117	3.0000e-005		0.0124
Energy	0.0286	0.2597	0.2182	1.5600e-003		0.0197	0.0197		0.0197	0.0197		311.6428	311.6428	5.9700e-003	5.7100e-003	313.4947
Mobile	0.0675	0.7388	0.7658	4.2800e-003	0.3024	2.5600e-003	0.3049	0.0811	2.4000e-003	0.0835		438.5906	438.5906	0.0245		439.2029
Total	**1.4420**	**0.9986**	**0.9894**	**5.8400e-003**	**0.3024**	**0.0223**	**0.3247**	**0.0811**	**0.0222**	**0.1032**		**750.2450**	**750.2450**	**0.0305**	**5.7100e-003**	**752.7101**

	ROG	NOx	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	**0.10**	**1.32**	**1.12**	**1.35**	**0.00**	**4.33**	**0.31**	**0.00**	**4.36**	**0.97**	**0.00**	**2.09**	**2.09**	**1.01**	**4.99**	**2.10**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/2/2023	1/3/2023	5	2	
2	Grading	Grading	1/4/2023	1/9/2023	5	4	
3	Building Construction	Building Construction	1/10/2023	10/16/2023	5	200	
4	Paving	Paving	10/17/2023	10/30/2023	5	10	
5	Architectural Coating	Architectural Coating	10/31/2023	11/27/2023	5	20	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 80,055; Non-Residential Outdoor: 26,685; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Central Valley Meats CEQA Phase 2 - San Joaquin Valley Unified APCD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	22.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2023

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					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.1339	12.4250	6.6420	0.0172		0.5074	0.5074		0.4668	0.4668		1,666.0573	1,666.0573	0.5388		1,679.5282
Total	**1.1339**	**12.4250**	**6.6420**	**0.0172**	**5.7996**	**0.5074**	**6.3070**	**2.9537**	**0.4668**	**3.4205**		**1,666.0573**	**1,666.0573**	**0.5388**		**1,679.5282**

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0286	0.0179	0.1724	5.5000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		54.7046	54.7046	1.2500e-003		54.7358
Total	**0.0286**	**0.0179**	**0.1724**	**5.5000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**54.7046**	**54.7046**	**1.2500e-003**		**54.7358**

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					2.2618	0.0000	2.2618	1.1519	0.0000	1.1519			0.0000			0.0000
Off-Road	0.2106	0.9126	8.6714	0.0172		0.0281	0.0281		0.0281	0.0281	0.0000	1,666.0573	1,666.0573	0.5388		1,679.5282
Total	**0.2106**	**0.9126**	**8.6714**	**0.0172**	**2.2618**	**0.0281**	**2.2899**	**1.1519**	**0.0281**	**1.1800**	**0.0000**	**1,666.0573**	**1,666.0573**	**0.5388**		**1,679.5282**

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0286	0.0179	0.1724	5.5000e-004	0.0372	4.1000e-004	0.0376	0.0104	3.8000e-004	0.0108		54.7046	54.7046	1.2500e-003		54.7358
Total	**0.0286**	**0.0179**	**0.1724**	**5.5000e-004**	**0.0372**	**4.1000e-004**	**0.0376**	**0.0104**	**3.8000e-004**	**0.0108**		**54.7046**	**54.7046**	**1.2500e-003**		**54.7358**

3.3 Grading - 2023

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					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865		1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.9335**	**10.1789**	**5.5516**	**0.0141**	**4.9143**	**0.4201**	**5.3343**	**2.5256**	**0.3865**	**2.9121**		**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0286	0.0179	0.1724	5.5000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		54.7046	54.7046	1.2500e-003		54.7358
Total	**0.0286**	**0.0179**	**0.1724**	**5.5000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**54.7046**	**54.7046**	**1.2500e-003**		**54.7358**

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					1.9166	0.0000	1.9166	0.9850	0.0000	0.9850			0.0000			0.0000
Off-Road	0.1725	0.7475	7.1557	0.0141		0.0230	0.0230		0.0230	0.0230	0.0000	1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.1725**	**0.7475**	**7.1557**	**0.0141**	**1.9166**	**0.0230**	**1.9396**	**0.9850**	**0.0230**	**1.0080**	**0.0000**	**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0286	0.0179	0.1724	5.5000e-004	0.0372	4.1000e-004	0.0376	0.0104	3.8000e-004	0.0108		54.7046	54.7046	1.2500e-003		54.7358
Total	**0.0286**	**0.0179**	**0.1724**	**5.5000e-004**	**0.0372**	**4.1000e-004**	**0.0376**	**0.0104**	**3.8000e-004**	**0.0108**		**54.7046**	**54.7046**	**1.2500e-003**		**54.7358**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.5233**	**11.7104**	**12.6111**	**0.0221**		**0.5145**	**0.5145**		**0.4968**	**0.4968**		**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0194	0.7235	0.1499	2.4000e-003	0.0610	7.3000e-004	0.0617	0.0176	7.0000e-004	0.0183		251.7585	251.7585	0.0144		252.1179
Worker	0.0786	0.0492	0.4742	1.5100e-003	0.1807	1.1400e-003	0.1819	0.0479	1.0500e-003	0.0490		150.4376	150.4376	3.4300e-003		150.5234
Total	**0.0980**	**0.7726**	**0.6241**	**3.9100e-003**	**0.2417**	**1.8700e-003**	**0.2436**	**0.0655**	**1.7500e-003**	**0.0673**		**402.1961**	**402.1961**	**0.0178**		**402.6413**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4382	10.6821	12.6941	0.0221		0.4614	0.4614		0.4483	0.4483	0.0000	2,001.787 7	2,001.787 7	0.3399		2,010.285 8
Total	**1.4382**	**10.6821**	**12.6941**	**0.0221**		**0.4614**	**0.4614**		**0.4483**	**0.4483**	**0.0000**	**2,001.787 7**	**2,001.787 7**	**0.3399**		**2,010.285 8**

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0194	0.7235	0.1499	2.4000e-003	0.0393	7.3000e-004	0.0400	0.0122	7.0000e-004	0.0129		251.7585	251.7585	0.0144		252.1179
Worker	0.0786	0.0492	0.4742	1.5100e-003	0.1022	1.1400e-003	0.1033	0.0287	1.0500e-003	0.0297		150.4376	150.4376	3.4300e-003		150.5234
Total	**0.0980**	**0.7726**	**0.6241**	**3.9100e-003**	**0.1415**	**1.8700e-003**	**0.1434**	**0.0409**	**1.7500e-003**	**0.0426**		**402.1961**	**402.1961**	**0.0178**		**402.6413**

3.5 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6446	6.2357	8.8024	0.0136		0.3084	0.3084		0.2846	0.2846		1,297.6880	1,297.6880	0.4114		1,307.9725
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6446**	**6.2357**	**8.8024**	**0.0136**		**0.3084**	**0.3084**		**0.2846**	**0.2846**		**1,297.6880**	**1,297.6880**	**0.4114**		**1,307.9725**

3.5 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0464	0.0291	0.2802	8.9000e-004	0.1068	6.7000e-004	0.1075	0.0283	6.2000e-004	0.0290		88.8950	88.8950	2.0300e-003		88.9456
Total	**0.0464**	**0.0291**	**0.2802**	**8.9000e-004**	**0.1068**	**6.7000e-004**	**0.1075**	**0.0283**	**6.2000e-004**	**0.0290**		**88.8950**	**88.8950**	**2.0300e-003**		**88.9456**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5312	4.8646	8.9131	0.0136		0.2377	0.2377		0.2199	0.2199	0.0000	1,297.6880	1,297.6880	0.4114		1,307.9725
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5312**	**4.8646**	**8.9131**	**0.0136**		**0.2377**	**0.2377**		**0.2199**	**0.2199**	**0.0000**	**1,297.6880**	**1,297.6880**	**0.4114**		**1,307.9725**

3.5 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0464	0.0291	0.2802	8.9000e-004	0.0604	6.7000e-004	0.0611	0.0169	6.2000e-004	0.0176		88.8950	88.8950	2.0300e-003		88.9456
Total	**0.0464**	**0.0291**	**0.2802**	**8.9000e-004**	**0.0604**	**6.7000e-004**	**0.0611**	**0.0169**	**6.2000e-004**	**0.0176**		**88.8950**	**88.8950**	**2.0300e-003**		**88.9456**

3.6 Architectural Coating - 2023

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					
Archit. Coating	37.1055					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**37.2972**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.6 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0143	8.9400e-003	0.0862	2.7000e-004	0.0329	2.1000e-004	0.0331	8.7200e-003	1.9000e-004	8.9100e-003		27.3523	27.3523	6.2000e-004		27.3679
Total	**0.0143**	**8.9400e-003**	**0.0862**	**2.7000e-004**	**0.0329**	**2.1000e-004**	**0.0331**	**8.7200e-003**	**1.9000e-004**	**8.9100e-003**		**27.3523**	**27.3523**	**6.2000e-004**		**27.3679**

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					
Archit. Coating	37.1055					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**37.2972**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.6 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0143	8.9400e-003	0.0862	2.7000e-004	0.0186	2.1000e-004	0.0188	5.2100e-003	1.9000e-004	5.4000e-003		27.3523	27.3523	6.2000e-004		27.3679
Total	**0.0143**	**8.9400e-003**	**0.0862**	**2.7000e-004**	**0.0186**	**2.1000e-004**	**0.0188**	**5.2100e-003**	**1.9000e-004**	**5.4000e-003**		**27.3523**	**27.3523**	**6.2000e-004**		**27.3679**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0675	0.7388	0.7658	4.2800e-003	0.3024	2.5600e-003	0.3049	0.0811	2.4000e-003	0.0835		438.5906	438.5906	0.0245		439.2029
Unmitigated	0.0675	0.7388	0.7658	4.2800e-003	0.3024	2.5600e-003	0.3049	0.0811	2.4000e-003	0.0835		438.5906	438.5906	0.0245		439.2029

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	48.19	48.19	23.85	130,549	130,549
Refrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	48.19	48.19	23.85	130,549	130,549

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
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Refrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.527283	0.030499	0.173802	0.106831	0.014644	0.004405	0.020987	0.111827	0.001768	0.001413	0.005010	0.000913	0.000619
Refrigerated Warehouse-No Rail	0.527283	0.030499	0.173802	0.106831	0.014644	0.004405	0.020987	0.111827	0.001768	0.001413	0.005010	0.000913	0.000619

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0286	0.2597	0.2182	1.5600e-003		0.0197	0.0197		0.0197	0.0197		311.6428	311.6428	5.9700e-003	5.7100e-003	313.4947
NaturalGas Unmitigated	0.0300	0.2731	0.2294	1.6400e-003		0.0208	0.0208		0.0208	0.0208		327.6890	327.6890	6.2800e-003	6.0100e-003	329.6363

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					
Manufacturing	2783.43	0.0300	0.2729	0.2292	1.6400e-003		0.0207	0.0207		0.0207	0.0207		327.4622	327.4622	6.2800e-003	6.0000e-003	329.4082
Refrigerated Warehouse-No Rail	1.9274	2.0000e-005	1.9000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.2268	0.2268	0.0000	0.0000	0.2281
Total		**0.0300**	**0.2731**	**0.2294**	**1.6400e-003**		**0.0208**	**0.0208**		**0.0208**	**0.0208**		**327.6890**	**327.6890**	**6.2800e-003**	**6.0000e-003**	**329.6363**

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					
Manufacturing	2.64715	0.0286	0.2595	0.2180	1.5600e-003		0.0197	0.0197		0.0197	0.0197		311.4296	311.4296	5.9700e-003	5.7100e-003	313.2803
Refrigerated Warehouse-No Rail	0.00181175	2.0000e-005	1.8000e-004	1.5000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.2132	0.2132	0.0000	0.0000	0.2144
Total		**0.0286**	**0.2597**	**0.2182**	**1.5600e-003**		**0.0197**	**0.0197**		**0.0197**	**0.0197**		**311.6428**	**311.6428**	**5.9700e-003**	**5.7100e-003**	**313.4947**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	1.3459	5.0000e-005	5.4300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0117	0.0117	3.0000e-005		0.0124
Unmitigated	1.3459	5.0000e-005	5.4300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0117	0.0117	3.0000e-005		0.0124

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	0.2033					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1421					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-004	5.0000e-005	5.4300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0117	0.0117	3.0000e-005		0.0124
Total	**1.3459**	**5.0000e-005**	**5.4300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0117**	**0.0117**	**3.0000e-005**		**0.0124**

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	0.2033					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1421					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-004	5.0000e-005	5.4300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0117	0.0117	3.0000e-005		0.0124
Total	**1.3459**	**5.0000e-005**	**5.4300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0117**	**0.0117**	**3.0000e-005**		**0.0124**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Central Valley Meats CEQA Phase 3

San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	115.48	1000sqft	2.38	115,480.00	0
Refrigerated Warehouse-No Rail	186.76	1000sqft	4.29	186,760.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2029
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Industrial - Manufacturing is a 2-story building. Lot acreage updated to reflect the footprint.

Construction Phase - Architectural Coating length updated to match schedule.

Vehicle Trips - Employee trips updated with true employee values.

Water And Wastewater - Water usage updated with true engineering values.

Construction Off-road Equipment Mitigation - Watering area 3x daily during construction and street sweeping to clean paved roads. Excavators, Graders, Rubber Tired Dozers, Tractors/Loaders/Backhoes updated to engine tier 4 per true equipment.

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	40.00
tblLandUse	LotAcreage	2.65	2.38
tblVehicleTrips	ST_TR	1.49	0.65
tblVehicleTrips	ST_TR	1.68	0.27
tblVehicleTrips	SU_TR	0.62	0.33
tblVehicleTrips	SU_TR	1.68	0.13
tblVehicleTrips	WD_TR	3.82	0.65
tblVehicleTrips	WD_TR	1.68	0.27
tblWater	IndoorWaterUseRate	26,704,750.00	9,125,000.00
tblWater	IndoorWaterUseRate	43,188,250.00	1,825,000.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2027	0.2344	2.1822	2.3982	6.0200e-003	0.3127	0.0735	0.3861	0.1259	0.0689	0.1947	0.0000	536.5697	536.5697	0.0862	0.0000	538.7246
2028	2.1155	0.1095	0.1918	3.3000e-004	5.2000e-003	5.2400e-003	0.0104	1.3800e-003	4.9100e-003	6.2900e-003	0.0000	28.6175	28.6175	6.8100e-003	0.0000	28.7878
Maximum	**2.1155**	**2.1822**	**2.3982**	**6.0200e-003**	**0.3127**	**0.0735**	**0.3861**	**0.1259**	**0.0689**	**0.1947**	**0.0000**	**536.5697**	**536.5697**	**0.0862**	**0.0000**	**538.7246**

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					
2027	0.1843	1.5753	2.4790	6.0200e-003	0.1528	0.0478	0.2006	0.0592	0.0454	0.1046	0.0000	536.5693	536.5693	0.0862	0.0000	538.7243
2028	2.1155	0.1095	0.1918	3.3000e-004	2.9500e-003	5.2400e-003	8.1900e-003	8.3000e-004	4.9100e-003	5.7400e-003	0.0000	28.6175	28.6175	6.8100e-003	0.0000	28.7877
Maximum	**2.1155**	**1.5753**	**2.4790**	**6.0200e-003**	**0.1528**	**0.0478**	**0.2006**	**0.0592**	**0.0454**	**0.1046**	**0.0000**	**536.5693**	**536.5693**	**0.0862**	**0.0000**	**538.7243**

	ROG	**NOx**	**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	**2.13**	**26.48**	**-3.12**	**0.00**	**51.01**	**32.63**	**47.36**	**52.87**	**31.78**	**45.13**	**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	1-4-2027	4-3-2027	0.6160	0.2996
2	4-4-2027	7-3-2027	0.5958	0.4879
3	7-4-2027	10-3-2027	0.6024	0.4933
4	10-4-2027	1-3-2028	0.5940	0.4885
5	1-4-2028	4-3-2028	2.2150	2.2150
		Highest	2.2150	2.2150

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	1.3908	3.0000e-005	2.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.4000e-003	5.4000e-003	1.0000e-005	0.0000	5.7500e-003
Energy	0.0132	0.1195	0.1004	7.2000e-004		9.0800e-003	9.0800e-003		9.0800e-003	9.0800e-003	0.0000	1,779.7843	1,779.7843	0.0771	0.0178	1,787.0214
Mobile	0.0260	0.2967	0.2684	1.7700e-003	0.1294	9.2000e-004	0.1303	0.0348	8.6000e-004	0.0356	0.0000	165.3529	165.3529	8.9700e-003	0.0000	165.5772
Waste						0.0000	0.0000		0.0000	0.0000	64.7034	0.0000	64.7034	3.8239	0.0000	160.2999
Water						0.0000	0.0000		0.0000	0.0000	3.4739	17.2366	20.7106	0.3576	8.5900e-003	32.2089
Total	**1.4299**	**0.4163**	**0.3715**	**2.4900e-003**	**0.1294**	**0.0100**	**0.1394**	**0.0348**	**9.9500e-003**	**0.0447**	**68.1773**	**1,962.3792**	**2,030.5565**	**4.2675**	**0.0264**	**2,145.1131**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3908	3.0000e-005	2.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.4000e-003	5.4000e-003	1.0000e-005	0.0000	5.7500e-003
Energy	0.0125	0.1137	0.0955	6.8000e-004		8.6400e-003	8.6400e-003		8.6400e-003	8.6400e-003	0.0000	1,745.5335	1,745.5335	0.0757	0.0174	1,752.6234
Mobile	0.0260	0.2967	0.2684	1.7700e-003	0.1294	9.2000e-004	0.1303	0.0348	8.6000e-004	0.0356	0.0000	165.3529	165.3529	8.9700e-003	0.0000	165.5772
Waste						0.0000	0.0000		0.0000	0.0000	42.0572	0.0000	42.0572	2.4855	0.0000	104.1949
Water						0.0000	0.0000		0.0000	0.0000	2.7791	13.7893	16.5685	0.2861	6.8700e-003	25.7671
Total	**1.4293**	**0.4104**	**0.3666**	**2.4500e-003**	**0.1294**	**9.5700e-003**	**0.1389**	**0.0348**	**9.5100e-003**	**0.0443**	**44.8363**	**1,924.6811**	**1,969.5174**	**2.8563**	**0.0243**	**2,048.1684**

	ROG	**NOx**	**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	**0.05**	**1.41**	**1.33**	**1.61**	**0.00**	**4.40**	**0.32**	**0.00**	**4.42**	**0.98**	**34.24**	**1.92**	**3.01**	**33.07**	**7.95**	**4.52**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2027	1/15/2027	5	10	
2	Grading	Grading	1/16/2027	2/12/2027	5	20	
3	Building Construction	Building Construction	2/13/2027	12/31/2027	5	230	
4	Paving	Paving	1/1/2028	1/28/2028	5	20	
5	Architectural Coating	Architectural Coating	1/29/2028	3/24/2028	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 453,360; Non-Residential Outdoor: 151,120; Striped Parking Area: 0 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

<u>Trips and VMT</u>

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	127.00	50.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2027

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0124	0.1262	0.0896	1.9000e-004		5.4300e-003	5.4300e-003		5.0000e-003	5.0000e-003	0.0000	16.7335	16.7335	5.4100e-003	0.0000	16.8688
Total	**0.0124**	**0.1262**	**0.0896**	**1.9000e-004**	**0.0903**	**5.4300e-003**	**0.0958**	**0.0497**	**5.0000e-003**	**0.0547**	**0.0000**	**16.7335**	**16.7335**	**5.4100e-003**	**0.0000**	**16.8688**

3.2 Site Preparation - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.2000e-004	1.4600e-003	1.0000e-005	7.2000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.4989	0.4989	1.0000e-005	0.0000	0.4991
Total	**2.3000e-004**	**1.2000e-004**	**1.4600e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.2000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.4989**	**0.4989**	**1.0000e-005**	**0.0000**	**0.4991**

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					0.0352	0.0000	0.0352	0.0194	0.0000	0.0194	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7335	16.7335	5.4100e-003	0.0000	16.8688
Total	**2.3300e-003**	**0.0101**	**0.1043**	**1.9000e-004**	**0.0352**	**3.1000e-004**	**0.0355**	**0.0194**	**3.1000e-004**	**0.0197**	**0.0000**	**16.7335**	**16.7335**	**5.4100e-003**	**0.0000**	**16.8688**

3.2 Site Preparation - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.2000e-004	1.4600e-003	1.0000e-005	4.1000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.4989	0.4989	1.0000e-005	0.0000	0.4991
Total	**2.3000e-004**	**1.2000e-004**	**1.4600e-003**	**1.0000e-005**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.4989**	**0.4989**	**1.0000e-005**	**0.0000**	**0.4991**

3.3 Grading - 2027

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					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.1532	0.1454	3.0000e-004		6.2400e-003	6.2400e-003		5.7400e-003	5.7400e-003	0.0000	26.0698	26.0698	8.4300e-003	0.0000	26.2806
Total	**0.0152**	**0.1532**	**0.1454**	**3.0000e-004**	**0.0655**	**6.2400e-003**	**0.0718**	**0.0337**	**5.7400e-003**	**0.0394**	**0.0000**	**26.0698**	**26.0698**	**8.4300e-003**	**0.0000**	**26.2806**

3.3 Grading - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	2.1000e-004	2.4300e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.8314	0.8314	1.0000e-005	0.0000	0.8318
Total	**3.9000e-004**	**2.1000e-004**	**2.4300e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.8314**	**0.8314**	**1.0000e-005**	**0.0000**	**0.8318**

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					0.0256	0.0000	0.0256	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6300e-003	0.0157	0.1775	3.0000e-004		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	26.0698	26.0698	8.4300e-003	0.0000	26.2806
Total	**3.6300e-003**	**0.0157**	**0.1775**	**3.0000e-004**	**0.0256**	**4.8000e-004**	**0.0260**	**0.0131**	**4.8000e-004**	**0.0136**	**0.0000**	**26.0698**	**26.0698**	**8.4300e-003**	**0.0000**	**26.2806**

3.3 Grading - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	2.1000e-004	2.4300e-003	1.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.8314	0.8314	1.0000e-005	0.0000	0.8318
Total	**3.9000e-004**	**2.1000e-004**	**2.4300e-003**	**1.0000e-005**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.8314**	**0.8314**	**1.0000e-005**	**0.0000**	**0.8318**

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1573	1.4340	1.8497	3.1000e-003		0.0607	0.0607		0.0571	0.0571	0.0000	266.7074	266.7074	0.0627	0.0000	268.2747
Total	**0.1573**	**1.4340**	**1.8497**	**3.1000e-003**		**0.0607**	**0.0607**		**0.0571**	**0.0571**	**0.0000**	**266.7074**	**266.7074**	**0.0627**	**0.0000**	**268.2747**

3.4 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.4484	0.0734	1.5200e-003	0.0381	4.4000e-004	0.0386	0.0110	4.2000e-004	0.0114	0.0000	144.7770	144.7770	8.2100e-003	0.0000	144.9822
Worker	0.0381	0.0201	0.2362	8.9000e-004	0.1168	6.7000e-004	0.1174	0.0310	6.2000e-004	0.0317	0.0000	80.9517	80.9517	1.4300e-003	0.0000	80.9874
Total	**0.0489**	**0.4685**	**0.3096**	**2.4100e-003**	**0.1549**	**1.1100e-003**	**0.1560**	**0.0420**	**1.0400e-003**	**0.0431**	**0.0000**	**225.7287**	**225.7287**	**9.6400e-003**	**0.0000**	**225.9697**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1288	1.0807	1.8837	3.1000e-003		0.0459	0.0459		0.0436	0.0436	0.0000	266.7071	266.7071	0.0627	0.0000	268.2744
Total	**0.1288**	**1.0807**	**1.8837**	**3.1000e-003**		**0.0459**	**0.0459**		**0.0436**	**0.0436**	**0.0000**	**266.7071**	**266.7071**	**0.0627**	**0.0000**	**268.2744**

3.4 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.4484	0.0734	1.5200e-003	0.0247	4.4000e-004	0.0251	7.7100e-003	4.2000e-004	8.1300e-003	0.0000	144.7770	144.7770	8.2100e-003	0.0000	144.9822
Worker	0.0381	0.0201	0.2362	8.9000e-004	0.0662	6.7000e-004	0.0669	0.0186	6.2000e-004	0.0193	0.0000	80.9517	80.9517	1.4300e-003	0.0000	80.9874
Total	**0.0489**	**0.4685**	**0.3096**	**2.4100e-003**	**0.0909**	**1.1100e-003**	**0.0920**	**0.0263**	**1.0400e-003**	**0.0274**	**0.0000**	**225.7287**	**225.7287**	**9.6400e-003**	**0.0000**	**225.9697**

3.5 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

3.5 Paving - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	1.9000e-004	2.2700e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	0.8058	0.8058	1.0000e-005	0.0000	0.8061
Total	**3.7000e-004**	**1.9000e-004**	**2.2700e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.8058**	**0.8058**	**1.0000e-005**	**0.0000**	**0.8061**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

3.5 Paving - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	1.9000e-004	2.2700e-003	1.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.8058	0.8058	1.0000e-005	0.0000	0.8061
Total	**3.7000e-004**	**1.9000e-004**	**2.2700e-003**	**1.0000e-005**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.8058**	**0.8058**	**1.0000e-005**	**0.0000**	**0.8061**

3.6 Architectural Coating - 2028

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					
Archit. Coating	2.1013					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4200e-003	0.0229	0.0362	6.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	5.1065	5.1065	2.8000e-004	0.0000	5.1135
Total	**2.1047**	**0.0229**	**0.0362**	**6.0000e-005**		**1.0300e-003**	**1.0300e-003**		**1.0300e-003**	**1.0300e-003**	**0.0000**	**5.1065**	**5.1065**	**2.8000e-004**	**0.0000**	**5.1135**

3.6 Architectural Coating - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	6.3000e-004	7.5500e-003	3.0000e-005	4.0000e-003	2.0000e-005	4.0200e-003	1.0600e-003	2.0000e-005	1.0800e-003	0.0000	2.6859	2.6859	4.0000e-005	0.0000	2.6871
Total	**1.2200e-003**	**6.3000e-004**	**7.5500e-003**	**3.0000e-005**	**4.0000e-003**	**2.0000e-005**	**4.0200e-003**	**1.0600e-003**	**2.0000e-005**	**1.0800e-003**	**0.0000**	**2.6859**	**2.6859**	**4.0000e-005**	**0.0000**	**2.6871**

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					
Archit. Coating	2.1013					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4200e-003	0.0229	0.0362	6.0000e-005		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	5.1065	5.1065	2.8000e-004	0.0000	5.1135
Total	**2.1047**	**0.0229**	**0.0362**	**6.0000e-005**		**1.0300e-003**	**1.0300e-003**		**1.0300e-003**	**1.0300e-003**	**0.0000**	**5.1065**	**5.1065**	**2.8000e-004**	**0.0000**	**5.1135**

3.6 Architectural Coating - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	6.3000e-004	7.5500e-003	3.0000e-005	2.2700e-003	2.0000e-005	2.2900e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.6859	2.6859	4.0000e-005	0.0000	2.6871
Total	**1.2200e-003**	**6.3000e-004**	**7.5500e-003**	**3.0000e-005**	**2.2700e-003**	**2.0000e-005**	**2.2900e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.6859**	**2.6859**	**4.0000e-005**	**0.0000**	**2.6871**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0260	0.2967	0.2684	1.7700e-003	0.1294	9.2000e-004	0.1303	0.0348	8.6000e-004	0.0356	0.0000	165.3529	165.3529	8.9700e-003	0.0000	165.5772
Unmitigated	0.0260	0.2967	0.2684	1.7700e-003	0.1294	9.2000e-004	0.1303	0.0348	8.6000e-004	0.0356	0.0000	165.3529	165.3529	8.9700e-003	0.0000	165.5772

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	75.06	75.06	38.11	203,732	203,732
Refrigerated Warehouse-No Rail	50.43	50.43	24.28	136,312	136,312
Total	125.49	125.49	62.39	340,044	340,044

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
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Refrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.539995	0.029626	0.177149	0.097439	0.011379	0.003842	0.020160	0.111182	0.001741	0.001278	0.004825	0.000867	0.000518
Refrigerated Warehouse-No Rail	0.539995	0.029626	0.177149	0.097439	0.011379	0.003842	0.020160	0.111182	0.001741	0.001278	0.004825	0.000867	0.000518

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	1,621.8147	1,621.8147	0.0733	0.0152	1,628.1694
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,649.6790	1,649.6790	0.0746	0.0154	1,656.1429
NaturalGas Mitigated	0.0125	0.1137	0.0955	6.8000e-004		8.6400e-003	8.6400e-003		8.6400e-003	8.6400e-003	0.0000	123.7188	123.7188	2.3700e-003	2.2700e-003	124.4540
NaturalGas Unmitigated	0.0132	0.1195	0.1004	7.2000e-004		9.0800e-003	9.0800e-003		9.0800e-003	9.0800e-003	0.0000	130.1053	130.1053	2.4900e-003	2.3900e-003	130.8785

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					
Manufacturing	2.41007e+006	0.0130	0.1181	0.0992	7.1000e-004		8.9800e-003	8.9800e-003		8.9800e-003	8.9800e-003	0.0000	128.6104	128.6104	2.4700e-003	2.3600e-003	129.3747
Refrigerated Warehouse-No Rail	28014	1.5000e-004	1.3700e-003	1.1500e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4949	1.4949	3.0000e-005	3.0000e-005	1.5038
Total		**0.0132**	**0.1195**	**0.1004**	**7.2000e-004**		**9.0800e-003**	**9.0800e-003**		**9.0800e-003**	**9.0800e-003**	**0.0000**	**130.1053**	**130.1053**	**2.5000e-003**	**2.3900e-003**	**130.8785**

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					
Manufacturing	2.29207e+006	0.0124	0.1124	0.0944	6.7000e-004		8.5400e-003	8.5400e-003		8.5400e-003	8.5400e-003	0.0000	122.3136	122.3136	2.3400e-003	2.2400e-003	123.0404
Refrigerated Warehouse-No Rail	26333.2	1.4000e-004	1.2900e-003	1.0800e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4052	1.4052	3.0000e-005	3.0000e-005	1.4136
Total		**0.0125**	**0.1137**	**0.0955**	**6.8000e-004**		**8.6400e-003**	**8.6400e-003**		**8.6400e-003**	**8.6400e-003**	**0.0000**	**123.7188**	**123.7188**	**2.3700e-003**	**2.2700e-003**	**124.4540**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	1.01853e +006	296.3031	0.0134	2.7700e-003	297.4641
Refrigerated Warehouse-No Rail	4.65219e +006	1,353.375 9	0.0612	0.0127	1,358.678 8
Total		**1,649.679 0**	**0.0746**	**0.0154**	**1,656.142 9**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	973774	283.2819	0.0128	2.6500e-003	284.3919
Refrigerated Warehouse-No Rail	4.60117e +006	1,338.532 8	0.0605	0.0125	1,343.777 5
Total		**1,621.814 6**	**0.0733**	**0.0152**	**1,628.169 4**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	1.3908	3.0000e-005	2.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.4000e-003	5.4000e-003	1.0000e-005	0.0000	5.7500e-003
Unmitigated	1.3908	3.0000e-005	2.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.4000e-003	5.4000e-003	1.0000e-005	0.0000	5.7500e-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	tons/yr										MT/yr					
Architectural Coating	0.2101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1804					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.6000e-004	3.0000e-005	2.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.4000e-003	5.4000e-003	1.0000e-005	0.0000	5.7500e-003
Total	**1.3908**	**3.0000e-005**	**2.7700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.4000e-003**	**5.4000e-003**	**1.0000e-005**	**0.0000**	**5.7500e-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	tons/yr										MT/yr					
Architectural Coating	0.2101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1804					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.6000e-004	3.0000e-005	2.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.4000e-003	5.4000e-003	1.0000e-005	0.0000	5.7500e-003
Total	**1.3908**	**3.0000e-005**	**2.7700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.4000e-003**	**5.4000e-003**	**1.0000e-005**	**0.0000**	**5.7500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.5685	0.2861	6.8700e-003	25.7671
Unmitigated	20.7106	0.3576	8.5900e-003	32.2089

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	9.125 / 0	17.2588	0.2980	7.1600e-003	26.8407
Refrigerated Warehouse-No Rail	1.825 / 0	3.4518	0.0596	1.4300e-003	5.3682
Total		**20.7106**	**0.3576**	**8.5900e-003**	**32.2089**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	7.3 / 0	13.8070	0.2384	5.7200e-003	21.4726
Refrigerated Warehouse-No Rail	1.46 / 0	2.7614	0.0477	1.1400e-003	4.2945
Total		**16.5685**	**0.2861**	**6.8600e-003**	**25.7671**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	42.0572	2.4855	0.0000	104.1949
Unmitigated	64.7034	3.8239	0.0000	160.2999

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	143.2	29.0683	1.7179	0.0000	72.0155
Refrigerated Warehouse-No Rail	175.55	35.6351	2.1060	0.0000	88.2844
Total		**64.7034**	**3.8239**	**0.0000**	**160.2999**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	93.08	18.8944	1.1166	0.0000	46.8101
Refrigerated Warehouse-No Rail	114.108	23.1628	1.3689	0.0000	57.3848
Total		**42.0572**	**2.4855**	**0.0000**	**104.1949**

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

Central Valley Meats CEQA Phase 3

San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	115.48	1000sqft	2.38	115,480.00	0
Refrigerated Warehouse-No Rail	186.76	1000sqft	4.29	186,760.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2029
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Industrial - Manufacturing is a 2-story building. Lot acreage updated to reflect the footprint.

Construction Phase - Architectural Coating length updated to match schedule.

Vehicle Trips - Employee trips updated with true employee values.

Water And Wastewater - Water usage updated with true engineering values.

Construction Off-road Equipment Mitigation - Watering area 3x daily during construction and street sweeping to clean paved roads. Excavators, Graders, Rubber Tired Dozers, Tractors/Loaders/Backhoes updated to engine tier 4 per true equipment.

