Miles Chemical Company (SPR 2020-04 MOD, CUP 2020-07 MOD & ENV 2021-38)

Initial Study/Mitigated Negative Declaration

February 2022

Prepared for:

The City of MADERA

Planning Department
205 W. 4th Street
Madera, CA 93637

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List of Abbreviations and Acronyms

AFY	Acre-Feet per Year
AIA	Air Impact Assessment
ALUCP	Airport Land Use Compatibility Plan
AM	Morning peak hour (related to traffic)
AMR	Automatic Meter Reading
BAAQMD	Bay Area Air Quality Management District
BAU	Business-As-Usual
BPS	Best Performance Standards
CAAQS	California Ambient Air Quality Standards
CalEEMOD	California Emissions Estimator Model
CalFire	California Department of Forestry and Fire Protection
CalGreen	California Green Building Standards Code
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CH_4	Methane
CNEL	Community Noise Equivalent Level
CO	Carbon monoxide
CO_2	Carbon dioxide
CO2e	Carbon dioxide emission
CRHR	California Register of Historical Resources
CUP	Conditional use permit
CPUC	California Public Utilities Commission
CGS	California Geological Survey
dB	decibel
dBa	A-weighted sound levels
DWQ	Division of Water Quality
EIR	Environmental Impact Report
EMFAC2017	California Air Resources Board 2017 Emissions Factors model
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FRAP	Fire Resource Assessment Program
ft	Feet
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
GCP	General Construction Permit
GHG	Greenhouse gas
GSP	Groundwater Sustainability Plan
HC	Hydrocarbons
HCP	Habitat Conservation Plan
HVAC	Heating, ventilation, and air conditioning
I	Industrial
IC	Industrial Commercial
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
ITE	Institute of Transportation Engineers
LED	Light-emitting diode

LOS	Level of Service
MAX	Madera Area Express
MMRP	Mitigation Monitoring and Reporting Program
MRZs	Mineral Resource Zones
MS4	Municipal separate storm sewer systems
MTCO2e	Metric tons of carbon dioxide emissions
MW	Megawatt
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
ND	Negative Declaration
N_2O	Nitrous Oxide
NO_2	Nitrogen dioxide
NOI	Notice of Intent
NOx	Oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	Ozone
OPE	California Office of Planning and Research
Pb	Lead
PG&E	Pacific Gas & Electric
PM	Afternoon peak hour (related to traffic)
PM_{10}	Particulate matter less than 10 microns in diameter
$PM_{2.5}$	Particulate matter less than 2.5 microns in diameter
PPM	Parts per million
PRC	Public Resources Code
PRD	Permit Registration Documents
Project	Miles Chemical Company
PUE	Public Utilities Easement
ROG	Reactive Organic Gases
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SGMA	Sustainable Groundwater Management Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	Sulfur dioxide
SPR	Site Plan Review
Sq. ft.	Square feet
SQPP	Stormwater Pollution Prevention Plan
ST-5	Arterial Street
SWRCB	State Water Resources Control Board
TACs	Toxic air contaminants
TPY	Tons per year
UCMP	University of California Museum of Paleontology
U.S.	United States
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Services
UWMP	Urban Water Management Plans
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	Vehicle miles traveled
WWTP	Wastewater treatment plant

Chapter 1 Introduction

The Initial Study/Mitigated Negative Declaration for the expansion of the existing Miles Chemical Company operation has been prepared on behalf of the City of Madera to address the environmental effects of the proposed Project. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et. seq. The City of Madera is the CEQA lead agency for the Project.

The Project site and details regarding the proposed Project are described in Chapter 2 Project Description.

1.1 Regulatory Information

This Initial Study (IS) has been prepared in coordination with City Staff to ensure that all potential impacts on the environment are identified and that appropriate mitigation measures are identified, if applicable. If there is considerable indication that the proposed Project may have a significant effect on the environment according to California Code of Regulations Title 14 (Chapter 3, Section 15000, *et seq*.) -- also known as the CEQA Guidelines -- Section 15064 (a)(1), then an environmental impact report (EIR) must be prepared, and the Project should be further analyzed to determine mitigation measures and Project alternatives. Should the impacts be minimal to a level of insignificance due to implementation of mitigation measures, a negative declaration (ND) may be prepared if the lead agency finds that there is *no* considerable indication that the proposed 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* considerable indication 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 negative declaration (ND) and IS are 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 considerable indication that the proposed project as revised may have a significant effect on the environment.*

An initial study circulated with a ND should indicate that there will not be any significant effects from the project and should identify or reference the data which supports its determination that any potentially significant effects have been mitigated or avoided.

For purposes of this Project, no impacts, less than significant impacts, and less than significant impacts with mitigation incorporated have been identified. As a result, mitigation is required, and an MND has been prepared.

1.2 Document Format

This IS/MND contains five chapters plus 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. **Chapter 3 Determination** identifies the environmental factors potentially affected based on the analyses contained in the IS and includes the Lead Agency's determination based upon the analyses. **Chapter 4 Impact Analysis** presents the CEQA checklist and environmental analyses for all impact areas and the mandatory findings of significance. A brief discussion of the reasons why a Project impact is anticipated to be potentially significant, less than significant with mitigation incorporated, less than significant or why no impacts are expected are detailed in this chapter. **Chapter 5 Mitigation Monitoring and Report Program** presents the mitigation measures required to address impacts associated with the Project. Technical Studies are provided in the appendices at the end of this document.

Chapter 2 Project Description

2.1 Project Background

2.1.1 Project Title

Miles Chemical Company Development Project

2.1.2 Lead Agency Name and Address

City of Madera
205 W. 4th Street
Madera, CA 93637

2.1.3 Contact Person and Phone Number

Lead Agency Contact

Adam Klier, Assistant Planner
(559) 661-5425
aklier@madera.gov

Applicant Information

Anthony Miles, President
Miles Chemical Company, Inc.
12801 Rangoon St.
Arleta, CA 91331

2.1.4 Study Prepared By

VRPA Technologies Inc.
4630 W. Jennifer Ave, Suite 105
Fresno, CA 93722
Phone (559) 271-1200

2.1.5 Project Location

The proposed Project is located in southwest Madera, along the southern edge of the city limits at 2345 West Pecan Avenue (Avenue 13) east of Road 25. Figure 2-1 Regional Location and Figure 2-2 Project Vicinity shows the location of the Project along with major roadways and highways.

2.1.6 Latitude and Longitude

The centroid of the Project area is 36.940417, -120.083988.

2.1.7 General Plan Designation

The Project site is designated as I-Industrial in the General Plan. The proposed Project is an approved use in the I-Industrial land use designation.

Figure 2-1 Regional Location

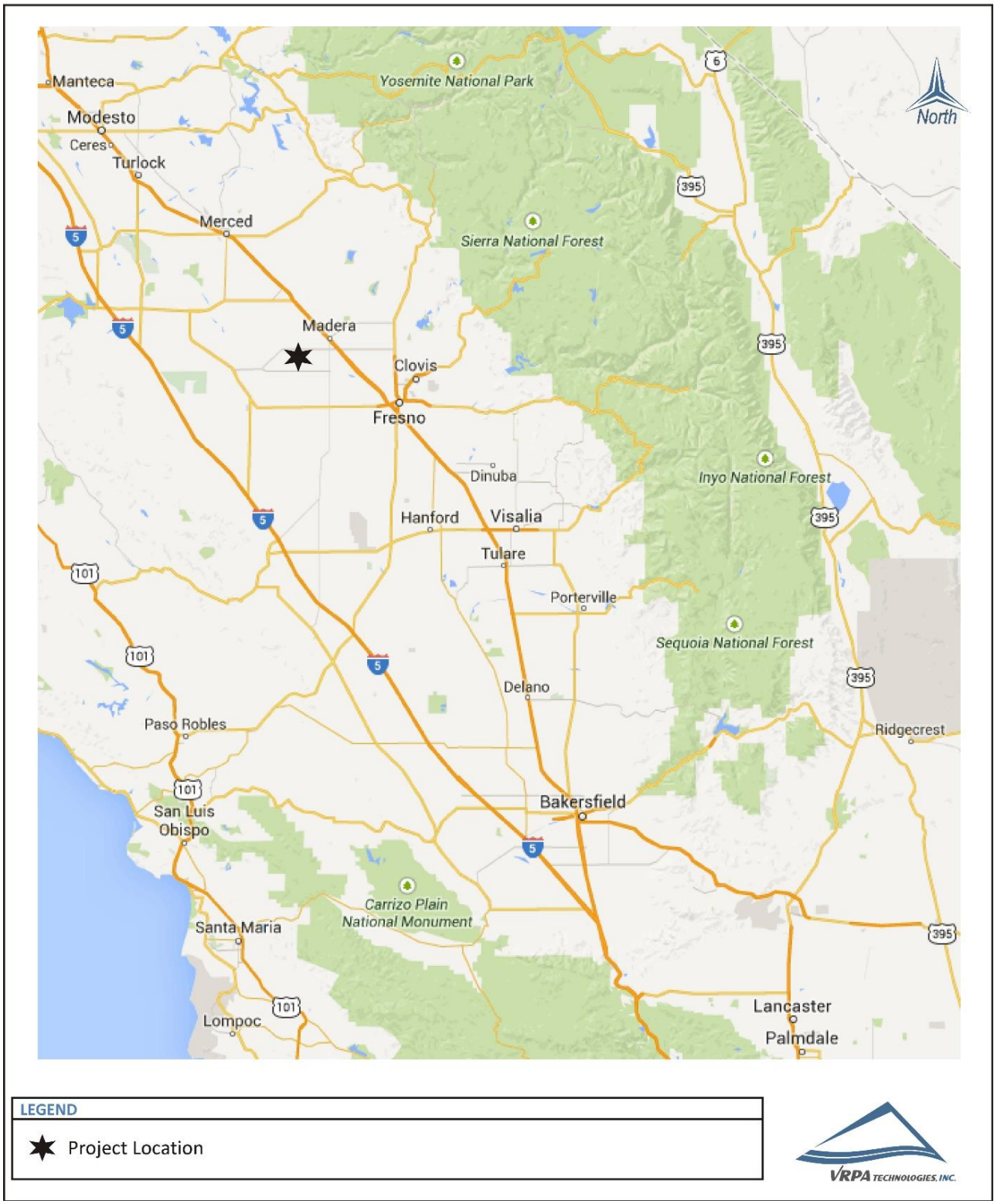


Figure 2-2 Project Vicinity

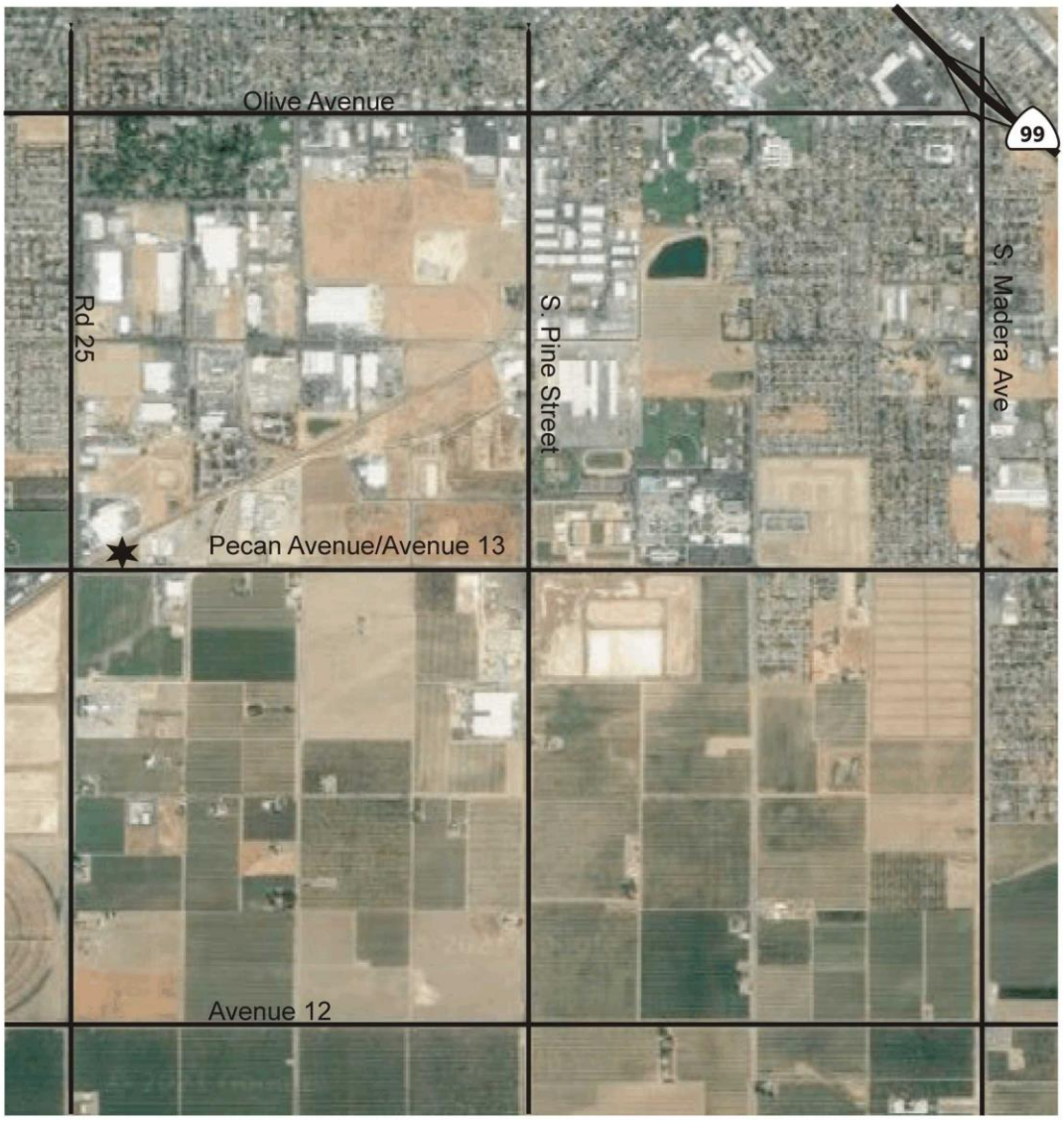
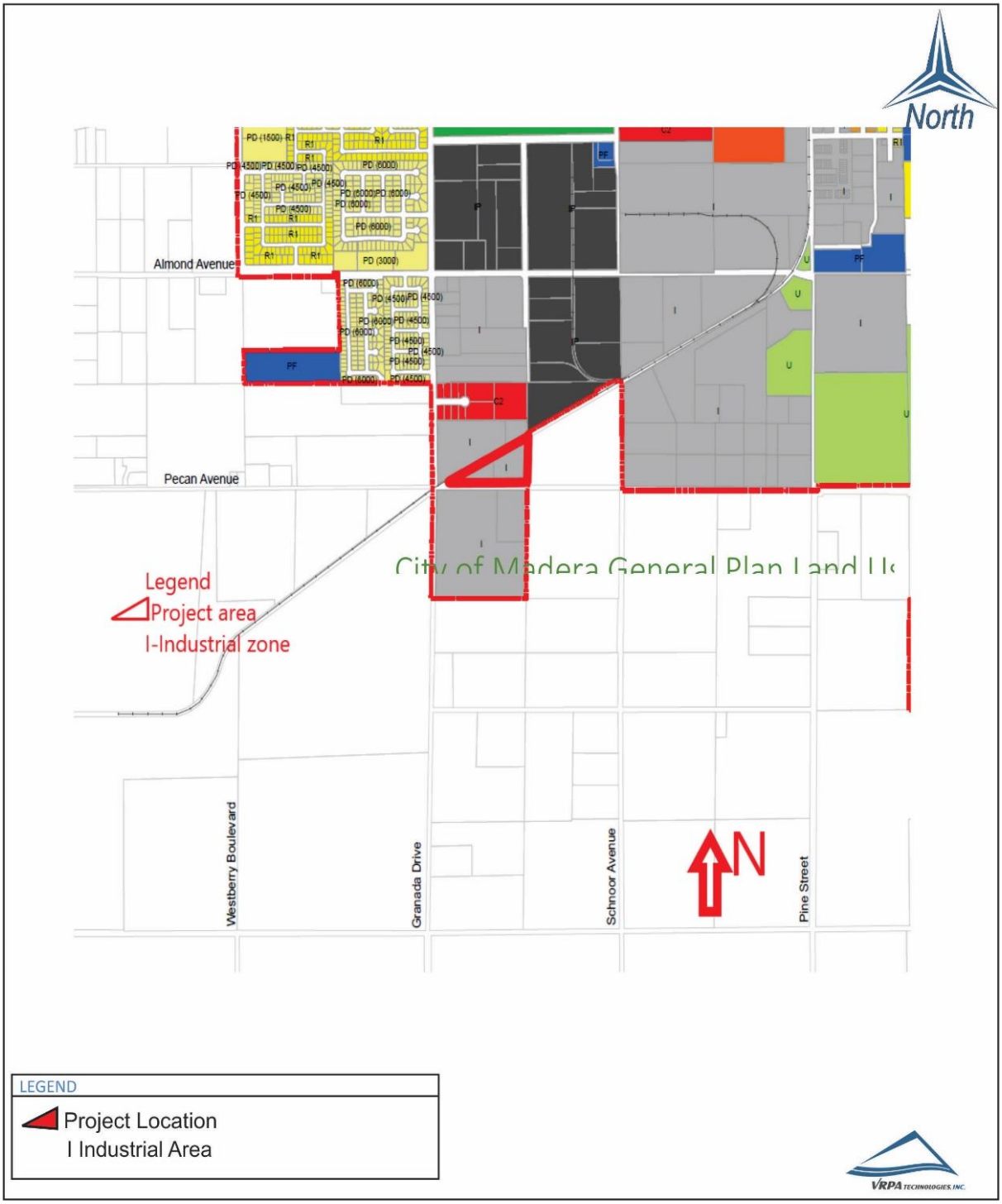


Figure 2-3 City of Madera General Plan Land Use Designation Map



2.1.8 Zoning

The Project site is within the I-Industrial Zone District of the City of Madera Zoning Ordinance and Map (see Figure 2-3).

2.1.9 Description of Project

Project Description

The Miles Chemical Company Development Project (Project) proposes to expand upon the existing industrial use located on the 7.24-acre site at Assessor's Parcel Numbers (APNs) 009-350-031 and 009-350-032. The site is located on the north side of Pecan Avenue between South Pine Street and Road 25 in the I (Industrial) zone district with an I (Industrial) General Plan land use designation (See Figure 2-3). The existing site includes a 6,000 square foot (sqft) food grade building, a 5,472 sqft office building, and 7,200 sqft of canopy structures. The Project includes Site Plan Review (SPR) 2020-04 MOD, a request to construct additional warehousing, operational buildings, buildings canopy structures, chemical tank containment structures, as well as other site improvements, as outlined below, and reflected in Figure 2-4 and Figure 2-5. Previous permits for the site have included the elimination of canopy structures and the realignment of the existing rail spur on the northern boundary of the site. Conditional Use Permit (CUP) 2020-07 MOD would facilitate the expansion of the use on-site and combine previous approvals under CUP 2020-06 and CUP 2020-07 under one conditional use permit. The Project would result in an expanded Miles Chemicals Company facility that would allow for the storage, blending, repackaging, and transport of liquid and dry products for use by food, agriculture, drinking water, and wastewater industry customers and the allowance for outdoor storage of chemicals and related equipment.

Operation would include the storage, blending, loading, and shipment of Class 3, 8, and 9 hazardous materials including Citric Acid, Calcium Chloride, Sorbitol, Sodium Hypochlorite, Potassium Hydroxide, Sodium Hydroxide, Hydrochloric Acid, Sulfuric Acid, Urea solution, Acetone, and Isopropyl Alcohol. During operation the site would accept deliveries from both trucks entering the site from Pecan Avenue, and rail deliveries from the railway that runs east and west on the northern end of the Project site. Chemical tanks used on-site during operation of the facility are required to meet safety standards set by the State of California. The tanks will be designed in such a manner to limit chemical spillage to the highest extent possible. The Project would include the construction of tank containment structures made of reinforced concrete, reaching heights of 38 inches, with the ability to contain spillage amounts through a dry sump system integrated into the designated loading and unloading areas. Buildout of the proposed Project would be completed in two phases.