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	40.00
tblLandUse	LotAcreage	2.65	2.38
tblVehicleTrips	ST_TR	1.49	0.65
tblVehicleTrips	ST_TR	1.68	0.27
tblVehicleTrips	SU_TR	0.62	0.33
tblVehicleTrips	SU_TR	1.68	0.13
tblVehicleTrips	WD_TR	3.82	0.65
tblVehicleTrips	WD_TR	1.68	0.27
tblWater	IndoorWaterUseRate	26,704,750.00	9,125,000.00
tblWater	IndoorWaterUseRate	43,188,250.00	1,825,000.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2027	2.5255	25.2568	19.0872	0.0489	18.2141	1.0876	19.3017	9.9699	1.0006	10.9705	0.0000	4,812.8143	4,812.8143	1.1953	0.0000	4,830.0796
2028	105.3056	8.5992	14.8442	0.0238	0.2054	0.4192	0.5424	0.0545	0.3856	0.4183	0.0000	2,304.1092	2,304.1092	0.7154	0.0000	2,321.9930
Maximum	**105.3056**	**25.2568**	**19.0872**	**0.0489**	**18.2141**	**1.0876**	**19.3017**	**9.9699**	**1.0006**	**10.9705**	**0.0000**	**4,812.8143**	**4,812.8143**	**1.1953**	**0.0000**	**4,830.0796**

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					
2027	1.5845	13.4291	21.2103	0.0489	7.1295	0.4085	7.1924	3.8964	0.3879	3.9593	0.0000	4,812.8143	4,812.8143	1.1953	0.0000	4,830.0796
2028	105.3056	8.5992	14.8442	0.0238	0.1161	0.4192	0.4888	0.0326	0.3856	0.4052	0.0000	2,304.1092	2,304.1092	0.7154	0.0000	2,321.9930
Maximum	**105.3056**	**13.4291**	**21.2103**	**0.0489**	**7.1295**	**0.4192**	**7.1924**	**3.8964**	**0.3879**	**3.9593**	**0.0000**	**4,812.8143**	**4,812.8143**	**1.1953**	**0.0000**	**4,830.0796**

	ROG	**NOx**	**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	**0.87**	**34.94**	**-6.26**	**0.00**	**60.66**	**45.07**	**61.29**	**60.81**	**44.20**	**61.68**	**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	7.6222	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0662	0.0662	1.7000e-004		0.0705
Energy	0.0720	0.6549	0.5501	3.9300e-003		0.0498	0.0498		0.0498	0.0498		785.8442	785.8442	0.0151	0.0144	790.5141
Mobile	0.1839	1.7416	1.7492	0.0111	0.7864	5.4400e-003	0.7918	0.2107	5.0900e-003	0.2158		1,134.4375	1,134.4375	0.0569		1,135.8588
Total	**7.8782**	**2.3967**	**2.3301**	**0.0150**	**0.7864**	**0.0553**	**0.8417**	**0.2107**	**0.0550**	**0.2657**		**1,920.3478**	**1,920.3478**	**0.0721**	**0.0144**	**1,926.4433**

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	7.6222	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0662	0.0662	1.7000e-004		0.0705
Energy	0.0685	0.6227	0.5231	3.7400e-003		0.0473	0.0473		0.0473	0.0473		747.2694	747.2694	0.0143	0.0137	751.7100
Mobile	0.1839	1.7416	1.7492	0.0111	0.7864	5.4400e-003	0.7918	0.2107	5.0900e-003	0.2158		1,134.4375	1,134.4375	0.0569		1,135.8588
Total	**7.8746**	**2.3646**	**2.3031**	**0.0148**	**0.7864**	**0.0529**	**0.8392**	**0.2107**	**0.0525**	**0.2633**		**1,881.7730**	**1,881.7730**	**0.0713**	**0.0137**	**1,887.6393**

	ROG	NOx	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	**0.04**	**1.34**	**1.16**	**1.27**	**0.00**	**4.41**	**0.29**	**0.00**	**4.44**	**0.92**	**0.00**	**2.01**	**2.01**	**1.03**	**4.93**	**2.01**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2027	1/15/2027	5	10	
2	Grading	Grading	1/16/2027	2/12/2027	5	20	
3	Building Construction	Building Construction	2/13/2027	12/31/2027	5	230	
4	Paving	Paving	1/1/2028	1/28/2028	5	20	
5	Architectural Coating	Architectural Coating	1/29/2028	3/24/2028	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 453,360; Non-Residential Outdoor: 151,120; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	127.00	50.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2027

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.4727	25.2339	17.9118	0.0381		1.0868	1.0868		0.9999	0.9999		3,689.1037	3,689.1037	1.1931		3,718.9320
Total	**2.4727**	**25.2339**	**17.9118**	**0.0381**	**18.0663**	**1.0868**	**19.1531**	**9.9307**	**0.9999**	**10.9305**		**3,689.1037**	**3,689.1037**	**1.1931**		**3,718.9320**

3.2 Site Preparation - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0527	0.0230	0.3414	1.2100e-003	0.1479	8.3000e-004	0.1487	0.0392	7.6000e-004	0.0400		120.5457	120.5457	2.1600e-003		120.5997
Total	**0.0527**	**0.0230**	**0.3414**	**1.2100e-003**	**0.1479**	**8.3000e-004**	**0.1487**	**0.0392**	**7.6000e-004**	**0.0400**		**120.5457**	**120.5457**	**2.1600e-003**		**120.5997**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,689.1037	3,689.1037	1.1931		3,718.9320
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**7.0458**	**0.0621**	**7.1079**	**3.8730**	**0.0621**	**3.9351**	**0.0000**	**3,689.1037**	**3,689.1037**	**1.1931**		**3,718.9320**

3.2 Site Preparation - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0527	0.0230	0.3414	1.2100e-003	0.0836	8.3000e-004	0.0844	0.0235	7.6000e-004	0.0242		120.5457	120.5457	2.1600e-003		120.5997
Total	**0.0527**	**0.0230**	**0.3414**	**1.2100e-003**	**0.0836**	**8.3000e-004**	**0.0844**	**0.0235**	**7.6000e-004**	**0.0242**		**120.5457**	**120.5457**	**2.1600e-003**		**120.5997**

3.3 Grading - 2027

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.5227	15.3148	14.5402	0.0297		0.6236	0.6236		0.5737	0.5737		2,873.7052	2,873.7052	0.9294		2,896.9405
Total	**1.5227**	**15.3148**	**14.5402**	**0.0297**	**6.5523**	**0.6236**	**7.1759**	**3.3675**	**0.5737**	**3.9412**		**2,873.7052**	**2,873.7052**	**0.9294**		**2,896.9405**

3.3 Grading - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0440	0.0191	0.2845	1.0100e-003	0.1232	6.9000e-004	0.1239	0.0327	6.3000e-004	0.0333		100.4548	100.4548	1.8000e-003		100.4998
Total	**0.0440**	**0.0191**	**0.2845**	**1.0100e-003**	**0.1232**	**6.9000e-004**	**0.1239**	**0.0327**	**6.3000e-004**	**0.0333**		**100.4548**	**100.4548**	**1.8000e-003**		**100.4998**

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,873.7052	2,873.7052	0.9294		2,896.9405
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**2.5554**	**0.0484**	**2.6038**	**1.3133**	**0.0484**	**1.3617**	**0.0000**	**2,873.7052**	**2,873.7052**	**0.9294**		**2,896.9405**

3.3 Grading - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0440	0.0191	0.2845	1.0100e-003	0.0697	6.9000e-004	0.0704	0.0195	6.3000e-004	0.0202		100.4548	100.4548	1.8000e-003		100.4998
Total	**0.0440**	**0.0191**	**0.2845**	**1.0100e-003**	**0.0697**	**6.9000e-004**	**0.0704**	**0.0195**	**6.3000e-004**	**0.0202**		**100.4548**	**100.4548**	**1.8000e-003**		**100.4998**

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0922	3.8699	0.5941	0.0134	0.3389	3.7800e-003	0.3427	0.0976	3.6100e-003	0.1012		1,405.8229	1,405.8229	0.0744		1,407.6837
Worker	0.3721	0.1621	2.4084	8.5300e-003	1.0433	5.8400e-003	1.0491	0.2767	5.3700e-003	0.2821		850.5170	850.5170	0.0152		850.8979
Total	**0.4643**	**4.0320**	**3.0025**	**0.0220**	**1.3822**	**9.6200e-003**	**1.3918**	**0.3743**	**8.9800e-003**	**0.3833**		**2,256.3399**	**2,256.3399**	**0.0897**		**2,258.5816**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1203	9.3971	16.3797	0.0270		0.3989	0.3989		0.3789	0.3789	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.1203**	**9.3971**	**16.3797**	**0.0270**		**0.3989**	**0.3989**		**0.3789**	**0.3789**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0922	3.8699	0.5941	0.0134	0.2183	3.7800e-003	0.2221	0.0680	3.6100e-003	0.0716		1,405.8229	1,405.8229	0.0744		1,407.6837
Worker	0.3721	0.1621	2.4084	8.5300e-003	0.5899	5.8400e-003	0.5958	0.1655	5.3700e-003	0.1708		850.5170	850.5170	0.0152		850.8979
Total	**0.4643**	**4.0320**	**3.0025**	**0.0220**	**0.8082**	**9.6200e-003**	**0.8178**	**0.2334**	**8.9800e-003**	**0.2424**		**2,256.3399**	**2,256.3399**	**0.0897**		**2,258.5816**

3.5 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0411	0.0175	0.2662	9.8000e-004	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		97.3641	97.3641	1.6500e-003		97.4052
Total	**0.0411**	**0.0175**	**0.2662**	**9.8000e-004**	**0.1232**	**6.4000e-004**	**0.1239**	**0.0327**	**5.9000e-004**	**0.0333**		**97.3641**	**97.3641**	**1.6500e-003**		**97.4052**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0411	0.0175	0.2662	9.8000e-004	0.0697	6.4000e-004	0.0703	0.0195	5.9000e-004	0.0201		97.3641	97.3641	1.6500e-003		97.4052
Total	**0.0411**	**0.0175**	**0.2662**	**9.8000e-004**	**0.0697**	**6.4000e-004**	**0.0703**	**0.0195**	**5.9000e-004**	**0.0201**		**97.3641**	**97.3641**	**1.6500e-003**		**97.4052**

3.6 Architectural Coating - 2028

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					
Archit. Coating	105.0662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**105.2370**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0685	0.0292	0.4436	1.6300e-003	0.2054	1.0700e-003	0.2064	0.0545	9.8000e-004	0.0555		162.2734	162.2734	2.7400e-003		162.3420
Total	**0.0685**	**0.0292**	**0.4436**	**1.6300e-003**	**0.2054**	**1.0700e-003**	**0.2064**	**0.0545**	**9.8000e-004**	**0.0555**		**162.2734**	**162.2734**	**2.7400e-003**		**162.3420**

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					
Archit. Coating	105.0662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**105.2370**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0685	0.0292	0.4436	1.6300e-003	0.1161	1.0700e-003	0.1172	0.0326	9.8000e-004	0.0336		162.2734	162.2734	2.7400e-003		162.3420
Total	**0.0685**	**0.0292**	**0.4436**	**1.6300e-003**	**0.1161**	**1.0700e-003**	**0.1172**	**0.0326**	**9.8000e-004**	**0.0336**		**162.2734**	**162.2734**	**2.7400e-003**		**162.3420**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1839	1.7416	1.7492	0.0111	0.7864	5.4400e-003	0.7918	0.2107	5.0900e-003	0.2158		1,134.4375	1,134.4375	0.0569		1,135.8588
Unmitigated	0.1839	1.7416	1.7492	0.0111	0.7864	5.4400e-003	0.7918	0.2107	5.0900e-003	0.2158		1,134.4375	1,134.4375	0.0569		1,135.8588

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	75.06	75.06	38.11	203,732	203,732
Refrigerated Warehouse-No Rail	50.43	50.43	24.28	136,312	136,312
Total	125.49	125.49	62.39	340,044	340,044

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
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Refrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.539995	0.029626	0.177149	0.097439	0.011379	0.003842	0.020160	0.111182	0.001741	0.001278	0.004825	0.000867	0.000518
Refrigerated Warehouse-No Rail	0.539995	0.029626	0.177149	0.097439	0.011379	0.003842	0.020160	0.111182	0.001741	0.001278	0.004825	0.000867	0.000518

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0685	0.6227	0.5231	3.7400e-003		0.0473	0.0473		0.0473	0.0473		747.2694	747.2694	0.0143	0.0137	751.7100
NaturalGas Unmitigated	0.0720	0.6549	0.5501	3.9300e-003		0.0498	0.0498		0.0498	0.0498		785.8442	785.8442	0.0151	0.0144	790.5141

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					
Manufacturing	6602.92	0.0712	0.6474	0.5438	3.8800e-003		0.0492	0.0492		0.0492	0.0492		776.8147	776.8147	0.0149	0.0142	781.4309
Refrigerated Warehouse-No Rail	76.7507	8.3000e-004	7.5200e-003	6.3200e-003	5.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004		9.0295	9.0295	1.7000e-004	1.7000e-004	9.0832
Total		**0.0720**	**0.6549**	**0.5501**	**3.9300e-003**		**0.0498**	**0.0498**		**0.0498**	**0.0498**		**785.8442**	**785.8442**	**0.0151**	**0.0144**	**790.5141**

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					
Manufacturing	6.27964	0.0677	0.6157	0.5172	3.6900e-003		0.0468	0.0468		0.0468	0.0468		738.7817	738.7817	0.0142	0.0135	743.1719
Refrigerated Warehouse-No Rail	0.0721456	7.8000e-004	7.0700e-003	5.9400e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		8.4877	8.4877	1.6000e-004	1.6000e-004	8.5382
Total		**0.0685**	**0.6227**	**0.5231**	**3.7300e-003**		**0.0473**	**0.0473**		**0.0473**	**0.0473**		**747.2694**	**747.2694**	**0.0143**	**0.0137**	**751.7100**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	7.6222	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0662	0.0662	1.7000e-004		0.0705
Unmitigated	7.6222	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0662	0.0662	1.7000e-004		0.0705

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	1.1514					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8300e-003	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0662	0.0662	1.7000e-004		0.0705
Total	**7.6222**	**2.8000e-004**	**0.0308**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0662**	**0.0662**	**1.7000e-004**		**0.0705**

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	1.1514					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8300e-003	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0662	0.0662	1.7000e-004		0.0705
Total	**7.6222**	**2.8000e-004**	**0.0308**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0662**	**0.0662**	**1.7000e-004**		**0.0705**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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

Central Valley Meats CEQA Phase 3

San Joaquin Valley Unified APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	115.48	1000sqft	2.38	115,480.00	0
Refrigerated Warehouse-No Rail	186.76	1000sqft	4.29	186,760.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2029
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Industrial - Manufacturing is a 2-story building. Lot acreage updated to reflect the footprint.

Construction Phase - Architectural Coating length updated to match schedule.

Vehicle Trips - Employee trips updated with true employee values.

Water And Wastewater - Water usage updated with true engineering values.

Construction Off-road Equipment Mitigation - Watering area 3x daily during construction and street sweeping to clean paved roads. Excavators, Graders, Rubber Tired Dozers, Tractors/Loaders/Backhoes updated to engine tier 4 per true equipment.

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	40.00
tblLandUse	LotAcreage	2.65	2.38
tblVehicleTrips	ST_TR	1.49	0.65
tblVehicleTrips	ST_TR	1.68	0.27
tblVehicleTrips	SU_TR	0.62	0.33
tblVehicleTrips	SU_TR	1.68	0.13
tblVehicleTrips	WD_TR	3.82	0.65
tblVehicleTrips	WD_TR	1.68	0.27
tblWater	IndoorWaterUseRate	26,704,750.00	9,125,000.00
tblWater	IndoorWaterUseRate	43,188,250.00	1,825,000.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2027	2.5230	25.2610	18.7836	0.0475	18.2141	1.0876	19.3017	9.9699	1.0006	10.9705	0.0000	4,667.5118	4,667.5118	1.1950	0.0000	4,684.9781
2028	105.3026	8.6023	14.7988	0.0237	0.2054	0.4192	0.5424	0.0545	0.3856	0.4183	0.0000	2,292.3971	2,292.3971	0.7151	0.0000	2,310.2753
Maximum	**105.3026**	**25.2610**	**18.7836**	**0.0475**	**18.2141**	**1.0876**	**19.3017**	**9.9699**	**1.0006**	**10.9705**	**0.0000**	**4,667.5118**	**4,667.5118**	**1.1950**	**0.0000**	**4,684.9781**

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					
2027	1.5726	13.4728	21.1530	0.0475	7.1295	0.4085	7.1924	3.8964	0.3880	3.9593	0.0000	4,667.5118	4,667.5118	1.1950	0.0000	4,684.9781
2028	105.3026	8.6023	14.7988	0.0237	0.1161	0.4192	0.4888	0.0326	0.3856	0.4052	0.0000	2,292.3971	2,292.3971	0.7151	0.0000	2,310.2753
Maximum	**105.3026**	**13.4728**	**21.1530**	**0.0475**	**7.1295**	**0.4192**	**7.1924**	**3.8964**	**0.3880**	**3.9593**	**0.0000**	**4,667.5118**	**4,667.5118**	**1.1950**	**0.0000**	**4,684.9781**

	ROG	**NOx**	**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	**0.88**	**34.81**	**-7.06**	**0.00**	**60.66**	**45.07**	**61.29**	**60.81**	**44.20**	**61.68**	**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	7.6222	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0662	0.0662	1.7000e-004		0.0705
Energy	0.0720	0.6549	0.5501	3.9300e-003		0.0498	0.0498		0.0498	0.0498		785.8442	785.8442	0.0151	0.0144	790.5141
Mobile	0.1457	1.7575	1.6144	0.0102	0.7864	5.4700e-003	0.7918	0.2107	5.1200e-003	0.2159		1,050.4244	1,050.4244	0.0619		1,051.9708
Total	**7.8399**	**2.4126**	**2.1953**	**0.0142**	**0.7864**	**0.0554**	**0.8417**	**0.2107**	**0.0550**	**0.2657**		**1,836.3348**	**1,836.3348**	**0.0771**	**0.0144**	**1,842.5553**

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	7.6222	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0662	0.0662	1.7000e-004		0.0705
Energy	0.0685	0.6227	0.5231	3.7400e-003		0.0473	0.0473		0.0473	0.0473		747.2694	747.2694	0.0143	0.0137	751.7100
Mobile	0.1457	1.7575	1.6144	0.0102	0.7864	5.4700e-003	0.7918	0.2107	5.1200e-003	0.2159		1,050.4244	1,050.4244	0.0619		1,051.9708
Total	**7.8363**	**2.3805**	**2.1683**	**0.0140**	**0.7864**	**0.0529**	**0.8393**	**0.2107**	**0.0526**	**0.2633**		**1,797.7600**	**1,797.7600**	**0.0763**	**0.0137**	**1,803.7513**

	ROG	NOx	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	**0.05**	**1.33**	**1.23**	**1.34**	**0.00**	**4.41**	**0.29**	**0.00**	**4.44**	**0.92**	**0.00**	**2.10**	**2.10**	**0.96**	**4.93**	**2.11**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2027	1/15/2027	5	10	
2	Grading	Grading	1/16/2027	2/12/2027	5	20	
3	Building Construction	Building Construction	2/13/2027	12/31/2027	5	230	
4	Paving	Paving	1/1/2028	1/28/2028	5	20	
5	Architectural Coating	Architectural Coating	1/29/2028	3/24/2028	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 453,360; Non-Residential Outdoor: 151,120; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	127.00	50.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2027

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.4727	25.2339	17.9118	0.0381		1.0868	1.0868		0.9999	0.9999		3,689.1037	3,689.1037	1.1931		3,718.9320
Total	**2.4727**	**25.2339**	**17.9118**	**0.0381**	**18.0663**	**1.0868**	**19.1531**	**9.9307**	**0.9999**	**10.9305**		**3,689.1037**	**3,689.1037**	**1.1931**		**3,718.9320**

3.2 Site Preparation - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0503	0.0271	0.2840	1.0600e-003	0.1479	8.3000e-004	0.1487	0.0392	7.6000e-004	0.0400		106.0544	106.0544	1.8700e-003		106.1013
Total	**0.0503**	**0.0271**	**0.2840**	**1.0600e-003**	**0.1479**	**8.3000e-004**	**0.1487**	**0.0392**	**7.6000e-004**	**0.0400**		**106.0544**	**106.0544**	**1.8700e-003**		**106.1013**

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,689.1037	3,689.1037	1.1931		3,718.9320
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**7.0458**	**0.0621**	**7.1079**	**3.8730**	**0.0621**	**3.9351**	**0.0000**	**3,689.1037**	**3,689.1037**	**1.1931**		**3,718.9320**

3.2 Site Preparation - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0503	0.0271	0.2840	1.0600e-003	0.0836	8.3000e-004	0.0844	0.0235	7.6000e-004	0.0242		106.0544	106.0544	1.8700e-003		106.1013
Total	**0.0503**	**0.0271**	**0.2840**	**1.0600e-003**	**0.0836**	**8.3000e-004**	**0.0844**	**0.0235**	**7.6000e-004**	**0.0242**		**106.0544**	**106.0544**	**1.8700e-003**		**106.1013**

3.3 Grading - 2027

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.5227	15.3148	14.5402	0.0297		0.6236	0.6236		0.5737	0.5737		2,873.7052	2,873.7052	0.9294		2,896.9405
Total	**1.5227**	**15.3148**	**14.5402**	**0.0297**	**6.5523**	**0.6236**	**7.1759**	**3.3675**	**0.5737**	**3.9412**		**2,873.7052**	**2,873.7052**	**0.9294**		**2,896.9405**

3.3 Grading - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0420	0.0226	0.2366	8.9000e-004	0.1232	6.9000e-004	0.1239	0.0327	6.3000e-004	0.0333		88.3787	88.3787	1.5600e-003		88.4178
Total	**0.0420**	**0.0226**	**0.2366**	**8.9000e-004**	**0.1232**	**6.9000e-004**	**0.1239**	**0.0327**	**6.3000e-004**	**0.0333**		**88.3787**	**88.3787**	**1.5600e-003**		**88.4178**

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					2.5554	0.0000	2.5554	1.3133	0.0000	1.3133			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484	0.0000	2,873.7052	2,873.7052	0.9294		2,896.9405
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**2.5554**	**0.0484**	**2.6038**	**1.3133**	**0.0484**	**1.3617**	**0.0000**	**2,873.7052**	**2,873.7052**	**0.9294**		**2,896.9405**

3.3 Grading - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0420	0.0226	0.2366	8.9000e-004	0.0697	6.9000e-004	0.0704	0.0195	6.3000e-004	0.0202		88.3787	88.3787	1.5600e-003		88.4178
Total	**0.0420**	**0.0226**	**0.2366**	**8.9000e-004**	**0.0697**	**6.9000e-004**	**0.0704**	**0.0195**	**6.3000e-004**	**0.0202**		**88.3787**	**88.3787**	**1.5600e-003**		**88.4178**

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0972	3.8843	0.6955	0.0130	0.3389	3.8400e-003	0.3428	0.0976	3.6700e-003	0.1013		1,362.7644	1,362.7644	0.0845		1,364.8764
Worker	0.3551	0.1914	2.0035	7.5000e-003	1.0433	5.8400e-003	1.0491	0.2767	5.3700e-003	0.2821		748.2730	748.2730	0.0132		748.6037
Total	**0.4523**	**4.0757**	**2.6989**	**0.0205**	**1.3822**	**9.6800e-003**	**1.3919**	**0.3743**	**9.0400e-003**	**0.3834**		**2,111.0374**	**2,111.0374**	**0.0977**		**2,113.4801**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1203	9.3971	16.3797	0.0270		0.3989	0.3989		0.3789	0.3789	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.1203**	**9.3971**	**16.3797**	**0.0270**		**0.3989**	**0.3989**		**0.3789**	**0.3789**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.4 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0972	3.8843	0.6955	0.0130	0.2183	3.8400e-003	0.2221	0.0680	3.6700e-003	0.0717		1,362.7644	1,362.7644	0.0845		1,364.8764
Worker	0.3551	0.1914	2.0035	7.5000e-003	0.5899	5.8400e-003	0.5958	0.1655	5.3700e-003	0.1708		748.2730	748.2730	0.0132		748.6037
Total	**0.4523**	**4.0757**	**2.6989**	**0.0205**	**0.8082**	**9.6800e-003**	**0.8179**	**0.2334**	**9.0400e-003**	**0.2425**		**2,111.0374**	**2,111.0374**	**0.0977**		**2,113.4801**

3.5 Paving - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.5 Paving - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0207	0.2208	8.6000e-004	0.1232	6.4000e-004	0.1239	0.0327	5.9000e-004	0.0333		85.6519	85.6519	1.4300e-003		85.6875
Total	**0.0393**	**0.0207**	**0.2208**	**8.6000e-004**	**0.1232**	**6.4000e-004**	**0.1239**	**0.0327**	**5.9000e-004**	**0.0333**		**85.6519**	**85.6519**	**1.4300e-003**		**85.6875**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.745 2**	**2,206.745 2**	**0.7137**		**2,224.587 8**

3.5 Paving - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0393	0.0207	0.2208	8.6000e-004	0.0697	6.4000e-004	0.0703	0.0195	5.9000e-004	0.0201		85.6519	85.6519	1.4300e-003		85.6875
Total	**0.0393**	**0.0207**	**0.2208**	**8.6000e-004**	**0.0697**	**6.4000e-004**	**0.0703**	**0.0195**	**5.9000e-004**	**0.0201**		**85.6519**	**85.6519**	**1.4300e-003**		**85.6875**

3.6 Architectural Coating - 2028

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					
Archit. Coating	105.0662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**105.2370**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0655	0.0345	0.3680	1.4300e-003	0.2054	1.0700e-003	0.2064	0.0545	9.8000e-004	0.0555		142.7532	142.7532	2.3800e-003		142.8126
Total	**0.0655**	**0.0345**	**0.3680**	**1.4300e-003**	**0.2054**	**1.0700e-003**	**0.2064**	**0.0545**	**9.8000e-004**	**0.0555**		**142.7532**	**142.7532**	**2.3800e-003**		**142.8126**

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					
Archit. Coating	105.0662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**105.2370**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.6 Architectural Coating - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0655	0.0345	0.3680	1.4300e-003	0.1161	1.0700e-003	0.1172	0.0326	9.8000e-004	0.0336		142.7532	142.7532	2.3800e-003		142.8126
Total	**0.0655**	**0.0345**	**0.3680**	**1.4300e-003**	**0.1161**	**1.0700e-003**	**0.1172**	**0.0326**	**9.8000e-004**	**0.0336**		**142.7532**	**142.7532**	**2.3800e-003**		**142.8126**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	0.1457	1.7575	1.6144	0.0102	0.7864	5.4700e-003	0.7918	0.2107	5.1200e-003	0.2159		1,050.4244	1,050.4244	0.0619		1,051.9708
Unmitigated	0.1457	1.7575	1.6144	0.0102	0.7864	5.4700e-003	0.7918	0.2107	5.1200e-003	0.2159		1,050.4244	1,050.4244	0.0619		1,051.9708

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	75.06	75.06	38.11	203,732	203,732
Refrigerated Warehouse-No Rail	50.43	50.43	24.28	136,312	136,312
Total	125.49	125.49	62.39	340,044	340,044

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
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Refrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.539995	0.029626	0.177149	0.097439	0.011379	0.003842	0.020160	0.111182	0.001741	0.001278	0.004825	0.000867	0.000518
Refrigerated Warehouse-No Rail	0.539995	0.029626	0.177149	0.097439	0.011379	0.003842	0.020160	0.111182	0.001741	0.001278	0.004825	0.000867	0.000518

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive 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	0.0685	0.6227	0.5231	3.7400e-003		0.0473	0.0473		0.0473	0.0473		747.2694	747.2694	0.0143	0.0137	751.7100
NaturalGas Unmitigated	0.0720	0.6549	0.5501	3.9300e-003		0.0498	0.0498		0.0498	0.0498		785.8442	785.8442	0.0151	0.0144	790.5141

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					
Manufacturing	6602.92	0.0712	0.6474	0.5438	3.8800e-003		0.0492	0.0492		0.0492	0.0492		776.8147	776.8147	0.0149	0.0142	781.4309
Refrigerated Warehouse-No Rail	76.7507	8.3000e-004	7.5200e-003	6.3200e-003	5.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004		9.0295	9.0295	1.7000e-004	1.7000e-004	9.0832
Total		**0.0720**	**0.6549**	**0.5501**	**3.9300e-003**		**0.0498**	**0.0498**		**0.0498**	**0.0498**		**785.8442**	**785.8442**	**0.0151**	**0.0144**	**790.5141**

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					
Manufacturing	6.27964	0.0677	0.6157	0.5172	3.6900e-003		0.0468	0.0468		0.0468	0.0468		738.7817	738.7817	0.0142	0.0135	743.1719
Refrigerated Warehouse-No Rail	0.0721456	7.8000e-004	7.0700e-003	5.9400e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004		8.4877	8.4877	1.6000e-004	1.6000e-004	8.5382
Total		**0.0685**	**0.6227**	**0.5231**	**3.7300e-003**		**0.0473**	**0.0473**		**0.0473**	**0.0473**		**747.2694**	**747.2694**	**0.0143**	**0.0137**	**751.7100**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	7.6222	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0662	0.0662	1.7000e-004		0.0705
Unmitigated	7.6222	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0662	0.0662	1.7000e-004		0.0705

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	1.1514					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8300e-003	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0662	0.0662	1.7000e-004		0.0705
Total	**7.6222**	**2.8000e-004**	**0.0308**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0662**	**0.0662**	**1.7000e-004**		**0.0705**

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	1.1514					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.4679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8300e-003	2.8000e-004	0.0308	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0662	0.0662	1.7000e-004		0.0705
Total	**7.6222**	**2.8000e-004**	**0.0308**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0662**	**0.0662**	**1.7000e-004**		**0.0705**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

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 – STATIONARY SOURCE EMISSIONS

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Central Valley Meats
Rendering Emissions

Permit Unit	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO	VOC
	Annual Emissions (ton/yr)					
Meat Rendering Operation	1.17	7.22	1.47	0.92	2.72	3.50
Loadout Operation	0	0	0.05	0.03	0	0
Boiler 1	1.39	0.77	0.81	0.81	10.03	1.49
Boiler 2	1.39	0.77	0.81	0.81	10.03	1.49
Boiler 3	1.39	0.77	0.81	0.81	10.03	1.49
Boiler 4	1.39	0.77	0.81	0.81	10.03	1.49
Total	**6.73**	**10.32**	**4.77**	**4.20**	**42.85**	**9.47**

Unit	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO	VOC
	Daily Emissions (lb/day)					
Meat Rendering Operation	6.39	78.65	14.11	8.37	14.92	25.25
Loadout Operation	0	0	0.54	0.29	0	0
Boiler natural gas 1	7.63	4.24	4.46	4.42	54.97	8.18
Boiler natural gas 2	7.63	4.24	4.46	4.42	54.97	8.18
Boiler natural gas 3	7.63	4.24	4.46	4.42	54.97	8.18
Boiler natural gas 4	7.63	4.24	4.46	4.42	54.97	8.18
Total	**36.9**	**95.6**	**32.5**	**26.3**	**234.8**	**58.0**

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Central Valley Meats
TAC Annual Emission Summary

Pollutant	CAS	RTO	2 Room Air Scrubbers	4 Boilers	Total Emissions
		Annual Emissions (lb/yr)			
H2S	7783064	-	153.4	-	**153.4**
Acetaldehyde	75070	0.279	-	6.734	**7.0**
Acrolein	107028	0.175	-	5.865	**6.0**
Benzene	71432	0.519	-	12.599	**13.1**
Ethylbenzene	100414	0.616	-	14.988	**15.6**
Formaldehyde	50000	1.102	-	26.718	**27.8**
Hexane	110543	0.408	-	9.992	**10.4**
Naphthalene	91203	0.019	-	0.652	**0.7**
PAH's (excl. naphthalene)	1151	0.006	-	0.217	**0.2**
Propylene	115071	47.386	-	1151.2	**1198.6**
Toluene	108883	2.373	-	57.562	**59.9**
Xylenes (mixed)	1330207	1.763	-	42.792	**44.6**
Ammonia slip (from SCR)	7664417	-	-	9753.0	**9753.0**
				Total TACs (lb/yr)	**11290.5**
				Total HAPs (ton/yr)	**0.769**

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Central Valley Meats
GHG Annual Emission Summary

Unit	CO_2	CH_4	N_2O	CO_2e
	Annual Emissions (MT/yr)			
Direct Emissions				
Rendering Plant Boilers	115,255	2.17	0.20	115,374
Rendering Plant RTO	3,440	0.06	0.01	3,443
Pet Food Plant RTO	2,324	0.04	0.004	2,326

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Process and Facility Information

Beef Slaughterhouse Raw Material

Material	Raw Material into Cookor					
	(%)	(lbs/hr)	(lbs/day)	(tons/day)	(lbs/wk)	(tons/yr)
Water	**52**	50,545	1,213,070	607	8,491,493	221,385
Solids - MBM	**28.42**	27,623	662,954	331	4,640,680	120,989
Fat - Tallow	**19.58**	19,031	456,742	228	3,197,194	83,355
Total Raw Material	100	97,199	2,332,767	**1,166**	16,329,367	425,730

Maximum Permitted Operating Schedule	Rate	Units
Daily Operation	24	Hours/Day
Weekly Operation	7	Day/Week
Annual Operation	8760	Hours/Year
Annual Operation	365	Days/Year
Weekly Operation (number cattle)	7000	Head/Day

Material	Raw Material into Cookor (lb/wk)
Water	8,491,493
Solids - MBM	4,640,680
Fat - Tallow	3,197,194
Total Raw	16,329,367

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Room Air Scrubbers

Emissions per scrubber

Pollutant	Emission Factors	Control Efficiency (%)	Uncontrolled PE (lbs/hr)	PE (lbs/hr)	PE (lbs/day)	PE (lbs/yr)
VOC	1.0 ppmv	0%	N/A	0.2530	6.1	2,216.0
PM_{10}	2.086E-04 lb/Mgal	0%	N/A	0.013	0.3	109.6
$PM_{2.5}$	1.147E-04 lb/Mgal	0%	N/A	0.007	0.2	60.3
H2S	9.73E-09 lb/ft3	85%	0.0584	0.01	0.2	76.71

PM emissions calculated from the TDS in the wet scrubber

H2S emissions calculated from sulfur content from cooker process from Reference 4.

H2S and VOC controlled by packed bed scrubber. However, the VOC EF is post control EF. Therefore, no further control is assumed.

Parameter	Value	Units	Reference	Notes
Room Air Packed Bed Scrubber Specifications				
Number of room air scrubbers	2			
max flowrate	100,000	cfm	Design Specification	Vendor, Robertson Technologies
Control Efficiency	85%		Design Specification	Vendor guarantee
Rendering H2S Emission Factor, uncontrolled	1.56E-04	g/m^3	2	Assumes that 1% of cooker vapor emissions become fugitive
Rendering H2S Emission Factor, controlled	2.34E-05	g/m^3	Controlled EF	
Rendering H2S Emission Factor, uncontrolled	9.73E-09	lbs/ft^3	conversion g/m^3 to lb/ft^3	
Rendering H2S Emission Factor, controlled	1.46E-09	lbs/ft^3	Controlled EF	
PM10/PM2.5 fraction	0.55		1	
Rendering VOC Emission Factor, controlled	4.22E-08	lbs/ft^3		
Conversion Factors				
CH4 molecular weight	16.0	lb/lb-mole		
Conversion Factor	60	min/hr		
Standard molecular volume	379.5	dscf/lb-mol	For standard conditions of 60F & 1 atm the ideal gas molar volume is 379.5 scf/lb.mol (SJVAPCD)	
Conversion Factor	2.2046	lb/kg		
Conversion Factor	3.785	l/gal		

Scrubber PM Emissions

design circulating water rate	1,000	gallons/min
TDS (conservative assumption)	5,000	mg/liter=ppm
TDS	41.72	lb/1000 gallons
Drift Eliminator Control	0.000005	=0.0005%

=(circ water rate)/1000 * 60 min/hr * TDS * (Drift Control)

References

1. Darling Fresno SJVAPCD permit C-9251 per ARB CEPAM Version 1.05 for food and agriculture, other - animal/poultry (EIC 420-995-6004-000)
2. Characterization of gaseous odorous emissions from a rendering plant by GC/MS and treatment bybiofiltration, Anet et al, 10 Oct 2013

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Solids Processing Emissions

Protein Processing Source	PM10 Uncontrolled Emission Factor (lb/ton)	Control Efficiency (%)	Uncontrolled (lbs/hr)	Controlled (lbs/hr)	Controlled (lbs/day)	Controlled (lbs/yr)
Conveyor to Crax Bin	0.0008	99.0%	0.022	0.0002	0.005	1
Crax Bin to Curing Hopper	0.0008	99.0%	0.022	0.0002	0.005	1
Hammermill - 1 or 2	0.0335	90.0%	0.925	0.0925	2.221	405
Rotex/Screen	0.0335	90.0%	0.925	0.0925	2.221	405
Recycle line to Hammermill	0.0008	99.0%	0.022	0.0002	0.005	1
Conveyor to storage silos	0.0008	99.0%	0.022	0.0002	0.005	1
PM10 Total from Solid Processing				**0.1860**	**4.46**	**814.50**
PM2.5 Total from Solid Processing				**0.1023**	**2.45**	**447.97**
Loading of storage silos (Controlled by bin vents)- Loadout Operation	0.0008	99%	0.022	0.0002	0.005	1
Transfer of meal from overhead silos to delivery truck (uncontrolled)-Loadout Operation	0.0008	0%	0.022	0.0221	0.530	97
PM10 Total from Loadout				**0.0223**	**0.536**	**97.76**
PM2.5 Total from Loadout				**0.0123**	**0.29**	**53.77**

Emission factors from EPA AP-42 Section 9.9.1 Grain Elevators and Processes, Table 9.9.1-2, Animal Feed Shipping and Hammermill

Hammermill and Screen EF based on EPA AP-42, Table 9.9.1-2, Animal Feed mills - Hammermill - controlled by Cyclone, using EPA assumption that 50% of PM is PM10

All transfer point PM controlled by cyclone and venturi

Grinding Room Calculation Data (Solids Processing)

Parameter	Value	Units	Reference	Notes
MBM from cooker	663	tons/day		
PM10/PM2.5 fraction	0.55		1	
Venturi/packed bed scrubber				
Venturi Flow	30,000	scfm	Design Specification	Robertson Technologies
Venturi PM10 Control	90.0%	%	Design Specification	Assume venturi scrubber controls all liquid and gaseous components
Cyclone Parameters				
Cyclone Dust Collector PM10 Control	90.0%	%	Vendor data	Robertson Technologies
Cyclone Flow	6,000	scfm	Design Specification	
Conversion Factors				
Standard molecular volume	385.3	dscf/lb-mol		
Conversion Factor	1000	mg/g		
Conversion Factor	454	g/lb		
Conversion Factor	35.31	ft^3/m^3		
Conversion Factor	60	min/hr		

References

1. Darling Fresno SJVAPCD permit C-9251 per ARB CEPAM Version 1.05 for food and agriculture, other - animal/poultry (EIC 420-995-6004-000)

Loadout Operation Calculation Data (Solids Processing)

Parameter	Value	Units	Reference	Notes
MBM Loadout	663	tons/day		
	120,989	tons/year		
PM10/PM2.5 fraction	0.55		1	
Bin Vents				
Bin Vent PM10 Control	99.0%	%	Design	EPA Air Pollution Control Technology Fact Shee

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Rendering Operation Emissions

Rendering Processing includes 2 cookers, a condensors, 6 screw pressers, a sweco screen, centrifuge, fat surge tank all venting to venturi/packed bed scrubber connected to RTO

Pollutant	Controlled Emission Factor (lb/ton raw material)	Controlled (lbs/hr)	Controlled (lbs/day)	Controlled (lbs/yr)
VOC	0.0052	0.51	12.13	2213.80
SOx	0.0335	3.26	78.15	14261.95
PM10	0.0033	0.32	7.70	1404.91
PM2.5	0.0018	0.18	4.23	772.70

Vapors from the pressors, centrifuges, fat tank, Sweco screen, CRAX conveyor, drainer, & condensors shall be captured and vented to the venturi/packed bed scrubber and RTO, in series