Project activities evaluated in this initial study include the following:

- Construction of a 57,985 sqft warehouse building
- Construction of a 10,125 sqft "flammables" building
- Expansion of the existing "food grade" building by 2,052 sqft
- Construction of a 600 sqft equipment building
- Construction of a 2,700 sqft blending canopy
- Construction of a new loading dock at the existing canopy to service the main warehouse
- Construction of a loading dock at the flammables building
- Construction of a Peroxide tanks containment structure of 1,056 sqft

- Construction of an acid tanks containment structure of 2,567 sqft
- Construction of a base tanks containment structure of 2,567 sqft
- Construction of a flammable tanks containment structure of 2,784 sqft
- Construction of a miscellaneous tanks containment structure of 2,394 sqft
- Construction of truck loading/unloading containment areas for each tank storage containment structure
- Concrete paved areas for truck circulation
- Installation of a truck scale
- Reconfiguring of the existing drainage basin to be approximately 0.63 acres in total size

Actions Required

The City of Madera has jurisdiction over the review and approval of the Project and would be requested to take action on the following:

- Adoption of Mitigated Negative Declaration;
- Approval of Site Plan Review 2020-04 MOD; and,
- Approval of Conditional Use Permit 2020-07 MOD.

The City of Madera would also issue the following ministerial permits for the proposed Project if and once the above listed actions are taken:

- Grading Permit;
- Encroachment Permit;
- Sign Permit; and
- Building Permit.

Figure 2-4: Site Plan, Phase 1

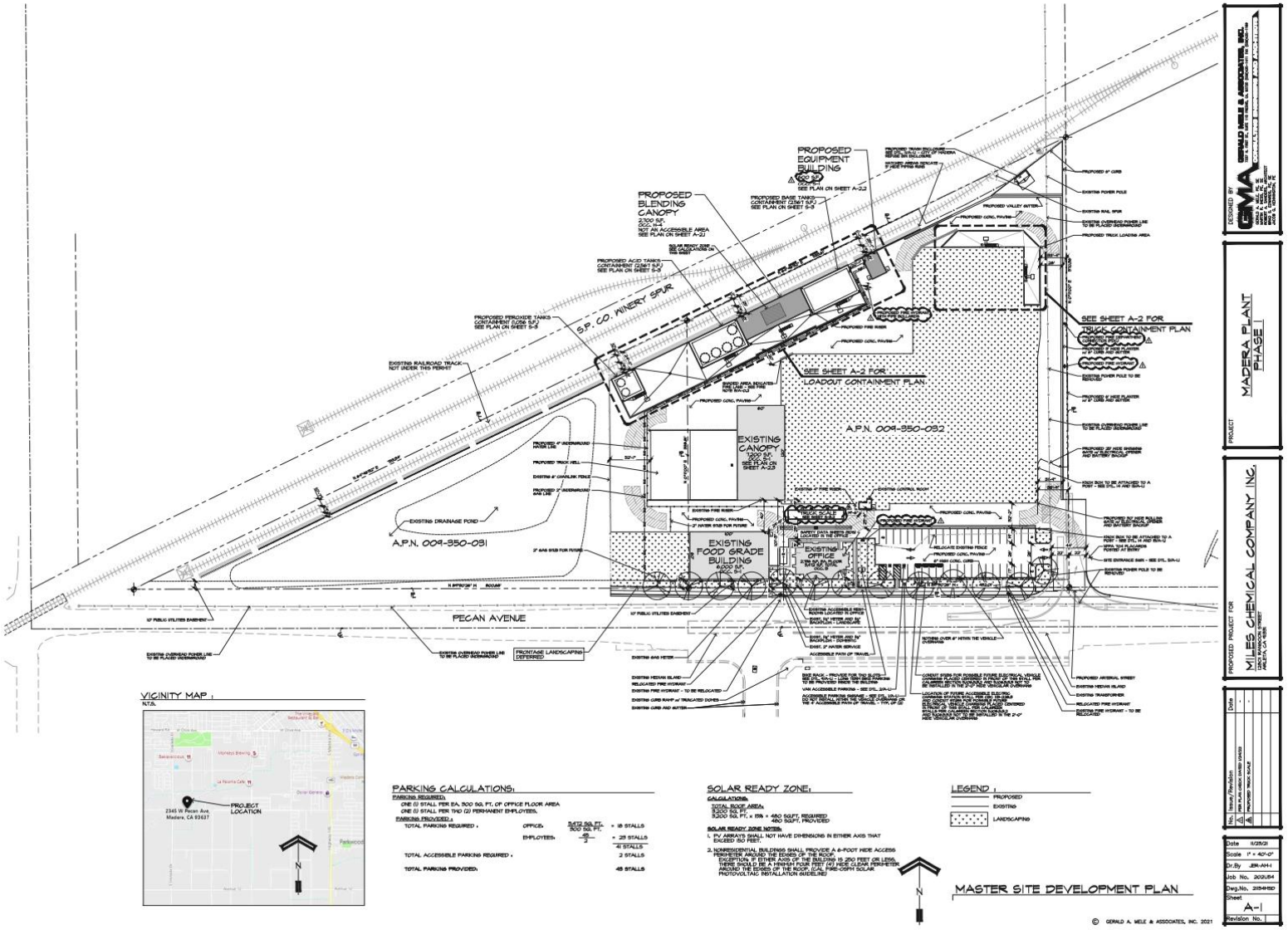
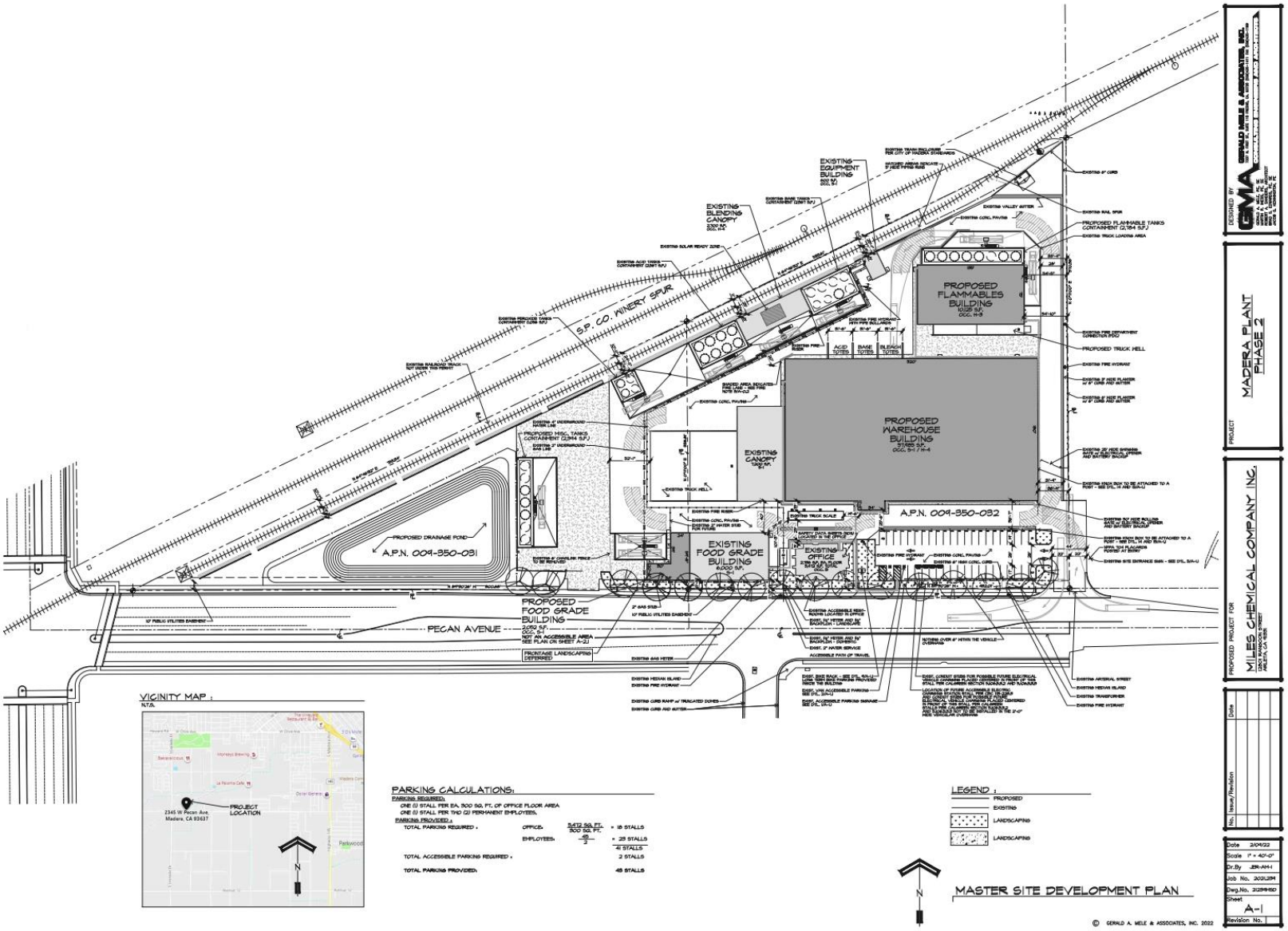


Figure 2-5: Site Plan, Phase 2



2.1.10 Site and Surrounding Land Uses and Setting

Project Setting

Historically, the Project site has been designated and operated as industrial land. The site is currently in use by Miles Chemical Company and contains several existing buildings. West and north of the Project site is an agricultural food company which is also considered an industrial use. The Project site also includes a spur line on the northern side of the property. Property to the east is vacant with industrial uses beyond. South of the Project site is an agricultural field and an existing agricultural use. The properties to the north, south, east, and west are all planned for industrial uses.

Table 2-1 Existing Uses, General Plan Designations, and Zone Districts of Surrounding Properties

Direction from Project Site	Existing Use	General Plan Designation	Zone District
North	Industrial	I-Industrial	I-Industrial
East	Vacant	I-Industrial	IH - Industrial, Urban or Rural, Heavy District (County)
South	Agricultural and Industrial	I-Industrial	I-Industrial
West	Industrial	I-Industrial	I-Industrial

2.1.11 Other Public Agencies Whose Approval May Be Required

Other agencies may have the authority to issue permits prior to implementation of the Project including, *but not necessarily limited to*, the San Joaquin Valley Air Pollution Control District (SJVAPCD) and the California Regional Water Quality Control Board. The Project will also be subject to a SJVAPCD Authority to Construct Permit and SJVAPCD Regulation VIII (Fugitive PM_{10} Prohibitions) requires the approval of a Dust Control Plan prior to construction, among other approvals.

2.1.12 Consultation with California Native American Tribes

Public Resources Code Section 21080.3.1, *et seq. (codification of Assembly Bill (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.

California Native American tribes traditionally and culturally affiliated with the Project area did not request consultation pursuant to Public Resources Code Section 21080.3.1.

Chapter 3 Determination

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 have not been recommended for any of the environmental issues referenced since potentially significant impacts are not anticipated.

☐ 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 reflected in **Chapter 4 Impact Analysis** have resulted in impact statements, which shall have the following meanings.

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 Determination

On the basis of this initial evaluation (to be completed by the Lead Agency):

☐ 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.

Arnoldo Rodriguez

Signature

2/14/22

Date

Arnoldo Rodriguez, City Manager

Chapter 4 Impact Analysis

4.1 Aesthetics

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?	☐	☐	☒	☐

4.1.1 Environmental Setting

The Project site is located on the north side of Pecan Avenue between South Pine Street and Road 25 in the I (Industrial) Zone District with an I (Industrial) General Plan land use designation. The surrounding area is dominated by developed industrial uses, agricultural and vacant properties designated and zoned for industrial development. There is an existing single-family residential development to the northwest (over ¼ mile from the Project site) across Road 25 and enclosed by a block wall. Existing sources of light in the vicinity of the Project include streetlights along West Pecan Avenue, Road 25, and exterior lighting from existing Miles Chemical and other existing adjacent industrial use facilities.

Topography is relatively flat and there are no natural drainages in the immediate area surrounding the Project. The Fresno River, approximately 2 miles to the north, the San Joaquin River, approximately 8 miles to the south, and the foothill region of the Sierra Nevada, approximately 35 miles to the northeast, are

the nearest significant topographic reliefs. There are no State or county designated scenic highways or historical buildings, or properties present in the Project's vicinity.

4.1.2 Impact Assessment

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

Less than Significant Impact. Scenic vistas are generally defined as long-range views of an explicit scenic feature (e.g., open space, mountain ridges, ocean views). The Project is not located near a scenic vista, nor does the Project provide notable scenic values such as undisturbed open space, prominent landforms, or features. The Project will not result in the obstruction of federal, State, or locally classified scenic areas, historic properties, community landmarks, or formally classified scenic resources, such as a scenic highway, national or State scenic area, or scenic vista. Given the flat topography and limited long-distance viewshed available, scenic vistas and far-field views from public vantage within the Project site are currently obstructed by existing industrial and agricultural uses. Therefore, the Project would have a **less than significant impact**.

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 Project is not located along a State-designated Scenic Highway. Furthermore, there are no notable trees, rock outcroppings, or historical buildings on the Project site that would be affected, and the Project would not alter long-range views to ridgelines or other natural features. As a result, the Project would not affect scenic resources within a State scenic highway and therefore would have **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 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?

Less than Significant Impact. The Project is an expansion of an existing chemical company or industrial use, so the Project will not change the existing visual character of the Project site and its surroundings. The surroundings do not conflict with zoning and other regulations regarding scenic quality. The surroundings include other industrial zoned areas and agricultural uses to the south of the Project site; the proposed Project will not result in a substantial degradation of existing visual character of the area. As a result, the Project would have a **less than significant impact** on the visual character and scenic quality.

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. Expansion of existing Project site will introduce new sources of light and glare. The site is within an industrial area, which has existing lighting and glare. Furthermore, lighting impacts are associated with artificial lighting in evening hours either through interior lighting from windows or exterior lighting (e.g., street lighting, parking lot lighting, landscape lighting, etc.). The Project may introduce temporary source of light during the construction phase in the dusk hours as construction activities are allowed between 7 AM to 10 PM on weekdays pursuant to Madera County General Plan. However, once construction is completed, light and glare from these activities would cease to occur.

Therefore, the Project would create **less than significant impact** on daytime or nighttime views in the area.

4.2 Agriculture and Forestry Resources

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?	☐	☐	☒	☐

4.2.1 Environmental Setting

The Project site is designated and zoned as Industrial in both City's General Plan and Zoning Code. According to California Department of Conservation, the Project site is located on land identified as "Urban and Built-Up Land" that is 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. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures. The Project site is not under a Williamson Act contract.

4.2.2 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?

No Impact. The Project site is currently used for industrial purposes. As a result, the proposed Project will not convert land classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency) to non-agricultural use. Therefore, there would be **no impact.**

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

No Impact. The Project site is currently zoned I-Industrial and would not conflict with any existing zoning for agricultural uses and there are no Williamson Act contracts affecting the Project site or surrounding properties. Therefore, there would be **no impact**.

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))?

No Impact. Neither the Project site nor the surrounding properties are defined as forest land (as defined by Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526) or timberland zoned for timberland production (as defined by Government Code Section 51104(g)). Therefore, there would be **no impact.**

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

No Impact. The Project site does not have any designated forest land and it is not adjacent to forest land. In addition, the adjacent sites are not designated for timberland protection. Therefore, the Project would not result in the loss of forest land or conversion of forest land to non-forest use. As a result, there would 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?

Less than Significant Impact. The Project site is within an industrial area and the surrounding properties have also been developed as industrial or agricultural uses. The Project entails expansion of an existing chemical facility and there will not be any significant changes in existing site conditions. As a result, the Project would have a **less than significant impact** to the existing environment.

4.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less than Significant with Mitigation 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?	☐	☐	☒	☐

4.3.1 Environmental Setting

The Project site is located within the San Joaquin Valley Air Basin (SJVAB). The SJVAB, which occupies the southern half of California's Central Valley, is under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). Other air quality regulatory agencies that share responsibility with regulating SJVAB's air quality to ensure that all State and federal ambient air quality standards are attained within the SJVAB include the California Air Resources Board (CARB) and the United States Environmental Protection Agency (USEPA). The SJVAPCD, which is responsible for the attainment of State and federal air quality standards in the SJVAB, develops rules, regulations, and policies to comply with applicable state and federal air quality legislation. The Air quality also depends on factors like geographical location, Topographic conditions, and the climatic condition of that specific region.

This section describes existing air quality within the San Joaquin Valley Air Basin and in Madera County, including the identification of air pollutant standards, meteorological and topological conditions affecting air quality, and current air quality conditions. Air quality is described in relation to ambient air quality standards for criteria pollutants such as, ozone, carbon monoxide, and particulate matter. Air quality can be directly affected by the type and density of land use change and population growth in urban and rural areas. The Project is located at 2345 West Pecan Avenue in the City of Madera east of Road 25.

Madera County is located in one of the most polluted air basins in the country. Temperature inversions can trap air within the Valley, thereby preventing the vertical dispersal of air pollutants. In addition to topographic conditions, the local climate can also contribute to air quality problems. Climate in Madera County is classified as Mediterranean, with moist cool winters and dry warm summers.

4.3.2 Impact Assessment

Thresholds of Significance

The impact assessment for air quality focuses on potential effects the Project might have on air quality within the Madera County region. The SJVAPCD has established the *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) for determining thresholds of significance environmental significance. These thresholds separate a project's short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project, which are recognized to be short in duration. The long-term emissions are primarily related to activities that occur as a result of project operations. Impacts will be evaluated both on the basis of CEQA Appendix G criteria and SJVAPCD significance criteria. The impacts to be evaluated will be those involving construction emissions of criteria pollutants. The thresholds of significance are summarized, as follows

Short-Term Impacts:
Short-term impacts are mainly related to the construction phase of a project and are recognized to be short in duration. Construction air quality impacts are generally attributable to dust and exhaust pollutants generated by equipment and vehicles. Fugitive dust is emitted both during construction activity and as a result of wind erosion over exposed earth surfaces. Clearing and earth moving activities do comprise major sources of construction dust emissions, but traffic and general disturbances of soil surfaces also generate significant dust emissions. Further, dust generation is dependent on soil type and soil moisture. Exhaust pollutants are the non-useable gaseous waste products produced during the combustion process. Engine exhaust contains CO, HC (hydrocarbons), and NOx pollutants which are harmful to the environment.

Emissions of Particulate Matter (PM_{10}): PM_{10} emissions can result from construction activities of the Project. The SJVAPCD requires implementation of effective and comprehensive control measures, rather than a detailed quantification of emissions. The SJVAPCD has determined that compliance with Regulation VIII for all sites and other control measures will constitute sufficient mitigation to reduce PM_{10} impacts to a level considered less-than significant.

Short-Term Emissions of Ozone Precursors (ROG and NO_X): Ozone precursor emissions are also an impact of construction activities and can be quantified through calculations. Numerous variables factored into estimating total construction emission include level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and amount of materials to be transported onsite or offsite. Additional exhaust emissions would be associated with the transport of workers and materials. Because the specific mix of construction equipment is not presently known for this project, construction emissions from equipment were estimated using the CalEEMod Model. If the project generates emissions of Reactive Organic Gases (ROG) or NO_X that exceeds 10 TPY.

Long-Term Emissions
Long-Term emissions from the Project are generated primarily by mobile source (vehicle) emissions from the Project site and area sources such as lawn maintenance equipment.

Long-Term Emissions of Ozone Precursors (ROG and NO_X), Particulate Matter (PM_{10}): The Madera County area is nonattainment for Federal and State air quality standards for ozone, attainment of Federal standards for PM_{10} and nonattainment for State standards, and nonattainment for Federal and State

standards for $PM_{2.5}$. Nitrogen oxides and reactive organic gases are regulated as ozone precursors. Significance criteria have been established for criteria pollutant emissions.