VOC, SOX and PM10 emission factors from SJVAPCD permit for proposed Darling Fresno facility C-9251 wirg SOx EF adjusted to 0.032

Pollutant	Emission Factor	Units	Reference
PM10/PM2.5 fraction	0.55		1
Total raw materials	2,333	ton/day	
Total raw materials	425,730	ton/year	

Process and Facility Information

Parameter	Value	Units	Reference	Notes
RTO Specifications				
VOC emission rate	20	ppmv		Vendor guarantee (measured as propane)
RTO flowrate max	20,000	cfm	Design Specification 18,0000 - 20,000 cfm	Vendor, Robertson Technologies
RTO VOC Control Efficiency	99.0%	%	Design Specification	Vendor guarantee (Non-Methane Hydrocarbons)
Venturi/packed bed scrubber				
Venturi Flow	18,000	cfm	Design Specification	Vendor, Robertson Technologies
Venturi PM10 Control	90.0%	%	Design Specification	Vendor, Robertson Technologies
Scrubber Control	85.0%	%	Design Specification	Assume venturi scrubber controls all liquid and gaseous components
Conversion Factors				
Conversion Factor	1000	mg/g		
Conversion Factor	454	gm/lb		
Conversion Factor	35.31	ft^3/m^3		
Conversion Factor	60	min/hr		
Standard molecular volume	385.3	dscf/lb-mol		

1. Darling Fresno SJVAPCD permit C-9251 per ARB CEPAM Version 1.05 for food and agriculture, other - animal/poultry (EIC 420-995-6004-000)

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Rendering Plant Thermal Oxidizer Emission Calculations
Criteria Pollutant Emission Calculations

Pollutant	Emission Factor ppmv @ 3% O2	Emission Factor (lb/MMBtu)	Emission Factor Source	RTO Natural Gas Contribution Hourly Emissions (lb/hr)	RTO Natural Gas Contribution Daily Emissions (lb/day)	RTO Natural Gas Contribution Annual Emissions (lb/yr)	RTO Rendering Contribution Hourly Emissions (lb/hr)	RTO Rendering Contribution Daily Emissions (lb/day)	RTO Rendering Contribution Annual Emissions (lb/yr)	Total RTO Emissions Hourly Emissions (lb/hr)	Total RTO Emissions Daily Emissions (lb/day)	Total RTO Emissions Annual Emissions (lb/yr)
NOx	30	0.036	Vendor	0.266	6.39	2,334	N/A	N/A	N/A	0.266	6.394	2,334
SOx		0.00285	SJVAPCD APR-1720	0.021	0.51	185	3.3	78.1	14,262.0	3.277	78.65	14,447
CO		0.084	AP-42 1.4	0.622	14.92	5,445	N/A	N/A	N/A	0.622	14.918	5,445
VOC		0.0055	AP-42 1.4	0.041	0.98	357	0.5	12.1	2,213.8	0.546	13.11	2,570
PM_{10}		0.0076	AP-42 1.4	0.056	1.35	493	0.3	7.7	1,404.9	0.377	9.05	1,898
$PM_{2.5}$		0.0076	AP-42 1.4	0.056	1.35	493	0.2	4.2	772.7	0.233	5.58	1,265

Data and Parameters

Process Flows -	***Heat Input***		***Operating Schedule***	
Est. Max. Heat Release	7.40	MMBtu/hr	Provided by Robertson Technologies	
	177.6	MMBtu/day	24	hr/day
	64,824	MMBtu/yr	365	day/yr
Molar Volume	385.3	scf/lbmol	Constant, EPA Method 19	
F-factor for natural gas	8710	dscf/MMBtu		
Natural Gas HHV:	1,000	Btu/scf		
Standard Temp	68	F		
Constant	460	R		
MW NOx	46	lbs/lbmol		
Stack Oxygen	3.0	%		

TAC Emissions from Natural Gas Combustion in RTO

Pollutant	CAS No.	Emission Factor (lb/MMscf)	Emission Factor (lb/MMBtu)	Hourly Emissions (lb/hr)	Daily Emissions (lb/day)	Annual Emissions (lb/yr)
Acetaldehyde	75070	4.30E-03	4.30E-06	3.18E-05	7.64E-04	2.79E-01
Acrolein	107028	2.70E-03	2.70E-06	2.00E-05	4.80E-04	1.75E-01
Benzene	71432	8.00E-03	8.00E-06	5.92E-05	1.42E-03	5.19E-01
Ethylbenzene	100414	9.50E-03	9.50E-06	7.03E-05	1.69E-03	6.16E-01
Formaldehyde	50000	1.70E-02	1.70E-05	1.26E-04	3.02E-03	1.10E+00
Hexane	110543	6.30E-03	6.30E-06	4.66E-05	1.12E-03	4.08E-01
Naphthalene	91203	3.00E-04	3.00E-07	2.22E-06	5.33E-05	1.94E-02
PAH's (excl. naphthalene	1151	1.00E-04	1.00E-07	7.40E-07	1.78E-05	6.48E-03
Propylene	115071	7.31E-01	7.31E-04	5.41E-03	1.30E-01	4.74E+01
Toluene	108883	3.66E-02	3.66E-05	2.71E-04	6.50E-03	2.37E+00
Xylenes (mixed)	1330207	2.72E-02	2.72E-05	2.01E-04	4.83E-03	1.76E+00

VCAPCD (SJVAPCD recommended) natural gas external combustion EFs <10 MMBtu/hr

GHG Emissions from Natural Gas Combustion in RTO

Greenhouse Gas	Emission Factor (kg/MMBtu)	Global Warming Potential	Annual Emissions (MT/yr)	Emission Factor Source
CO_2	53.06	1	3,439.6	*40 CFR 98 Subpart C, Table C-1*
CH_4	0.001	25	0.065	*40 CFR 98 Subpart C, Table C-2*
N_2O	0.0001	298	0.006	*40 CFR 98 Subpart C, Table C-2*
CO_2e	53.11		3,443.1	*40 CFR 98 Subpart A, Table A-1 (AR4)*

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Natural Gas Fired Boiler Emissions Calculations (point source) per Boiler

Source Characteristics		
Process Equipment Description	1500 hp natural gas-fired boiler (CVM is proposing 4 boilers)	
Rated Size Range (pull-down for TAC EFs)	10-100	mmBTU/hr (consistent with Hourly Heat Input Rating)

Operating Data	—	References/Remarks	Value	Units	Value	Units
Hourly Heat Input Rating	—	Design value	1500	hp		
Conversion factor	—	Conversion factor	33475	Btu/boiler hp		
Hourly Heat Input Rating	—	Range (0.03-3000 mmBTU/hr)	61.991	mmBTU/hr	61.99	mcf/hr
Daily Heat Input	—	Calculated	1488	mmBTU/day	1487.78	mcf/day
Annual Heat Input	—	Calculated	543041	mmBTU/yr	543.041	mmcf/yr

Operating Schedule	—	References/Remarks	Value	Units
Daily Operation (total)	—	Range (1-24 hrs/day)	24	hrs/day
Daily Operation (steady state)	—	Range (1-24 hrs/day)	22.5	hrs/day
Daily Operation (startup/shutdown)	—	Range (1-24 hrs/day)	1.5	hrs/day
Annual Operation (total)	—	Range (1-8760 hrs/yr)	8760	hrs/yr
Annual Operation (steady state)	—	Range (1-8760 hrs/yr)	8212.5	hrs/yr
Annual Operation (startup/shutdown)	—	Range (1-8760 hrs/yr)	547.5	hrs/yr

Constants	—	References/Remarks	Value	Units
Fuel Gas HHV	—	Range (1000-1100 BTU/cf)	1000	BTU/cf
Standard Temperature	—	Select 32, 60, 68, 70, or 77°F	68	°F
Standard Temperature	—	Rankine	528	°R
Standard Temperature	—	Kelvin	293.16	°K
Gas Constant	—	Metric	82.057338	cm^3 atm K^{-1} mol^{-1}
Standard Molar Volume	—	@ Temp °K	24056	cm^3/g-mole
Standard Molar Volume	—	EPA Method 19 (corrected)	385.3	scf/lb-mole
Dry Fd Factor	—	EPA Method 19 (corrected)	8710	dscf/mmBTU
Wet Fw Factor	—	EPA Method 19 (corrected)	10610	wscf/mmBTU
Stoichiometric Moisture Ratio	—	EPA Method 19 (corrected)	21.8	percent

BACT - Natural Gas	EF	EF Units	lb/mmBTU	Control Technology Notes
CO	50	ppmv @3% O_2	0.03695	*Vendor*
CO startup/shutdown	50	ppmv @3% O_2	0.03695	*Vendor Mar 3, 2021 conversation*
NO_x	2.5	ppmv @3% O_2	0.00304	*BACT Technologically feasible - vendor*
NOx startup/shutdown	30	ppmv @3% O_2	0.03642	*Vendor*
PM_{10}	3.00	lb/mmcf	0.003	*District practice*
$PM_{2.5}$	2.97	lb/mmcf	0.003	*SJVAPCD Practice for Natural Combustion*
VOC	5.50	lb/mmcf	0.0055	*AP-42 Table 1.4-2*
SO_X	2.85	lb/mmcf	0.00285	*SJVAPCD APR-1720*
CO_2	53.06	kg/mmBTU	116.9761	*40 CFR 98 Subpart C, Table C-1*
CH_4	0.001	kg/mmBTU	0.0022	*40 CFR 98 Subpart C, Table C-2*
N_2O	0.0001	kg/mmBTU	0.0002	*40 CFR 98 Subpart C, Table C-2*
CO_2e	53.11	kg/mmBTU	117.0969	*40 CFR 98 Subpart A, Table A-1 (AR4)*
NH_3 (ammonia slip)	10	ppmv @3% O_2	0.00449	*From SCR vendor*

Criteria Pollutants, TACs, GHGs	CAS No.	References/Remarks	Emission Factors	Maximum Hourly Emissions	Maximum Daily Emissions	Maximum Annual Emissions		Annual Emissions	Maximum Hourly Emissions
			lb/mmBTU	lb/hr	lb/day	lb/yr	tons/yr	g/sec	g/sec
CO steady state	630080	Vendor	0.03695	2.29	51.54	18811	9.406		
CO startup/shutdown	630080	Vendor Mar 3, 2021 conversation	0.03695	2.29	3.44	1254	0.627		
CO total/max	630080			2.29	54.97	20065	10.033	0.2886	0.2886
NO_x steady state	10102440	BACT Technologically feasible - vendor	0.00304	0.19	4.24	1548	0.774		
NOx startup/shutdown	10102440	Vendor	0.03642	2.26	3.39	1236	0.618		
NOx total/max	10102440			2.26	7.63	2784	1.392	0.0400	0.2845
PM_{10}	85101	District practice	0.00300	0.186	4.46	1629	0.815	0.0234	0.0234
$PM_{2.5}$ (99% of PM_{10})	88101	SJVAPCD Practice for Natural Combustio	0.00297	0.18	4.42	1613	0.806	0.0232	0.0232
VOC	43104	AP-42 Table 1.4-2	0.00550	0.34	8.18	2987	1.493	0.0430	0.0430
SO_x	7446095	SJVAPCD APR-1720	0.00285	0.18	4.24	1548	0.774	0.0223	0.0223
				lb/hr	lb/day	lb/yr	MT/yr		
CO_2	124389	40 CFR 98 Subpart C, Table C-1	116.97610	7,251	174,035	63,522,837	28,813.8	—	—
CH_4	74828	40 CFR 98 Subpart C, Table C-2	0.00220	0.14	3.27	1,194.69	0.542	—	—
N_2O	10024972	40 CFR 98 Subpart C, Table C-2	0.00020	0.01	0.30	108.61	0.049	—	—
CO_2e	124389	40 CFR 98 Subpart A, Table A-1 (AR4)	117.09690	7,259	174,215	63,588,436	28,843.5	—	—

Notes:

Annual GHGs in units of MT/yr

Table 3: Rule 4201 Compliance Evaluation		
Particulate Matter Emissions	**Value**	**Units**
Particulate Matter Concentration	0.0021	gr/dscf
Stack Flowrate, dry standard	10507	dscf/min
Rule 4201 Limit	0.1000	gr/dscf
Rule 4201 Evaluation	Pass	

Table 4: Estimated SCR Reducing Agent Consumption		
SCR Performance Parameter	**Value**	**Units**
NO_X reducing agent (pull-down)	19% aqueous ammonia - NH4OH	
Uncontrolled (peak) inlet NO_X	3.05	lb/hr (AP-42 Table 1.4-1 LNB)
Controlled outlet NO_X	0.19	lb/hr
NO_X reduction (90% NO; 10% NO_2)	2.86	lb/hr
NH_3 reacted as reducing agent	3.16	lb/hr
Reducing agent reacted	16.65	lb/hr

Table 2: Toxic Air Contaminants Emissions Summary				
Toxic Air Contaminants	**CAS No.**	**EF (lb/MMBtu)**	**Hourly PE (lb/hr)**	**Annual PE (lb/year)**
Ammonia slip (SCR)	7664417	4.49E-03	2.78E-01	2.44E+03
Acetaldehyde	75070	3.10E-06	1.92E-04	1.68E+00
Acrolein	107028	2.70E-06	1.67E-04	1.47E+00
Benzene	71432	5.80E-06	3.60E-04	3.15E+00
Ethylbenzene	100414	6.90E-06	4.28E-04	3.75E+00
Formaldehyde	50000	1.23E-05	7.62E-04	6.68E+00
Hexane	110543	4.60E-06	2.85E-04	2.50E+00
Naphthalene	91203	3.00E-07	1.86E-05	1.63E-01
PAH's (excl. naphthalene)	1151	1.00E-07	6.20E-06	5.43E-02
Propylene	115071	5.30E-04	3.29E-02	2.88E+02
Toluene	108883	2.65E-05	1.64E-03	1.44E+01
Xylenes (mixed)	1330207	1.97E-05	1.22E-03	1.07E+01

EF Source: VCAPCD 2001 (SCAQMD, SJVAPCD)

Ordered Format - Hourly						
NO_X	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**ROG**	**CO_2e**
lbs/hr	**lbs/hr**	**lbs/hr**	**lbs/hr**	**lbs/hr**	**lbs/hr**	**lbs/hr**
2.26	0.18	0.19	0.18	2.29	0.34	7,259

Ordered Format - Daily						
NO_X	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**ROG**	**CO_2e**
lbs/day	**lbs/day**	**lbs/day**	**lbs/day**	**lbs/day**	**lbs/day**	**lbs/day**
7.63	4.24	4.46	4.42	54.97	8.18	174,215

Ordered Format - Annual						
NO_X	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**ROG**	**CO_2e**
tons/yr	**tons/yr**	**tons/yr**	**tons/yr**	**tons/yr**	**tons/yr**	**MT/yr**
1.39	0.77	0.82	0.81	10.03	1.49	28,844

VCAPCD 2001 TAC Emission Factors for Natural Gas External Combustion (lb/mmcf)					
Toxic Air Contaminants	**CAS No.**	**<10**	**10-100**	**>100**	**Flare**
Acetaldehyde	75070	0.0043	0.0031	0.0009	0.0430
Acrolein	107028	0.0027	0.0027	0.0008	0.0100
Benzene	71432	0.0080	0.0058	0.0017	0.1590
Ethylbenzene	100414	0.0095	0.0069	0.0020	1.4440
Formaldehyde	50000	0.0170	0.0123	0.0036	1.1690
Hexane	110543	0.0063	0.0046	0.0013	0.0290
Naphthalene	91203	0.0003	0.0003	0.0003	0.0110
PAH's (excl. naphthalene)	1151	0.0001	0.0001	0.0001	0.0030
Propylene	115071	0.7310	0.5300	0.0155	2.4400
Toluene	108883	0.0366	0.0265	0.0078	0.0580
Xylenes (mixed)	1330207	0.0272	0.0197	0.0058	0.0290

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CVM Pet Food Thermal Oxidizer Emission Calculations Criteria Pollutant Emissions from Natural Gas Combustion in RTO						
Pollutant	**Emission Factor ppmv @ 3% O2**	**Emission Factor (lb/MMBtu)**	**Emission Factor Source**	**Hourly Emissions (lb/hr)**	**Daily Emissions (lb/day)**	**Annual Emissions (lb/yr)**
NOx	30	0.036	Vendor	0.180	4.32	1,577
SOx		0.00285	SJVAPCD APR-1720	0.014	0.34	125
PM_{10}		0.0076	AP-42 1.4	0.038	0.91	333
$PM_{2.5}$		0.0076	AP-42 1.4	0.038	0.91	333
CO		0.084	AP-42 1.4	0.420	10.08	3,679
VOC		0.0055	AP-42 1.4	0.028	0.66	241

Data and Parameters

Process Flows -	***Heat Input***		***Operating Schedule***		
Est. Max. Heat Release	5.00	MMBtu/hr	Provided by CVM		
	120.0	MMBtu/day		24	hr/day
	43,800	MMBtu/yr		365	day/yr
Molar Volume	385.3	scf/lbmol	Constant, EPA Method 19		
F-factor for natural gas	8710	dscf/MMBtu			
Natural Gas HHV:	1,000	Btu/scf			
Standard Temp	68	F			
Constant	460	R			
MW NOx	46	lbs/lbmol			
Stack Oxygen	3.0	%			

TAC Emissions from Natural Gas Combustion in RTO					
Pollutant	**CAS No.**	**Emission Factor (lb/MMscf)**	**Emission Factor (lb/MMBtu)**	**Hourly Emissions (lb/hr)**	**Annual Emissions (lb/yr)**
Acetaldehyde	75070	4.30E-03	4.30E-06	2.15E-05	1.88E-01
Acrolein	107028	2.70E-03	2.70E-06	1.35E-05	1.18E-01
Benzene	71432	8.00E-03	8.00E-06	4.00E-05	3.50E-01
Ethylbenzene	100414	9.50E-03	9.50E-06	4.75E-05	4.16E-01
Formaldehyde	50000	1.70E-02	1.70E-05	8.50E-05	7.45E-01
Hexane	110543	6.30E-03	6.30E-06	3.15E-05	2.76E-01
Naphthalene	91203	3.00E-04	3.00E-07	1.50E-06	1.31E-02
PAH's (excl. naphthalene)	1151	1.00E-04	1.00E-07	5.00E-07	4.38E-03
Propylene	115071	7.31E-01	7.31E-04	3.66E-03	3.20E+01
Toluene	108883	3.66E-02	3.66E-05	1.83E-04	1.60E+00
Xylenes (mixed)	1330207	2.72E-02	2.72E-05	1.36E-04	1.19E+00

VCAPCD (SJVAPCD recommended) natural gas external combustion EFs <10 MMBtu/hr

GHG Emissions from Natural Gas Combustion in RTO				
Greenhouse Gas	**Emission Factor (kg/MMBtu)**	**Global Warming Potential**	**Annual Emissions (MT/yr)**	**Emission Factor Source**
CO_2	53.06	1	2,324.0	*40 CFR 98 Subpart C, Table C-1*
CH_4	0.001	25	0.044	*40 CFR 98 Subpart C, Table C-2*
N_2O	0.0001	298	0.004	*40 CFR 98 Subpart C, Table C-2*
CO_2e	53.11		2,326.4	*40 CFR 98 Subpart A, Table A-1 (AR4)*

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CVM Fuel Dispensing Station
Diesel Tank-Emissions Calculations

Device Description	Process Rate (gal/yr)	VOC Emission Factor (lb VOC/1,000 gal)	VOC Emissions (lb/yr)	VOC Emissions (ton/yr)	VOC Emissions (lb/day)
Diesel Storage Tanks	372,000	0.0280	10.42	0.005	0.03

Emission Factor Source: SCAQMD Annual Emissions Reporting Program – December 2011, GUIDELINES AND EXAMPLES FOR MANUAL DATA INPUT OF LIQUID STORAGE TANKS

Calculation Methodology

$E_{LS} = EFV_{OC} \times SF_{LS}$

E_{LS} = *listed substance emissions in lb/yr or lb/hr*
EF_{VOC} = *VOC emission factor in lb/yr or lb/hr*
SF_{LS} = *listed substance speciation factor (lb LS/lb VOC)*

SJVAPCD Profile

District Toxic Profile ID	23
Description	Diesel Storage Tanks
Source	The emission factors are from the 1993 District memo "Diesel Storage Weight Fractions."

Pollutant Name	Emission Factor	Emission Factor Units	CAS#
Benzene	8.80E-04	lb/lb VOC	71432
Toluene	4.82E-03	lb/lb VOC	108883
Xylenes (mixed)	4.20E-03	lb/lb VOC	1330207

Emissions

Pollutant Name	CAS#	Speciated EF (lb/lb VOC)	Emissions	
			lb/yr	lb/hr
Benzene	71432	8.80E-04	9.17E-03	1.05E-06
Toluene	108883	4.82E-03	5.02E-02	5.73E-06
Xylenes	1330207	4.20E-03	4.37E-02	4.99E-06

Hours per year	8,760
Days per year	365

APPENDIX C – OPERATIONAL MOBILE SOURCE EMISSIONS

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Central Valley Meats CEQA - Trucks per Week

Facility	Route	Round Trip Miles	Pre-Project Trucks	Pre-Project Miles	Post-Project Trucks	Post-Project Miles	Truck Type
Rendering Facility	Selma - Los Angeles	416	62	25,792	0	0	Fleet Mix
	Selma - Fresno	46	0	0	0	0	Fleet Mix
	Selma - Turlock	226	0	0	0	0	Fleet Mix
	Selma - Hanford	32	0	0	140	4,480	NZE
	Fresno-Hanford	71	0	0	83	5,893	NZE
	Hanford - Los Angeles	404	33	13,332	0	0	Fleet Mix
	Hanford - Kerman	100	60	6,000	0	0	Fleet Mix
	Hanford - Turlock	256	0	0	0	0	Fleet Mix
	Processing to Rendering Plant	0	0	0	204	41	Mule
	Fresno to Los Angeles	446	0	0	0	0	Fleet Mix
	Fresno to Coalinga	88	11	968	0	0	Fleet Mix
	Hanford to Coalinga	81	0	0	28	2,268	NZE
	Kerman to Corcoran	130	2	260	0	0	Fleet Mix
	Kerman to LA	475	15	7,125	0	0	Fleet Mix
	Hanford to LA	402	0	0	51	20,502	NZE
	Los Angeles to Imperial Valley	412	0	0	0	0	Fleet Mix
	Los Angeles to Phoenix	745	0	0	0	0	Fleet Mix
	Fresno to Manteca	212	0	0	0	0	Fleet Mix
	Fresno to Goshen	72	9	648	0	0	Fleet Mix
	Fresno to Turlock	164	4	656	0	0	Fleet Mix
	Kerman to Corcoran	130	1	130	0	0	Fleet Mix
	Kerman to Helm	36	16	576	0	0	Fleet Mix
	Hanford to LA	402	0	0	30	12,060	Fleet Mix
	Hanford to Manteca	276	0	0	18	4,968	Fleet Mix
	Hanford to Goshen	27	0	0	25	675	Fleet Mix
	Hanford to Corcoran	42	0	0	3	126	Fleet Mix
	Hanford to Imperial Valley	778	0	0	5	3,890	Fleet Mix
	Hanford to Turlock	234	0	0	0	0	Fleet Mix
	Los Angeles to Imperial Valley	412	0	0	0	0	Fleet Mix
	Los Angeles to Phoenix	745	0	0	0	0	Fleet Mix
	Facility Subtotal		***213***	***55,487***	***587***	***54,903***	
Pet Food Facility	Selma - Hanford	32	0	0	2	64	NZE
	From Processing and Rendering Plant	0.2	0	0	2	0	Mule
	Hanford to Western US	500	0	0	2	1,000	Fleet Mix
	Facility Subtotal		***0***	***0***	***6***	***1,064***	
Processing Expansion	Selma - Vernon	208	11	2,288	0	0	Fleet Mix
	Selma - Hanford	19	0	0	11	209	NZE
	Long Beach - Vernon (frozen)	20	15	300	0	0	Fleet Mix
	Long Beach - Hanford (frozen)	219	0	0	15	3,285	NZE
	Greeley - Vernon	1078	5	5,390	0	0	Fleet Mix
	Greeley - Hanford	1178	0	0	5	5,890	NZE
	Pasco - Vernon	1083	1	1,083	0	0	Fleet Mix
	Pasco - Hanford	885	0	0	1	885	Fleet Mix
	Hanford - Vernon	200	8	1,600	0	0	Fleet Mix
	Toppenwish - Vernon	1021	4	4,084	0	0	Fleet Mix
	Toppenwish - Hanford	834	0	0	4	3,336	NZE
	Vernon to Western U.S.	500	45	22,500	0	0	Fleet Mix
	Hanford to Western U.S.	500	0	0	50	25,000	Fleet Mix
	Selma to Western U.S.	500	5	2,500	0	0	Fleet Mix
	Facility Subtotal		***94***	***39,745***	***86***	***38,605***	
Hide Facility	Selma - Los Angeles	416	6	2,496	0	0	Fleet Mix
	Selma - Hanford	32	0	0	6	192	NZE
	From Processing and Rendering Plant	0	0	0	6	1	Mule
	Los Angeles to Oakland	800	3	2,400	0	0	Fleet Mix
	Los Angeles to Long Beach	50	3	150	0	0	Fleet Mix
	Hanford to Oakland	420	0	0	3	1,260	Fleet Mix
	Hanford to Long Beach	430	0	0	3	1,290	Fleet Mix
	Facility Subtotal		***12***	***5,046***	***18***	***2,743***	
Freezer/ Cooler Distribution Center	Selma - Hanford	32	0	0	114	3,648	NZE
	From Processing Plant	1	0	0	114	114	Mule
	Selma to Western US	500	114	57,000	0	0	Fleet Mix
	Hanford to Western US	500	0	0	114	57,000	Fleet Mix
	Facility Subtotal		**114**	**57,000**	**342**	**60,762**	
Project Grand Total			**433**	**157,278**	**1,039**	**158,077**	

Note: Distances to Western US estimated based on distribution throughout the region

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Unrefrigerated Truck DPM Emissions		
Heavy-Heavy Duty Trucks DPM	**Value**	**Units**
Daily Throughput	30	trips/day
Operating schedule (weekdays excluding holidays)	365	days/yr
Emission Factor, on-site travel*	3.80E-02	g/mile
On-site length (2-way)	1.20	miles
Travel distance, on-site	36	miles/day
On-site travel emissions	**3.01E-03**	**lbs/day**
Emission Factor, off-site travel*	1.87E-02	g/mile
Off-site length (2-way)	0.50	miles
Travel distance, off-site	15	miles/day
Off-site travel emissions	**6.18E-04**	**lbs/day**
Emission Factor, 5-minute idling*	2.26E-02	g/trip
Trip count	30	trips/day
On-site idling emissions	**1.50E-03**	**lbs/day**

Source: Guidance for Air Dispersion Modeling (SJVAPCD 2007)
*All CY 2022 HHDT, LDA, LDT1, LDT2 emission factors from CARB EMFAC2017 web database (https://arb.ca.gov/emfac/2017/). Aggregated values used (all years bell-curve).

Grand Total DPM from Trucking (CEQA)	**5.13E-03**	**lbs/day**
	1.872	**lbs/yr**

HHDT Speed	Fuel	VMT	PM10_RUNEX	
5	DSL	192064.2034	0.054294014	g/mile
10	DSL	274869.7315	0.037381142	g/mile
15	DSL	223525.6282	0.024657103	g/mile
	HHDT DSL EF =		**3.80E-02**	**g/mile**
20	DSL	344941.0204	0.019329342	g/mile
25	DSL	282437.4794	0.016364627	g/mile
30	DSL	248257.4271	0.018527237	g/mile
35	DSL	299548.7667	0.018353447	g/mile
40	DSL	321903.9418	0.020501657	g/mile
	HHDT DSL EF =		**1.87E-02**	**g/mile**
			0.054294014	g/mile
			5	mi/hr
			0.271470068	g/hr
			60	min/hr
			0.004524501	g/min
			5	minutes
HHDT Idling	**5-minute idling DSL EF =**		**2.26E-02**	**g/trip**

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Refrigerated Truck DPM Emissions		
Heavy-Heavy Duty Trucks DPM	**Value**	**Units**
Daily Throughput	19	trips/day
Operating schedule (weekdays excluding holidays)	365	days/yr
Emission Factor, on-site travel*	3.80E-02	g/mile
On-site length (2-way)	0.48	miles
Travel distance, on-site	9.1	miles/day
On-site travel emissions	**7.63E-04**	**lbs/day**
Emission Factor, off-site travel*	1.87E-02	g/mile
Off-site length (2-way)	0.50	miles
Travel distance, off-site	9.5	miles/day
Off-site travel emissions	**3.92E-04**	**lbs/day**
Emission Factor, 5-minute idling*	2.26E-02	g/trip
Trip count	19	trips/day
On-site idling emissions	**9.48E-04**	**lbs/day**

Source: Guidance for Air Dispersion Modeling (SJVAPCD 2007)
*All CY 2022 HHDT, LDA, LDT1, LDT2 emission factors from CARB EMFAC2017 web database (https://arb.ca.gov/emfac/2017/). Aggregated values used (all years bell-curve).

TRUs DPM	**Value**	**Units**
Daily Throughput	38	trips/day
Emission Factor, ATCM, Tier 4 Ultra-Low Emission TRU**	0.02	g/BHP-hr
TRU diesel motor rating (100%)	11.00	BHP
Load Factor (TRU with generator)	0.46	dimensionless
TRU diesel motor output @ 0.051 gal/BHP-hr @ load factor	5.06	BHP
Emission Factor, LETRU	0.1012	g/hr
Pre-cool time (average per trip)	2.0	hrs/trip
Running time, aggregate	76.0	hrs/day
TRU emissions	**1.70E-02**	**lbs/day**
TRU emissions	**6.19E+00**	**lbs/yr**

Source: Guidance for Air Dispersion Modeling (SJVAPCD 2007)

**California Code of Regulations, Title 13, Division 3, Chapter 9, Article 8, Section 2477. Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate. Table 4.

Grand Total DPM from Refrigerated Trucking (CEQA)	**1.91E-02**	**lbs/day**
	6.956	**lbs/yr**

HHDT Speed	Fuel	VMT	PM10_RUNEX	
5	DSL	192064.2034	0.054294014	g/mile
10	DSL	274869.7315	0.037381142	g/mile
15	DSL	223525.6282	0.024657103	g/mile
	HHDT DSL EF =		**3.80E-02**	**g/mile**
20	DSL	344941.0204	0.019329342	g/mile
25	DSL	282437.4794	0.016364627	g/mile
30	DSL	248257.4271	0.018527237	g/mile
35	DSL	299548.7667	0.018353447	g/mile
40	DSL	321903.9418	0.020501657	g/mile
	HHDT DSL EF =		**1.87E-02**	**g/mile**
			0.054294014	g/mile
			5	mi/hr
			0.271470068	g/hr
			60	min/hr
			0.004524501	g/min
			5	minutes
HHDT Idling	**5-minute idling DSL EF =**		**2.26E-02**	**g/trip**

Worker Vehicles DPM Emissions		
Diesel Cars & Light Trucks DPM	**Value**	**Units**
Daily Throughput	193	trips/day
Operating schedule (weekdays excluding holidays)	365	days/yr
Emission Factor, on-site travel*	1.25E-04	g/mile
On-site length (2-way)	1.00	miles
Travel distance, on-site	193	miles/day
On-site travel emissions	**5.32E-05**	**lbs/day**
Emission Factor, off-site travel*	6.12E-05	g/mile
Off-site length (2-way)	0.50	miles
Travel distance, off-site, 0.25 mile x 2 = 0.5 mile/trip	97	miles/day
Off-site travel emissions	**1.30E-05**	**lbs/day**
Starting & Idling emissions (assume 2.15 x travel per trucks)	**1.14E-04**	**lbs/day**
Total DPM emissions, daily	**1.81E-04**	**lbs/day**
Total DPM emissions, annual	**0.066**	**lbs/yr**

Source: Guidance for Air Dispersion Modeling (SJVAPCD 2007)
*All CY 2022 HHDT, LDA, LDT1, LDT2 emission factors from CARB EMFAC2017 web database (https://arb.ca.gov/emfac/2017/).
Aggregated values used (all years bell-curve).

LDA Speed	Fuel	VMT	PM10_RUNEX	
5	GAS	82129.50545	0.01001119	g/mile
5	DSL	767.6536358	0.022796202	g/mile
10	GAS	193152.2812	0.006310087	g/mile
10	DSL	1800.860718	0.017729034	g/mile
15	GAS	1463240.129	0.004194626	g/mile
15	DSL	13836.71107	0.013995223	g/mile
20	GAS	1915883.327	0.002929626	g/mile
20	DSL	17406.23778	0.011113584	g/mile
25	GAS	2280123.995	0.002175192	g/mile
25	DSL	20991.63778	0.009016989	g/mile
30	GAS	4699262.617	0.001696744	g/mile
30	DSL	43785.66159	0.007811038	g/mile
35	GAS	5510782.626	0.001394191	g/mile
35	DSL	50386.25865	0.00687878	g/mile
40	GAS	7191779.633	0.001208948	g/mile
40	DSL	64997.63869	0.0062046	g/mile

LDT1 Speed	Fuel	VMT	PM10_RUNEX	
5	GAS	7570.595364	0.014378395	g/mile
5	DSL	3.14982481	0.56140941	g/mile
10	GAS	17869.27832	0.009213169	g/mile
10	DSL	7.862858286	0.365894105	g/mile
15	GAS	137786.1571	0.006195452	g/mile
15	DSL	63.58082457	0.254194796	g/mile
20	GAS	182248.4062	0.004472298	g/mile
20	DSL	77.90853378	0.219905924	g/mile
25	GAS	213212.907	0.003215882	g/mile
25	DSL	88.69567251	0.158303315	g/mile
30	GAS	450907.1356	0.002527654	g/mile
30	DSL	179.1468477	0.141329778	g/mile
35	GAS	520786.7615	0.002123553	g/mile
35	DSL	204.1846939	0.131775164	g/mile
40	GAS	666242.8074	0.001848335	g/mile
40	DSL	257.5099162	0.124591941	g/mile

LDT2 Speed	Fuel	VMT	PM10_RUNEX	
5	GAS	25503.44341	0.010394248	g/mile
5	DSL	150.9614945	0.01994633	g/mile
10	GAS	60572.6097	0.006624215	g/mile
10	DSL	356.7768928	0.016450637	g/mile
15	GAS	467464.6384	0.004444863	g/mile
15	DSL	2859.180955	0.01283702	g/mile
20	GAS	621862.2781	0.003150988	g/mile
20	DSL	3655.95035	0.0108119	g/mile
25	GAS	721556.4993	0.002297671	g/mile
25	DSL	4448.017212	0.00812392	g/mile
30	GAS	1528553.842	0.001792752	g/mile
30	DSL	9511.031464	0.0068818	g/mile
35	GAS	1766794.713	0.001486238	g/mile
35	DSL	10665.84493	0.006504766	g/mile
40	GAS	2253624.335	0.00128688	g/mile
40	DSL	13274.33919	0.00609785	g/mile

LDA, LDT1, LDT2 Composite Speed	Fuel	VMT	PM10_RUNEX	
5	DSL	82897.15909	2.11E-04	g/mile
10	DSL	194953.1419	1.64E-04	g/mile
15	DSL	1477076.84	1.31E-04	g/mile
5	DSL	7573.745189	2.33E-04	g/mile
10	DSL	17877.14118	1.61E-04	g/mile
15	DSL	137849.7379	1.17E-04	g/mile
5	DSL	25654.40491	1.17E-04	g/mile
10	DSL	60929.38659	9.63E-05	g/mile
15	DSL	470323.8193	7.80E-05	g/mile
	Composite DSL EF =		**1.25E-04**	**g/mile**
20	DSL	1933289.564	0.00010006	g/mile
25	DSL	2301115.632	8.22563E-05	g/mile
30	DSL	4743048.279	7.21079E-05	g/mile
35	DSL	5561168.885	6.23243E-05	g/mile
40	DSL	7256777.272	5.55735E-05	g/mile
20	DSL	182326.3147	9.39664E-05	g/mile
25	DSL	213301.6027	6.58261E-05	g/mile
30	DSL	451086.2824	5.61285E-05	g/mile
35	DSL	520990.9462	5.16448E-05	g/mile
40	DSL	666500.3173	4.81375E-05	g/mile
20	DSL	625518.2285	6.3192E-05	g/mile
25	DSL	726004.5165	4.97729E-05	g/mile
30	DSL	1538064.874	4.25554E-05	g/mile
35	DSL	1777460.558	3.90326E-05	g/mile
40	DSL	2266898.674	3.57073E-05	g/mile
	Composite DSL EF =		**6.12E-05**	**g/mile**

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Central Valley Meats DPM Emissions Source Summary and Comparison

Source Category*	DPM (lbs/day)	Category Percent	DPM (lbs/yr)	Total Percent
Unrefrigerated trucks on-site travel	3.01E-03	59%	1.100	16.2%
Unrefrigerated trucks off-site travel	6.18E-04	12%	0.226	
Unrefrigerated trucks idling	1.50E-03	29%	0.546	
Unrefrigerated trucks subtotal	***5.13E-03***	***100%***	***1.872***	
Refrigerated trucks on-site travel	7.63E-04	4%	0.279	60.4%
Refrigerated trucks off-site travel	3.92E-04	2%	0.143	
Refrigerated trucks idling	9.48E-04	5%	0.346	
Refrigerated trucks TRUs**	1.70E-02	89%	6.189	
Refrigerated trucks subtotal	***1.91E-02***	***100%***	***6.956***	
Worker vehicle on-site travel	5.32E-05	29%	0.019	0.6%
Worker vehicle off-site travel	1.30E-05	7%	0.005	
Worker vehicle starting & idling	1.14E-04	63%	0.042	
Worker vehicle subtotal	***1.81E-04***	***100%***	***0.066***	
Tier 4 "Mules" on-site travel	7.20E-03	100%	2.628	22.8%
"Mules" subtotal	***7.20E-03***	***100%***	***2.628***	
Total DPM Emissions			**11.52**	**100%**

Notes:

*All CY 2022 HHDT, LDA, LDT1, LDT2 emission factors from CARB EMFAC2017 web database (https://arb.ca.gov/emfac/2017/). Aggregated values used (all years bell-curve).