Operational impacts associated with the proposed project would be considered significant if the project generates emissions of PM_{10} that exceed 15 tons per year (TPY) or 100 pounds per day.

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 parts per million (ppm) for 8 hours or 20 ppm for 1 hour).

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 10 in 1 million or would result in a Hazard Index greater than 1.

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.

Rule 2280 Portable Equipment Registration. Portable equipment used at project sites for less than six consecutive months must be registered with the SJVAPCD. The SJVAPCD will issue the registration 30 days after receipt of application.

Rule 8011 General Requirements: Fugitive Dust Emission Sources. Operations, including construction operations, must control fugitive dust emissions in accordance with SJVAPCD Regulation VIII. The SJVACPD requires the implementation of control measures for fugitive dust emissions. For projects in which construction-related activities would disturb equal to or greater than one (1) acre of surface area, the SJVAPCD recommends that demonstration of receipt of an SJVAPCD approved "Dust Control Plan" or "Construction Notification Form," before issuance of the first grading permit, be made a condition of approval.

Rule 9510 Indirect Source Review: This rule requires project applicants to reduce operational emission of oxides of nitrogen (NOx) by 33 percent of the project's operational baseline and 50 percent of the project's operational suspended particulate matter less than 10 microns in diameter (PM_{10}) emissions. Projects subject to SJVAPCD's District Rule 9510 are required to submit an Air Impact Assessment (AIA) application to the SJVAPCD no later than applying for final discretionary approval of a proposed project, and to pay any applicable off-site mitigation fees before issuance of the first building permit.

Air quality is determined by the type and amount (concentration) of contaminants emitted into the atmosphere, the size and topography of the SJVAB, and its meteorological conditions. National and State air quality standards specify the upper limits of concentrations and duration in the ambient air for the following air pollutants: ozone (O3), carbon monoxide (CO), nitrogen dioxide (NO_2), suspended particulate matter less than 10 microns in diameter (PM_{10}), suspended particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), sulfur dioxide (SO2) and lead (Pb). These pollutants are commonly referred to as "criteria pollutants." The SJVAPCD also conducts monitoring for two other State standards: sulfates and visibility.

The SJVAPCD, together with the CARB, maintains ambient air quality monitoring stations in the SJVAB. The air quality monitoring stations closest to the Project site are the Madera – 28261 Avenue 14 and Pump Yard monitoring stations. The pollutants monitored at this station are O3, $PM_{2.5}$, PM_{10}, and NO_2.

The CARB is required to designate areas of the state as attainment, non-attainment, or unclassified for all state standards. An attainment designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A non-attainment designation indicates that a pollutant concentration violated that standard at least once, excluding those occasions when the violation was caused by an exceptional event, as defined in the criteria. An unclassified designation signifies that data does not support either an attainment or non-attainment status. The California Clean Air Act divides the air districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category. The USEPA also designates areas as attainment, non-attainment, or classified. The air quality data are also used to monitor progress in attaining air quality standards.

The CARB has designated the SJVAB as being a severe non-attainment for 1-hour O3, and non-attainment for PM_{10} and for $PM_{2.5}$. The CARB has designated the Air Basin as attainment for NO_2, SO2, Pb, and as unclassified area for CO.

The USEPA has designated the SJVAB as being an extreme non-attainment area for 8-hour O3, and non-attainment for $PM_{2.5}$. USEPA has designated the SJVAB as attainment and/or unclassified for CO, NO_2, SO2, Pb, and PM_{10}. There is no federal standard for 1-hour O3.

Short-term and long-term emissions associated with the Project were calculated using California Emissions Estimator Model (CalEEMod, Version 2020.4.0) based on Project information available. Emissions modeling includes emissions generated by off-road equipment, haul trucks, and worker commute trips. Emissions were quantified based on anticipated construction schedules provided by the Project applicant. All remaining assumptions were based on the default parameters contained in the model. Modeling assumptions and output files are included in Appendix A.

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

Less than Significant Impact. CalEEMod was used to determine the potential emissions of regulated criterion pollutants for the Project. Table 4-1 below shows the Project totals (in tons per year) in relation to the SJVAPCD adopted thresholds outlined in the GAMAQI. The results shown used default CalEEMod. As shown, the estimated Construction and Operational emissions of the Project are below all significant thresholds and the Project is therefore consistent with the GAMAQI. CalEEMod Output Files are presented in Appendix A.

Table 4-1 CO, NOx, ROG, PM_{10}, $PM_{2.5}$ Thresholds, Maximum

Emission Source (Tons Per Year)	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Construction						
Construction, Unmitigated (maximum)	0.64	0.99	1.05	0.00	0.07	0.05
Significance Threshold	10	10	100	27	15	15
Exceed Threshold?	No	No	No	No	No	No
Operational						
Operational, Mitigated	0.42	0.20	0.73	0.00	0.14	0.04
Significance Threshold	10	10	100	27	15	15
Exceed Threshold?	No	No	No	No	No	No

Source: CalEEMod, Version 2020.4.0, ran on September 8, 2021

Additionally, the proposed project shall comply with all rules and regulations administered by the SJVAPCD including but not limited to Regulation VIII - Fugitive PM_{10} Prohibitions, Rules 8011-8081 which intend to minimize human-generated PM_{10} emissions (e.g., dust and dirt) and Indirect Source Review, Rule 9510 which intends to minimize NO_x and PM_{10} emissions through on-site mitigation or district-administered projects off-site. The Project design anticipates such requirements and incorporates the measures in regard to air quality impacts, as described above. Thus, any impacts related to construction activities of the Project would be regulated through SJVAPCD regulations and requirements.

Overall, the Project would not have potential emissions of regulated criterion pollutants that exceed the SJVAPCD implemented thresholds as outlined in the GAMAQI. In addition, the Project shall be conditioned to meet additional rules and regulations administered by the SJVAPCD to minimize and mitigate on-site emissions. Consequently, the Project would result in a **less than significant impact**.

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. The San Joaquin Valley Air Basin is in non-attainment for ozone, PM_{10}, and $PM_{2.5}$, which means that certain pollutants' exposure levels are often higher than the normal air quality requirements. As of the above table, the construction and operations of the Project would not exceed the thresholds of significance for criteria pollutants as set by the GAMAQI (See Table 4-1Table 4-1 CO, NOx, ROG, PM_{10}, $PM_{2.5}$ Thresholds, Maximum). This analysis includes PM_{10}, and $PM_{2.5}$. Thus, because the Project's potential emissions were determined to be below the SJVAPCD's regional significance thresholds, the Project would have a **less than significant impact.**

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

Less than Significant Impact. Sensitive receptors refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses that have the greatest potential to attract these types of sensitive receptors include schools, parks, playgrounds, daycare centers, nursing homes, hospitals, and residential communities.

The first step in evaluating the potential for impacts to sensitive receptors for TAC's from the Project is to perform a screening level analysis that includes all sources of emissions. The recommended screening method by the SVAPCD is a 'prioritization' using the latest approved California Air Pollution Control Officer's Association (CAPCOA) methodology. A prioritization score of 10 or greater triggers the need for a refined Health Risk Assessment (HRA).

The results of the 'prioritization' screening analysis, given Project emissions as described in the air quality analysis, show that the Project results in a 'prioritization' score of 2.74 for receptors between 100 and 250 meters which is less than the score of 10. As a result, the Project is not considered to have a significant TAC impact on adjacent receptors. Therefore, the Project would have a **less than significant impact**.

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. Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory, and respiratory effects, nausea, vomiting, and headache). The Project would not be located adjacent to a sensitive receptor population that would be substantially affected by odors emitted from the facility. In addition, Project operations include the use of scrubbers for the hydrochloric acid and the acetic acid tanks to reduce odor impacts. Although, the odor impacts associated with the Project would have a **less than significant impact**, they would be regulated through SJVAPCD regulations and requirements.

4.4 Biological Resources

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?	☐	☐	☐	☒

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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?	☐	☐	☐	☒

4.4.1 Environmental Setting

The Project site is void of any natural features, such as seasonal drainages, riparian or wetland habitat, rock outcroppings, or other native habitat or associated species. The United States Department of Fish and Wildlife Services National Wetland Inventory identified a freshwater pond at the southwest corner of the Project site using infrared imagery in 1987. This area is currently occupied by railroad tracks and no vegetation or natural drainages appear to exist. No shrubs or trees are present on or immediately adjacent to the Project site. No wetlands have been reported or observed on the site. Development of the site would not conflict with any local policies or ordinances protecting biological resources, 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.

According to the United States Fish and Wildlife Service (USFWS) (Information for Planning and Conservation) neither the City of Madera General Plan Update nor its Environmental Impact Report (EIR) identified threatened or endangered species in the Project area.

Sensitive plants and animals that have been found in the City of Madera are listed below.

- Burrowing Owl
- California Tiger Salamander
- Blunt nosed leopard lizard
- California linderiella ("fairy shrimp")
- Vernal pool fairy shrimp
- Madera leptosiphon
- Hairy orcutt grass

Although most of the City of Madera has been changed from its natural condition by farming and urban uses, a few areas of natural habitat remain. These include:

- Annual grasslands
- Riparian areas
- Wetlands

4.4.2 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. The Project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Therefore, the Project would result in a **less than significant impact.**

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?

No Impact. The Project site and its surroundings are absent of any riparian habitat, sensitive natural communities of special concern or of any critical habitat designated by the California Department Fish and Wildlife or by the United States Fish and Wildlife Service as critical habitat essential for the preservation and recovery of State and/or federally listed plant or animal species. The Project would not result in any direct or indirect impacts to a riparian corridor, stream channel, or potentially viable habitat in which sensitive species could be found. Therefore, this Project would have **no impact.**

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 upper surface of the soil is generally loose and medium dense silty; whereas the subsurface soil is sandy, silty, and clayey. Soils have moderately coarse textures, moderate to high infiltration rates, and are moderate to well drained. Further, no wetlands have been reported or observed on the site. As a result, the Project would have **no impact** on federally protected wetlands as defined by Section 404 of the Clean Water Act.

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?

No Impact. The Project site does not present any features of a river, creek, stream, or other form of water course, nor does the Project site include features of a wildlife corridor. Wildlife movement corridors are absent from the Project site. Therefore, the Project would have **no impact** on the movement of any native resident or migratory fish or wildlife species or on an established native resident or migratory wildlife corridor.