**California Code of Regulations, Title 13, Division 3, Chapter 9, Article 8, Section 2477. Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate. Table 4.

307 days per year operations (6 days/week excluding 6 holidays)

Source Category	Total Percent	Idling as Percent of Onsite Travel
Unrefrigerated trucks travel & idling	16.2%	49.6%
Refrigerated trucks travel & idling	6.7%	124.1%
Refrigerated trucks TRUs	53.7%	—
Worker vehicle travel, starting & idling	0.6%	—
"Mules" travel, starting & idling	22.8%	—
Total DPM Emissions	**100%**	—

DPM Source Description	Source ID	Length (m)	One-Way Length (mi)	Trips/Day	Weighting by Trip	One-Way VMT	Weighting by VMT	VMT-Weighted Line Emissions (lbs/yr)	Trip-Weighted Point Emissions (lbs/yr)
Workers: 1/2 mile on-site	WORKER	804.7	**0.50**	**193**	—	96.50	—	6.12E-02	—
Truck Traffic & Workers: 1/4 mile off-site	OFFSITE	400.7	**0.25**	**49**	—	12.25	—	3.73E-01	—
Trucks with TRUs: Entrance to Freezer/Cooler	FREEZER	393.7	**0.24**	**19**	—	4.56	—	2.79E-01	3.46E-01
TRUs: Freezer/Cooler (parked)				**38**	—	—	—	—	6.19E+00
Truck Traffic: Entrance to Rendering Plant	RENDER	888.9	0.55	20	66.7%	11.00	61.1%	6.72E-01	3.64E-01
Truck Traffic: Entrance to Pet Food Facility	PET	662.5	0.41	1	3.3%	0.41	2.3%	2.51E-02	1.82E-02
Truck Traffic: Entrance to Hide Building	HIDE	575	0.36	1	3.3%	0.36	2.0%	2.20E-02	1.82E-02
Truck Traffic: Entrance to Processing	PROCESS	1,247.60	0.78	8	26.7%	6.24	34.6%	3.81E-01	1.46E-01
			0.60	**30**		**18.01**			
Mules: Processing to Rendering Plant	MULES1	429.2	0.27	35	62.5%	9.45	44.4%	1.17E+00	—
Mules: Processing to Pet Foods Facility	MULES2	611.9	0.38	1	1.8%	0.38	1.8%	4.69E-02	—
Mules: Processing to Hide Building	MULES3	718.1	0.45	1	1.8%	0.45	2.1%	5.55E-02	—
Mules: Processing to Freezer/Cooler	MULES4	926.6	0.58	19	33.9%	11.02	51.7%	1.36E+00	—
			0.38	**56**		**21.30**			
								CHECKSUM	**11.52**
								365	**days/yr**

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EMFAC 2017 Light Duty Mix (50/25/25) Year 2022			
Pollutant	On-site (g/mile)	Off-site (g/mile)	Highway (g/mile)
NOx_RUNEX	0.113315	0.078333	0.075599
PM2.5_RUNEX	0.004978	0.001749	0.001312
PM10_RUNEX	0.005409	0.001900	0.001425
CO2_RUNEX	499.170612	296.742615	294.552556
CH4_RUNEX	0.013336	0.004720	0.003493
N2O_RUNEX	0.009979	0.006948	0.006565
ROG_RUNEX	0.056234	0.019887	0.014670
TOG_RUNEX	0.081826	0.028968	0.021368
CO_RUNEX	1.578422	1.103036	0.792496
SOx_RUNEX	0.004939	0.002936	0.002914

	miles/day	miles/day	miles/day
	193	97	4,169
Pollutant	On-site (lbs/day)	Off-site (lbs/day)	Highway (lbs/day)
NOx_RUNEX	0.048	0.017	0.695
PM2.5_RUNEX	0.002	0.000	0.012
PM10_RUNEX	0.002	0.000	0.013
CO2_RUNEX	212	63	2,707
CH4_RUNEX	0.006	0.001	0.032
N2O_RUNEX	0.004	0.001	0.060
ROG_RUNEX	0.024	0.004	0.135
TOG_RUNEX	0.035	0.006	0.196
CO_RUNEX	0.672	0.235	7.284
SOx_RUNEX	0.002	0.001	0.027

	miles/yr	miles/yr	miles/yr
	70,445	35,223	1,521,612
Pollutant	On-site (lbs/yr)	Off-site (lbs/yr)	Highway (lbs/yr)
NOx_RUNEX	17.60	6.08	253.60
PM2.5_RUNEX	0.77	0.14	4.40
PM10_RUNEX	0.84	0.15	4.78
CO2_RUNEX	77,524	23,043	988,105
CH4_RUNEX	2.07	0.37	11.72
N2O_RUNEX	1.55	0.54	22.02
ROG_RUNEX	8.73	1.54	49.21
TOG_RUNEX	12.71	2.25	71.68
CO_RUNEX	245.14	85.65	2,658.50
SOx_RUNEX	0.77	0.23	9.78

	Light Duty Mix		
Pollutant	Total (lbs/day)	Total (lbs/yr)	Total* (tons/yr)
NOx_RUNEX	0.76	277.29	0.139
PM2.5_RUNEX	0.01	5.31	0.003
PM10_RUNEX	0.02	5.77	0.003
CO2_RUNEX	2,983	1,088,672	494
CH4_RUNEX	0.04	14.15	0.006
N2O_RUNEX	0.07	24.11	0.011
ROG_RUNEX	0.16	59.49	0.030
TOG_RUNEX	0.24	86.64	0.043
CO_RUNEX	8.19	2,989.30	1.495
SOx_RUNEX	0.03	10.77	0.005

* GHGs in MT/yr

EMFAC 2017 Diesel HHDT Year 2022			
Pollutant	On-site (g/mile)	Off-site (g/mile)	Highway (g/mile)
NOx_RUNEX	10.865599	4.383416	2.262224
PM2.5_RUNEX	0.036324	0.017885	0.035162
PM10_RUNEX	0.037967	0.018694	0.036752
CO2_RUNEX	2917.001356	1610.114397	1259.105608
CH4_RUNEX	0.017400	0.004094	0.001555
N2O_RUNEX	0.458512	0.253088	0.197914
ROG_RUNEX	0.374621	0.088147	0.033482
TOG_RUNEX	0.426477	0.100349	0.038117
CO_RUNEX	1.840947	0.464828	0.158828
SOx_RUNEX	0.027558	0.015212	0.011895

	miles/day	miles/day	miles/day
	45	25	18,788
Pollutant	On-site (lbs/day)	Off-site (lbs/day)	Highway (lbs/day)
NOx_RUNEX	1.080	0.237	93.703
PM2.5_RUNEX	0.004	0.001	1.456
PM10_RUNEX	0.004	0.001	1.522
CO2_RUNEX	290	87	52,153
CH4_RUNEX	0.002	0.000	0.064
N2O_RUNEX	0.046	0.014	8.198
ROG_RUNEX	0.037	0.005	1.387
TOG_RUNEX	0.042	0.005	1.579
CO_RUNEX	0.183	0.025	6.579
SOx_RUNEX	0.003	0.001	0.493

	miles/yr	miles/yr	miles/yr
	16,454	8,943	6,857,620
Pollutant	On-site (lbs/yr)	Off-site (lbs/yr)	Highway (lbs/yr)
NOx_RUNEX	394.15	86.42	34,201.53
PM2.5_RUNEX	1.32	0.35	531.60
PM10_RUNEX	1.38	0.37	555.63
CO2_RUNEX	105,816	31,743	19,035,842
CH4_RUNEX	0.63	0.08	23.51
N2O_RUNEX	16.63	4.99	2,992.17
ROG_RUNEX	13.59	1.74	506.20
TOG_RUNEX	15.47	1.98	576.27
CO_RUNEX	66.78	9.16	2,401.25
SOx_RUNEX	1.00	0.30	179.84

	Diesel HHDT		
Pollutant	Total (lbs/day)	Total (lbs/yr)	Total* (tons/yr)
NOx_RUNEX	95.02	34,682.10	17.341
PM2.5_RUNEX	1.46	533.27	0.267
PM10_RUNEX	1.53	557.38	0.279
CO2_RUNEX	52,530	19,173,401	8,697
CH4_RUNEX	0.07	24.22	0.011
N2O_RUNEX	8.26	3,013.79	1.367
ROG_RUNEX	1.43	521.53	0.261
TOG_RUNEX	1.63	593.72	0.297
CO_RUNEX	6.79	2,477.19	1.239
SOx_RUNEX	0.50	181.14	0.091

* GHGs in MT/yr

EMFAC 2017 NZE CNG/LNG HHDT Year 2022			
Pollutant	On-site (g/mile)	Off-site (g/mile)	Highway (g/mile)
NOx_RUNEX	1.460225	0.767059	0.595455
PM2.5_RUNEX	0.020557	0.015657	0.020415
PM10_RUNEX	0.021487	0.016365	0.021338
CO2_RUNEX	4830.039652	3190.141350	2674.404900
CH4_RUNEX	9.126813	2.340075	0.905424
N2O_RUNEX	0.098464	0.065033	0.054519
ROG_RUNEX	1.159843	0.270708	0.122747
TOG_RUNEX	10.487504	2.658563	1.049167
CO_RUNEX	2.448517	0.771424	0.218566
SOx_RUNEX	0.000000	0.000000	0.000000

	miles/day	miles/day	miles/day
	92	44	10,608
Pollutant	On-site (lbs/day)	Off-site (lbs/day)	Highway (lbs/day)
NOx_RUNEX	0.295	0.074	13.926
PM2.5_RUNEX	0.004	0.002	0.477
PM10_RUNEX	0.004	0.002	0.499
CO2_RUNEX	975	309	62,546
CH4_RUNEX	1.841	0.227	21.175
N2O_RUNEX	0.020	0.006	1.275
ROG_RUNEX	0.234	0.026	2.871
TOG_RUNEX	2.116	0.258	24.537
CO_RUNEX	0.494	0.075	5.112
SOx_RUNEX	0.000	0.000	0.000

	miles/yr	miles/yr	miles/yr
	33,405	16,060	3,871,920
Pollutant	On-site (lbs/yr)	Off-site (lbs/yr)	Highway (lbs/yr)
NOx_RUNEX	107.54	27.16	5,082.90
PM2.5_RUNEX	1.51	0.55	174.27
PM10_RUNEX	1.58	0.58	182.15
CO2_RUNEX	355,710	112,951	22,829,167
CH4_RUNEX	672.15	82.85	7,728.85
N2O_RUNEX	7.25	2.30	465.39
ROG_RUNEX	85.42	9.58	1,047.79
TOG_RUNEX	772.36	94.13	8,955.87
CO_RUNEX	180.32	27.31	1,865.72
SOx_RUNEX	0.00	0.00	0.00

	NZE HHDT		
Pollutant	Total (lbs/day)	Total (lbs/yr)	Total* (tons/yr)
NOx_RUNEX	14.29	5,217.60	2.609
PM2.5_RUNEX	0.48	176.33	0.088
PM10_RUNEX	0.50	184.31	0.092
CO2_RUNEX	63,830	23,297,828	10,568
CH4_RUNEX	23.24	8,483.85	3.848
N2O_RUNEX	1.30	474.94	0.215
ROG_RUNEX	3.13	1,142.79	0.571
TOG_RUNEX	26.91	9,822.35	4.911
CO_RUNEX	5.68	2,073.35	1.037
SOx_RUNEX	0.00	0.00	0.000

* GHGs in MT/yr

Onroad Mobile Source Notes:

Annual operation 365 days

Worker LD Mix 50% LDA, 25% LDT1, 25% LDT2 (CalEEMod)

Worker onsite 193 workers, 0.5 mile length, 2-ways daily

Worker offsite 193 workers, 0.25 mile length, 2-ways daily

Worker commute 10.8 mile length (CalEEMod, urban H-W, SJV), 2-ways daily

Diesel Trucks 49, 0.46 mile wtd. avg. onsite length, 2-ways daily

Diesel Trucks 49, 0.25 mile offsite length, 2-ways daily

Diesel Trucks 49, travel mileage per Applicant, all ways daily

NZE Trucks 88, 0.52 mile wtd. avg. onsite length, 2-ways daily

NZE Truck 88, 0.25 mile offsite length, 2-ways daily

NZE Trucks 88, travel mileage per Applicant, all ways daily

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Off-Road Mules - Tier 4 Diesel - Onsite Only			
Pollutant	Maxima (lbs/day)	Total (lbs/yr)	Total* (tons/yr)
NO_X	2.73E-01	99.5	0.050
$PM_{2.5}$	7.20E-03	2.63	1.31E-03
PM_{10}	7.20E-03	2.63	1.31E-03
CO_2 (MT)	4.66E+02	170,059	77.138
CH_4 (MT)	2.08E-02	7.6	0.003
N_2O (MT)	6.60E-03	2.4	0.001
ROG	1.26E-01	46.0	0.023
TOG	1.40E-01	51.0	0.026
CO	3.35E+00	1,224.3	0.612
SO_X	6.60E-03	2.4	0.001
AR2 CO_2e	–	–	**77.55**
AR4 CO_2e	–	–	**77.55**
AR5 CO_2e	–	–	**77.52**

Mule Notes:
146 BHP Tier 4 (vendor spec); diesel fuel
6 hrs/day @ 40% load factor (CalEEMod)
2 hrs/day @ 20% load factor (as starting & idling)
* GHGs in MT/yr

Off-Road Forklift - Propane - Onsite Only			
Pollutant	Maxima (lbs/day)	Total (lbs/yr)	Total* (tons/yr)
NO_X	1.23E+00	448.19	0.224
$PM_{2.5}$	1.11E-04	0.04	2.02E-05
PM_{10}	1.12E-04	0.04	2.04E-05
CO_2 (MT)	2.01E+02	73,469	33.325
CH_4 (MT)	9.57E-03	3.49	0.002
N_2O (MT)	1.88E-03	0.69	0.000
ROG	1.71E-01	62.45	0.031
TOG	–	–	–
CO	8.07E-01	294.73	0.147
SO_X	3.91E-04	0.14	0.000
AR2 CO_2e	–	–	**33.46**
AR4 CO_2e	–	–	**33.46**
AR5 CO_2e	–	–	**33.45**

Forklift Notes:
89 BHP (CalEEMod); propane fuel
8 hrs/day @ 20% load factor (CalEEMod)
Criteria EFs per AP-42 Table 3.2-2
* GHGs in MT/yr

Off-Road TRUs - Tier 4 Diesel - Onsite Only			
Pollutant	Maxima (lbs/day)	Total (lbs/yr)	Total* (tons/yr)
NO_X	2.08E+00	758.2	0.379
$PM_{2.5}$	1.68E-02	6.13	3.06E-03
PM_{10}	1.70E-02	6.19	3.09E-03
CO_2 (MT)	4.39E+02	160,210	72.671
CH_4 (MT)	1.78E-02	6.5	0.003
N_2O (MT)	3.56E-03	1.3	0.001
ROG	8.90E-01	324.9	0.162
TOG	9.78E-01	357.1	0.179
CO	3.48E+00	1,268.8	0.634
SO_X	4.24E-03	1.5	0.001
AR2 CO_2e	–	–	**72.92**
AR4 CO_2e	–	–	**72.92**
AR5 CO_2e	–	–	**72.91**

TRU Notes:
11 BHP Tier 4; diesel fuel
2 hrs/day @ 46% load factor (cool-down & load)
* GHGs in MT/yr

	NO_X (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)	CO (lbs/day)	VOC (lbs/day)		NO_X (tons/yr)	SO_X (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)	CO (tons/yr)	VOC (tons/yr)
Light Duty Mix													
On-site	0.048	0.002	0.002	0.002	0.672	0.024		8.80E-03	3.83E-04	4.20E-04	3.87E-04	1.23E-01	4.37E-03
Off-site	0.017	0.001	0.000	0.000	0.235	0.004		3.04E-03	1.14E-04	7.38E-05	6.79E-05	4.28E-02	7.72E-04
Diesel HHDT													
On-site	1.080	0.003	0.004	0.004	0.183	0.037		1.97E-01	5.00E-04	6.89E-04	6.59E-04	3.34E-02	6.79E-03
Off-site	0.237	0.001	0.001	0.001	0.025	0.005		4.32E-02	1.50E-04	1.84E-04	1.76E-04	4.58E-03	8.69E-04
NZE HHDT													
On-site	0.295	0.000	0.004	0.004	0.494	0.234		5.38E-02	0.00E+00	7.91E-04	7.57E-04	9.02E-02	4.27E-02
Off-site	0.074	0.000	0.002	0.002	0.075	0.026		1.36E-02	0.00E+00	2.90E-04	2.77E-04	1.37E-02	4.79E-03
Mules													
On-site	0.273	0.007	0.007	0.007	3.354	0.126		4.97E-02	1.20E-03	1.31E-03	1.31E-03	6.12E-01	2.30E-02
Forklift													
On-site	1.228	0.000	0.000	0.000	0.807	0.171		2.24E-01	7.14E-05	2.04E-05	2.02E-05	1.47E-01	3.12E-02
TRUs													
On-site	2.077	0.004	0.017	0.017	3.476	0.890		3.79E-01	7.74E-04	3.09E-03	3.06E-03	6.34E-01	1.62E-01
CHECKSUMS	**2.023**	**0.013**	**0.021**	**0.020**	**5.037**	**0.456**		**0.369**	**0.002**	**0.004**	**0.004**	**0.919**	**0.083**

Aggregated Mobile Sources - On-road & Off-road								
Pollutant	On-site (lbs/day)	Off-site (lbs/day)	Highway (lbs/day)	On-site (tons/yr)	Off-site (tons/yr)	Highway (tons/yr)	Total (tons/yr)	Threshold (tons/yr)
NO_X	5.000	0.328	108.323	0.913	0.06	19.77	20.74	10
$PM_{2.5}$	0.034	0.003	1.946	0.006	0.00	0.36	0.36	15
PM_{10}	0.035	0.003	2.034	0.006	0.00	0.37	0.38	15
CO_2 (MT)	2,583	460	117,406	428	76	19,438	19,942	–
CH_4 (MT)	1.897	0.228	21.271	0.31	0.04	3.52	3.87	–
N_2O (MT)	0.082	0.021	9.533	0.01	0.00	1.58	1.60	–
ROG	1.482	0.035	4.392	0.271	0.01	0.80	1.08	10
TOG	3.311	0.269	26.312	0.604	0.05	4.80	5.46	–
CO	8.986	0.335	18.974	1.640	0.06	3.46	5.16	100
SO_X	0.016	0.001	0.519	0.003	0.00	0.09	0.10	27
AR2 CO_2e	–	–	–	438	78	20,001	20,518	–
AR4 CO_2e	–	–	–	**440**	**78**	**19,996**	**20,514**	–
AR5 CO_2e	–	–	–	440	78	19,955	20,473	–

CHECK (tons/yr)
20.74
0.36
0.38
19,942
3.87
1.60
1.08
5.46
5.16
0.10
20,518
20,514
20,473

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Operational Mobile Source Summary - On-road & Off-road Composite - Daily						
Mobile Sources	NO_X (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)	CO (lbs/day)	VOC (lbs/day)
Vehicle Exhaust - Onsite	5.00	0.02	0.03	0.03	8.99	1.48
Vehicle Exhaust - Near Offsite	0.33	0.001	0.003	0.003	0.33	0.04
Vehicle Exhaust - Highway	108.32	0.52	2.03	1.95	18.97	4.39
Road Dust - Onsite	–	–	1.34	0.33	–	–
Road Dust - Near Offsite	–	–	0.67	0.17	–	–
Road Dust - Highway	–	–	30.62	7.52	–	–
Natural Gas & Maintenance (onsite)	1.20	0.01	0.09	0.09	1.05	10.84
Total (Onsite & Near Offsite)	**6.52**	**0.02**	**2.14**	**0.62**	**10.37**	**12.36**

Operational Mobile Source Summary - On-road & Off-road Composite - Annual										
Mobile Sources	NO_X (tons/yr)	SO_X (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)	CO (tons/yr)	VOC (tons/yr)	CO_2 (MT/yr)	CH_4 (MT/yr)	N_2O (MT/yr)	CO_2e (MT/yr)
Vehicle Exhaust - Onsite	0.91	0.003	0.01	0.01	1.64	0.27	428	0.31	0.01	440
Vehicle Exhaust - Near Offsite	0.06	0.0003	0.001	0.001	0.06	0.01	76	0.04	0.00	78
Vehicle Exhaust - Highway	19.77	0.09	0.37	0.36	3.46	0.80	19,438	3.52	1.58	19,996
Road Dust - Onsite	–	–	0.24	0.06	–	–	–	–	–	–
Road Dust - Near Offsite	–	–	0.12	0.03	–	–	–	–	–	–
Road Dust - Highway	–	–	5.44	1.33	–	–	–	–	–	–
Natural Gas & Maintenance (onsite)	0.22	0.001	0.02	0.02	0.19	1.98	238	0.00	0.00	239
Electricity, Water & Waste (offsite)	–	–	–	–	–	–	2,063	5.01	0.05	2,203
Total	**20.96**	**0.10**	**6.19**	**1.80**	**5.36**	**3.06**	**22,242**	**8.89**	**1.65**	**22,956**

Criteria Source Description	Source ID	VMT (1-way)	VMT (percent)	NO_X (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)	CO (lbs/day)	VOC (lbs/day)		NO_X (tons/yr)	SO_X (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)	CO (tons/yr)	VOC (tons/yr)
Workers: 1/2 mile on-site	WORKER	96.50	100.0%	0.048	0.002	0.002	0.002	0.672	0.024		8.80E-03	3.83E-04	4.20E-04	3.87E-04	1.23E-01	4.37E-03
Truck Traffic & Workers: 1/4 mile off-site	OFFSITE	12.25	100.0%	0.328	0.001	0.003	0.003	0.335	0.035		5.98E-02	2.64E-04	5.48E-04	5.21E-04	6.11E-02	6.43E-03
Trucks with TRUs: Entrance to Freezer/Cooler	FREEZER	4.56	20.2%	0.278	0.001	0.002	0.002	0.137	0.055		5.07E-02	1.01E-04	2.99E-04	2.86E-04	2.50E-02	1.00E-02
Truck Traffic: Entrance to Rendering Plant	RENDER	11.00	48.7%	0.670	0.001	0.004	0.004	0.330	0.132		1.22E-01	2.44E-04	7.21E-04	6.90E-04	6.02E-02	2.41E-02
Truck Traffic: Entrance to Pet Food Facility	PET	0.41	1.8%	0.025	0.000	0.000	0.000	0.012	0.005		4.56E-03	9.08E-06	2.69E-05	2.57E-05	2.24E-03	8.99E-04
Truck Traffic: Entrance to Hide Building	HIDE	0.36	1.6%	0.022	0.000	0.000	0.000	0.011	0.004		4.00E-03	7.97E-06	2.36E-05	2.26E-05	1.97E-03	7.90E-04
Truck Traffic: Entrance to Processing	PROCESS	6.24	27.6%	0.380	0.001	0.002	0.002	0.187	0.075		6.94E-02	1.38E-04	4.09E-04	3.91E-04	3.42E-02	1.37E-02
Mules: Processing to Rendering Plant	MULES1	9.45	44.4%	0.121	0.003	0.003	0.003	1.488	0.056		2.21E-02	5.34E-04	5.83E-04	5.83E-04	2.72E-01	1.02E-02
Mules: Processing to Pet Foods Facility	MULES2	0.38	1.8%	0.005	0.000	0.000	0.000	0.060	0.002		8.88E-04	2.15E-05	2.34E-05	2.34E-05	1.09E-02	4.10E-04
Mules: Processing to Hide Building	MULES3	0.45	2.1%	0.006	0.000	0.000	0.000	0.071	0.003		1.05E-03	2.54E-05	2.78E-05	2.78E-05	1.29E-02	4.86E-04
Mules: Processing to Freezer/Cooler	MULES4	11.02	51.7%	0.141	0.003	0.004	0.004	1.735	0.065		2.57E-02	6.23E-04	6.80E-04	6.80E-04	3.17E-01	1.19E-02
CHECKSUMS				2.023	0.013	0.021	0.020	5.037	0.456		0.369	0.002	0.004	0.004	0.919	0.083

Criteria Source Description	Trips/Day	Weighting by Trip	Idling as Percent of Onsite Travel	Idle NO_X (lbs/day)	Idle SO_X (lbs/day)	Idle PM_{10} (lbs/day)	Idle $PM_{2.5}$ (lbs/day)	Idle CO (lbs/day)	Idle VOC (lbs/day)
Workers: 1/2 mile on-site									
Truck Traffic & Workers: 1/4 mile off-site									
Trucks with TRUs: Entrance to Freezer/Cooler	38	55.9%	124.1%	9.53E-01	1.90E-03	5.62E-03	5.38E-03	4.70E-01	1.88E-01
Truck Traffic: Entrance to Rendering Plant	20	29.4%	49.6%	2.01E-01	4.00E-04	1.18E-03	1.13E-03	9.88E-02	3.96E-02
Truck Traffic: Entrance to Pet Food Facility	1	1.5%	49.6%	1.00E-02	2.00E-05	5.92E-05	5.66E-05	4.94E-03	1.98E-03
Truck Traffic: Entrance to Hide Building	1	1.5%	49.6%	1.00E-02	2.00E-05	5.92E-05	5.66E-05	4.94E-03	1.98E-03
Truck Traffic: Entrance to Processing	8	11.8%	49.6%	8.02E-02	1.60E-04	4.73E-04	4.53E-04	3.95E-02	1.58E-02
Mules: Processing to Rendering Plant	–	–	–	–	–	–	–	–	–
Mules: Processing to Pet Foods Facility	–	–	–	–	–	–	–	–	–
Mules: Processing to Hide Building	–	–	–	–	–	–	–	–	–
Mules: Processing to Freezer/Cooler	–	–	–	–	–	–	–	–	–

On-Road Vehicles Emissions Contributions by Type				
Pollutant	**Percent LD Mix**	**Percent Diesel HHDT**	**Percent NZE HHDT**	**Percent Total**
NO_X	0.7%	86.3%	13.0%	100.0%
$PM_{2.5}$	0.7%	74.6%	24.7%	100.0%
PM_{10}	0.8%	74.6%	24.7%	100.0%
CO_2 (MT)	2.5%	44.0%	53.5%	100.0%
CH_4 (MT)	0.2%	0.3%	99.5%	100.0%
N_2O (MT)	0.7%	85.8%	13.5%	100.0%
ROG	3.5%	30.3%	66.3%	100.0%
TOG	0.8%	5.7%	93.5%	100.0%
CO	39.6%	32.9%	27.5%	100.0%
SO_X	5.6%	94.4%	0.0%	100.0%

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Construction Mobile & Area Sources Summary - On-road & Off-road Composite - Daily Mitigated						
Mobile & Area Sources	**NO_X (lbs/day)**	**SO_X (lbs/day)**	**PM_{10} (lbs/day)**	**$PM_{2.5}$ (lbs/day)**	**CO (lbs/day)**	**VOC (lbs/day)**
Stage 1 Construction	23.2	0.1	7.5	4.0	33.6	53.6
Stage 2 Construction	11.5	0.0	2.3	1.2	13.4	37.3
Stage 3 Construction	13.5	0.0	7.2	4.0	21.2	93.6
Construction Maxima	**23.2**	**0.1**	**7.5**	**4.0**	**33.6**	**93.6**
SJVAPCD CEQA Threshold	**100**	**100**	**100**	**100**	**100**	**100**
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Construction Mobile & Area Sources Summary - On-road & Off-road Composite - Annual Mitigated									
Mobile & Area Sources	**NO_X (tons/yr)**	**SO_X (tons/yr)**	**PM_{10} (tons/yr)**	**$PM_{2.5}$ (tons/yr)**	**CO (tons/yr)**	**VOC (tons/yr)**	**CO_2 (MT/yr)**	**CH_4 (MT/yr)**	**N_2O (MT/yr)**	**CO_2e (MT/yr)**
Stage 1 Construction	2.22	0.01	0.20	0.10	2.53	0.78	619.85	0.08	0.00	621.96
Stage 2 Construction	1.19	0.00	0.07	0.05	1.42	0.53	232.28	0.04	0.00	233.17
Stage 3 Construction	1.58	0.01	0.20	0.10	2.48	2.12	536.57	0.09	0.00	538.72
Construction Maxima	**2.22**	**0.01**	**0.20**	**0.10**	**2.53**	**2.12**	**619.85**	**0.09**	**0.00**	**621.96**
SJVAPCD CEQA Threshold	**10**	**27**	**15**	**15**	**100**	**10**	—	—	—	**6,000**
Above Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	—	—	—	**No**

DPM Emissions – Entire Construction Period					
Sources	**Stage 1 Construction (lbs)**	**Stage 2 Construction (lbs)**	**Stage 3 Construction (lbs)**	**Total Construction Emissions (lbs)**	**Average Annual Construction Emissions (lbs/yr)**
Construction Equipment	214.82	96.16	103.82	414.80	59.26
Onsite Trucks	1.55	0.03	0.18	1.75	0.25
Offsite Trucks	0.52	0.01	0.06	0.58	0.08

Estimated Onroad Fugitive Dust Emissions - AP-42 Chapters 13.2.1 & 13.2.2

All Roads Travelled	Vehicle Category	Weight Class	Activity		Usage	
			Daily	Annual	Paved	Unpaved
		Tons	VMT	VMT	%	%
Onsite						
Passenger Cars/Smaller SUVs	LDA	2	97	35,223	100%	0%
Standard-Duty Pickup Trucks/Midsize SUVs	LDT1	3	48	17,611	100%	0%
Heavy-Duty Pickup Trucks/Larger SUVs	LDT2	4	48	17,611	100%	0%
Work/Trade Trucks	MDT	5			100%	0%
Light Heavy-Duty Trucks 1	LHDT1	8			100%	0%
Light Heavy-Duty Trucks 2	LHDT2	10			100%	0%
Medium Heavy-Duty Trucks	MHDT	15			100%	0%
Heavy Heavy-Duty Trucks	HHDT	20	137	49,859	100%	0%
Offsite						
Passenger Cars/Smaller SUVs	LDA	2	48	17,611	100%	0%
Standard-Duty Pickup Trucks/Midsize SUVs	LDT1	3	24	8,806	100%	0%
Heavy-Duty Pickup Trucks/Larger SUVs	LDT2	4	24	8,806	100%	0%
Work/Trade Trucks	MDT	5			100%	0%
Light Heavy-Duty Trucks 1	LHDT1	8			100%	0%
Light Heavy-Duty Trucks 2	LHDT2	10			100%	0%
Medium Heavy-Duty Trucks	MHDT	15			100%	0%
Heavy Heavy-Duty Trucks	HHDT	20	69	25,003	100%	0%
Highway						
Passenger Cars/Smaller SUVs	LDA	2	2,084	760,806	100%	0%
Standard-Duty Pickup Trucks/Midsize SUVs	LDT1	3	1,042	380,403	100%	0%
Heavy-Duty Pickup Trucks/Larger SUVs	LDT2	4	1,042	380,403	100%	0%
Work/Trade Trucks	MDT	5			100%	0%
Light Heavy-Duty Trucks 1	LHDT1	8			100%	0%
Light Heavy-Duty Trucks 2	LHDT2	10			100%	0%
Medium Heavy-Duty Trucks	MHDT	15			100%	0%
Heavy Heavy-Duty Trucks	HHDT	20	29,396	10,729,540	100%	0%

Paved Road Dust	Vehicle Category	Activity		Required Variables						Uncontrolled		Controlled Emissions				
		Daily	Annual	EET	Moisture (M)	Silt Load (sL)	Weight (W)	Speed (S)	Precip (P)	PM_{10}	$PM_{2.5}$	Control	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
		VMT	VMT	code	percent	g/m^2	tons	mph	days/yr	lbs/VMT	lbs/VMT	%	lbs/day	lbs/day	lbs/yr	lbs/yr
Onsite																
Passenger Cars/Smaller SUVs	LDA	97	35,223	G	—	0.320	2	—	40	0.00158	0.00039	50%	0.08	0.02	27.1	6.7
Standard-Duty Pickup Trucks/Midsize SUVs	LDT1	48	17,611	G	—	0.320	3	—	40	0.00239	0.00059	50%	0.06	0.01	20.5	5.0
Heavy-Duty Pickup Trucks/Larger SUVs	LDT2	48	17,611	G	—	0.320	4	—	40	0.00321	0.00079	50%	0.08	0.02	27.5	6.7
Work/Trade Trucks	MDT	-	-	G	—	0.320	5	—	40	0.00403	0.00099	50%	-	-	-	-
Light Heavy-Duty Trucks 1	LHDT1	-	-	G	—	0.320	8	—	40	0.00651	0.00160	50%	-	-	-	-
Light Heavy-Duty Trucks 2	LHDT2	-	-	G	—	0.320	10	—	40	0.00817	0.00200	50%	-	-	-	-
Medium Heavy-Duty Trucks	MHDT	-	-	G	—	0.320	15	—	40	0.01235	0.00303	50%	-	-	-	-
Heavy Heavy-Duty Trucks	HHDT	137	49,859	G	—	0.320	20	—	40	0.01656	0.00407	50%	1.13	0.28	401.6	98.6
Offsite																
Passenger Cars/Smaller SUVs	LDA	48	17,611	G	—	0.320	2	—	40	0.00158	0.00039	50%	0.04	0.01	13.5	3.3
Standard-Duty Pickup Trucks/Midsize SUVs	LDT1	24	8,806	G	—	0.320	3	—	40	0.00239	0.00059	50%	0.03	0.01	10.2	2.5
Heavy-Duty Pickup Trucks/Larger SUVs	LDT2	24	8,806	G	—	0.320	4	—	40	0.00321	0.00079	50%	0.04	0.01	13.7	3.4
Work/Trade Trucks	MDT	-	-	G	—	0.320	5	—	40	0.00403	0.00099	50%	-	-	-	-
Light Heavy-Duty Trucks 1	LHDT1	-	-	G	—	0.320	8	—	40	0.00651	0.00160	50%	-	-	-	-
Light Heavy-Duty Trucks 2	LHDT2	-	-	G	—	0.320	10	—	40	0.00817	0.00200	50%	-	-	-	-
Medium Heavy-Duty Trucks	MHDT	-	-	G	—	0.320	15	—	40	0.01235	0.00303	50%	-	-	-	-
Heavy Heavy-Duty Trucks	HHDT	69	25,003	G	—	0.320	20	—	40	0.01656	0.00407	50%	0.57	0.14	201.4	49.4

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Highway																
Passenger Cars/Smaller SUVs	LDA	2,084	760,806	G	—	0.015	2	—	40	0.00010	0.00002	0%	0.20	0.05	72.3	17.7
Standard-Duty Pickup Trucks/Midsize SUVs	LDT1	1,042	380,403	G	—	0.015	3	—	40	0.00015	0.00004	0%	0.15	0.04	54.6	13.4
Heavy-Duty Pickup Trucks/Larger SUVs	LDT2	1,042	380,403	G	—	0.015	4	—	40	0.00020	0.00005	0%	0.21	0.05	73.3	18.0
Work/Trade Trucks	MDT	-	-	G	—	0.015	5	—	40	0.00025	0.00006	0%	-	-	-	-
Light Heavy-Duty Trucks 1	LHDT1	-	-	G	—	0.015	8	—	40	0.00040	0.00010	0%	-	-	-	-
Light Heavy-Duty Trucks 2	LHDT2	-	-	G	—	0.015	10	—	40	0.00050	0.00012	0%	-	-	-	-
Medium Heavy-Duty Trucks	MHDT	-	-	G	—	0.015	15	—	40	0.00076	0.00019	0%	-	-	-	-
Heavy Heavy-Duty Trucks	HHDT	29,396	10,729,540	G	—	0.015	20	—	40	0.00102	0.00025	0%	30.06	7.38	10,671.7	2,619.4