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 would not conflict with any local policies or ordinances protecting biological resources and the City of Madera does not have a tree preservation ordinance. Therefore, this Project will have **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. The Project site is not subject to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Therefore, construction of the proposed Project would not conflict with the provisions of any adopted habitat conservation plans and **no impact** would occur.

4.5 Cultural Resources

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?	☐	☐	☒	☐

4.5.1 Environmental Setting

Cultural resources include prehistoric and historical archaeological sites, buildings, bridges, roadways, and tribal cultural resources. Historical resources include sites, structures, objects, or districts that may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance as defined by CEQA. Such resources are eligible for listing in the California Register of Historic Resources by the State Historical Resources Commission. According to the Madera General Plan, there are approximately 54 historic buildings/structures and sites in the City. Places of contemporary historical significance include the Madera County Courthouse, Luther Burbank School, and the Dixie Motel. In addition, it is likely that archaeological and cultural resources exist along waterways. The City of Madera General Plan Environmental Impact Report (EIR) does not indicate the presence of Native American traditional cultural place(s) within or adjacent to the Project site.

4.5.2 Impact Assessment

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

No Impact. In recent history, the Project site has been designated and operated as industrial use related to manufacturing chemicals. There are no local, State, or federal designated historical resources on the Project site or within the Project area. The Project is devoid of historic structures. No historic properties would be affected by the Project. Therefore, the Project would result in **no impact.**

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

Less than Significant Impact. The Project site consists of no known archaeological deposits; however, it is possible that unknown buried archaeological materials could be found during ground disturbing construction activities, which would constitute a significant impact. Madera General Plan Action Item HC-9.2 imposes the following condition of approval on all discretionary projects, which may cause ground disturbance pursuant to Public Resources Code Section 21082.2: "The Planning Department shall be notified immediately if any prehistoric, archaeologic, or fossil artifact or resource is uncovered during construction. All construction must stop and an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to evaluate the finds and recommend appropriate action." Thus, if such resources were discovered, implementation of the required condition of approval would reduce the impact resulting in a **less than significant impact.**

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less than Significant Impact. There is no evidence that human remains exist on the Project site. In addition, the existing site already has an existing operation in the same location so there is a very low possibility that a non-visible buried site may exist and may be uncovered during ground disturbing construction activities, which would constitute a significant impact. Madera General Plan Action Item HC-9.2 imposes the following condition of approval on all discretionary projects, which may cause ground disturbance pursuant to California Code of Regulations Section 15064.5(e), Public Resources Code Section 5097.98, and California Health and Safety Code Section 7050.5: "All construction must stop if any human remains are uncovered, and the County Coroner must be notified according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the procedures

outlined in CEQA Section 15064.5 (d) and (e) shall be followed." If such resources were discovered, implementation of the required condition of approval would reduce the impact resulting in a **less than significant impact.**

4.6 Energy

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?	☐	☐	☒	☐

4.6.1 Environmental Setting

The City of Madera, including the Project site, is served by Pacific Gas and Electric (PG&E) for its natural gas and electrical energy demands.

4.6.2 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. Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction. For heavy-duty construction equipment, horsepower and load factor were assumed using default data from the CalEEMod model. Fuel use associated with construction vehicle trips generated by the Project was also estimated; trips include construction worker trips, haul trucks trips for material transport, and vendor trips for construction material deliveries. Fuel use from these vehicles traveling to the Project was based on (1) the projected number of trips the Project will generate (CalEEMod default values), (2) default average trip distance by land use in CalEEMod, and (3) fuel efficiencies estimated in the CARB 2017 Emissions Factors model (EMFAC2017) mobile source emission model.

Construction. Construction would include demolition, site preparation, Grading, Warehouse construction, Architectural Coating which require the transportation of building materials and equipment. Therefore, the primary source of energy for construction activities would be diesel and gasoline (i.e., petroleum fuels). All construction equipment shall conform to current emissions standards and related fuel efficiencies including applicable CARB regulations (Airborne Toxic Control Measure), California Code of

Regulations (Title 13, Motor Vehicles), and Title 24 standards. Compliance with such regulations would ensure that the short-term, temporary construction activities do not result in wasteful, inefficient, or unnecessary consumption of energy resources.

Operations. The Operations would involve heating, cooling, equipment, and vehicle trips. Energy consumption related to operations would be associated with natural gas, electricity, and fuel. Energy and natural gas consumption were estimated using CalEEMod (**Appendix A**). When compared to energy outputs for Madera County, the results of the analyses do not rise to a level of significance. Section 4.17 analyzes vehicle miles traveled (VMT) associated with the Project. Energy consumption is anticipated to decrease over time as more energy efficient standards take effect and energy-consuming equipment reaches its end-of-life and necessitates replacement. Documentation demonstrating compliance with such standards will be required to be submitted with the building permit application; and compliance will be enforced by the Building Department. For these reasons, Project operations would not result in wasteful, inefficient, or unnecessary consumption of energy resources. As a result, a **less than significant impact** is expected**.**

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

Less than Significant Impact. As previously mentioned, the construction and operation of the Project would be subject to compliance with applicable CARB regulations, California Code of Regulations, and Title 24 standards, which include a broad set of energy conservation requirements in addition to Best Management Practices (BMPs) for water conservation. Thus, applicable State regulations and programs would be implemented to reduce energy waste. As a result, the Project would not conflict with any plans for renewable energy or energy efficiency and would therefore have a **less than significant impact**.

4.7 Geology and Soils

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?	☐	☐	☒	☐

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☐	☒	☐

4.7.1 Environmental Setting

The Project lies in the City of Madera, which is located within the San Joaquin Valley and bordered by the Sierra Nevada Mountains to the east (8,000 to 14,492 feet in elevation), the Coastal Range to the west (4,500 feet in elevation), and the Tehachapi Mountains to the south (9,000 feet elevation). The San Joaquin Valley is open to the north extending to the Sacramento Valley Air Basin. Madera is generally flat with some areas of slopes including areas near rivers and streams. The City has no known active earthquake faults (i.e., faults showing activity within the last 11,000 years) and is not located within any Alquist-Priolo Special Studies Zones. The nearest active fault is more than70-miles from the City. Potential ground shaking may occur due to earthquakes on nearby faults. However, compliance with the California Building Code (CBC) would be sufficient to prevent significant damage during seismic events. A brief discussion of the likelihood of seismic activities to occur in or affect Madera is provided below.

The subsurface soils encountered generally consist of sandy silt, silty sand, clayey silty sandy, sandy clayey silt, sand with silt, sandy silty clay, silty clay, sandy clay, and clayey sand. The upper surface soil is generally loose and medium dense silty sand with trace of clay and medium stiff sandy silt with trace of clay to depths ranging from 1 to 2 feet below grade (BG). The silty sand and sandy silt with trace of clay was

underlain by loose to medium dense silty sand, clayey silty sand, sand with silt, and medium stiff to stiff sandy silt, sandy clayey silt, and sandy silty clay to depths ranging from 4 to 8.5 feet BG, which in turn was underlain by stiff to very stiff sandy silty clay, sandy silt and medium dense silty sand, clayey silty sand, clayey sand, sandy clay, silty clay, and sand with silt to a maximum depth of 31.5 feet BG, the maximum depth explored. The clayey soil in the upper 3 feet at the site has very low to low expansion potential as indicated by Expansion Index results ranging from 0 to 25. Therefore, there is less than significant chances of liquefaction. Furthermore, the Project site is located within a minimal flood hazard zone that reduces the chances of flood and landslide. Ground subsidence is the settling or sinking of surface soil deposits with little or no horizontal motion. Soils with high silt or clay content are subject to subsidence. According to the Madera County Local Hazard Mitigation Plan (LHMP), the probability of future occurrences of subsidence is less than 10%. Furthermore, the Madera General Plan indicates the risk of subsidence in Madera County to be "low."

4.7.2 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. Ground shaking intensity is largely a function of distance from the earthquake epicenter and underlying geology. The Project site is relatively flat and located a considerable distance from fault lines. The most common impact associated with strong ground shaking is damage to structures. The CBC establishes minimum standards for structures located in regions subject to ground shaking. Structures constructed on-site would be required by State law and City ordinances to be constructed in accordance with CBC regulations and to adhere to all current earthquake construction requirements. The Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving the 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. No known faults with evidence of historic activity cut through the Valley soils in the Project vicinity. The major active faults and fault zones occur at some distance to the east, west, and south of the Project site. The Project would not introduce residential development on the site nor expose people to strong seismic ground shaking. Therefore, the Project would result in a **less than significant impact.**

a-ii) Strong seismic ground shaking?

Less than Significant Impact. There are no known active earthquake faults in the City of Madera, nor is the City within an Alquist-Priolo earthquake fault zone as established by the Alquist-Priolo Fault Zoning Act. Ground shaking generally decreases with distance and increases with the depth of unconsolidated alluvial deposits. The most likely source of potential ground shaking is attributed to the San Andreas (approximately 125 miles west), Owens Valley (approximately 70 miles east), and the White Wolf faults. Thus, based on the previous shaking and distance of the causative faults, the Project site has minimal potential of strong ground shaking. Therefore, the Project would have a **less than significant Impact** as a result of seismic ground shaking.

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

Less than Significant Impact. As previously described, there are no geologic hazards or unstable soil conditions known to exist on the Project site. The site is relatively flat with stable soils and no apparent unique or significant landforms. Further, development of the site would require compliance with the City's grading and drainage standards. In addition, neither liquefaction nor lateral spreading have been observed in Madera from any historic earthquake. Liquefaction and lateral spreading potential in the City of Madera is considered very low due to the nature of the underlying soils, relatively deep-water table, and history of low ground shaking potential. Therefore, because of the Project's relatively flat topography, stability of soils, infrequency of seismic activity, and required compliance with City standards, the Project would have a **less than significant impact**.

a-iv) Landslides?

Less than Significant Impact. The topography of the Project site is relatively flat with stable, native soils, and the site is not susceptible to seismic activities, geologic instability, or landslides. Furthermore, the site is not in the immediate vicinity of rivers or creeks that would be more susceptible to landslides. Landslides are not expected to affect the Project area as the City of Madera is not located near an area with steep slopes and has a relatively dry climate. The Project area has a nearly flat topography level with a slope of about 2%, which is not subject to landslides. Therefore, there would be **a less than significant impact.**

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

Less than Significant Impact. For the preparation of site development, activities such as grading and trenching may result in the potential for short-term soil disturbance or erosion impacts. Construction would also involve the use of water, which may cause further soil disturbance. However, the extent of erosion would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions. Projects that would disturb more than 1 acre land are required to obtain coverage under the Statewide General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). Such impacts would be addressed through compliance with Madera General Plan Policy CON-8, which encourages Low Impact Development practices, and regulations set by the State Water Resources Control Board (SWRCB). The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. Since the Project site has relatively flat terrain with a low potential for soil erosion and would address State Water Resources Control Board (SWRCB) requirements, the Project would have a **less than significant impact.**

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 has a relatively flat topography with stable soils and no apparent unique or significant landforms. Furthermore, the Project site is in an area of infrequent and low historic seismic activity of nearby faults. Such factors minimize the potential for other geologic hazards such as landslides, lateral spreading, subsidence, liquefaction, or collapse. Therefore, any development on the native, stable soils is unlikely to become unstable and result in geologic hazards. As a result, the Project would have a **less than significant impact.**

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?

Less than Significant Impact. As discussed above in (4.7.1) environmental section, the traces of clay present in the soil have very low expansion potential. Therefore, the Project would have a **less than significant 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 would not require the installation of a septic tank or alternative wastewater disposal system. Therefore, the Project would have **no impact.**

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

Less than Significant Impact. There are no known paleontological resources or unique geological features known to the City within this area or on this site. However, there is some possibility that a non-seen, buried site may exist and may be uncovered during ground disturbing construction activities, which would constitute a significant impact. Madera General Plan Action Item HC-9.2 imposes the following condition of approval on all discretionary projects, which may cause ground disturbance pursuant to Public Resources Code Section 21082.2: "The Planning Department shall be notified immediately if any prehistoric, archaeologic, or fossil artifact or resource is uncovered during construction. All construction must stop and an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to evaluate the finds and recommend appropriate action." As a result, if such resources were discovered, implementation of the required condition of approval would result in a **less than significant impact.**

4.8 Greenhouse Gas Emissions

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?	☐	☐	☒	☐

4.8.1 Environmental Setting

Gases that trap heat in the atmosphere are often called greenhouse gases. Some greenhouse gases such as carbon dioxide occur naturally and are emitted to the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. Solar radiation enters Earth's atmosphere from space and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring greenhouse gases include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases (GHGs), but they are, for the most part, solely a product of industrial activities. Although the direct greenhouse gases CO_2, CH_4, and N_2O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three GHGs have increased globally by 40, 150, and 20 percent, respectively (Intergovernmental Panel on Climate Change [IPCC], 2013).

In 2006, the California State Legislature adopted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, which aims to reduce GHG emissions in California. GHGs, as defined by AB 32, include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. AB 32 requires the CARB, the State agency that regulates statewide air quality, to adopt rules and regulations that would achieve GHG emissions equivalent to 1990 statewide levels by 2020. The Air District adopted a 29 percent less than Business-As-Usual (BAU) to meet the 2020 standard.

In 2016, Senate Bill (SB) 32 was adopted, which established a goal to achieve GHG emissions equivalent to 40 percent below 1990 statewide levels by 2030. No project-level reduction standard has been adopted to meet the 2030 standard established by SB 32; however, the 2017 Climate Scoping Plan has estimated that a reduction of between 8 and 15 percent in the industrial sector would contribute to an overall 40 percent reduction in GHG emissions below 1990 levels. This would equate to an overall reduction target of 34.6 to 39.7 percent below BAU for industrial projects. An average target of 37.2 percent reduction from BAU has been used in this analysis as an interim threshold of significance for 2030 in-lieu of an adopted project-level standard for industrial projects.

The emissions from a single project will not cause global climate change, however, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. Therefore, the analysis of GHGs and climate change presented in this section is presented in terms of the proposed Project's contribution to cumulative impacts and potential to result in cumulatively considerable impacts related to GHGs and climate change.

Cumulative impacts are the collective impacts of one or more past, present, and future projects that, when combined, result in adverse changes to the environment. In determining the significance of a proposed Project's contribution to anticipated adverse future conditions, a lead agency should generally undertake a two-step analysis. The first question is whether the combined effects from both the proposed Project and other projects would be cumulatively significant. If the agency answers this inquiry in the affirmative, the second question is whether "the proposed Project's incremental effects are cumulatively considerable" and thus significant in and of themselves.

The cumulative project list for this issue (climate change) comprises anthropogenic (i.e., human made) GHG emissions sources across the globe and no project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate. However, legislation and executive orders on the subject of climate change in California have established a statewide context and process for developing an enforceable statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and, therefore, significant.

In assessing the significance of impacts from GHG emissions, Section 15064.4(b) of the CEQA Guidelines states that a lead agency may consider the following:

- The extent to which the project may increase or reduce GHG emissions as compared to the environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

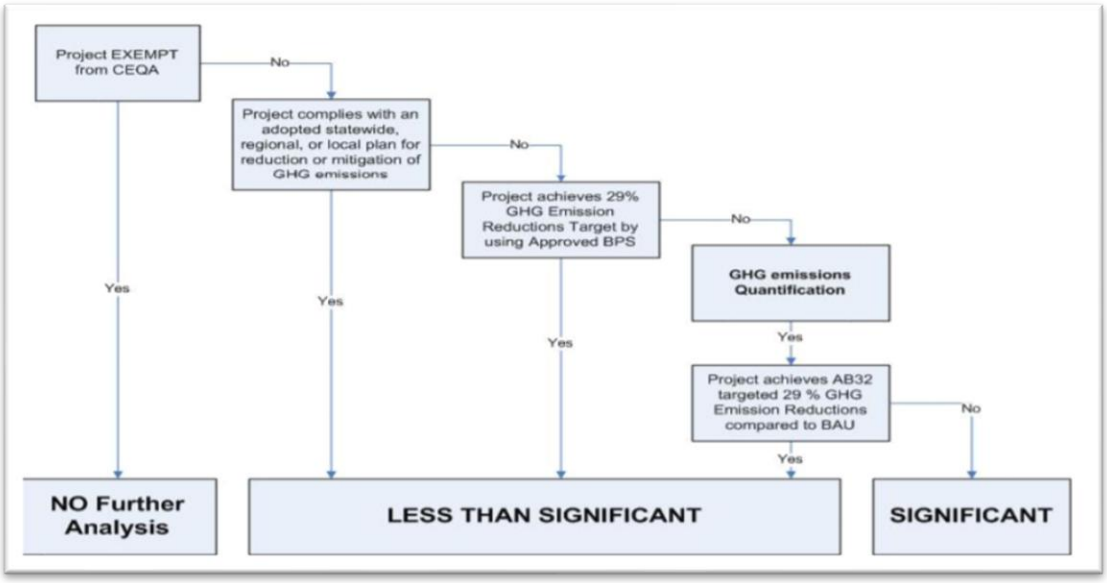
The SJVAPCD's Guidance for Valley Land Use Agencies in Addressing GHG Impacts for New Projects Under CEQA (2009) provides screening criteria for climate change analyses, as well as draft guidance for the determination of significance. [1,] These criteria are used to evaluate whether a project would result in a significant climate change impact (see below). Projects that meet one of these criteria would have less than significant impact on the global climate.

- Does the project comply with an adopted statewide, regional, or local plan for reduction or mitigation of GHG emissions? If no, then:
- Does the project achieve 29% GHG reductions by using approved Best Performance Standards (BPS)? If no, then
- Does the project achieve targeted 29% GHG emission reductions compared with Business As Usual (BAU)?
- Below is a simplification of this process identified in a Fact Sheet from the San Joaquin Valley Air Pollution Control District (Figure 4-1).[2]

[1] San Joaquin Valley Air Pollution Control District. (2009). Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. Accessed July 27, 2021, http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf

[2] San Joaquin Valley Air Pollution Control District, FACT SHEET, Addressing Greenhouse Gas Emissions Impact under the California Environmental Quality Act (CEQA), Land Use Development Projects https://www.valleyair.org/Programs/CCAP/bps/Fact_Sheet_Development_Sources.pdf

Figure 4-1 SJVAPCD Guidance for CEQA Climate Change Analyses



Source: San Joaquin Valley Air Pollution Control District Factsheet

4.8.2 Impact Assessment

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

Less than Significant Impact. Consistent with the District Guidance and District Policy above, SJVAPCD (2015) acknowledges the current absence of numerical thresholds, and recommends a tiered approach to establish the significance of the GHG impacts on the environment:

- If a project complies 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, then the project would be determined to have a less than significant individual and cumulative impact for GHG emissions;
- If a project does not comply with an approved GHG emission reduction plan or mitigation program, then it would be required to implement Best Performance Standards (BPS); and
- If a project is not implementing BPS, then it should demonstrate that its GHG emissions would be reduced or mitigated by at least 29 percent compared to Business as Usual (BAU).

In the event that a local air district's guidance for addressing GHG impacts does not use numerical GHG emissions thresholds, at the lead agency's discretion, a neighboring air district's GHG threshold may be used to determine impacts. In December 2008, the South Coast Air Quality Management District (SCAQMD) Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. The SCAQMD guidance identifies a threshold of 10,000 MTCO2eq. (metric tons of carbon dioxide equivalent)/year for GHG for construction emissions amortized over a 30-year project lifetime, plus annual operation emissions. This threshold is often used by agencies, such as the California Public Utilities Commission, to evaluate GHG impacts in areas that do not have

specific thresholds (CPUC 2015)3[3]. Though the Project is under SJVAPCD jurisdiction, the SCAQMD GHG threshold provides some perspective on the GHG emissions generated by the Project. Table 4-2 shows the yearly GHG emissions generated by the Project as determined by the CalEEMod model, which is less than the threshold identified by the SCAQMD.