Fugitive Dust Source Description	Source ID	VMT one-way	VMT percent	PM_{10} lbs/day	$PM_{2.5}$ lbs/day	PM_{10} lbs/yr	$PM_{2.5}$ lbs/yr	PM_{10} tons/yr	$PM_{2.5}$ tons/yr
Workers: 1/2 mile on-site	WORKER	96.50	100.0%	0.21	0.05	75.05	18.42	0.038	0.009
Truck Traffic & Workers: 1/4 mile off-site	OFFSITE	12.25	100.0%	0.67	0.17	238.92	58.64	0.119	0.029
Trucks with TRUs: Entrance to Freezer/Cooler	FREEZER	4.56	20.2%	0.23	0.06	81.14	19.92	0.041	0.010
Truck Traffic: Entrance to Rendering Plant	RENDER	11.00	48.7%	0.55	0.14	195.74	48.04	0.098	0.024
Truck Traffic: Entrance to Pet Food Facility	PET	0.41	1.8%	0.02	0.01	7.30	1.79	0.004	0.001
Truck Traffic: Entrance to Hide Building	HIDE	0.36	1.6%	0.02	0.00	6.41	1.57	0.003	0.001
Truck Traffic: Entrance to Processing	PROCESS	6.24	27.6%	0.31	0.08	111.04	27.25	0.056	0.014
	CHECKSUM	—	—	**2.02**	**0.49**	**716**	**176**	**0.36**	**0.09**

Paved Totals	PM_{10} lbs/day	$PM_{2.5}$ lbs/day	PM_{10} lbs/yr	$PM_{2.5}$ lbs/yr	PM_{10} tons/yr	$PM_{2.5}$ tons/yr
Onsite	**1.34**	**0.33**	**477**	**117**	**0.24**	**0.06**
Offsite	**0.67**	**0.17**	**239**	**59**	**0.12**	**0.03**
Highway	**30.62**	**7.52**	**10,872**	**2,669**	**5.44**	**1.33**
CHECKSUM	**2.02**	**0.49**	**716**	**176**	**0.36**	**0.09**

EET Code G

Paved Road Dust (New AP-42 Section 13.2.1):

$E = 0.0022 * (sL)^{0.91} * (W)^{1.02} * P_C$ for PM_{10}

$E = 0.00054 * (sL)^{0.91} * (W)^{1.02} * P_C$ for $PM_{2.5}$

E = lb/VMT fugitive

sL = Silt Loading from EPA Table 13.2.1-2 or CARB Table 7.9-3

W = Average weight of vehicles in tons

$P_C = (1-P/4N)$

P = Number of wet days over 0.01 in precipitation for averaging period (from AP-42 Figure 13.2.1-2)

N = days of period = 365 days (4N = 1460)

Note: precipitation correction not used (P_C = 1) for worst case day calculations

AP-42 Figure 13.2.1-2 (California Climates)	
Values for Precipitation (P)	**days/yr**
Low Deserts	20
High Deserts & Inland SoCal	30
South/Central Coast/Valley & Mountains	40
Mid/Northern Central Valley	50
Bay & Delta Areas	60
Wine Country & Sierras	90
North Coast	120

AP-42 Table 13.2.1-2 (US Paved Roads)	
Values for Silt Loading (sL)	**g/m^2**
< 500 average daily traffic (ADT) count	0.6
500 - 5,000 ADT	0.2
5,000 - 10,000 ADT	0.06
> 10,000 ADT (surface streets)	0.03
> 10,000 ADT (limited access)	0.015
Average Rural	0.4
Average Mid-Range	0.13
Average Urban	0.023
Average for All Roads	0.18

CARB Methodology 7.9 Table 3 (California Paved Roads)	
Values for Silt Loading (sL)	**g/m^2**
Freeway	0.015
Major Collector	0.032
Local Road (paved)	0.32
Local Rural Road (from unpaved road) SJVAPCD	1.6
Major Collector - Los Angeles & Orange Co.	0.013
Major Collector - Riverside & San Bernardino Co.	0.08
Local Road - Los Angeles & Orange Co.	0.135
Local Road - Riverside & San Bernardino Co.	0.84

Diesel Mule Emissions Calculations (line-volume source)

Operating Parameters	References/Remarks	Value	Units	
Annual Throughput	PTE	27740	hrs/yr	
Daily Throughput	PTE	76	hrs/day	*38 trips/day @ 2 hrs/trip*
Hourly Throughput	PTE	1	hrs/hr	
	maintenance operation	1	hrs/hr	
Monthly Schedule	PTE	30	days/mo	

Constants	References/Remarks	Value	Units
Diesel Fuel HHV	40 CFR 98 Table C-1	138000	BTU/gal
Heat Rate	AP-42 Table 3.3-1	7000	BTU/BHP-hr
Standard Molar Volume	EPA Method 19 (68°F, 20°C)	385.3	dscf/lb-mole
Dry Fd Factor	EPA Method 19 (68°F, 20°C)	9190	dscf/mmBTU
Wet Fw Factor	EPA Method 19 (68°F, 20°C)	10320	wscf/mmBTU
Stoichiometric Moisture Ratio	EPA Method 19 (68°F, 20°C)	12.3	percent

Release Parameters	References/Remarks	Value	Units	
Generator Rating (kW)	"Real Power"	3.77	kW	*11 BHP, 46% load factor*
Reactive Power Factor	Range is 0.67-1.00	1.00	PF	
Generator Rating (kVA)	"Apparent Power"	3.77	kVA	
Engine Rating	Calculated from above	5.06	BHP	
Hourly Heat Input	Calculated for heat rate	0.035	mmBTU/hr	
Stack Exit Temperature	Typical	800	°F	
Stack Exit Temperature	Calculated for modeling	700	°K	
Stack Gas Oxygen Content	Standard	15.00	percent O_2	
Stack Gas Moisture Content	Stoichiometry	3.47	percent H_2O	
Stack Flowrate, dry standard	Calculated for percent O_2	19	dscf/min	
Stack Flowrate, wet standard	Calculated for percent H_2O	20	wscf/min	
Stack Flowrate, actual	Calculated for stack temp	48	wacf/min	
Stack Flowrate, actual	Calculated for modeling	0.02	wacm/sec	
Stack Height	Typical	8.00	feet	
Stack Height	Calculated for modeling	2.00	meters	
Stack Diameter	Typical	2.00	inches	
Stack Diameter	Calculated for modeling	0.05	meters	
Stack Velocity	Calculated for modeling	11.18	meters/sec	
Stack Velocity	Informational	2200	feet/min	

Criteria Pollutants, TACs, GHGs	CAS No.	Emission Factor	Average Hourly	Maximum Hourly	Maximum Daily	30-Day Average	Annual Total		Annual Average	Hourly Maximum
		lb/hr	lb/hr	lb/hr	lb/day	lb/day	lb/yr	tons/yr	g/sec	g/sec
CO (1-hr std)	630080.1	0.04574	0.145	0.046	3.48	3.48	1268.8	0.634	1.82E-02	5.76E-03
CO (8-hr std)	630080	0.04574	0.145	0.046	3.48	3.48	1268.8	0.634	1.82E-02	5.76E-03
NO_x (1-hr std)	10102440.1	0.02733	0.087	0.027	2.08	2.08	758.2	0.379	1.09E-02	3.44E-03
NO_x (annual std)	10102440	0.02733	0.087	0.027	2.08	2.08	758.2	0.379	1.09E-02	3.44E-03
PM_{10}	85101	0.00022	0.001	0.000	0.02	0.02	6.2	0.003	8.90E-05	2.81E-05
$PM_{2.5}$	88101	0.00022	0.001	0.000	0.02	0.02	6.1	0.003	8.81E-05	2.78E-05
VOC	43104	0.01171	0.037	0.012	0.89	0.89	324.9	0.162	4.67E-03	1.48E-03
SO_x	7446095	0.00006	0.000	0.000	0.00	0.00	1.5	0.001	2.23E-05	7.03E-06
Diesel Particulate Matter (DPM)	9901	0.00022	0.001	0.000	0.0170	0.02	6.19	0.003	8.90E-05	2.81E-05
Diesel Total Organic Gas (DTOG)	9902	0.01287	0.041	0.013	0.98	0.98	357.1	0.179	5.14E-03	1.62E-03
CO_2	124389	5.77540	18.29	6	439	438.93	160,210	72.7	—	—
CH_4	74828	0.00023	0.001	0.000	0.02	0.02	6.50	0.003	—	—
N_2O	10024972	0.00005	0.000	0.000	0.00	0.00	1.30	0.001	—	—
CO_2e	124389	5.79522	18.35	6	440	440.44	160,759	72.9	—	—

Sources: 40 CFR 1039.101, 17 CCR 93115

Notes:

Assumes DPM = PM10; DTOG = VOC/0.91 (AP-42 Ch. 3.4)

Annual GHGs in units of MT/yr

Select Correct Row of Tiered Factors from Nonroad Tiers (CO, NO_X, PM, NMHC)

Pollutant	g/BHP-hr for BHP Rating	BHP	lb/hr
CO	4.100	5.06	0.04574
NO_X	2.450	5.06	0.02733
PM_{10}	0.020	5.06	0.00022
$PM_{2.5}$ (99% of PM_{10})	0.0198	5.06	0.00022
VOC (NMHC)	1.050	5.06	0.01171
SO_X (15 ppmw ULSD)	0.005	5.06	0.00006
DPM	0.020	5.06	0.00022
DTOG	1.154	5.06	0.01287
CO_2 (40 CFR 98)	517.72	5.06	5.77540
CH_4 (40 CFR 98)	0.021	5.06	0.00023
N_2O (40 CFR 98)	0.0042	5.06	0.00005
CO_2e (40 CFR 98; IPCC AR4)	519.50	5.06	5.79522

Ordered Format - Hourly

ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr
0.01	0.03	0.05	0.00	0.00	0.00	6

Ordered Format - Daily

ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day
0.89	2.08	3.48	0.00	0.02	0.02	440

Ordered Format - Annual

ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	MT/yr
0.16	0.38	0.63	0.001	0.003	0.003	72.9

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Diesel Mule Emissions Calculations (line-volume source)

Operating Parameters	References/Remarks	Value	Units	
Annual Throughput	PTE	2190	hrs/yr	*6 hrs/day @ 4 mph avg*
Daily Throughput	PTE	6	hrs/day	
Hourly Throughput	PTE	1	hrs/hr	
	maintenance operation	1	hrs/hr	
Monthly Schedule	PTE	30	days/mo	

Constants	References/Remarks	Value	Units
Diesel Fuel HHV	40 CFR 98 Table C-1	138000	BTU/gal
Heat Rate	AP-42 Table 3.3-1	7000	BTU/BHP-hr
Standard Molar Volume	EPA Method 19 (68°F, 20°C)	385.3	dscf/lb-mole
Dry Fd Factor	EPA Method 19 (68°F, 20°C)	9190	dscf/mmBTU
Wet Fw Factor	EPA Method 19 (68°F, 20°C)	10320	wscf/mmBTU
Stoichiometric Moisture Ratio	EPA Method 19 (68°F, 20°C)	12.3	percent

Release Parameters	References/Remarks	Value	Units	
Generator Rating (kW)	"Real Power"	43.5	kW	*146 BHP, Tier 4, 0.4 load factor (CalEEMod "Other Material Handling Equipment")*
Reactive Power Factor	Range is 0.67-1.00	1.00	PF	
Generator Rating (kVA)	"Apparent Power"	43.5	kVA	
Engine Rating	Calculated from above	58.3	BHP	
Hourly Heat Input	Calculated for heat rate	0.408	mmBTU/hr	
Stack Exit Temperature	Typical	800	°F	
Stack Exit Temperature	Calculated for modeling	700	°K	
Stack Gas Oxygen Content	Standard	15.00	percent O_2	
Stack Gas Moisture Content	Stoichiometry	3.47	percent H_2O	
Stack Flowrate, dry standard	Calculated for percent O_2	221	dscf/min	
Stack Flowrate, wet standard	Calculated for percent H_2O	229	wscf/min	
Stack Flowrate, actual	Calculated for stack temp	546	wacf/min	
Stack Flowrate, actual	Calculated for modeling	0.26	wacm/sec	
Stack Height	Typical	8.00	feet	
Stack Height	Calculated for modeling	2.44	meters	
Stack Diameter	Typical	3.00	inches	
Stack Diameter	Calculated for modeling	0.08	meters	
Stack Velocity	Calculated for modeling	56.50	meters/sec	
Stack Velocity	Informational	11123	feet/min	

Criteria Pollutants, TACs, GHGs	CAS No.	Emission Factor	Average Hourly	Maximum Hourly	Maximum Daily	30-Day Average	Annual Total		Annual Average	Hourly Maximum
		lb/hr	lb/hr	lb/hr	lb/day	lb/day	lb/yr	tons/yr	g/sec	g/sec
CO (1-hr std)	630080.1	0.479	0.120	0.479	2.87	2.87	1049.0	0.525	1.51E-02	6.04E-02
CO (8-hr std)	630080	0.479	0.120	0.479	2.87	2.87	1049.0	0.525	1.51E-02	6.04E-02
NO_x (1-hr std)	10102440.1	0.039	0.010	0.039	0.23	0.23	85.4	0.043	1.23E-03	4.91E-03
NO_x (annual std)	10102440	0.039	0.010	0.039	0.23	0.23	85.4	0.043	1.23E-03	4.91E-03
PM_{10}	85101	0.001	0.000	0.001	0.01	0.01	2.2	0.001	3.15E-05	1.26E-04
$PM_{2.5}$	88101	0.001	0.000	0.001	0.01	0.01	2.2	0.001	3.15E-05	1.26E-04
VOC	43104	0.018	0.005	0.018	0.11	0.11	39.4	0.020	5.67E-04	2.27E-03
SO_x	7446095	0.001	0.000	0.001	0.01	0.01	2.2	0.001	3.15E-05	1.26E-04
Diesel Particulate Matter (DPM)	9901	0.001	0.000	0.001	0.0060	0.01	2.190	0.001	3.15E-05	1.26E-04
Diesel Total Organic Gas (DTOG)	9902	0.020	0.005	0.020	0.12	0.12	43.8	0.022	6.30E-04	2.52E-03
CO_2	124389	66.5	16.64	67	399	399.26	145,729	66.1	—	—
CH_4	74828	0.003	0.001	0.003	0.02	0.02	6.57	0.003	—	—
N_2O	10024972	0.001	0.000	0.001	0.01	0.01	2.19	0.001	—	—
CO_2e	124389	66.8	16.69	67	401	400.63	146,228	66.3	—	—

Sources: 40 CFR 1039.101, 17 CCR 93115

Notes:

Assumes DPM = PM10; DTOG = VOC/0.91 (AP-42 Ch. 3.4)

Annual GHGs in units of MT/yr

Select Correct Row of Tiered Factors from Nonroad Tiers (CO, NO_X, PM, NMHC)			
Pollutant	**g/BHP-hr for BHP Rating**	**BHP**	**lb/hr**
CO	3.730	58.3	0.479
NO_X	0.300	58.3	0.039
PM_{10}	0.010	58.3	0.001
$PM_{2.5}$ (99% of PM_{10})	0.0099	58.3	0.001
VOC (NMHC)	0.140	58.3	0.018
SO_X (15 ppmw ULSD)	0.005	58.3	0.001
DPM	0.010	58.3	0.001
DTOG	0.154	58.3	0.02
CO_2 (40 CFR 98)	517.72	58.3	67
CH_4 (40 CFR 98)	0.021	58.3	0.003
N_2O (40 CFR 98)	0.0042	58.3	0.001
CO_2e (40 CFR 98; IPCC AR4)	519.50	58.3	67

Ordered Format - Hourly						
ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
lbs/hr	**lbs/hr**	**lbs/hr**	**lbs/hr**	**lbs/hr**	**lbs/hr**	**lbs/hr**
0.02	0.04	0.48	0.00	0.00	0.00	67

Ordered Format - Daily						
ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
lbs/day	**lbs/day**	**lbs/day**	**lbs/day**	**lbs/day**	**lbs/day**	**lbs/day**
0.11	0.23	2.87	0.01	0.01	0.01	401

Ordered Format - Annual						
ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
tons/yr	**tons/yr**	**tons/yr**	**tons/yr**	**tons/yr**	**tons/yr**	**MT/yr**
0.02	0.04	0.53	0.001	0.001	0.001	66.3

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Diesel Mule Emissions Calculations (point source)

Operating Parameters	References/Remarks	Value	Units	
Annual Throughput	PTE	730	hrs/yr	*2 hrs/day @ start & idle*
Daily Throughput	PTE	2	hrs/day	
Hourly Throughput	PTE	1	hrs/hr	
	maintenance operation	1	hrs/hr	
Monthly Schedule	PTE	30	days/mo	

Constants	References/Remarks	Value	Units
Diesel Fuel HHV	40 CFR 98 Table C-1	138000	BTU/gal
Heat Rate	AP-42 Table 3.3-1	7000	BTU/BHP-hr
Standard Molar Volume	EPA Method 19 (68°F, 20°C)	385.3	dscf/lb-mole
Dry Fd Factor	EPA Method 19 (68°F, 20°C)	9190	dscf/mmBTU
Wet Fw Factor	EPA Method 19 (68°F, 20°C)	10320	wscf/mmBTU
Stoichiometric Moisture Ratio	EPA Method 19 (68°F, 20°C)	12.3	percent

Release Parameters	References/Remarks	Value	Units	
Generator Rating (kW)	"Real Power"	21.8	kW	*146 BHP, Tier 4, 0.2 load factor for starting & idling*
Reactive Power Factor	Range is 0.67-1.00	1.00	PF	
Generator Rating (kVA)	"Apparent Power"	21.8	kVA	
Engine Rating	Calculated from above	29.2	BHP	
Hourly Heat Input	Calculated for heat rate	0.204	mmBTU/hr	
Stack Exit Temperature	Typical	800	°F	
Stack Exit Temperature	Calculated for modeling	700	°K	
Stack Gas Oxygen Content	Standard	15.00	percent O_2	
Stack Gas Moisture Content	Stoichiometry	3.47	percent H_2O	
Stack Flowrate, dry standard	Calculated for percent O_2	111	dscf/min	
Stack Flowrate, wet standard	Calculated for percent H_2O	115	wscf/min	
Stack Flowrate, actual	Calculated for stack temp	274	wacf/min	
Stack Flowrate, actual	Calculated for modeling	0.13	wacm/sec	
Stack Height	Typical	8.00	feet	
Stack Height	Calculated for modeling	2.44	meters	
Stack Diameter	Typical	3.00	inches	
Stack Diameter	Calculated for modeling	0.08	meters	
Stack Velocity	Calculated for modeling	28.36	meters/sec	
Stack Velocity	Informational	5582	feet/min	

Criteria Pollutants, TACs, GHGs	CAS No.	Emission Factor	Average Hourly	Maximum Hourly	Maximum Daily	30-Day Average	Annual Total		Annual Average	Hourly Maximum
		lb/hr	lb/hr	lb/hr	lb/day	lb/day	lb/yr	tons/yr	g/sec	g/sec
CO (1-hr std)	630080.1	0.240	0.020	0.240	0.48	0.48	175.3	0.088	2.52E-03	3.03E-02
CO (8-hr std)	630080	0.240	0.020	0.240	0.48	0.48	175.3	0.088	2.52E-03	3.03E-02
NO_x (1-hr std)	10102440.1	0.019	0.002	0.019	0.04	0.04	14.1	0.007	2.03E-04	2.43E-03
NO_x (annual std)	10102440	0.019	0.002	0.019	0.04	0.04	14.1	0.007	2.03E-04	2.43E-03
PM_{10}	85101	0.001	0.000	0.001	0.00	0.00	0.4	0.000	6.30E-06	7.56E-05
$PM_{2.5}$	88101	0.001	0.000	0.001	0.00	0.00	0.4	0.000	6.30E-06	7.56E-05
VOC	43104	0.009	0.001	0.009	0.02	0.02	6.6	0.003	9.45E-05	1.13E-03
SO_x	7446095	0.000	0.000	0.000	0.00	0.00	0.2	0.000	3.15E-06	3.78E-05
Diesel Particulate Matter (DPM)	9901	0.001	0.000	0.001	0.0012	0.00	0.438	0.000	6.30E-06	7.56E-05
Diesel Total Organic Gas (DTOG)	9902	0.010	0.001	0.010	0.02	0.02	7.2	0.004	1.04E-04	1.25E-03
CO_2	124389	33.3	2.78	33	67	66.66	24,330	11.0	—	—
CH_4	74828	0.001	0.000	0.001	0.00	0.00	1.02	0.000	—	—
N_2O	10024972	0.000	0.000	0.000	0.00	0.00	0.22	0.000	—	—
CO_2e	124389	33.4	2.79	33	67	66.89	24,413	11.1	—	—

Sources: 40 CFR 1039.101, 17 CCR 93115

Notes:

Assumes DPM = PM10; DTOG = VOC/0.91 (AP-42 Ch. 3.4)

Annual GHGs in units of MT/yr

Select Correct Row of Tiered Factors from Nonroad Tiers (CO, NO_X, PM, NMHC)			
Pollutant	**g/BHP-hr for BHP Rating**	**BHP**	**lb/hr**
CO	3.730	29.2	0.2401
NO_X	0.300	29.2	0.0193
PM_{10}	0.010	29.2	0.0006
$PM_{2.5}$ (99% of PM_{10})	0.0099	29.2	0.0006
VOC (NMHC)	0.140	29.2	0.009
SO_X (15 ppmw ULSD)	0.005	29.2	0.0003
DPM	0.010	29.2	0.0006
DTOG	0.154	29.2	0.0099
CO_2 (40 CFR 98)	517.72	29.2	33.3284
CH_4 (40 CFR 98)	0.021	29.2	0.0014
N_2O (40 CFR 98)	0.0042	29.2	0.0003
CO_2e (40 CFR 98; IPCC AR4)	519.50	29.2	33.4428

Ordered Format - Hourly						
ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr	lbs/hr
0.01	0.02	0.24	0.00	0.00	0.00	33

Ordered Format - Daily						
ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day
0.02	0.04	0.48	0.00	0.00	0.00	67

Ordered Format - Annual						
ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO_2e**
tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	tons/yr	MT/yr
0.00	0.01	0.09	0.000	0.000	0.000	11.1

4-Stroke Spark Ignited IC Engine Emissions Calculations (point source)

Source Characteristics	
Process Equipment Description	Propane Forklift (CalEEMod 89 BHP, 0.2 load factor)
Notes: Requires BACT g/BHP-hr	

Operating Parameters	—	References/Remarks	Value	Units
Annual Throughput	—	PTE	2920	hrs/yr
Daily Throughput	—	PTE	8	hrs/day
Hourly Throughput	—	PTE	1	hrs/hr
Monthly Schedule	—	PTE	30	days/mo

Emissions Parameters	—	References/Remarks	Value	Units	
Fuel Gas Flowrate	—	Fuel gas usage	1.21	cf/min	
Power output	—	Client specified	13.27	kw	*89 BHP, 20% load factor (CalEEMod)*
Hourly Heat Input (HHV)	—	Calculated for estimating	0.18	mmBTU/hr	
Daily Heat Input (HHV)	—	Calculated for estimating	1.45	mmBTU/day	
Annual Heat Input (HHV)	—	Calculated for estimating	529	mmBTU/yr	
Heat Rate (HHV)	—	Calculated for estimating	13,652	BTU/kw-hr	
Heat Rate (HHV)	—	Calculated for estimating	10,180	BTU/BHP-hr	
Engine Efficiency (HHV)	—	Calculated for estimating	25.00%	percent	
Hourly Heat Input (LHV)	—	Calculated for estimating	0.16	mmBTU/hr	
Heat Rate (LHV)	—	Calculated for estimating	12,320	BTU/kw-hr	
Rule 1110.2 ECF	—	Efficiency Correction Factor	0.7508	fract. percent	

Constants	—	References/Remarks	Value	Units
Fuel Gas HHV	—	Fuel gas composition	2500	BTU/cf
Fuel Gas LHV (est.)		Fuel gas composition	2256	BTU/cf
Standard Molar Volume	—	EPA Method 19 (68°F, 20°C)	385.3	dscf/lb-mole
Dry Fd Factor (propane)	—	EPA Method 19 (68°F, 20°C)	8,710	dscf/mmBTU
Wet Fw Factor (propane)	—	EPA Method 19 (68°F, 20°C)	10,200	wscf/mmBTU
Stoichiometric Moisture Ratio	—	EPA Method 19 (68°F, 20°C)	17.1	percent

Release Parameters	—	References/Remarks	Value	Units
Stack Exit Temperature	—	DNX SCR, 360-930 °F	400	°F
Stack Exit Temperature	—	Calculated for modeling	478	°K
Stack Gas Oxygen Content	—	Typical, ICE	15	percent O_2
Stack Flowrate, dry standard		Calculated for percent O_2	93	dscf/min
Stack Flowrate, dry actual		Calculated for stack temp	152	dacf/min
Stack Gas Moisture Content (est.)		Calculated for percent O_2	4.8	percent H_2O
Stack Flowrate, actual		Calculated for moisture	159	wacf/min
Stack Flowrate, actual	—	Calculated for modeling	0.08	wacm/sec
Stack Height	—	Typical, Industrial	40	feet
Stack Height	—	Calculated for modeling	12.19	meters
Stack Diameter	—	Typical, Industrial	2.00	inches
Stack Diameter	—	Calculated for modeling	0.05	meters
Stack Velocity	—	Calculated for modeling	37.04	meters/sec

BACT Emission Factors

BACT - Natural Gas	g/BHP-hr	g/kW-hr	lb/mmBTU	Typical Control Technology Notes
CO	2.5721	1.918	5.57E-01	*AP-42 Table 3.2-2*
NO_x	3.9113	2.917	8.47E-01	*AP-42 Table 3.2-2*
PM_{10}	3.56E-04	0.000	7.71E-05	*AP-42 Table 3.2-2*
$PM_{2.5}$ (99% of PM_{10})	3.53E-04	0.000	7.64E-05	*AP-42 Table 3.2-2*
VOC	5.45E-01	0.406	1.18E-01	*AP-42 Table 3.2-2*
SO_x (4 ppmv in PNG)	—		2.70E-04	

4-Stroke Spark Ignited IC Engine Emissions Calculations

Criteria Pollutants, TACs, GHGs	CAS No.	References/Remarks	Emission Factors			Average Hourly Uncontrolled (AHU)	Average Hourly Controlled (AHC)	Maximum Hourly Uncontrolled (MHU)	Maximum Hourly Controlled (MHC)	Maximum Daily Uncontrolled (MDU)	Maximum Daily Controlled (MDC)	Annual Average / Maximum Annual Controlled (AA/MAC)		30-Day Average (30DA)	Annual Average (AA/MAC)	Hourly Maximum (MHC)
			lb/mmcf	ppmv @ 15%	lb/mmBTU	lb/hr	lb/hr	lb/hr	lb/hr	lb/day	lb/day	lb/yr	tons/yr	lb/day	g/sec	g/sec
CO	630080	BACT	—	248.4	0.55700	0.03	0.03	0.10	0.10	0.81	0.81	294.73	0.147	0.81	4.24E-03	1.27E-02
NO_x	10102440	BACT	—	229.9	0.84701	0.05	0.05	0.15	0.15	1.23	1.23	448.19	0.224	1.23	6.45E-03	1.93E-02
PM_{10}	85101	BACT	—	—	0.00008	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.000	0.00	5.87E-07	1.76E-06
$PM_{2.5}$ (99% of PM_{10})	88101	BACT	—	—	0.00008	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.000	0.00	5.81E-07	1.74E-06
VOC	43104	BACT	—	—	0.11802	0.01	0.01	0.02	0.02	0.17	0.17	62.45	0.031	0.17	8.98E-04	2.69E-03
SO_x	7446095	BACT	—	—	0.00027	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.000	0.00	2.05E-06	6.16E-06
PM_{10} $(NH_4)_2SO_4$	9960	SCAQMD 2004 (5% conv.)	—	—	0.00003	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.000	0.00	2.12E-07	6.36E-07
CO_2	124389	40 CFR 98 Table C-2	62.98	kg/mmBTU	138.8457	8	8	25	25	201	201	73,469	33.3	201	—	—
CH_4	74828	40 CFR 98 Table C-2	3.00E-03	kg/mmBTU	0.0066	0.00	0.00	0.00	0.00	0.01	0.01	3.49	0.002	0.01	—	—
N_2O	10024972	40 CFR 98 Table C-2	6.00E-04	kg/mmBTU	0.0013	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.000	0.00	—	—
CO_2e	124389	40 CFR 98 Table A-1	63.2338	kg/mmBTU	139.4052	8	8	25	25	202	202	73,765	33.5	202	—	—
aAmmonia slip (SCR)	7664417	BACT 96.2.4	—	0	0.00000	—	—	0.00E+00	0.00E+00	—	—	0	0.000	—	0.00E+00	0.00E+00
Acetaldehyde	75070	EPA 2000	—	—	8.36E-03	—	—	1.51E-03	1.51E-03	—	—	4.42	—	—	6.36E-05	1.91E-04
Acrolein	107028	EPA 2000	—	—	5.14E-03	—	—	9.31E-04	9.31E-04	—	—	2.72	—	—	3.91E-05	1.17E-04
Benzene	71432	EPA 2000	—	—	4.40E-04	—	—	7.97E-05	7.97E-05	—	—	0.23	—	—	3.35E-06	1.00E-05
Ethylbenzene	100414	EPA 2000	—	—	3.97E-05	—	—	7.19E-06	7.19E-06	—	—	0.02	—	—	3.02E-07	9.06E-07
Formaldehyde	50000	EPA 2000	—	—	5.28E-02	—	—	9.57E-03	9.57E-03	—	—	27.94	—	—	4.02E-04	1.21E-03
Hexane	110543	EPA 2000	—	—	1.11E-03	—	—	2.01E-04	2.01E-04	—	—	0.59	—	—	8.45E-06	2.53E-05
Naphthalene	91203	EPA 2000	—	—	7.44E-05	—	—	1.35E-05	1.35E-05	—	—	0.04	—	—	5.66E-07	1.70E-06
PAHs (excl. naphthalene)	1151	EPA 2000	—	—	2.69E-05	—	—	4.87E-06	4.87E-06	—	—	0.01	—	—	2.05E-07	6.14E-07
Propylene	115071	VCAPCD 2001	—	—	7.17E-04	—	—	1.30E-04	1.30E-04	—	—	0.38	—	—	5.45E-06	1.64E-05
Toluene	108883	EPA 2000	—	—	4.08E-04	—	—	7.39E-05	7.39E-05	—	—	0.22	—	—	3.11E-06	9.32E-06
Xylenes (mixed)	1330207	EPA 2000	—	—	1.84E-04	—	—	3.33E-05	3.33E-05	—	—	0.10	—	—	1.40E-06	4.20E-06

Notes:

Annual GHGs in units of MT/yr

Source: EPA 2000 - AP-42 Table 3.2-2. UNCONTROLLED EMISSION FACTORS FOR 4-STROKE LEAN-BURN ENGINES with 90% reduction in organic TACs by correctly sized (low space velocity, F/V) oxidation catalyst as recommended by SDAPCD.

TAC DRE of OXCAT	0%

APPENDIX D – OPERATIONAL MODELING PARAMETERS

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Central Valley Meats CEQA
Stack Parameters

Rendering Facility Point Sources

Source	Description	Stack height (m)	Stack diameter (m)	Exit velocity (m/s)	Stack temp (K)	Stack height (ft)	Stack diameter (ft)	Exhaust Flow Rate (acfm)	Stack temp (F)	Notes
RTO	Cookor/Rendering RTO and Venturi/packed bed scrubber	15.24	0.91	20.3	364.3	50	3.0	28,274	196	RTO Spec sheet 4000 fpm, T from RTO Cost Estimate, page 7
SOILDS	Solids Processing Cyclone and Venturi/packed bed scrubber	15.24	0.91	21.6	295.4	50	3.0	30,000	72	
RMSC1	Room Air packed bed Scrubber 1	15.24	1.68	21.4	ambient	50	5.5	100,000	ambient	
RMSC2	Room Air packed bed Scrubber 2	15.24	1.68	21.4	ambient	50	5.5	100,000	ambient	
Boiler 1	Boiler natural gas 1	13.86	0.91	14.7	495.9	45.46	3	20,473	433	
Boiler 2	Boiler natural gas 2	13.86	0.91	14.7	495.9	45.46	3	20,473	433	
Boiler 3	Boiler natural gas 3	13.86	0.91	14.7	495.9	45.46	3	20,473	433	
Boiler 4	Boiler natural gas 4	13.86	0.91	14.7	495.9	45.46	3	20,473	433	

Rendering Volume Sources

Source ID	Description	Release Height (m)	Initial Sigma Y (m)	Initial Sigma Z (m)	Length of Side (m)	Basis	Door Height (m)	Door Width (m)	Building Height (m)	Notes
LOADOUT1	Loadout door	6.096	1.134	5.310	4.88	->	6.096	4.8768	11.417	From Plot Plan
LOADOUT1	Loadout door	6.096	1.134	5.310	4.88	->	6.096	4.877	11.417	From Plot Plan

Volume source modeled as elevated Source (he > 0) on or Adjacent to a Building

Pet Food Facility, TRUs and Idling Point Sources

Source	Description	Stack height (m)	Stack diameter (m)	Exit velocity (m/s)	Stack temp (K)	Stack height (ft)	Stack diameter (ft)	Exhaust Flow Rate (acfm)	Stack temp (F)	Notes
RTO_PET	Pet Food RTO	15.24	0.91	20.3	364.3	50	3.0	28,274	196	Same as Rendering RTO
TRU1	Transportation Refrigeration Unit	3.96	0.04	49.0	501.0	13	0.15	161	442	
TRU2	Transportation Refrigeration Unit	3.96	0.04	49.0	501.0	13	0.15	161	442	
TRU3	Transportation Refrigeration Unit	3.96	0.04	49.0	501.0	13	0.15	161	442	
TRU4	Transportation Refrigeration Unit	3.96	0.04	49.0	501.0	13	0.15	161	442	
TRU5	Transportation Refrigeration Unit	3.96	0.04	49.0	501.0	13	0.15	161	442	
IDLE1	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
IDLE2	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
IDLE3	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
IDLE4	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
IDLE5	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
IDLE6	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
IDLE7	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
IDLE8	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
IDLE9	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
IDLE10	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
IDLE11	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
IDLE12	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
IDLE13	Truck Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
WIDLE1	Worker Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
WIDLE2	Worker Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
WIDLE3	Worker Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
WIDLE4	Worker Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	
WIDLE5	Worker Idling	4.11	0.10	51.7	366.0	13.5	0.33	861	199	

RTO stack parameters from vendor, diameter from Jim Robertson email 12-17-20

Boiler SCR stack parameters from spec sheet

Boiler stacks are 8 feet above roof

37.46 roof height (ft)

Idling and TRU parameters from SJVAPCD Modeling Guidance (2006)

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Central Valley Meats CEQA
Mobile Source Parameters

Onsite Vehicle Model Inputs

Source	Description
HIDE	Truck Traffic: Hide Building
HIDEF	Truck Traffic: Hide Building: Fugitives
PET	Truck Traffic: Pet Food Facility
PETF	Truck Traffic: Pet Food Facility: Fugitives
PROCESS	Truck Traffic: Processing
PROCESSF	Truck Traffic: Processing: Fugitives
RENDER	Truck Traffic: Rendering Plant
RENDERF	Truck Traffic: Rendering Plant: Fugitives
FREEZER	TRUs: Freezer/Cooler
FREEZERF	TRUs: Freezer/Cooler: Fugitives
WORKER	Worker Truck Traffic
WORKERF	Worker Truck Traffic: Fugitives

The District recommends the following for modeling vehicles

1. Separate volume sources (separated 2W surface based)	feet	AERMOD View input (m)	
2. Top of Plume Height = 1.0 x VH	13.5	4.11	PH
3. Volume Source Release Height = 0.5 x Top of Plume Height	6.75	2.06	release ht
VW = vehicle width	8.5	2.59	
4. Width of Plume = VW or lane width (Each lane should be modeled separately.)	28.2	8.59	PW
From EPA - Width of Plume = VW + 6m for single lane roadways / Road Width + 6m for two lane roadways			
5. Initial Sigma Z - Top of Plume Height/2.15	6.28	1.91	calculated in AERMOD
6. Initial Sigma Y - Width of Plume/2.15	13.11	4.00	calculated in AERMOD
7. Emissions input as g/s			

Onsite Mule Model Inputs

Source	Description
MULES1	Mules - Processing to Rendering Plant
MULES2	Mules - Processing to Pet Foods Facility
MULES3	Mules - Processing to Hide Building
MULES4	Mules - Processing to Freezer/Cooler

The District recommends the following for modeling vehicles

1. Separate volume sources (separated 2W surface based)	feet	AERMOD View input (m)	
2. Top of Plume Height = 1.0 x VH	8	2.44	PH
3. Volume Source Release Height = 0.5 x Top of Plume Height	4	1.22	release ht
VW = vehicle width	5	1.52	
4. Width of Plume = VW or lane width (Each lane should be modeled separately.)	24.7	7.52	PW
From EPA - Width of Plume = VW + 6m for single lane roadways / Road Width + 6m for two lane roadways			
5. Initial Sigma Z - Top of Plume Height/2.15	3.72	1.13	calculated in AERMOD
6. Initial Sigma Y - Width of Plume/2.15	11.48	3.50	calculated in AERMOD
7. Emissions input as g/s			

Offsite Vehicle Model Inputs

Source	Description
OFFSITE	Truck Traffic: 1/4 mile Off-site
OFFSITEF	Truck Traffic: 1/4 mile Off-site: Fugitives

The District recommends the following for modeling vehicles

1. Separate volume sources (separated 2W surface based)	feet	AERMOD View input (m)	
2. Top of Plume Height = 1.0 x VH	13.5	4.11	PH
3. Volume Source Release Height = 0.5 x Top of Plume Height	6.75	2.06	release ht
road width	14	4.27	
4. Width of Plume = VW or lane width (Each lane should be modeled separately.)	33.7	10.27	PW
From EPA - Width of Plume = VW + 6m for single lane roadways / Road Width + 6m for two lane roadways			
5. Initial Sigma Z - Top of Plume Height/2.15	6.28	1.91	calculated in AERMOD
6. Initial Sigma Y - Width of Plume/2.15	15.67	4.78	calculated in AERMOD
7. Emissions input as g/s			

SJVAPCD Guidance from Glenn T. Reed, Senior Air Quality Specialist, Thursday, August 22, 2013

Truck Idling and TRU Model Inputs

Source	Description
TRU1	Transportation Refrigeration Unit
TRU2	Transportation Refrigeration Unit
TRU3	Transportation Refrigeration Unit
TRU4	Transportation Refrigeration Unit
TRU5	Transportation Refrigeration Unit

Source	Description
IDLE1	Truck Idling
IDLE2	Truck Idling
IDLE3	Truck Idling
IDLE4	Truck Idling
IDLE5	Truck Idling
IDLE6	Truck Idling
IDLE7	Truck Idling
IDLE8	Truck Idling
IDLE9	Truck Idling
IDLE10	Truck Idling
IDLE11	Truck Idling
IDLE12	Truck Idling
IDLE13	Truck Idling
WIDLE1	Worker Idling
WIDLE2	Worker Idling
WIDLE3	Worker Idling
WIDLE4	Worker Idling
WIDLE5	Worker Idling

Modeling parameters from SJVAPCD Modeling Guidance (2006)

Transportation Refrigeration Units (TRUs)

(c) Height = 13 ft
(d) Diameter = 0.04445 m
(e) Temperature = 501 K
(f) Velocity = 49 m/s
(g) Modeled as point source

Truck Idling – Vertical High Level Point Source

(a) Height = 13.5 ft (the height of a transport truck)
(b) Diameter = 0.1 meter
(c) Velocity = 51.71 m/s @ 1500 rpm
(d) Temperature = 366 K
Modeled as point source

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Central Valley Meats
Operations Instack NO2/NOx Ratio

Source	Description	Source Type	NO2/NOx Instack Ratio	SJVAPCD Instack Type
Boiler 1	Boiler natural gas 1	BOILERS	0.1	Natural Gas Boilers
Boiler 2	Boiler natural gas 2	BOILERS	0.1	Natural Gas Boilers
Boiler 3	Boiler natural gas 3	BOILERS	0.1	Natural Gas Boilers
Boiler 4	Boiler natural gas 4	BOILERS	0.1	Natural Gas Boilers
RTO	Rendering RTO	RTO	0.1	Natural Gas Boilers
RTO_PET	Pet Food RTO	RTO_PET	0.1	Natural Gas Boilers
OFFSITE	Truck Traffic: 1/4 mile Off-site	Truck Exhaust	0.06	Trucks/Cars
HIDE	Truck Traffic: Hide Building	Truck Exhaust	0.06	Trucks/Cars
PET	Truck Traffic: Pet Food Facility	Truck Exhaust	0.06	Trucks/Cars
PROCESS	Truck Traffic: Processing	Truck Exhaust	0.06	Trucks/Cars
RENDER	Truck Traffic: Rendering Plant	Truck Exhaust	0.06	Trucks/Cars
FREEZER	Truck Traffic: Freezer/Cooler	Truck Exhaust	0.06	Trucks/Cars
WORKER	Worker Traffic	Worker Exhaust	0.06	Trucks/Cars
MULES1	Mules - Processing to Rendering Plant	Mules	0.06	Trucks/Cars
MULES2	Mules - Processing to Pet Foods Facility	Mules	0.06	Trucks/Cars
MULES3	Mules - Processing to Hide Building	Mules	0.06	Trucks/Cars
MULES4	Mules - Processing to Freezer/Cooler	Mules	0.06	Trucks/Cars
TRU1	Transportation Refrigeration Unit	TRUID	0.2	Diesel IC Engines
TRU2	Transportation Refrigeration Unit	TRUID	0.2	Diesel IC Engines
TRU3	Transportation Refrigeration Unit	TRUID	0.2	Diesel IC Engines
TRU4	Transportation Refrigeration Unit	TRUID	0.2	Diesel IC Engines
TRU5	Transportation Refrigeration Unit	TRUID	0.2	Diesel IC Engines
IDLE1	Truck Idling	FREEZERID	0.06	Trucks/Cars
IDLE2	Truck Idling	FREEZERID	0.06	Trucks/Cars
IDLE3	Truck Idling	FREEZERID	0.06	Trucks/Cars
IDLE4	Truck Idling	FREEZERID	0.06	Trucks/Cars
IDLE5	Truck Idling	FREEZERID	0.06	Trucks/Cars
IDLE6	Truck Idling	HIDEID	0.06	Trucks/Cars
IDLE7	Truck Idling	HIDEID	0.06	Trucks/Cars
IDLE8	Truck Idling	PETID	0.06	Trucks/Cars
IDLE9	Truck Idling	PETID	0.06	Trucks/Cars
IDLE10	Truck Idling	RENDERID	0.06	Trucks/Cars
IDLE11	Truck Idling	RENDERID	0.06	Trucks/Cars
IDLE12	Truck Idling	PRODID	0.06	Trucks/Cars
IDLE13	Truck Idling	PRODID	0.06	Trucks/Cars

Instack ratios from SJVAPCD "Assessment of Non-Regulatory Options in AERMOD Specifically OLM and PVMRM" Sep 16, 2010.

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Central Valley Meats
Operations HRA Source Groups

Source	Description	Source Group	Emission Rate (g/s)	Source Group Emission Rate (g/s)
TRU1	Transportation Refrigeration Unit	TRUID	0.2	1.0
TRU2	Transportation Refrigeration Unit	TRUID	0.2	
TRU3	Transportation Refrigeration Unit	TRUID	0.2	
TRU4	Transportation Refrigeration Unit	TRUID	0.2	
TRU5	Transportation Refrigeration Unit	TRUID	0.2	
IDLE1	Truck Idling	FREEZERID	0.2	1.0
IDLE2	Truck Idling	FREEZERID	0.2	
IDLE3	Truck Idling	FREEZERID	0.2	
IDLE4	Truck Idling	FREEZERID	0.2	
IDLE5	Truck Idling	FREEZERID	0.2	
IDLE6	Truck Idling	HIDEID	0.5	1.0
IDLE7	Truck Idling	HIDEID	0.5	
IDLE8	Truck Idling	PETID	0.5	1.0
IDLE9	Truck Idling	PETID	0.5	
IDLE10	Truck Idling	RENDERID	0.5	1.0
IDLE11	Truck Idling	RENDERID	0.5	
IDLE12	Truck Idling	PRODID	0.5	1.0
IDLE13	Truck Idling	PRODID	0.5	

APPENDIX E – CONSTRUCTION HRA RESULTS

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Maximum Cancer Risk by Pollutant at PMI, MEIR, MEIW and Sensitive Receptor
CVM Construction HRA

Pollutant CAS	Pollutant	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
		receptor #	3597	receptor #	7	receptor #	37	receptor #	1
		UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
		265197	4022695	265165	4022846	264134	4024459	265225	4022584
		7-Year Cancer Risk	Contribution (%)	7-Year Cancer Risk	Contribution (%)	7-Year Cancer Risk	Contribution (%)	7-Year Cancer Risk	Contribution (%)
-	ALL	2.03E-05	100%	1.95E-05	100%	2.15E-07	100%	1.79E-06	100%
9901	DieselExhPM	2.03E-05	100.00%	1.95E-05	100.00%	2.15E-07	100.00%	1.79E-06	100.00%

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Cancer Risk by Source for All Pollutants Combined at PMI, MEIR, MEIW and Sensitive Receptor
CVM Construction HRA

Sources	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
	receptor #	3597	receptor #	7	receptor #	37	receptor #	1
	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
	265197	4022695	265165	4022846	264134	4024459	265225	4022584
	7-Year Cancer Risk	Contribution (%)	7-Year Cancer Risk	Contribution (%)	7-Year Cancer Risk	Contribution (%)	7-Year Cancer Risk	Contribution (%)
ALL	2.03E-05	100%	1.95E-05	100%	2.15E-07	100%	1.79E-06	100%
OFFSITE	1.41E-09	0.01%	1.08E-09	0.01%	1.98E-10	0.09%	3.49E-10	0.02%
Stage1	1.67E-05	82.14%	4.10E-06	21.07%	1.16E-07	54.04%	9.96E-07	55.75%
Stage2	2.01E-06	9.89%	1.55E-06	7.96%	4.77E-08	22.13%	5.92E-07	33.13%
Stage3	1.58E-06	7.77%	1.38E-05	70.84%	5.03E-08	23.33%	1.87E-07	10.47%
TRUCKS	4.09E-08	0.20%	2.51E-08	0.13%	8.69E-10	0.40%	1.13E-08	0.63%

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Maximum Chronic Hazard Index by Pollutant at PMI, MEIR, MEIW and Sensitive Receptor
CVM Construction HRA

Pollutant CAS	Pollutant	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
		receptor #	3597	receptor #	7	receptor #	37	receptor #	1
		UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
		265197	4022695	265165	4022846	264134	4024459	265225	4022584
		Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)
-	ALL	7.58E-03	100%	7.26E-03	100%	8.03E-05	100%	3.18E-03	100%
9901	DieselExhPM	7.58E-03	100.00%	7.26E-03	100.00%	8.03E-05	100.00%	3.37E-03	106.12%

Notes:
Individual pollutants are not additive because risk is based on specific target organs, which may be different per pollutant

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Chronic Hazard Index by Source for All Pollutants Combined at PMI, MEIR, MEIW and Sensitive Receptor
CVM Construction HRA

Sources	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
	receptor #	3597	receptor #	7	receptor #	37	receptor #	1
	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
	265197	4022695	265165	4022846	264134	4024459	265225	4022584
	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)
ALL	7.58E-03	100.00%	7.26E-03	100.00%	8.03E-05	100.00%	3.18E-03	100.00%
OFFSITE	5.24E-07	0.01%	4.02E-07	0.01%	7.37E-08	0.09%	6.59E-07	0.02%
Stage1	6.23E-03	82.13%	1.53E-03	21.07%	4.34E-05	54.04%	1.88E-03	59.16%
Stage2	7.50E-04	9.89%	5.78E-04	7.96%	1.78E-05	22.13%	1.12E-03	35.15%
Stage3	5.89E-04	7.77%	5.14E-03	70.84%	1.87E-05	23.33%	3.53E-04	11.11%
TRUCKS	1.52E-05	0.20%	9.36E-06	0.13%	3.24E-07	0.40%	2.14E-05	0.67%

Notes:
Individual sources are not additive because risk is based on specific target organs, which may be different per source

APPENDIX F – OPERATIONAL HRA RESULTS

 4/19/2021

Yorke ENGINEERING, LLC
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Maximum Acute Hazard Index by Pollutant at PMI, MEIR, MEIW and Sensitive Receptor
CVM Operational HRA

Pollutant CAS	Pollutant	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
		receptor #	746	receptor #	4	receptor #	37	receptor #	2
		UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
		265292	4022599	265177	4022824	528267	8048919	265225	4022578
		Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)
-	ALL	5.42E-02	100%	1.21E-02	100%	3.13E-03	100%	1.50E-02	100%
7664417	NH3	3.32E-03	6.12%	3.65E-03	30.22%	3.21E-04	10.23%	1.30E-03	8.67%
75070	Acetaldehyde	1.69E-05	0.03%	1.79E-05	0.15%	1.63E-06	0.05%	7.22E-06	0.05%
107028	Acrolein	2.71E-03	5.00%	2.89E-03	23.98%	2.61E-04	8.33%	1.13E-03	7.56%
71432	Benzene	5.51E-04	1.02%	5.82E-04	4.82%	5.30E-05	1.69%	2.35E-04	1.57%
100414	Ethyl Benzene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
50000	Formaldehyde	5.74E-04	1.06%	6.06E-04	5.02%	5.52E-05	1.76%	2.45E-04	1.64%
110543	Hexane	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
91203	Naphthalene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
1151	PAHs-w/o	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
115071	Propylene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
108883	Toluene	1.36E-05	0.03%	1.44E-05	0.12%	1.31E-06	0.04%	5.80E-06	0.04%
1330207	Xylenes	2.30E-06	0.00%	2.43E-06	0.02%	2.21E-07	0.01%	9.80E-07	0.01%
7783064	H2S	5.42E-02	99.97%	1.20E-02	99.86%	3.13E-03	99.95%	1.50E-02	99.95%
9901	DieselExhPM	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%

Notes:
Individual pollutants are not additive because risk is based on specific target organs, which may be different per pollutant
PMI receptor equivalent to AERMOD View receptor #707 (risk receptor)

Acute Hazard Index by Source for All Pollutants Combined at PMI, MEIR, MEIW and Sensitive Receptor
CVM Operational HRA

Sources	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
	receptor #	746	receptor #	4	receptor #	37	receptor #	2
	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
	265292	4022599	265177	4022824	528267	8048919	265225	4022578
	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)
ALL	5.42E-02	100.00%	1.21E-02	100.00%	3.13E-03	100.00%	1.50E-02	100.00%
BOIL1	7.93E-04	1.46%	1.78E-03	14.79%	1.56E-04	4.98%	4.04E-04	2.70%
BOIL2	1.24E-03	2.29%	1.77E-03	14.67%	1.56E-04	4.96%	4.85E-04	3.24%
BOIL3	1.87E-03	3.44%	1.76E-03	14.56%	1.55E-04	4.95%	6.13E-04	4.10%
BOIL4	2.53E-03	4.67%	1.76E-03	14.56%	1.55E-04	4.94%	1.01E-03	6.77%
FREEZER	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
HIDE	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
MULES1	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
MULES2	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
MULES3	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
MULES4	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
OFFSITE	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
PET	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
PROCESS	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
RENDER	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
RMSC1	2.58E-02	47.56%	6.18E-03	51.22%	1.57E-03	50.23%	7.68E-03	51.33%
RMSC2	2.84E-02	52.41%	5.87E-03	48.64%	1.56E-03	49.72%	7.28E-03	48.62%
RTO	1.52E-04	0.28%	5.91E-05	0.49%	1.15E-05	0.37%	1.23E-04	0.82%
RTO_PET	5.34E-05	0.10%	5.35E-05	0.44%	7.26E-06	0.23%	4.90E-05	0.33%
SOLIDS	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
WORKER	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
TRUID	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
FREEZEID	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
HIDEID	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
PETID	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
RENDERID	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
PROID	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%

Notes:
Individual sources are not additive because risk is based on specific target organs, which may be different per source
PMI receptor equivalent to AERMOD View receptor #707 (risk receptor)

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Maximum Cancer Risk by Pollutant at PMI, MEIR, MEIW and Sensitive Receptor
CVM Operational HRA

Pollutant CAS	Pollutant	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
		receptor #	34	receptor #	34	receptor #	37	receptor #	729
		UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
		265455	4022871	265455	4022871	264134	4024459	265267	4022424
		70-Year Cancer Risk	Contribution (%)	70-Year Cancer Risk	Contribution (%)	70-Year Cancer Risk	Contribution (%)	40-Year Cancer Risk	Contribution (%)
-	ALL	8.66E-06	100%	8.66E-06	100%	6.81E-07	100%	2.76E-07	100%
7664417	NH3	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
75070	Acetaldehyde	1.12E-09	0.01%	1.12E-09	0.01%	4.10E-11	0.01%	1.35E-10	0.05%
107028	Acrolein	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
71432	Benzene	2.10E-08	0.24%	2.10E-08	0.24%	7.68E-10	0.11%	2.53E-09	0.92%
100414	Ethyl Benzene	2.17E-09	0.03%	2.17E-09	0.03%	7.94E-11	0.01%	2.61E-10	0.09%
50000	Formaldehyde	9.35E-09	0.11%	9.35E-09	0.11%	3.42E-10	0.05%	1.13E-09	0.41%
110543	Hexane	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
91203	Naphthalene	1.29E-09	0.01%	1.29E-09	0.01%	4.67E-11	0.01%	1.54E-10	0.06%
1151	PAHs-w/o	8.08E-07	9.33%	8.08E-07	9.33%	6.12E-07	89.88%	8.84E-09	3.21%
115071	Propylene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
108883	Toluene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
1330207	Xylenes	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
7783064	H2S	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
9901	DieselExhPM	7.81E-06	90.26%	7.81E-06	90.26%	6.76E-08	9.94%	2.63E-07	95.27%

Notes:
PMI and MEIR occur at the same on-site receptor

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Cancer Risk by Source for All Pollutants Combined at PMI, MEIR, MEIW and Sensitive Receptor
CVM Operational HRA

Sources	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
	receptor #	34	receptor #	34	receptor #	37	receptor #	729
	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
	265455	4022871	265455	4022871	264134	4024459	265267	4022424
	70-Year Cancer Risk	Contribution (%)	70-Year Cancer Risk	Contribution (%)	70-Year Cancer Risk	Contribution (%)	40-Year Cancer Risk	Contribution (%)
ALL	8.66E-06	100%	8.66E-06	100%	6.81E-07	100%	2.76E-07	100%
BOIL1	1.75E-07	2.02%	1.75E-07	2.02%	1.00E-07	14.72%	3.73E-09	1.35%
BOIL2	1.90E-07	2.19%	1.90E-07	2.19%	1.21E-07	17.73%	3.47E-09	1.26%
BOIL3	1.74E-07	2.01%	1.74E-07	2.01%	1.32E-07	19.39%	2.70E-09	0.98%
BOIL4	2.35E-07	2.71%	2.35E-07	2.71%	1.81E-07	26.60%	2.44E-09	0.88%
FREEZER	9.26E-09	0.11%	9.26E-09	0.11%	1.45E-09	0.21%	4.62E-09	1.67%
HIDE	1.12E-09	0.01%	1.12E-09	0.01%	1.28E-10	0.02%	2.83E-09	1.03%
MULES1	4.07E-06	47.04%	4.07E-06	47.04%	8.96E-09	1.32%	1.69E-08	6.13%
MULES2	1.14E-07	1.31%	1.14E-07	1.31%	3.41E-10	0.05%	1.52E-09	0.55%
MULES3	1.31E-07	1.52%	1.31E-07	1.52%	3.94E-10	0.06%	2.83E-09	1.03%
MULES4	2.55E-06	29.41%	2.55E-06	29.41%	9.10E-09	1.34%	4.82E-08	17.47%
OFFSITE	9.46E-09	0.11%	9.46E-09	0.11%	1.72E-09	0.25%	2.72E-09	0.99%
PET	1.53E-09	0.02%	1.53E-09	0.02%	1.48E-10	0.02%	3.38E-09	1.23%
PROCESS	6.06E-07	7.00%	6.06E-07	7.00%	2.51E-09	0.37%	3.32E-08	12.04%
RENDER	6.39E-08	0.74%	6.39E-08	0.74%	4.02E-09	0.59%	8.22E-08	29.79%
RMSC1	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
RMSC2	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
RTO	6.76E-08	0.78%	6.76E-08	0.78%	6.33E-08	9.30%	4.53E-10	0.16%
RTO_PET	1.71E-08	0.20%	1.71E-08	0.20%	1.57E-08	2.31%	2.45E-10	0.09%
SOLIDS	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
WORKER	5.48E-09	0.06%	5.48E-09	0.06%	3.69E-10	0.05%	7.73E-09	2.80%
TRUID	1.69E-07	1.95%	1.69E-07	1.95%	3.30E-08	4.85%	4.75E-08	17.21%
FREEZEID	8.16E-09	0.09%	8.16E-09	0.09%	1.74E-09	0.26%	2.22E-09	0.80%
HIDEID	1.07E-09	0.01%	1.07E-09	0.01%	1.09E-10	0.02%	9.23E-10	0.33%
PETID	1.41E-09	0.02%	1.41E-09	0.02%	1.13E-10	0.02%	5.19E-10	0.19%
RENDERID	4.33E-08	0.50%	4.33E-08	0.50%	2.34E-09	0.34%	4.74E-09	1.72%
PROID	3.09E-08	0.36%	3.09E-08	0.36%	1.15E-09	0.17%	7.74E-10	0.28%

Notes:
PMI and MEIR occur at the same on-site receptor

4/19/2021

ENGINEERING, LLC
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Maximum Chronic Hazard Index by Pollutant at PMI, MEIR, MEIW and Sensitive Receptor
CVM Operational HRA

Pollutant CAS	Pollutant	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)		Maximally Exposed Individual Worker (MEIW)	
		receptor #	747	receptor #	34	receptor #	38	receptor #	14	receptor #	14
		UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
		265292	4022624	265455	4022871	263072	4024078	265118	4022675	265118	4022675
		Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic 8-hr Hazard Index	Contribution (%)
-	ALL	8.94E-03	100%	3.07E-03	100%	1.51E-04	100%	2.35E-03	100%	3.09E-04	100%
7664417	NH3	4.91E-03	54.92%	8.19E-04	26.66%	3.30E-05	21.88%	1.28E-03	54.44%	0.00E+00	0.00%
75070	Acetaldehyde	5.01E-06	0.06%	8.40E-07	0.03%	3.53E-08	0.02%	1.32E-06	0.06%	6.15E-07	0.20%
107028	Acrolein	1.73E-03	19.34%	2.89E-04	9.42%	1.20E-05	7.96%	4.54E-04	19.27%	2.27E-04	73.47%
71432	Benzene	4.37E-04	4.89%	7.33E-05	2.39%	3.08E-06	2.04%	1.15E-04	4.88%	1.15E-04	37.24%
100414	Ethyl Benzene	7.81E-07	0.01%	1.31E-07	0.00%	5.49E-09	0.00%	2.05E-07	0.01%	0.00E+00	0.00%
50000	Formaldehyde	3.09E-04	3.46%	5.18E-05	1.69%	2.18E-06	1.44%	8.13E-05	3.45%	8.13E-05	26.33%
110543	Hexane	1.49E-07	0.00%	2.49E-08	0.00%	1.05E-09	0.00%	3.91E-08	0.00%	0.00E+00	0.00%
91203	Naphthalene	7.47E-06	0.08%	1.25E-06	0.04%	5.19E-08	0.03%	1.96E-06	0.08%	0.00E+00	0.00%
1151	PAHs-w/o	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
115071	Propylene	4.00E-05	0.45%	6.70E-06	0.22%	2.81E-07	0.19%	1.05E-05	0.45%	0.00E+00	0.00%
108883	Toluene	1.43E-05	0.16%	2.39E-06	0.08%	1.00E-07	0.07%	3.75E-06	0.16%	0.00E+00	0.00%
1330207	Xylenes	6.37E-06	0.07%	1.07E-06	0.03%	4.48E-08	0.03%	1.67E-06	0.07%	0.00E+00	0.00%
7783064	H2S	1.42E-03	15.84%	4.13E-04	13.45%	9.20E-05	60.95%	3.39E-04	14.41%	0.00E+00	0.00%
9901	DieselExhPM	5.17E-04	5.78%	1.49E-03	48.47%	1.13E-05	7.49%	1.83E-04	7.77%	0.00E+00	0.00%

Notes:
Individual pollutants are not additive because risk is based on specific target organs, which may be different per pollutant
PMI receptor equivalent to AERMOD View receptor #708 (risk receptor)

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Chronic Hazard Index by Source for All Pollutants Combined at PMI, MEIR, MEIW and Sensitive Receptor
CVM Operational HRA

Sources	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)		Maximally Exposed Individual Worker (MEIW)	
	receptor #	747	receptor #	34	receptor #	38	receptor #	14	receptor #	14
	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
	265292	4022624	265455	4022871	263072	4024078	265118	4022675	265118	4022675
	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic Hazard Index	Contribution (%)	Chronic 8-hr Hazard Index	Contribution (%)
ALL	8.94E-03	100.00%	3.07E-03	100.00%	1.51E-04	100.00%	2.35E-03	100.00%	3.09E-04	100.00%
BOIL1	1.52E-03	16.99%	3.03E-04	9.87%	1.17E-05	7.75%	4.20E-04	17.85%	6.92E-05	22.40%
BOIL2	1.75E-03	19.55%	3.04E-04	9.90%	1.17E-05	7.75%	4.52E-04	19.19%	7.44E-05	24.08%
BOIL3	1.85E-03	20.72%	2.36E-04	7.69%	1.17E-05	7.75%	4.65E-04	19.77%	7.66E-05	24.82%
BOIL4	1.84E-03	20.52%	3.16E-04	10.28%	1.17E-05	7.74%	4.78E-04	20.28%	7.86E-05	25.46%
FREEZER	3.60E-06	0.04%	1.76E-06	0.06%	2.33E-07	0.15%	2.73E-06	0.12%	0.00E+00	0.00%
HIDE	6.74E-07	0.01%	2.13E-07	0.01%	2.08E-08	0.01%	4.00E-07	0.02%	0.00E+00	0.00%
MULES1	1.05E-04	1.17%	7.76E-04	25.26%	1.43E-06	0.95%	4.43E-05	1.88%	0.00E+00	0.00%
MULES2	4.76E-06	0.05%	2.16E-05	0.70%	5.59E-08	0.04%	1.82E-06	0.08%	0.00E+00	0.00%
MULES3	4.87E-06	0.05%	2.50E-05	0.82%	6.48E-08	0.04%	1.98E-06	0.08%	0.00E+00	0.00%
MULES4	9.51E-05	1.06%	4.85E-04	15.79%	1.51E-06	1.00%	4.05E-05	1.72%	0.00E+00	0.00%
OFFSITE	2.82E-06	0.03%	1.80E-06	0.06%	2.79E-07	0.18%	2.27E-06	0.10%	0.00E+00	0.00%
PET	1.33E-06	0.01%	2.91E-07	0.01%	2.44E-08	0.02%	5.82E-07	0.02%	0.00E+00	0.00%
PROCESS	1.03E-04	1.16%	1.16E-04	3.76%	4.12E-07	0.27%	1.45E-05	0.62%	0.00E+00	0.00%
RENDER	7.90E-05	0.88%	1.22E-05	0.40%	6.74E-07	0.45%	2.09E-05	0.89%	0.00E+00	0.00%
RMSC1	6.78E-04	7.58%	2.06E-04	6.72%	4.62E-05	30.61%	1.75E-04	7.42%	0.00E+00	0.00%
RMSC2	7.39E-04	8.26%	2.07E-04	6.73%	4.58E-05	30.33%	1.65E-04	6.99%	0.00E+00	0.00%
RTO	4.58E-05	0.51%	7.81E-06	0.25%	5.18E-07	0.34%	1.13E-05	0.48%	6.51E-06	2.11%
RTO_PET	8.12E-06	0.09%	2.57E-06	0.08%	3.44E-07	0.23%	6.05E-06	0.26%	3.50E-06	1.13%
SOLIDS	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
WORKER	2.23E-05	0.25%	1.04E-06	0.03%	6.14E-08	0.04%	2.27E-06	0.10%	0.00E+00	0.00%
TRUID	4.65E-05	0.52%	3.22E-05	1.05%	5.58E-06	3.70%	3.69E-05	1.57%	0.00E+00	0.00%
FREEZEID	2.20E-06	0.02%	1.56E-06	0.05%	3.02E-07	0.20%	1.76E-06	0.07%	0.00E+00	0.00%
HIDEID	3.07E-07	0.00%	2.04E-07	0.01%	1.97E-08	0.01%	2.72E-07	0.01%	0.00E+00	0.00%
PETID	1.08E-06	0.01%	2.69E-07	0.01%	2.05E-08	0.01%	4.37E-07	0.02%	0.00E+00	0.00%
RENDERID	4.21E-05	0.47%	8.26E-06	0.27%	4.26E-07	0.28%	9.15E-06	0.39%	0.00E+00	0.00%
PROID	2.75E-06	0.03%	5.89E-06	0.19%	1.99E-07	0.13%	2.20E-06	0.09%	0.00E+00	0.00%

Notes:
Individual sources are not additive because risk is based on specific target organs, which may be different per source
PMI receptor equivalent to AERMOD View receptor #708 (risk receptor)

Appendix B

Biological Evaluation

Biological Evaluation

CENTRAL VALLEY MEAT CO.

CENTRAL VALLEY MEAT FACILITY PROJECT

MARCH 5, 2021

Mary Beth Bourne, Biologist

PROVOST & PRITCHARD CONSULTING GROUP | 286 CROMWELL, FRESNO CA 93711

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I. Introduction

Conditional Use Permit No. 1528 was approved by the Kings County Planning Commission on February 5, 1990 which authorized the subject property to be used as a beef boning and slaughtering operation. Existing slaughter capacity is estimated to be around 3,000 head per day. Raw rendering materials leaving the facility are delivered to a rendering plant. Over time, Central Valley Meat Co., has sought to both vertically integrate its processes on-site and increase the amount of value-added products it can offer utilizing its raw rendering materials generated on-site.

The following technical report, prepared by Provost & Pritchard Consulting Group, in compliance with the California Environmental Quality Act (CEQA) includes a description of the biological resources present or with potential to occur within the Central valley Meat Facility Project (Project) and surrounding areas, and evaluates potential Project-related impacts to those resources.

Project Description

Conditional Use Permit No. 21-01, proposes the following addition in two (2) phases, over approximately five (5) years:

Phase 1 will include:-

- Construction of a 106,755 square foot Livestock Canopy over existing cattle holding pens.
- Truck Wash Ramp
    - Construction of a 45,728 square foot rendering plant designed to process 10,497,450 pounds of raw material per week and produce 2,055,339 pounds of tallow and 2,983,294 pounds of meat and bone meal.
- Expand the dry storage facility by 8,000 square feet.
- Construction of a 4,687 square foot Cooler Expansion
- Construction of accessory structures such as scale houses, guard shacks,
- Construction of a 28,080 square foot hide building.
- Construction of a 15,000 square foot pet food facility
- Construction of a 5,600 square foot truck wash building
- Entrance from Hanford-Armona Road
- Removal and construction of automobile parking, for a net increase of 166 stalls.
- Construction of approximately Truck Parking
- Brine Evaporation Pond (Waste Water Treatment Plant)
    - Four wastewater storage ponds, to an approximate depth of 20 feet below ground surface (bgs).
- Drainage Retention Pond
    - Amount of impermeable surfaces will increase by approximately 2,378,000 square feet (54.6 acres). Stormwater ponds will be constructed to appropriate handle approximately 22 acre-feet of runoff, excavated to a depth of approximately 15 bgs.

Phase 2 will include-

- Construction of a two-story, 115,476 square foot process expansion building to increase slaughtering capacity from 3,000 to 4,500 head per day, approximately 6 days per week.
- Construction of a ±187,000 square foot freezer/cooler building

- Access to both phases of development will be provided from Hanford-Armona Road to the south. Existing access from Third Street will be maintained.

The Area of Potential Effect (APE) is located southeast of the City of Hanford, as seen in **Figure 1**. The area is dominated by agricultural production and processing. As illustrated in **Figure 2**, the APE includes approximately 126 acres of land, including an 80-acre field located directly northwest of the intersection of Hanford-Armona Road and 8 ½ Avenue. The rest of the APE is located to the north of the field where the current Central Valley Meat Co. facility is based.

Report Objectives

Construction activities such as that proposed by Central Valley Meat Co. could potentially damage biological resources or modify habitats that are crucial for sensitive plant and wildlife species. In cases such as these, development may be regulated by State or federal agencies, subject to provisions of CEQA addressed by local regulatory agencies.

This report addresses issues related to the following:

1. The presence of sensitive biological resources onsite, or with the potential to occur onsite.
2. The federal, State, and local regulations regarding these resources.
3. Mitigation measures that may be required to reduce the magnitude of anticipated impacts and/or comply with permit requirements of state and federal resource agencies.

Therefore, the objectives of this report are:

1. Summarize all site-specific information related to existing biological resources.
2. Make reasonable inferences about the biological resources that could occur onsite based on habitat suitability and the proximity of the site to a species' known range.
3. Summarize all State and federal natural resource protection laws that may be relevant to the Project APE.
4. Identify and discuss Project impacts to biological resources likely to occur onsite within the context of CEQA or state or federal laws.
5. Identify and publish a set of avoidance and mitigation measures that would reduce impacts to a less-than-significant level (as identified by CEQA) and are generally consistent with recommendations of the resource agencies for affected biological resources.

Study Methodology

A reconnaissance-level field survey of the APE (see **Figure 2**) and surrounding areas was conducted on February 16, 2021, by Provost & Pritchard's biologist, Mary Beth Bourne. The survey consisted of walking through the APE while identifying and noting land uses, biological habitats and communities, and plant and animal species encountered. Furthermore, the APE was assessed for suitable habitats of various wildlife species.

The biologist conducted an analysis of potential Project-related impacts to biological resources based on the resources known to exist or with potential to exist within the APE. Sources of information used in preparation of this analysis included: the California Department of Fish and Wildlife (CDFW) California Natural Diversity

Database (CNDDB); the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Vascular Plants of California; CalFlora's online database of California native plants; the Jepson Herbarium online database (Jepson eFlora); United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS); the NatureServe Explorer online database; the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Plants Database; CDFW California Wildlife Habitat Relationships (CWHR) database; the California Herps online database; and various manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

The field investigation did not include a wetland delineation or focused surveys for special status species. The field survey conducted included the appropriate level of detail to assess the significance of potential impacts to sensitive biological resources resulting from the Project. Furthermore, the field survey was sufficient to generally describe those features of the Project that could be subject to the jurisdiction of federal and/or State agencies, such as the United States Army Corps of Engineers (USACE), CDFW, Regional Water Quality Control Board (RWQCB) and State Water Resources Control Board (SWRCB) .

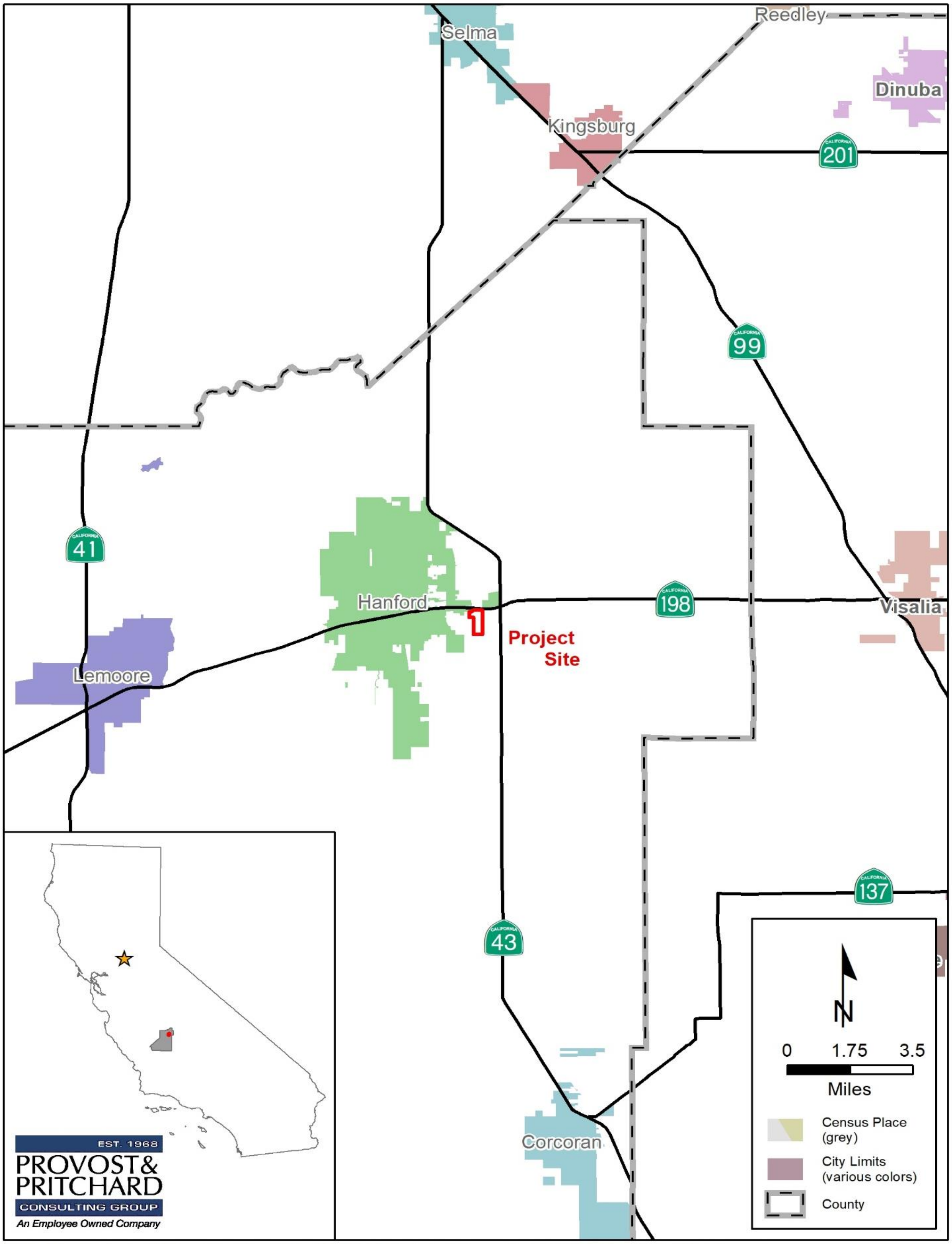

***Figure 1.* Regional Location**

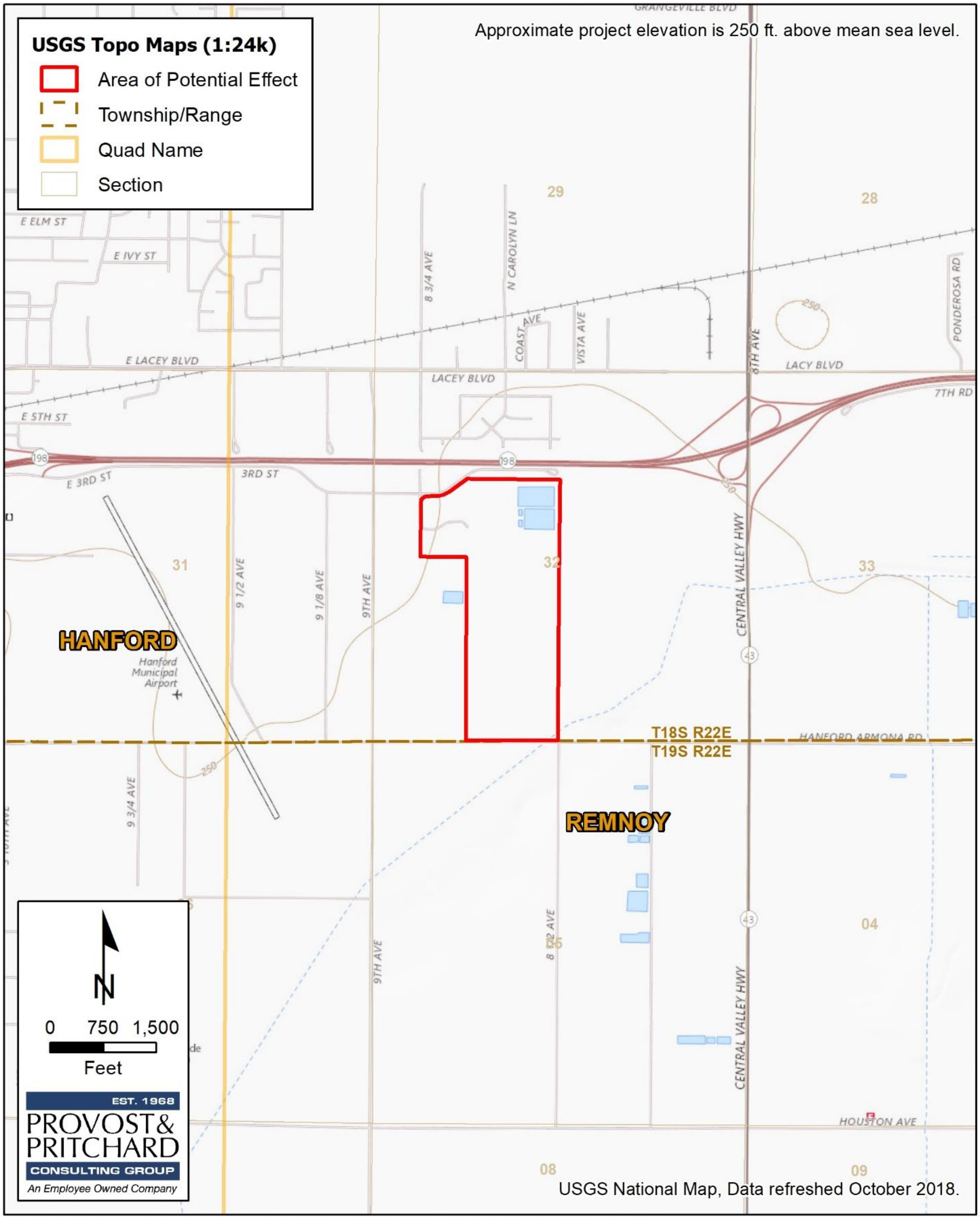

Figure 2. Topographic Quadrangle Map

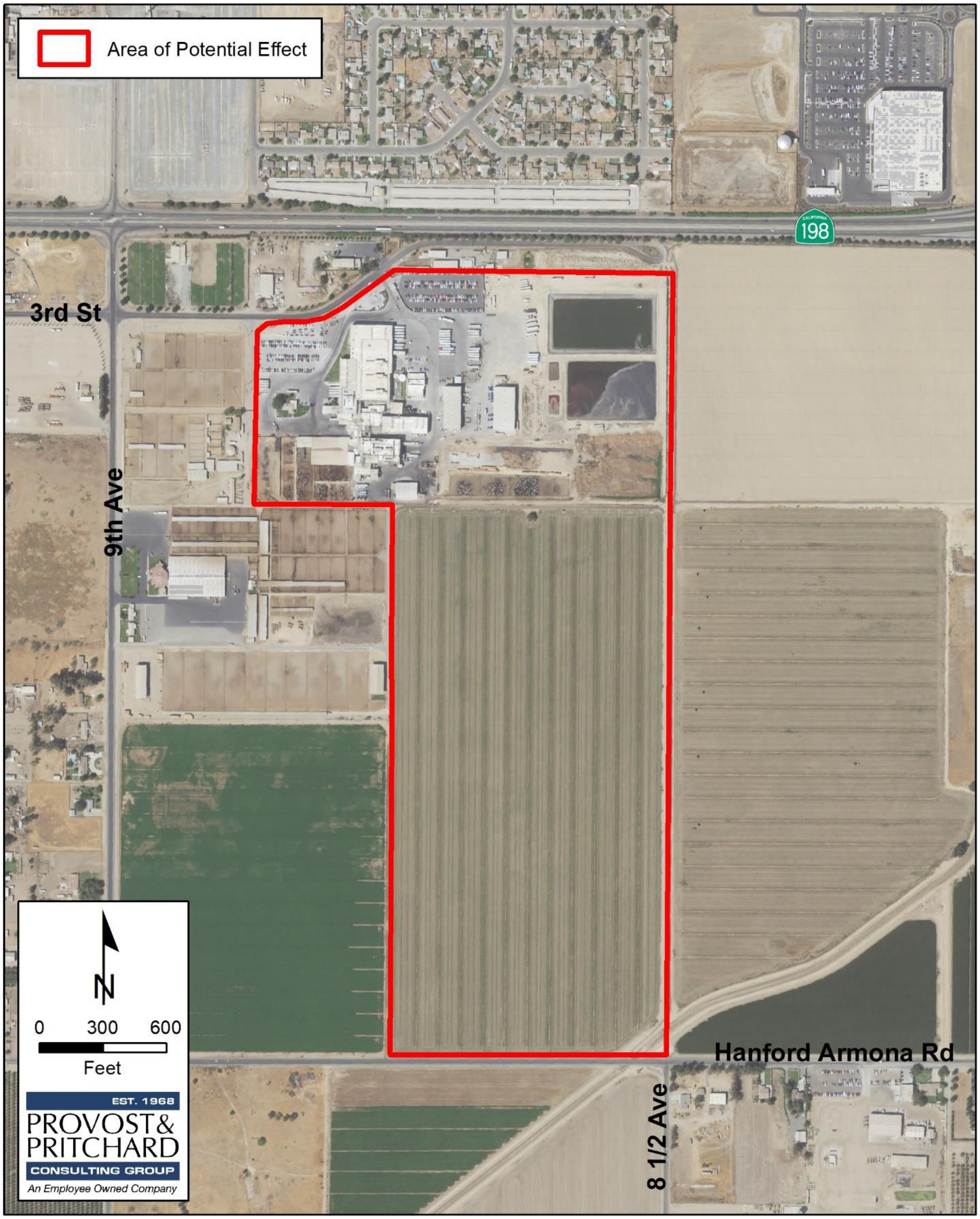

Figure 3. **Area of Potential Effect**

II. Existing Conditions

Regional Setting

The Project site is located in eastern Kings County within the lower San Joaquin Valley, part of the Great Valley of California (see **Figure 1**). The Valley is bordered by the Sierra Nevada Mountain Ranges to the east, the Coast Ranges to the west, the Klamath Mountains and Cascade Range to the north, and the Transverse Ranges and Mojave Desert to the south.

Like most of California, the San Joaquin Valley experiences a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures often reach above 90 degrees Fahrenheit, and the humidity is generally low. Winter temperatures are often below 60 degrees Fahrenheit during the day and rarely exceed 70 degrees. On average, the Central Valley receives approximately 10 inches of precipitation in the form of rainfall yearly, most of which occurs between October and March.

The entire Project site lies within Guernsey Slough sub-watershed; Hydrologic Unit Code (HUC): 180300122001, part of the Jacobs Slough-Frontal Tulare Lake Bed watershed; HUC: 1803001220. The principal drainage in the vicinity is Lakeside ditch, which runs through the southeast corner of the APE.

Photographs of the Project areas and vicinity are available in **Appendix A** at the end of this document.

Project Site

As illustrated in **Figure 2**, the APE includes approximately 126 acres of land, including an 80-acre field located directly northwest of the intersection of Hanford-Armona Road and 8 ½ Avenue. The rest of the APE is located to the north of the field where the current Central Valley Meat Co. facility is based. California State Route runs along the northern perimeter of the APE north of East 3rd Street. Overland Stock Yards is located west of the APE and includes several livestock yards. The APE boarders agricultural fields top the southwest, south, east, and northeast.

At the time of the field survey, the 80-acre field included strips of alfalfa and recently grazed alfalfa. Herds of sheep were present during the survey. Most of the fields were surrounded by low electrical fencing and hard, compact, frequently used dirt roads. Domestic dogs used for herding were also present in the area during the survey. Non-agricultural vegetation was almost entirely absent. A few patches of cheeseweed (*Malva parviflora)* were observed along the margins of the fields. A single English walnut (J*uglans regia)* was present on the northern perimeter of the fields. Several American crows (*Corvus brachyrhynchos*) were observed perched in the walnut tree. Several dead crows and cattle egrets (*Bubulcus ibis*) were laying underneath the walnut next to numerous shotgun shells. Lakeside ditch runs through the southeastern most corner of the APE. The canal was largely dry and devoid of vegetation at the time of the survey. Some water with a significant algal film was observed located underneath the area where the ditch passes under Hanford Armona Road. Debris and a few coyote melons (*Cucurbita palmata)* were scattered throughout the general area. Other species observed during the surveying of the fields include killdeer (*Charadrius vociferus*), house sparrows (*Passer domesticus*), and white crowned sparrows (*Zonotrichia leucophrys*).

The current location of the Central Valley Meat Co. operations was dominated by concrete structures and cattle holding facilities. The site is completely enclosed by chain link fencing. The eastern portion of the site is dedicated to dairy ponds and cattle refuse. Numerous birds were present in and around the cattle pens and ponds, including cattle egrets, crows, killdeer, European starlings (*Sturnus vulgaris*), rock pigeons (*Columba livia*), black phoebes (*Sayornis nigricans*), great egrets (*Ardea alba*), and least sandpipers (*Calidris minutilla*). Multiple feral domestic cats *(Felis catus*) were also observed in this area. Additional mammalian species expected to occur nearby include coyote (*Canis latrans*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), Botta's pocket gopher (*Thomomys bottae*), and other common murid rodents. Large trucks and heavy machinery were being operated throughout the site. Ornamental shrubs including lantanas bordered the roads and facilities within the complex. Numerous rodent bait traps were identified in and around the vegetation. A small residence is located within the western portion of the complex. Ornamental trees containing inactive nests were present next to the house. A single cooper's hawk (*Accipiter cooperii*) was observed perched within a large tree inside the residential lot.

Ruderal/agricultural areas within the proposed APE have minimal value to wildlife due to the frequent human disturbance, presence of domestic dogs and cats, and the absence of native vegetation. However, some disturbance-tolerant species may make incidental use of these ruderal lands.

Soils

Two soil mapping units representing one soil series were identified within the Project area: Kimberlina fine sandy loam, saline-alkali and Kimberlina fine sandy loam, sandy substratum. One minor unit of Kimberlina fine sandy loam, sandy substratum, which accounts for one percent of the map unit, is identified as hydric. Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions such that under sufficiently wet conditions, hydrophytic vegetation can be supported.

Kimberlina fine sandy loam, saline-alkali accounts for 74.5 percent of the APE. Kimberlina soils consist of very deep, well drained soils on flood plains and recent alluvial fans. These soils formed in mixed alluvium derived dominantly from igneous and/or sedimentary rock sources. Often, these soils are used for growing irrigated field, forage, and row crops, while some areas are used for livestock grazing. When not irrigated, vegetation which grows on Kimberlina soils includes annual grasses, forbs, and atriplex spp., in the San Joaquin Valley.

Kimberlina fine sandy loam, sandy substratum accounts for 25.5 percent of the APE.

The complete NRCS Web Soil Survey report is available in Appendix C at the end of this document.

Natural Communities of Special Concern

Natural communities of special concern are those that are of limited distribution, distinguished by significant biological diversity, or home to special status species. CDFW is responsible for the classification and mapping of all-natural communities in California. Just like the special status plant and animal species, these natural communities of special concern can be found within the CNDDB.

According to CNDDB, there are no recorded observations of natural communities of special concern with potential to occur within the Project area or vicinity. Furthermore, biological communities observed onsite during the field survey were significantly disturbed, degraded by the presence agriculture and development, and therefore provide relatively low-quality habitat for most native wildlife species.

Designated Critical Habitat of the APE

The USFWS often designates areas of "Critical Habitat" when it lists species as threatened or endangered. Critical Habitat is a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. According to CNDDB and IPaC, designated critical habitat is absent from the Project area and vicinity.

Wildlife Movement Corridors

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation.

Lakeside ditch is highly disturbed in the Project area and surrounded by urban and agricultural development. No riparian vegetation was present within the APE, and vegetation within the canal is absent. The Project area is flanked by intensively cultivated agricultural lands, residential development, and paved roads. Therefore, the Project area does not contain features that would be likely to function as a wildlife movement corridor. Furthermore, the Project is located in a region often disturbed by intensive agricultural cultivation practices and human disturbance which would discourage dispersal and migration. At most, domestic dogs, coyotes, and common gray foxes may utilize the canal banks to travel between agricultural lands while foraging nocturnally.

Special Status Plants and Animals

California contains several "rare" plant and animal species. In this context, rare is defined as species known to have low populations or limited distributions. As the human population grows, resulting in urban expansion which encroaches on the already limited suitable habitat, these sensitive species become increasingly more vulnerable to extirpation. State and federal regulations have provided the CDFW and the USFWS with a mechanism for conserving and protecting the diversity of plant and animal species native to California. Numerous native plants and animals have been formally designated as "threatened" or "endangered" under State and federal endangered species legislation. Other formal designations include "candidate" for listing or "species of special concern" by CDFW. The CNPS has its list of native plants considered rare, threatened, or endangered. Collectively these plants and animals are referred to as "special status species."

A thorough search of the CNDDB for published accounts of special status plant and animal species was conducted for the *Remnoy* 7.5-minute quadrangle that contains the APE in its entirety, and for the eight surrounding quadrangles: *Goshen, Traver, Burris Park, Laton, Hanford, Guernsey, Waukena, and Paige*. These species, and their potential to occur within the Project area are listed in **Table 1** and

Table 2 on the following pages. Raw data obtained from CNDDB is available in **Appendix B** at the end of this document. All relevant sources of information, as discussed in the Study Methodology section of this report (above), were used to determine if any special status species are known to be within the Project APEs. **Figure 2** shows the Project's 7.5-minute quadrangle, according to USGS Topographic Maps.

Table 1. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity

Species	Status	Habitat	Occurrence on Project Site
blunt-nosed leopard lizard *(Gambelia sila)*	FE, CE, CFP	Inhabits semi-arid grasslands, alkali flats, low foothills, canyon floors, large washes, and arroyos, usually on sandy, gravelly, or loamy substrate, sometimes on hardpan. Often found where there are abundant rodent burrows in dense vegetation or tall grass. Cannot survive on lands under cultivation. Known to bask on kangaroo rat mounds and often seeks shelter at the base of shrubs, in small mammal burrows, or in rock piles. Adults may excavate shallow burrows but rely on deeper pre-existing rodent burrows for hibernation and reproduction.	**Unlikely**. Agricultural activities onsite make the APE unsuitable for this species. The only regional recorded observation of this species occurred more than 30 years ago approximately 9.5 miles southwest of the APE in valley sink scrub habitat.
burrowing owl *(Athene cunicularia)*	CSC	Resides in open, dry annual or perennial grasslands, deserts, and scrublands with low growing vegetation. Nests underground in existing burrows created by mammals, most often ground squirrels.	**Unlikely**. The highly disturbed habitats of the APE and surrounding lands are unsuitable for this species. Nesting and foraging habitat is absent due to incompatible topography and/or vegetative cover. All regional recorded observations of this species have occurred within the vicinity of Cross Creek and Cameron Creek. At most, a burrowing owl individual could potentially pass over or through the site but would not be expected to nest or forage within or adjacent to proposed impact areas.

Species	Status	Habitat	Occurrence on Project Site
California tiger salamander *(Ambystoma californiense)*	FT, CT, CWL	Requires vernal pools or seasonal ponds for breeding and small mammal burrows for aestivation. Generally found in grassland and oak savannah plant communities in central California from sea level to 1500 feet in elevation.	**Absent**. The highly disturbed habitats of the APE and surrounding lands are unsuitable for this species. Wetland habitat suitable for breeding is absent from the APE and potential aestivation habitat is marginal.
loggerhead shrike *(Lanius ludovicianus)*	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the Central Valley, nests in riparian areas, desert scrub, and agricultural hedgerows.	**Unlikely**. Suitable nesting habitat is absent from the APE and surrounding lands. The only regional observation of this species occurred approximately 30 years ago in riparian habitat along Cottonwood Creek. At most, this species could occasionally fly over the APE.
San Joaquin kit fox *(Vulpes macrotis mutica)*	FE, CT	Underground dens with multiple entrances in alkali sink, valley grassland, and woodland in valleys and adjacent foothills.	**Unlikely**. The three nearest recorded observations of this species occurred more than 45 years ago. Although some populations of San Joaquin Kit Fox in other parts of California have adapted to an urbanized environment, modern kit fox occurrences are locally scarce. Presence of domestic dogs on site and lack of prey species makes this less than marginal habitat for this species. The APE is located approximately 50 miles east of the nearest known core population in Ciervo-Panoche Natural Area. At most, this species could conceivably pass through the Project area during dispersal movements.
Swainson's hawk *(Buteo swainsoni)*	CT	Nests in large trees in open areas adjacent to grasslands, grain or alfalfa fields, or livestock pastures suitable for supporting rodent populations.	**Possible**. Nesting habitat in the vicinity of Project activities is marginal for this species. A nest tree was observed less than a mile from the APE in 2016. Marginal foraging habitat is found throughout the region.

Species	*Status*	*Habitat*	*Occurrence on Project Site*
Tipton kangaroo rat *(Dipodomys nitratoides nitratoides)*	FE, CE	Burrows in soil. Often found in grassland and shrubland.	**Absent**. Suitable habitat for this species is absent from the APE and surrounding lands. The APE is outside the current known range of this species. The only two regional recorded observations of this species occurred in 1985, approximately 9 miles southwest of the APE in shrub-marsh habitat.
tricolored blackbird *(Agelaius tricolor)*	CT, CSC	Nests colonially near fresh water in dense cattails or tules, or in thickets of riparian shrubs. Forages in grassland and cropland. Large colonies are often found on dairy farm forage fields.	**Possible**. The Project is located within the historic and current breeding range of this species. Although there have been no recorded observations of this species in the past 20 years in the vicinity of the Project, the alfalfa fields on site and the surrounding area could serve as marginal foraging habitat. Higher quality habitat with less disturbance, however, is abundant in the region.
vernal pool fairy shrimp *(Branchinecta lynchi)*	FT	Occupies vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	**Absent**. Suitable vernal pool habitat for this species is absent from the APE and surrounding lands. The APE is subject to frequent ground disturbance and therefore generally unsuitable for this species.
vernal pool tadpole shrimp *(Lepidurus packardi)*	FE	Occurs in vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	**Absent**. Suitable vernal pool habitat for this species is absent from the APE and surrounding lands. The APE is subject to frequent ground disturbance and therefore generally unsuitable for this species.
western mastiff bat *(Eumops perotis californicus)*	CSC	Found in open, arid to semi-arid habitats, including dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces but may also use high buildings and tunnels.	**Unlikely**. Roosting and breeding habitat is absent from the APE and surrounding lands, but this species may occasionally forage over the Project site. The only recorded observation of this species in the vicinity corresponds to a historic (1899) collection from the general region of "Traver." The exact location is unknown.

Species	Status	Habitat	Occurrence on Project Site
western pond turtle *(Emys marmorata)*	CSC	An aquatic turtle of ponds, marshes, slow-moving rivers, streams, and irrigation ditches with riparian vegetation. Requires adequate basking sites and sandy banks or grassy open fields to deposit eggs.	**Unlikely**. The highly disturbed habitats of the Project area and fragmentation of the surrounding lands are unsuitable for this species. Typical preferred aquatic habitat is absent from the Project site, and terrestrial habitat is unsuitable due to frequent ground disturbance associated with agricultural production.
western spadefoot *(Spea hammondii)*	CSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Vernal pools or temporary wetlands, lasting a minimum of three weeks, which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	**Unlikely**. Vernal pools are absent from the APE. The disturbed habitats of the Project areas are generally unsuitable for this species. All recorded observations in the vicinity have occurred within vernal pools in undisturbed grassland habitat, with the majority located near Cross Creek and Cottonwood Creek approximately 7 miles northeast of the APE.

Table 2. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity

Species	Status	Habitat	Occurrence on Project Site
alkali-sink goldfields (*Lasthenia chrysantha*)	CNPS 1B	Found in vernal pool and wet saline flat habitats. Occurrences documented in the San Joaquin and Sacramento Valleys at elevations below 656 feet. Blooms February - April.	**Absent**. Vernal pool habitat is absent from APE and surrounding areas. The disturbed habitats and soils onsite are unsuitable for this species
brittlescale *(Atriplex depressa)*	CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in alkaline or clay soils, typically in meadows or annual grassland in at elevations below	**Absent**. The disturbed habitats and soils onsite are unsuitable for this species. There have been no observations of this species in the vicinity of the APE in over 50 years.

Species	*Status*	*Habitat*	*Occurrence on Project Site*
		1050 feet. Sometimes associated with vernal pools. Blooms June–October.	
California alkali grass *(Puccinellia simplex)*	CNPS 1B	Found in the San Joaquin Valley and other parts of California in saline flats and mineral springs within valley grassland and wetland-riparian communities at elevations below 3000 feet. Blooms March–May.	**Absent**. One occurrence of this species has been mapped within the APE, however the observation was made in 1942 with the location described as "2 Miles east of Hanford". The observation notes, "Possibly extirpated by development and agricultural conversion based on aerial imagery of the area". The disturbed habitats and soils onsite are unsuitable for this species.
Earlimart orache *(Atriplex cordulata var. erecticaulis)*	CNPS 1B	Found in the San Joaquin Valley in saline or alkaline soils, typically within valley and foothill grassland at elevations below 375 feet. Blooms August–September.	**Absent**. The disturbed habitats onsite are unsuitable for this species. The nearest observation of this species occurred approximately 8 miles south of the APE and is from a 1994 collection. When the site was surveyed in 2002, no observations of the species occurred. All other regional observations of this species have occurred in the vicinity of Cottonwood creek.
heartscale *(Atriplex cordulata var. cordulata)*	CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in saline or alkaline soils within shadescale scrub, valley grassland, and wetland-riparian communities at elevations below 230 feet. Blooms June–July.	**Absent.** The disturbed habitats onsite are unsuitable for this species. The only regional recorded observation of this species is from a historical collection dated 1938.
lesser saltscale *(Atriplex minuscula)*	CNPS 1B	Found in the San Joaquin Valley in sandy, alkaline soils in alkali scrub, valley and foothill grassland, and alkali sink communities at elevations below 750 feet. Blooms April–October.	**Absent**. The disturbed habitats onsite are unsuitable for this species. All regional recorded observations of this species have occurred in vernal pool habitat or alkali grasslands, both of which are absent from the APE and surrounding area.

Species	Status	Habitat	Occurrence on Project Site
Mud nama (*Nama stenocarpa*)	CNPS 2B	Found in the San Joaquin Valley and throughout southern California, this species grows in wetland habitats including marshes, swamps, and river banks. Occurs at elevations below 2660 feet. Blooms March – October.	**Absent**. Suitable wetland habitat is absent from the APE. The only regional observation of this species is mapped approximately 8.5 miles south of the APE and occurred in a flood control channel.
recurved larkspur *(Delphinium recurvatum)*	CNPS 1B	Occurs in poorly drained, fine, alkaline soils in grassland and alakli scrub communities at elevations between 100 feet and 2600 feet. Blooms March–June.	**Absent**. The disturbed habitats and soils onsite are unsuitable for this species. The only regional observation of this species is from a historical collection dated 1914 and is mapped in the general area of "Guernsey".
subtle orache *(Atriplex subtilis)*	CNPS 1B	Found in the San Joaquin Valley in saline depressions in alkaline soils within valley and foothill grassland communities at elevations below 330 feet. Blooms June–October.	**Absent**. The disturbed habitats onsite are unsuitable for this species. The nearest recorded observation of this species occurred more than 25 years ago in the vicinity of Cross Creek. One regional observation of this species lists it as "Possibly Extirpated" from the area.

EXPLANATION OF OCCURRENCE DESIGNATIONS

Present:	Species observed on the site at time of field surveys or during recent past
Likely:	Species not observed on the site, but it may reasonably be expected to occur there on a regular basis
Possible:	Species not observed on the site, but it could occur there from time to time
Unlikely:	Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient
Absent:	Species not observed on the site, and precluded from occurring there due to absence of suitable habitat

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
CCT	California Threatened (Candidate)	CFP	California Fully Protected
CSC	California Species of Special Concern	CWL	California Watch List
CR	California Rare		

CNPS RARE PLANT RANKS

1B	Plants Rare, Threatened, or Endangered in California and elsewhere
2B	Plants Rare, Threatened, or Endangered in California but more common elsewhere

III. Impacts and Mitigation

Significance Criteria

CEQA

General plans, area plans, and specific projects are subject to the provisions of CEQA. The purpose of CEQA is to assess the impacts of proposed projects on the environment prior to project implementation. Impacts to biological resources are just one type of environmental impact assessed under CEQA and vary from project to project in terms of scope and magnitude. Projects requiring removal of vegetation may result in the mortality or displacement of animals associated with this vegetation. Animals adapted to humans, roads, buildings, and pets may replace those species formerly occurring on a site. Plants and animals that are State and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. Such impacts may be considered either "significant" or "less than significant" under CEQA. According to CEQA, Statute and Guidelines (AEP 2012), "significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered "significant" if they would:

- 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 CDFW or USFWS;
- 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 CDFW or USFWS;
- 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;
- 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.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) states that a project may trigger the requirement to make a "mandatory finding of significance" if the project has 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 an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory."

Relevant Goals, Policies, and Laws

General Plan

The Kings County General Plan sets forth the following goals and policies that protect biological resources and which have potential relevance to the Project's environmental review:

Resource Conservation Element

C. Soil Resources

RC GOAL C2: Encourage soil conservation and management practices that maintain the productivity of prime soils throughout the County.

RC Objective C2.2: Ensure that land use decisions are compatible with the control of soil erosion and the maintenance of soil quality.

> RC Policy C2.2.1: Require erosion control measures for any development involving construction or grading near waterways, or on land with slopes over ten percent. Require that improvements such as roads and driveways be designed to retain natural vegetation and topography to the extent feasible.

D. Natural Plant and Animal Habitats

RC GOAL D1: Preserve land that contains important natural plant and animal habitats.

RC OBJECTIVE D1.1: Require that development in or adjacent to important natural plant and animal habitats minimize the disruption of such habitats.

> RC Policy D1.1.1: Evaluate all discretionary land use applications in accordance with the screening procedures contained in the Biological Resources Survey located in Appendix C. If the results of the project screening indicates the potential for important biological resources to exist on the site a biological evaluation (consistent with Appendix C) shall be performed by a qualified biologist. If the evaluation indicates that the project could have a significant adverse impact, mitigation shall be required or the project will be redesigned to avoid such impacts. Mitigation shall be provided consistent with the California Environmental Quality Act (CEQA), and applicable state and federal guidelines as appropriate. Mitigation may include habitat improvement or protection, acquisition of other habitat, or payment to an appropriate agency to purchase, improve, or protect such habitat. Resource Conservation Element RC Policy

> D1.1.2: Require project applicants to consult with the California Department of Fish and Game and the United States Fish and Wildlife Service and to obtain appropriate authority for any such take pursuant to Endangered Species Act requirements if new development or other actions are likely to result in incidental take of any threatened or endangered species.

RC GOAL D2: Maintain the quality of existing natural wetland areas as required by the California Department of Fish and Game, the United States Fish and Wildlife Service and the United States Army Corp of Engineers.

E. Threatened and Endangered Species

RC GOAL E1: Balance the protection of the County's diverse plant and animal communities with the County's economic needs.

RC Objective E1.1: Require mitigation measures to protect important plant and wildlife habitats.

RC Policy E1.1.1: Complete the inquiry process outlined in Appendix C in the initial project review for development permits to determine whether the project is likely to have a significant adverse impact on any threatened or endangered species habitat locations, and to assure appropriate consideration of habitat preservation by development. Maintain current copies of California Department of Fish and Game and United States Fish and Wildlife Service maps showing locations of known threatened and endangered species habitat. If shown to be necessary, require the developer to consult with the California Department of Fish and Game, the United States Fish and Wildlife Service, and the United States Army Corps of Engineers as to potential impacts, appropriate mitigation measures, and required permits.

RC Policy E1.1.2: Require as a primary objective in the review of development projects the preservation of healthy native oaks and other healthy native trees.

RC Policy E1.1.3: Maintain to the maximum extent practical the natural plant communities utilized as habitat by threatened and endangered species (see Appendix C for a listing and map of these plant communities).

Threatened and Endangered Species

Permits may be required from the USFWS and/or CDFW if activities associated with a project have the potential to result in the "take" of a species listed as threatened or endangered under the federal and/or state Endangered Species Acts. Take is defined by the State of California as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Game Code, Section 86). Take is more broadly defined by the federal Endangered Species Act to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3). CDFW and USFWS are responsible agencies under CEQA and National Environmental Policy Act (NEPA). Both agencies review CEQA and NEPA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

Designated Critical Habitat

When species are listed as threatened or endangered, the USFWS often designates areas of "Critical Habitat" as defined by section 3(5)(A) of the federal Endangered Species Act (ESA). Critical Habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical Habitat is a tool that supports the continued conservation of imperiled species by guiding cooperation with the federal government. Designations only affect federal agency actions or federally funded or permitted activities. Critical Habitat does not prevent activities that occur within the designated area. Only activities that involve a federal permit, license, or funding and are likely to destroy or adversely modify Critical Habitat will be affected.

Migratory Birds

The Federal Migratory Bird Treaty Act (MBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the U.S. is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all bird's native to the U.S., even those that are non-migratory. The MBTA encompasses whole birds, parts of birds, and bird nests and eggs. Additionally, California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the MBTA (Section 3513), as well as any other native non-game bird (Section 3800).

Birds of Prey

Birds of prey are protected in California under provisions of Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

Nesting Birds

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto.". Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of "take" by the CDFW.

Wetlands and other "Jurisdictional Waters"

Natural drainage channels and adjacent wetlands may be considered "waters of the United States." or "jurisdictional waters" subject to the jurisdiction of the USACE. The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. As of April 2020, jurisdictional waters generally include:

- The territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide;
- Traditional Navigable Waters: Perennial and Intermittent tributaries that contain surface water flow to such waters;
- Lake and ponds, and impoundments of jurisdictional waters; and
- Wetlands adjacent to jurisdictional waterways.

On June 22, 2020 the U.S. Environmental Protection Agency (EPA) and the U.S. Department of the Army (Army or Corps) (together, ''the agencies'') published the Navigable Waters Protection Rule defining the scope of waters subject to federal regulation under the Clean Water Act (CWA or the Act). In this final rule, the agencies interpret the term ''waters of the United States'' to encompass: The territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters.

The USACE regulates the filling or grading of Waters of the United States. under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by "ordinary high-water marks" on opposing channel banks. All activities that involve the discharge of dredge or fill material into Waters of the United States are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that results in no net loss of wetland functions or values. No permit can be issued until the RWQCB issues a Section 401 Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet State water quality standards.

Under the Porter-Cologne Water Quality Control Act of 1969, the SWRCB has regulatory authority to protect the water quality of all surface water and groundwater in the State of California ("Waters of the State"). Nine RWQCBs oversee water quality at the local and regional level. The RWQCB for a given region regulates discharges of fill or pollutants into Waters of the State through the issuance of various permits and orders. Discharges into Waters of the State that are also Waters of the United States require a Section 401 Water Quality Certification from the RWQCB as a prerequisite to obtaining certain federal permits, such as a Section 404 Clean Water Act permit. Discharges into all Waters of the State, even those that are not also Waters of the United States., require Waste Discharge Requirements (WDRs), or waivers of WDRs, from the RWQCB. The RWQCB also administers the Construction Storm Water Program and the federal National Pollution Discharge Elimination System (NPDES) program. Projects that disturb one acre or more of soil must obtain a Construction General Permit under the Construction Storm Water Program. A prerequisite for this permit is the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. Projects that discharge wastewater, storm water, or other pollutants into a Water of the United States. may require a NPDES permit.

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code. Activities that may substantially modify such waters through the diversion or obstruction of their natural flow, change or use of any material from their bed or bank, or the deposition of debris require a notification of a Lake or Streambed Alteration. If CDFW determines that the activity may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. Such an agreement typically stipulates that certain measures will be implemented to protect the habitat values of the lake or drainage in question.

Potentially Significant Project-Related Impacts and Mitigation

Species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations by CDFW or USFWS that have the potential to be impacted by the Project are identified below with corresponding mitigation measures.

Project-Related Mortality and/or Disturbance of Nesting Raptors, Migratory Birds, and Special Status Birds (Including Swainson's Hawk).

Portions of the site contain marginal foraging habitat for several avian species, including the Swainson's hawk and tricolored blackbird. Suitable nesting trees were observed within the vicinity of the Project APE including large eucalyptus trees. Smaller avian species may nest within ornamental trees and shrubs in residential backyards. Ground nesting birds such as the killdeer could nest on the bare ground or compacted dirt roads onsite.

Swainson's hawks are common in this portion of Kings County, and there are multiple known nest trees within five miles of the APE. In the absence of preferred habitat, especially within the Central Valley, Swainson's hawks often nest within eucalyptus trees lining highways, and several raptor species nest within ornamental Mexican fan palms. Although nesting habitat onsite and in the vicinity is not ideal due to the absence of native riparian trees, and suboptimal foraging habitat , raptors, such as the special status Swainson's hawk could conceivably nest or forage near the APE. In the event that a Swainson's hawk or other avian species is foraging within the site during construction activities, the individual would be expected to fly away from disturbance they encounter, subsequently eliminating the risk of injury or mortality while foraging. Birds nesting within the site or on the ground could be injured or killed by Project activities. Furthermore, construction activities could disturb birds nesting within or adjacent to work areas, resulting in nest abandonment. Construction activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of State and federal laws and are considered a significant impact under CEQA.

The APE is located within the historic and current distribution range for the special status tricolored blackbird. However, tricolored blackbirds are nearly extirpated from Kings County and very few sites have recently been occupied by a breeding colony in any given year. While suitable breeding habitat was not observed at the time of the field survey or during any of the site visits, the agricultural field onsite could be utilized for a as foraging habitat for this species. Although it seems unlikely, if a breeding colony of tricolored blackbirds were present within the field planned for construction, nests could be disturbed or destroyed, resulting in nest abandonment and reproductive failure.

As previously mentioned, due to the ruderal nature of the lands, nesting and foraging habitat for raptors, resident and migratory birds, and special status birds within the APE is marginal, at best. Habitat of higher foraging and nesting value is regionally abundant. Therefore, the development resulting from implementation of the Project would not be considered a significant loss of foraging or nesting habitat under CEQA.

Nesting bird season is generally accepted as February 1 through August 31; however, Swainson's hawk nesting season is generally accepted as March 1 through September 15. For simplicity, these timeframes have been combined.

Implementation of the following measures would reduce potential impacts to nesting raptors, migratory birds, and special status birds, including Swainson's hawk and tricolored blackbird to a less than significant level under CEQA, and would ensure compliance with State and federal laws protecting these avian species.

Mitigation: *The following measures will be implemented prior to the start of construction:*

> ***Mitigation Measure NEST-1a (Avoidance):*** The Project's construction activities shall occur, if feasible, between September 16 and January 31 (outside of nesting bird season) in an effort to avoid impacts to nesting birds.
>
> ***Mitigation Measure NEST-1b (Pre-construction Surveys):*** If activities must occur within nesting bird season (February 1 to September 15), a qualified biologist shall conduct pre-construction surveys for Swainson's hawk nests onsite and within a 0.5-mile radius. These surveys will be conducted in accordance with the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee, 2000) or current guidance. In addition to the focused Swainson's hawk surveys, a qualified biologist shall conduct a pre-

construction survey for all other nesting birds within 14 days prior to the start of construction. The survey shall include the proposed work area and surrounding lands within 50 feet. All raptor nests will be considered "active" upon the nest-building stage.

Mitigation Measure NEST-1c (Establish Buffers): On discovery of any active nests near work areas, the biologist shall determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. Specifically, a 0.5-mile disturbance-free buffer shall be implemented around active Swainson's hawk nests. Construction buffers shall be identified with flagging, fencing, or other easily visible means, and shall be maintained until the biologist has determined that the nestlings have fledged and are no longer dependent on the nest.

Mitigation Measure WEAP-1d (WEAP Training): On discovery of any special status bird species, all personnel associated with Project construction shall attend mandatory Worker Environmental Awareness Program (WEAP) training, conducted by a qualified biologist, prior to initiating construction activities (including staging and mobilization). The specifics of this program shall include identification of the special status species and suitable habitats, a description of the regulatory status and general ecological characteristics of the species, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information, along with photographs or illustrations of the special status species, shall also be prepared for distribution to all contractors, their employees, and all other personnel involved with construction of the Project. All employees shall sign a form documenting that they have attended WEAP training and understand the information presented to them.

Less than Significant Project-Related Impacts

Project-Related Impacts to Special Status Animal Species Absent From, or Unlikely to Occur on, the Project Site

Of the 13 regionally occurring special status species, 11 are considered absent from or unlikely to occur within the Project area due to past or ongoing disturbance and/or the absence of suitable habitat. As explained in Table 1, the following species were deemed absent from the APE: California tiger salamander, Tipton kangaroo rat, vernal pool fairy shrimp, and vernal pool tadpole shrimp, and the following species were deemed unlikely to occur within the APE: blunt-nosed leopard lizard, burrowing owl, loggerhead shrike, San Joaquin kit fox, western mastiff bat, western pond turtle, and western spadefoot. Therefore, implementation of the Project would have no impact on these ten special status species through construction mortality, disturbance, or loss of habitat. Mitigation measures are not warranted. The remaining three species were not observed during the field survey but may possibly use the site for nesting or foraging. Appropriate mitigation measures to be implemented are discussed above.

Project-Related Impacts to Special Status Plant Species

Nine of the special status plant species which have been documented in the Project vicinity are considered absent from the APE area due to past or ongoing disturbance and/or the absence of suitable habitat. As explained in

Table 2, the following species were deemed absent from the Project site: alkali-sink goldfields, brittlescale, California Alkali grass, Earilmart orache, heartscale, lesser saltscale, mud nama, recurved larkspur, and subtle orache. Therefore, the implementation of the Project would have no effect on individual plants or regional populations of these special status plant species. Mitigation measures are not warranted.

Project-Related Impacts to Riparian Habitat and Natural Communities of Special Concern

There are no CNDDB-designated "natural communities of special concern" recorded within the Project area or surrounding lands. The Project site consists of agricultural fields and cattle operations.

A review of historical aerial imagery shows that the APE has been dominated by agricultural operations for at least the last 35 years. Processing facilities have been developed in the northern portion of the APE over time with major expansions happening before 2003 and around 2016. Currently, there are no natural lakes or streams onsite. Furthermore, the site is flanked by intensively cultivated agricultural lands. Undoubtedly, some native wildlife species use the Project area in the absence of preferred habitat. However, because of the aforementioned disturbance, the Project area represents relatively low-quality habitat for native plants and animals.

Project-Related Impacts to Regulated Waters, Wetlands, and Water Quality.

The Project does not involve alterations to the existing man-made canal, Lakeside Ditch. For these reasons, implementation of the Project will not have a significant impact on regulated waters, wetlands, or water quality.

Project-Related Impacts to Wildlife Movement Corridors and Native Wildlife Nursery Sites.

The Project area is flanked by intensively cultivated agricultural lands, residential development, and paved roads. Therefore, the Project area does not contain features that would be likely to function as a wildlife movement corridor. Furthermore, the Project is located in a region often disturbed by intensive agricultural cultivation practices and human disturbance which would discourage dispersal and migration. At most, domestic dogs, coyotes, and common gray foxes may utilize the canal banks to travel between agricultural lands while foraging nocturnally. The Project does not propose the removal of the canal banks, and outside of construction hours and after construction completion, these species would continue to travel along the banks of the Lakeside ditch canal. For these reasons, implementation of the Project will not have a significant impact on wildlife movement corridors. Potential impacts to migratory birds and nesting birds has been discussed in detail above, and no additional mitigation is warranted.

Project-Related Impacts to Critical Habitat.

Designated critical habitat is absent from the Project area and surrounding lands. Therefore, there will be no impact to critical habitat, and mitigation is not warranted.

Local Policies or Habitat Conservation Plans.

The Project appears to be consistent with the goals and policies of the Kings County General Plan. There are no known habitat conservation plans (HCPs) or a natural Community Conservation Plan (NCCP) in the Project vicinity. Mitigation is not warranted.

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Appendix A: Study Area Photos

CENTRAL VALLEY MEAT CO.

CENTRAL VALLEY MEAT FACILITY PROJECT

Photograph 1

Overview of the 80 acre field on the southern portion of the APE. Electrical fencing is visible in the foreground.

Photograph 2

Overview of Lakeside ditch where is passes through the APE.

Photograph 3

Overview of the 80-acre field from the northeast corner.

Photograph 4

Overview of the dairy lagoon and refuse area of the APE.

Photograph 5

Overview of a walnut tree located south of the current Central Valley Meat Co. facility, and north of the 80-acre field. A crow is visible in the top of the tree.

Photograph 6

Dead cattle egrets and a crow located underneath the walnut tree.

Photograph 7

One of the 80-acre field from the southwest corner of the APE.

Photograph 8

Overview of the dairy lagoons on site.

Photograph 9

Overview of the refuse piles adjacent to the lagoons. Great egrets are visible in the background.

Photograph 10

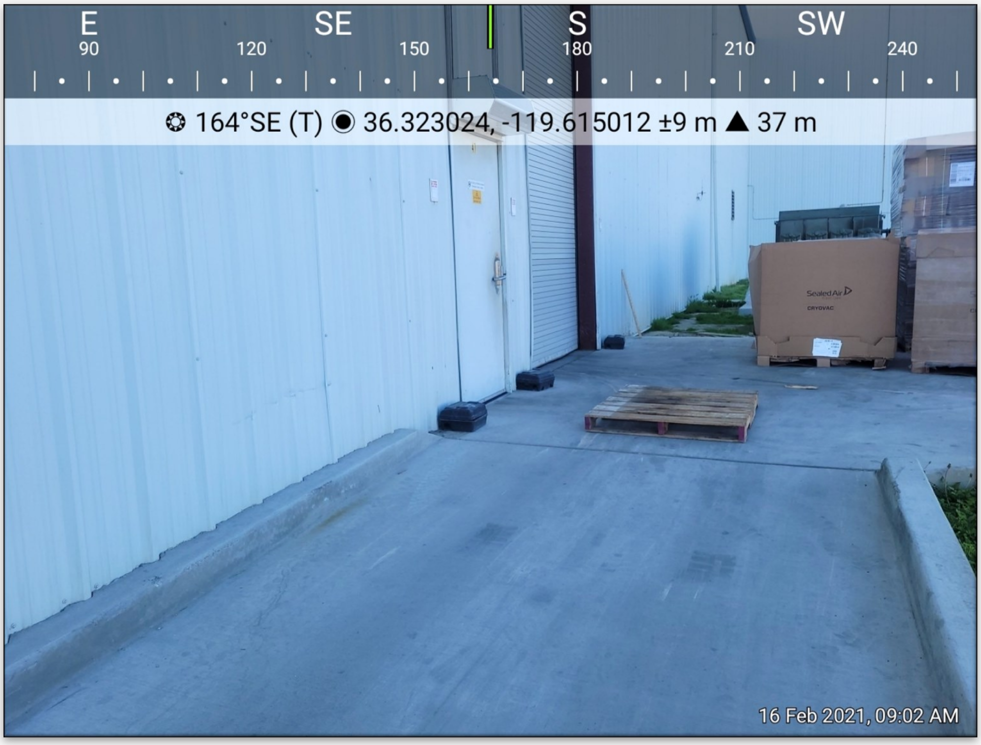
Overview of the slated chain link fencing with razor wire on the eastern perimeter of the current Central Valley Meat Co. facility.

Photograph 11

Overview of the refuse piles adjacent to the lagoons. The Central Valley Meat Co. facility buildings are visible in the background.

Photograph 12

Overview of the current Central Valley Meat Co. facility.



Photograph 13

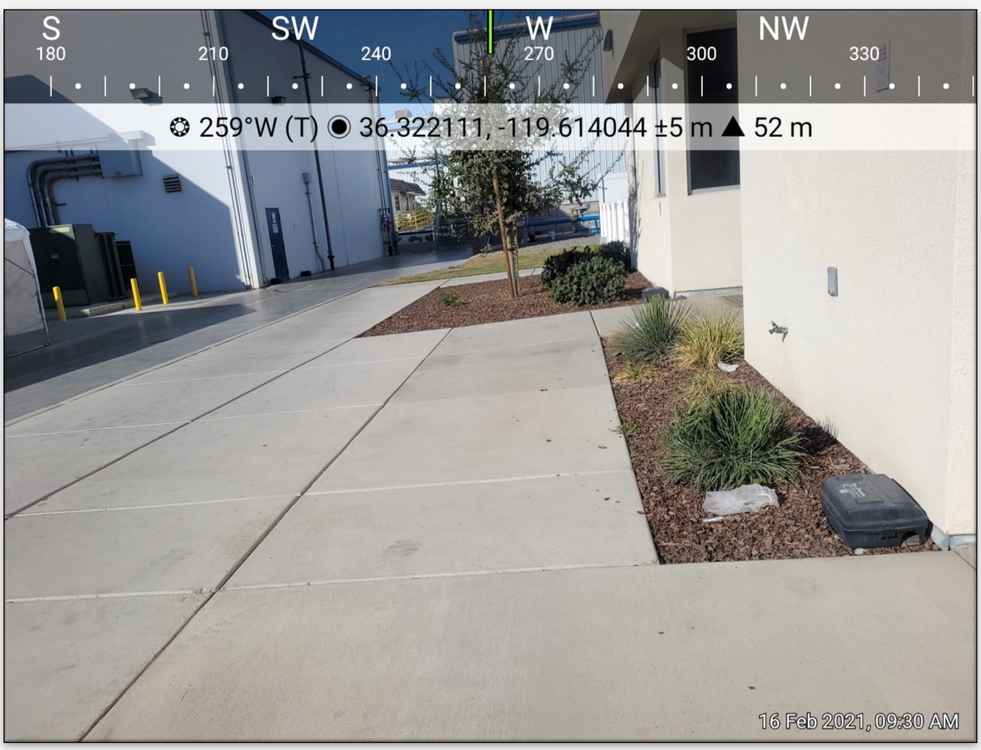
Three rodent bait traps located within the Central Valley Meat Co. facility.

Photograph 14

Overview of the residential lot located within the APE. An inactive raptor nest is visible in the background.

Photograph 15

Overview of the border between the 80-acre field and the current Central Valley Meat Co. facility.



Photograph 16

Overview of the office buildings located within the Central valley Meat Co. facility. Rodent bait traps and ornamental shrubs and trees are visible.

Appendix B: CNDDB Quad Search

CENTRAL VALLEY MEAT CO.

CENTRAL VALLEY MEAT FACILITY PROJECT

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Remnoy (3611935) OR Goshen (3611934) OR Traver (3611944) OR Burris Park (3611945) OR Laton (3611946) OR Hanford (3611936) OR Guernsey (3611926) OR Waukena (3611925) OR Paige (3611924))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alkali-sink goldfields *Lasthenia chrysantha*	PDAST5L030	None	None	G2	S2	1B.1
blunt-nosed leopard lizard *Gambelia sila*	ARACF07010	Endangered	Endangered	G1	S1	FP
brittlescale *Atriplex depressa*	PDCHE042L0	None	None	G2	S2	1B.2
burrowing owl *Athene cunicularia*	ABNSB10010	None	None	G4	S3	SSC
California alkali grass *Puccinellia simplex*	PMPOA53110	None	None	G3	S2	1B.2
California linderiella *Linderiella occidentalis*	ICBRA06010	None	None	G2G3	S2S3	
California tiger salamander *Ambystoma californiense*	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
Earlimart orache *Atriplex cordulata var. erecticaulis*	PDCHE042V0	None	None	G3T1	S1	1B.2
heartscale *Atriplex cordulata var. cordulata*	PDCHE040B0	None	None	G3T2	S2	1B.2
hoary bat *Lasiurus cinereus*	AMACC05030	None	None	G3G4	S4	
lesser saltscale *Atriplex minuscula*	PDCHE042M0	None	None	G2	S2	1B.1
loggerhead shrike *Lanius ludovicianus*	ABPBR01030	None	None	G4	S4	SSC
mud nama *Nama stenocarpa*	PDHYD0A0H0	None	None	G4G5	S1S2	2B.2
Northern Claypan Vernal Pool *Northern Claypan Vernal Pool*	CTT44120CA	None	None	G1	S1.1	
recurved larkspur *Delphinium recurvatum*	PDRAN0B1J0	None	None	G2?	S2?	1B.2
San Joaquin kit fox *Vulpes macrotis mutica*	AMAJA03041	Endangered	Threatened	G4T2	S2	
San Joaquin tiger beetle *Cicindela tranquebarica joaquinensis*	IICOL0220E	None	None	G5T1	S1	
subtle orache *Atriplex subtilis*	PDCHE042T0	None	None	G1	S1	1B.2
Swainson's hawk *Buteo swainsoni*	ABNKC19070	None	Threatened	G5	S3	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Tipton kangaroo rat *Dipodomys nitratoides nitratoides*	AMAFD03152	Endangered	Endangered	G3T1T2	S1S2	
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Valley Sacaton Grassland *Valley Sacaton Grassland*	CTT42120CA	None	None	G1	S1.1	
vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened	None	G3	S3	
vernal pool tadpole shrimp *Lepidurus packardi*	ICBRA10010	Endangered	None	G4	S3S4	
western mastiff bat *Eumops perotis californicus*	AMACD02011	None	None	G4G5T4	S3S4	SSC
western pond turtle *Emys marmorata*	ARAAD02030	None	None	G3G4	S3	SSC
western spadefoot *Spea hammondii*	AAABF02020	None	None	G3	S3	SSC

Record Count: 27

Appendix C: NRCS Soils Report

CENTRAL VALLEY MEAT CO.

CENTRAL VALLEY MEAT FACILITY PROJECT

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

Kings County, California

February 25, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:6,630 if printed on A portrait (8.5" x 11") sheet.

Meters: 0, 50, 100, 200, 300

Feet: 0, 300, 600, 1200, 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kings County, California
Survey Area Data: Version 16, May 29, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 17, 2019—Mar 24, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
130	Kimberlina fine sandy loam, saline-alkali	93.7	74.5%
131	Kimberlina fine sandy loam, sandy substratum	32.1	25.5%
Totals for Area of Interest		**125.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Kings County, California

130—Kimberlina fine sandy loam, saline-alkali

Map Unit Setting

National map unit symbol: hhjh
Elevation: 190 to 3,500 feet
Mean annual precipitation: 4 to 8 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 210 to 300 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Kimberlina and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kimberlina

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from igneous and sedimentary rock

Typical profile

Ap - 0 to 8 inches: fine sandy loam
C - 8 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 25.0
Available water capacity: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Wasco

Percent of map unit: 2 percent

Hydric soil rating: No

Kimberlina, sandy substratum

Percent of map unit: 2 percent
Hydric soil rating: No

Excelsior

Percent of map unit: 2 percent
Hydric soil rating: No

Nord

Percent of map unit: 2 percent
Hydric soil rating: No

Yound

Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, rare flooding

Percent of map unit: 1 percent
Landform: Sloughs
Hydric soil rating: Yes

Garces

Percent of map unit: 1 percent
Hydric soil rating: No

Melga

Percent of map unit: 1 percent
Hydric soil rating: No

Remnoy

Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, rare flooding

Percent of map unit: 1 percent
Hydric soil rating: No

Cajon

Percent of map unit: 1 percent
Hydric soil rating: No

131—Kimberlina fine sandy loam, sandy substratum

Map Unit Setting

National map unit symbol: hhjj
Elevation: 250 to 3,500 feet
Mean annual precipitation: 7 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 255 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Kimberlina and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kimberlina

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from igneous and sedimentary rock

Typical profile

Ap - 0 to 8 inches: fine sandy loam
C - 8 to 41 inches: fine sandy loam
2C - 41 to 60 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water capacity: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Nord

Percent of map unit: 3 percent
Hydric soil rating: No

Cajon

Percent of map unit: 3 percent
Hydric soil rating: No

Kimberlina, saline alkali

Percent of map unit: 3 percent
Hydric soil rating: No

Excelsior

Percent of map unit: 3 percent
Hydric soil rating: No

Unnamed, rare flooding

Percent of map unit: 1 percent
Landform: Sloughs
Hydric soil rating: Yes

Wasco

Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, rare flooding

Percent of map unit: 1 percent
Hydric soil rating: No

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Appendix C

Cultural Resources Information

Cultural Resources Information
Central Valley Meat Company Facility Project

Southern San Joaquin Valley Information Center, CSU Bakersfield, California Historical Resources Information System: Record Search 20-304, dated August 31, 2020.

- There have been no previous cultural resource studies conducted within the project area
- There have been six cultural resource studies conducted within the one-half mile radius, KI-00023, KI-00028, KI-00109, KI-00110, KI-00111, and KI-00315.
- There is one recorded resource within the project area, P-16-000086, Lakeside Ditch. It is unknown if any other resources exist there. There is one recorded resource within the one-half mile radius, P-16-000122, an historic era railroad.
- There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.
- No existing historical archaeological resources will be impacted by the project.

Native American Heritage Commission (NAHC): Sacred Lands File & Native American Contacts List Request, dated August 21, 2020.

- A Record Search of the NAHC Sacred Lands File was completed for the Area of Potential Effect (APE) with negative results.
- A list of six tribes was provided, and letters to the six tribes were then mailed out August 28, 2020.
- No additional responses or additional cultural information were received.

AB 52 Consultation pursuant to Public Resource Code Section 21080.3.1

- Kings County, as a public lead agency has received a formal request for notification from the Santa Rosa Rancheria Tachi Yokut Tribe, pursuant to AB 52.
- The County sent a consultation notice to the tribe January 19, 2021 and no response was received.

California
Historical
Resources
Information
System

Fresno
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley Information Center
California State University, Bakersfield
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

To: Briza Sholars
Provost & Pritchard Consulting Group
286 W. Cromwell Avenue
Fresno, CA 93711

Record Search 20-304

Date: August 31, 2020

Re: Central Valley Meat Co., Inc. Consulting Services for the Proposed California Rendering Plant, Hanford, CA.

County: Kings

Map(s): Remnoy 7.5’

CULTURAL RESOURCES RECORDS SEARCH

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System’s (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP’s regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, the OHP Built Environment Resources Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the OHP are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

According to the information in our files, there have been no previous cultural resource studies conducted within the project area. There have been six studies conducted within the one-half mile radius, KI-00023, KI-00028, KI-00109, KI-00110, KI-00111, and KI-00315.

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

There is one recorded resource within the project area, P-16-000086, Lakeside Ditch. It is unknown if any other resources exist there. There is one recorded resource within the one-half mile radius, P-16-000122, an historic era railroad.

There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

COMMENTS AND RECOMMENDATIONS

We understand this project consists of expansion to an existing meat processing facility, which includes construction of new structures and expansion of existing structures. Because a cultural resources study has not been conducted on this property, it is unknown if any exist there. If ground disturbance will take place on property that is currently vacant and has not been previously developed, then we recommend a qualified, professional consultant first conduct a field survey to determine if any cultural resources are present. If any existing structures more than 45 years old will be affected by project activities, then we recommend the structures first be recorded and evaluated for historical significance prior to alteration or demolition. If ground disturbance activities will take place on property that has already been developed and no structures more than 45 years old will be affected, then no further cultural resource investigation is recommended at this time. However, if cultural resources are unearthed during ground disturbance activities, all work must halt in the area of the find and a qualified, professional consultant should be called out to assess the findings and make the appropriate mitigation recommendations. A list of qualified consultants can be found at www.chrisinfo.org.

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:

Celeste M. Thomson, Coordinator **Date**: August 31, 2020

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

August 21, 2020

Briza Sholars

Provost & Pritchard Consulting Group

Via Email to: BSholars@ppeng.com

Re: Central Valley Meat Project, Kings County

Dear Ms. Sholars:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez

Nancy Gonzalez-Lopez
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contacts List
August 21, 2020

Kings River Choinumni Farm Tribe
Stan Alec
3515 East Fedora Avenue
Fresno ,CA 93726
(559) 647-3227 Cell
Foothill Yokuts
Choinumni

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas ,CA 93906
kwood8934@aol.com
(831) 443-9702
Foothill Yokuts
Mono
Wuksache

Santa Rosa Rancheria Tachi Yokut Tribe
Leo Sisco, Chairperson
P.O. Box 8
Lemoore ,CA 93245
(559) 924-1278
(559) 924-3583 Fax
Tache
Tachi
Yokut

Table Mountain Rancheria
Leanne Walker-Grant, Chairperson
P.O. Box 410
Friant ,CA 93626
rpennell@tmr.org
(559) 822-2587
(559) 822-2693 Fax
Yokuts

Table Mountain Rancheria
Bob Pennell, Cultural Resources Director
P.O. Box 410
Friant ,CA 93626
rpennell@tmr.org
(559) 325-0351
(559) 325-0394 Fax
Yokuts

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589
Porterville ,CA 93258
neil.peyron@tulerivertribe-nsn.gov
(559) 781-4271
(559) 781-4610 Fax
Yokuts

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans Tribes for the proposed:
Central Valley Meat Project, Kings County.

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CONSULTING GROUP
An Employee Owned Company

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700
Fax: (559) 449-2715
www.ppeng.com

August 28, 2020

Kings River Choinumni Farm Tribe
Attn: Stan Alec
3515 East Fedora Ave
Fresno, CA 93726

RE: Central Valley Meat Co., Inc. Consulting Services for proposed Rendering Plant in Hanford, CA

Dear Mr. Alec:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Central Valley Meat Co., Inc. Consulting Services for the Proposed Rendering Plant, Hanford, CA.

The proposed project is a processing facility (new and expanding) consisting of: 1) Rendering Plant – New receiving, processing, finished goods storage, shop and welfare facilities; 2) Dry Storage – Expansion; 3) Processing Plant – Expansion; 4) Hide House – New with future brine evaporation pond; 5) Parking; 6) Wastewater Pretreatment; 7) New Entrance - From Hanford-Armona Road; 8) Cooler/Freezer – New 200,000 sf facility with employee/visitor parking, truck wash, refueling stations, security building, mechanical areas, and side yards. The project will be on approximately 125.78 acres, addressed as 10431 8 ¾ Avenue, in Kings County, APN 016-060-014, (33.45 acres) APN 016-060-024, (13.85 acres) and APN 016-060-012, (78.48 acres).

Provost and Pritchard Consulting Group has requested a records search of the California Historic Resources Information System from the Southern San Joaquin Valley Information Center to identify any cultural resources within or adjacent to the Project Area. A search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed with negative results. The NAHC provided your name and address as a tribal contact that is culturally affiliated to the project area. If you have any information that you wish to share, or have questions or would like more information about the project, please do not hesitate to contact me by phone (559) 449-2700, email (bsholars@ppeng.com), or send a letter to my attention. I would appreciate any information you might provide to assist us with our inventory efforts.

Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

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Fresno, CA 93711-6162
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Fax: (559) 449-2715
www.ppeng.com

August 28, 2020

Santa Rosa Rancheria Tachi Yokut Tribe
Attn: Leo Sisco, Chairperson
P.O. Box 8
Lemoore CA 93245

RE: Central Valley Meat Co., Inc. Consulting Services for proposed Rendering Plant in Hanford, CA

Dear Mr. Sisco:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Central Valley Meat Co., Inc. Consulting Services for the Proposed Rendering Plant, Hanford, CA.

The proposed project is a processing facility (new and expanding) consisting of: 1) Rendering Plant – New receiving, processing, finished goods storage, shop and welfare facilities; 2) Dry Storage – Expansion; 3) Processing Plant – Expansion; 4) Hide House – New with future brine evaporation pond; 5) Parking; 6) Wastewater Pretreatment; 7) New Entrance - From Hanford-Armona Road; 8) Cooler/Freezer – New 200,000 sf facility with employee/visitor parking, truck wash, refueling stations, security building, mechanical areas, and side yards. The project will be on approximately 125.78 acres, addressed as 10431 8 ¾ Avenue, in Kings County, APN 016-060-014, (33.45 acres) APN 016-060-024, (13.85 acres) and APN 016-060-012, (78.48 acres).

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Fresno, CA 93711-6162
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Fax: (559) 449-2715
www.ppeng.com

August 28, 2020

Tule River Indian Tribe
Attn: Neil Pevron, Chairperson
PO Box 589
Porterville, CA 93258

RE: Central Valley Meat Co., Inc. Consulting Services for proposed Rendering Plant in Hanford, CA

Dear Mr. Pevron:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Central Valley Meat Co., Inc. Consulting Services for the Proposed Rendering Plant, Hanford, CA.

The proposed project is a processing facility (new and expanding) consisting of: 1) Rendering Plant – New receiving, processing, finished goods storage, shop and welfare facilities; 2) Dry Storage – Expansion; 3) Processing Plant – Expansion; 4) Hide House – New with future brine evaporation pond; 5) Parking; 6) Wastewater Pretreatment; 7) New Entrance - From Hanford-Armona Road; 8) Cooler/Freezer – New 200,000 sf facility with employee/visitor parking, truck wash, refueling stations, security building, mechanical areas, and side yards. The project will be on approximately 125.78 acres, addressed as 10431 8 ¾ Avenue, in Kings County, APN 016-060-014, (33.45 acres) APN 016-060-024, (13.85 acres) and APN 016-060-012, (78.48 acres).

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August 28, 2020

Table Mountain Rancheria
Attn: Bob Pennell, Cultural Resources Director
P.O. Box 410
Friant CA 93626

RE: Central Valley Meat Co., Inc. Consulting Services for proposed Rendering Plant in Hanford, CA

Dear Mr. Pennell:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Central Valley Meat Co., Inc. Consulting Services for the Proposed Rendering Plant, Hanford, CA.

The proposed project is a processing facility (new and expanding) consisting of: 1) Rendering Plant – New receiving, processing, finished goods storage, shop and welfare facilities; 2) Dry Storage – Expansion; 3) Processing Plant – Expansion; 4) Hide House – New with future brine evaporation pond; 5) Parking; 6) Wastewater Pretreatment; 7) New Entrance - From Hanford-Armona Road; 8) Cooler/Freezer – New 200,000 sf facility with employee/visitor parking, truck wash, refueling stations, security building, mechanical areas, and side yards. The project will be on approximately 125.78 acres, addressed as 10431 8 ¾ Avenue, in Kings County, APN 016-060-014, (33.45 acres) APN 016-060-024, (13.85 acres) and APN 016-060-012, (78.48 acres).

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Fax: (559) 449-2715
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August 28, 2020

Table Mountain Rancheria
Attn: :Leanne Walker-Grant, Chairperson
P.O. Box 410
Friant CA 93626

RE: Central Valley Meat Co., Inc. Consulting Services for proposed Rendering Plant in Hanford, CA

Dear Ms. Walker-Grant:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Central Valley Meat Co., Inc. Consulting Services for the Proposed Rendering Plant, Hanford, CA.

The proposed project is a processing facility (new and expanding) consisting of: 1) Rendering Plant – New receiving, processing, finished goods storage, shop and welfare facilities; 2) Dry Storage – Expansion; 3) Processing Plant – Expansion; 4) Hide House – New with future brine evaporation pond; 5) Parking; 6) Wastewater Pretreatment; 7) New Entrance - From Hanford-Armona Road; 8) Cooler/Freezer – New 200,000 sf facility with employee/visitor parking, truck wash, refueling stations, security building, mechanical areas, and side yards. The project will be on approximately 125.78 acres, addressed as 10431 8 ¾ Avenue, in Kings County, APN 016-060-014, (33.45 acres) APN 016-060-024, (13.85 acres) and APN 016-060-012, (78.48 acres).

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www.ppeng.com

August 28, 2020

Wuksache Indian Tribe/Eshom Valley Band
Attn: Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas CA 93906

RE: Central Valley Meat Co., Inc. Consulting Services for proposed Rendering Plant in Hanford, CA

Dear Mr. Woodrow:

Provost and Pritchard Consulting Group, is providing cultural resources services in support of the Central Valley Meat Co., Inc. Consulting Services for the Proposed Rendering Plant, Hanford, CA.

The proposed project is a processing facility (new and expanding) consisting of: 1) Rendering Plant – New receiving, processing, finished goods storage, shop and welfare facilities; 2) Dry Storage – Expansion; 3) Processing Plant – Expansion; 4) Hide House – New with future brine evaporation pond; 5) Parking; 6) Wastewater Pretreatment; 7) New Entrance - From Hanford-Armona Road; 8) Cooler/Freezer – New 200,000 sf facility with employee/visitor parking, truck wash, refueling stations, security building, mechanical areas, and side yards. The project will be on approximately 125.78 acres, addressed as 10431 8 ¾ Avenue, in Kings County, APN 016-060-014, (33.45 acres) APN 016-060-024, (13.85 acres) and APN 016-060-012, (78.48 acres).

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Sincerely, Briza Sholars

Briza Sholars

encl.: Topo Quad Map

Appendix D

Soils Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for
Kings County, California

California Rendering Plant
Hanford, CA

October 1, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:6,630 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 50 100 200 300

Feet: 0 300 600 1200 1800

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kings County, California
Survey Area Data: Version 16, May 29, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 17, 2019—Mar 24, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
130	Kimberlina fine sandy loam, saline-alkali	93.7	74.5%
131	Kimberlina fine sandy loam, sandy substratum	32.1	25.5%
Totals for Area of Interest		**125.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Kings County, California

130—Kimberlina fine sandy loam, saline-alkali

Map Unit Setting

National map unit symbol: hhjh
Elevation: 190 to 3,500 feet
Mean annual precipitation: 4 to 8 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 210 to 300 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Kimberlina and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kimberlina

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from igneous and sedimentary rock

Typical profile

Ap - 0 to 8 inches: fine sandy loam
C - 8 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 25.0
Available water capacity: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Wasco

Percent of map unit: 2 percent

Hydric soil rating: No

Kimberlina, sandy substratum
Percent of map unit: 2 percent
Hydric soil rating: No

Excelsior
Percent of map unit: 2 percent
Hydric soil rating: No

Nord
Percent of map unit: 2 percent
Hydric soil rating: No

Yound
Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, rare flooding
Percent of map unit: 1 percent
Landform: Sloughs
Hydric soil rating: Yes

Garces
Percent of map unit: 1 percent
Hydric soil rating: No

Melga
Percent of map unit: 1 percent
Hydric soil rating: No

Remnoy
Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, rare flooding
Percent of map unit: 1 percent
Hydric soil rating: No

Cajon
Percent of map unit: 1 percent
Hydric soil rating: No

131—Kimberlina fine sandy loam, sandy substratum

Map Unit Setting

National map unit symbol: hhjj
Elevation: 250 to 3,500 feet
Mean annual precipitation: 7 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 255 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Kimberlina and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kimberlina

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from igneous and sedimentary rock

Typical profile

Ap - 0 to 8 inches: fine sandy loam
C - 8 to 41 inches: fine sandy loam
2C - 41 to 60 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water capacity: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Nord

Percent of map unit: 3 percent
Hydric soil rating: No

Cajon

Percent of map unit: 3 percent
Hydric soil rating: No

Kimberlina, saline alkali

Percent of map unit: 3 percent
Hydric soil rating: No

Excelsior

Percent of map unit: 3 percent
Hydric soil rating: No

Unnamed, rare flooding

Percent of map unit: 1 percent
Landform: Sloughs
Hydric soil rating: Yes

Wasco

Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, rare flooding

Percent of map unit: 1 percent
Hydric soil rating: No

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Appendix E

Trip Generation Analysis

EST. 1968
PROVOST & PRITCHARD
CONSULTING GROUP
An Employee Owned Company

130 N. Garden Street
Visalia, CA 93291-6362
Tel: (559) 636-1166
Fax: (559) 636-1177
www.ppeng.com

October 22, 2020

Michael Oliver
Harris Ranch Beef Company
PO Box 220
16277 South McCall Avenue
Selma, CA 93662

RE: Trip Generation Analysis for the Central Valley Meat Rendering Plant Expansion

Dear Mr. Oliver:

Per your request Provost & Pritchard has analyzed the conceptual site plan for the Central Valley Meat rendering plant expansion located at 10431 8¾ Avenue in Kings County for the expected traffic generated by the project.

The site plan includes the following buildings indicated in Table 1 below. The table also includes client-provided expectations for additional employees. These employee numbers were utilized to project anticipated trips generation, as they represent the client's specific expectations for the facility expansion rather than a general projection from building size.

Table 1 – Building Features

Building Feature	CEQA Phase	Building Area (Square Feet)	Additional Employees
Rendering Plant	Proposed Phase 1	45,728	20
Hide Building	Proposed Phase 1	20,000	25
Pet Food Facility	Proposed Phase 1	15,000	20
Dry Storage Expansion	Proposed Phase 1	8,000	0 *
Cooler Expansion	Proposed Phase 1	4,687	3
Truck Wash Building	Proposed Phase 1	5,600	0 *
Scale House	Proposed Phase 1	336	0 *
Freezer/Cooler Building	**Future Phase 2**	186,756	50
Processing Expansion	**Future Phase 2**	103,482	75

* Buildings not anticipated to generate traffic are omitted from subsequent tables

The trip generation land-use codes are taken from *Trip Generation, 10th Edition - Institute of Traffic Engineers (ITE).* The two most appropriate land-use designations for the facility are Manufacturing (Land Use Code 140) and Warehousing (150), defined as:

Manufacturing – Land Use 140: A manufacturing facility is an area where the primary activity is the conversion of raw materials or parts into finished products. Size and type of activity may vary substantially from one facility to another. In addition to the actual production of goods, manufacturing facilities generally also have office, warehouse, research, and associated functions.

Warehousing – Land Use 150: A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas.

Trip generation rates taken from *Trip Generation, 10th Edition - Institute of Traffic Engineers (ITE)* are calculated per employee and summarized in Table 2 with projected Daily, AM Peak Hour, and PM Peak Hour subtotals included in Table 3. AM and PM Peak Hour totals are utilized to determine the need for a Traffic Impact Study (TIS) and determine the potential need for improvements to the adjacent roadways and traffic control devices.

Table 2 – Trip Generation Rates

Building Feature	ITE Land Use Code	Daily Rate	AM Peak Rate	PM Peak Rate
Rendering Plant	140	**2.47**	**0.37**	**0.33**
Hide Building	140	**2.47**	**0.37**	**0.33**
Pet Food Facility	140	**2.47**	**0.37**	**0.33**
Cooler Expansion	150	**5.05**	**0.61**	**0.66**
Freezer/Cooler Building (Future)	150	**5.05**	**0.61**	**0.66**
Processing Expansion (Future)	140	**2.47**	**0.37**	**0.33**

The rates shown above are applied *per additional employee*. In addition, the rates include both projected employee and heavy vehicle traffic calculated from the land use. The client has indicated a net daily increase of 20-30 heavy vehicle trips because of the facility expansion. This increase aligns with the daily rates for manufacturing and warehousing indicated in Table 2 above and is not expected to represent a significant increase in peak-hour traffic.

Table 3 – Trip Generation Totals

Building Feature	ITE Land Use Code	Additional Employees	Daily Total	AM Peak Total	PM Peak Total
Rendering Plant	140	20	49	7	7
Hide Building	140	25	62	9	8
Pet Food Facility	140	20	49	7	7
Cooler Expansion	150	3	15	2	2
Freezer/Cooler Building (Future)	150	50	253	31	33
Processing Expansion (Future)	140	75	185	28	25
Proposed Phase 1 Totals			**176**	**26**	**23**
Future Phase 2 Totals			**438**	**58**	**58**

The *2035 Kings County General Plan Update – Final Environmental Impact Report*, published 2009, sets the following thresholds for the requirement of a full Traffic Impact Study:

> C Policy A1.3.2 – Require proposed developments that have the potential to generate 100 peak hour trips or more to conduct a traffic impact study that follows the most recent methodology outlined in Caltrans Guide to the Preparation of Traffic Impact Studies.

As neither Proposed Phase 1, Phase 2, nor the combination thereof meets the County threshold of 100 peak-hour trips, it is not expected that the expansion should trigger the need for a full Traffic Impact Study.

If you need additional information please do not hesitate to contact me at (559) 636-1166 or mhamilton@ppeng.com.

Respectfully,

Matt Hamilton, PE
Senior Engineer

c: Briza Sholars – Provost & Pritchard