The Bay Area Air Quality Management District (BAAQMD) and Sacramento Metropolitan Air Quality Management District (SMAQMD) states that projects that generate less than 1,100 MTCO2eq. annually would not have a significant GHG impact. The SMAQMD has established 1,100 MTCO2eq. annually for both construction and operational phases (See Table 4-2) as the threshold to determine a **less than significant impact**. The Project would be generally consistent with the applicable goals and policies related to GHG reduction measures for the City of Madera.

Table 4-2 Project Operation Threshold

Source (Tons Per Year)	CO_2e		
	Operational year	Amortized Construction Emissions	Total Emission
Operational Emissions	355.2382	5.7253	360.96 Mt
Exceed Threshold?			**No**

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 Impact. As discussed above, project emissions are below the threshold for neighboring air districts. The Project complies with several of the measures as described below. AB 32 was enacted by the state in 2006 in an effort to reduce GHGs to 1990 levels by 2020. In 2008, the CARB adopted the Climate Change Scoping Plan in accordance with the requirements of AB 32 which outlines the actions recommended to achieve that aim. CARB's 2017 Climate Change Scoping Plan builds on the efforts and plans encompassed in the initial Scoping Plan. The Scoping Plan includes a number of measures to reduce the pollution from the State.

As required by California law, city and county General Plans contain a Land Use Element that details the types and quantities of land uses that the city or county estimates will be needed for future growth, and that designate locations for land uses to regulate growth. MCTC uses the growth projections and land use information in adopted general plans to estimate future average daily trips and then VMT, which are then provided to SJVAPCD to estimate future emissions in the AQPs. The applicable General Plan for the project is the City of Madera Vision 2025 General Plan, which was adopted in 2009.

The Project is consistent with the currently adopted General Plan for the City of Madera and the adopted 2018 RTP/SCS and is therefore consistent with the population growth and VMT applied in those plan

[3] California Public Utilities Commission (CPUC). 2015. Section 4.7, "Greenhouse Gases." Final Environmental Impact Report for
the Santa Barbara County Reliability Project. May 2015. Accessed 2021
http://www.cpuc.ca.gov/environment/info/ene/sbcrp/SBCRP_FEIR.html.

documents. Therefore, the Project is consistent with the growth assumptions used in the applicable AQP. It should also be noted that yearly GHG emissions generated by the Project are less than the threshold identified by the SCAQMD, BAAQMD and SMAQMD.

Table 4-3. Scoping Plan Reduction Measures Consistency Analysis

Reduction Measure	Consistency/Applicability Determination
Energy Efficiency. Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms.	The Project is required to meet the State Building Energy Efficiency Standards. Compliance with these energy efficiency regulations and programs ensure that development will not result in wasteful, inefficient, or unnecessary consumption of energy sources. Therefore, the Project is consistent with this measure.
Renewable Portfolio Standard. Achieve 33% renewable energy mix statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	This measure is a statewide measure that is not implemented by a project applicant or lead agency. Therefore, the measure is not applicable to the proposed project.
Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.	This measure is a statewide measure that is not implemented by a project applicant or lead agency. Therefore, the measure is not applicable to the proposed project. However, when the measure is initiated, it would be applicable to vehicles that would access the Project site.
Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles.	This measure refers to SB 375. SB 375 does not have requirements that directly apply to development projects. Therefore, the measure is not applicable to the Project.
Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.	This measure is a statewide measure that is not implemented by a project applicant or lead agency. Therefore, the measure is not applicable to the proposed project. However, when the measure is initiated, it would be applicable to light-duty vehicles that would access the Project site.
Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits.	The Project does not exceed neighboring air district emission thresholds and the effects due to GHG are less than significant.
Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	The Madera General Plan outlines goals and policies for source reduction and recycling. The Project is required to comply with these goals and policies during the approval process.
Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	As described above the project meets the necessary State Building Energy Efficiency Standards (Title 24, Parts 6 and 11) (i.e., CALGreen). Compliance with these energy efficiency regulations and programs ensure that development will not result in wasteful, inefficient, or unnecessary consumption of energy

Reduction Measure	Consistency/Applicability Determination
	sources. Therefore, the proposed project is consistent with this measure.

In conclusion, the Project contains features that would reduce GHG emissions. These features are in accordance with several measures. As such, the Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and therefore would result in a **less than significant impact.**

4.9 Hazards and Hazardous Materials

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?	☐	☐	☒	☐

4.9.1 Environmental Setting

For the purposes of this section, the term "hazardous materials" as defined by the California Code of Regulations are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Hazardous materials are grouped into the following four categories based on their properties:

- Toxic: causes human health effect
- Ignitable: has the ability to burn
- Corrosive: causes severe burns or damage to materials
- Reactive: causes explosions or generates toxic gases

A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that define a material as hazardous also define a waste as hazardous. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Hazardous materials are routinely used, stored, and transported in the City of Madera. Hazardous waste generators may include industries, businesses, public and private institutions, and households. Federal, State, and local agencies maintain comprehensive databases that identify the location of facilities using large quantities of hazardous materials, as well as facilities generating hazardous waste. Some of these facilities use certain classes of hazardous materials that require risk management plans to protect surrounding land uses. The release of hazardous materials would be subject to existing federal, State, and local regulations.

4.9.2 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. The Project site would receive deliveries from trucks entering the site via Pecan Avenue, as well as from the railway on the northern boundary of the site during operation of the facility. Site operations would include the storage, blending, loading, and shipment of Class 3, 8, and 9 hazardous materials including Citric Acid, Calcium Chloride, Sorbitol, Sodium Hypochlorite, Potassium Hydroxide, Sodium Hydroxide, Hydrochloric Acid, Sulfuric Acid, Urea solution, Acetone, and Isopropyl Alcohol. The facility would be required to meet the safety requirements set by the State, including the acquisition of applicable permits, the drafting of a California Accidental Release Prevention Program, a Hazardous Material Release Response Plan, a Hazardous Material Management Plan and Hazardous Materials Inventory Statement, and a Hazardous Waste Generator and Onsite Hazardous Waste Treatment Program. The Madera County Office of Environmental Health Division is the regulatory body that would oversee participation in all of the aforementioned plans and programs, as required under the State's Certified Unified Program Agency (CUPA). In addition, as discussed in the Project Description above, the Project would construct tank containment structures made of reinforced concrete for

protection in the event of any spillage of chemicals. Tank structures would include external pipes within the containment structure areas that allow for easier identification of leakages originating from the tanks. Due to State standards, regulation and enforcement by the Madera County Office of Environmental Health, the Project would not result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, impacts would be **less than significant.**

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 with Mitigation Incorporated. As discussed above in impact a), the Project would handle several chemicals on-site including some that are designated as corrosives and flammables. The Project would be required to meet all requirements for hazardous material handling, transport, and storage by the State. The Project would also be subject to several plans, programs, and permits regulated by the Madera County Office of Environmental Health under CUPA. The Project site would be constructed to provide multiple safety measures including containment areas, piping designed to expose leakages, as well as fire hydrants located on-site. Implementation of Mitigation Measure **HAZ-1** will ensure that potential impacts from foreseeable upset and accident conditions involving the release of hazardous materials remains less than significant. Therefore, impacts would be **less than significant with mitigation incorporated.**

HAZ-1: A Hazardous Material Release Response Plan shall be submitted and accepted by the County of Madera Office of Environmental Health before operational activities authorized under the proposed Project commence on-site.

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?

Less than Significant Impact. The proposed Project is not anticipated to emit hazardous emissions or handle hazardous materials, substances, or waste that would pose a risk or threat to area school within one-quarter miles of the Project site. Madera South High School is the nearest school to the site, located approximately 4,100 feet to the northeast. Therefore, there would be **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?

Less than Significant Impact. The Project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, the Project would not create a significant hazard to the public or the environment. For these reasons, there would be a **less than significant 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?

No Impact. The nearest public airport to the Project site is the Madera Municipal Airport, which is located approximately 4 miles north of the site. The applicable airport land use plan for the Madera Municipal Airport is the Madera Countywide Airport Land Use Compatibility Plan (ALUCP) adopted in 2015. According to the land use plan, the Project site is not located within the airport influence area of the Madera Municipal Airport. The City of Madera General Plan ensures that projects would not result in a safety hazard or excessive noise for people residing or working in the area. As a result, the Project would have **no impact.**

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 Project site is within an urbanized area, which is surrounded by existing development and infrastructure, including public street and roads. Thus, the Project would not involve any new or altered infrastructure associated with evacuation, emergency response, and emergency access routes within the City or County of Madera. Construction of frontage improvements may require "no parking" signs, traffic routing, and/or lane closures; however, these activities would be short-term, and access would be maintained through standard traffic control. Following construction, the south Pecan driveway would continue to provide access to the site. Furthermore, the Project would be subject to compliance with applicable standards for on-site emergency access including turn radii and fire access. Therefore, the Project would have a **less than significant impact.**

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

No Impact. The Project site is not identified by the California Department of Forestry and Fire Protection (Cal Fire) or the City of Madera as a Very High Fire Hazard Severity Zone (VHFHSZ); rather, the site is within an "area of local responsibility" and is considered an area of low fire risk.[4] Lastly, the Project would be required to be developed and operated in compliance with all regulations of the current California Fire Code. Therefore, the Project would have **no impact.**

[4] Cal Fire, "FHSZ Viewer." Accessed on July 30, 2021, https://egis.fire.ca.gov/FHSZ/

4.10 Hydrology and Water Quality

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?	☐	☐	☒	☐

4.10.1 Environmental Setting

The City of Madera is within the San Joaquin River watershed and Basin Hydrological Study Area covering roughly 13,500 square miles, or approximately the southern two-thirds of the San Joaquin Valley. The San Joaquin River watershed is divided into numerous hydrologic areas and subareas. The Madera hydrologic area encompasses the southwestern and northwestern portions of the City and extends northwest to the City of Chowchilla, draining into the Fresno River and its tributaries. The Fresno River is the main hydrologic feature in the City. The river flows west from the Sierra Nevada before entering the Chowchilla Bypass in western Madera County. The Fresno River is dry throughout most of the year, with flows depending mainly on water releases from upstream water agencies[5].

Water demands for the City of Madera are increasing each year. In 2014, the City had an annual demand of 13,800 acre-feet to service the 63,105 population.[6] The City of Madera uses various methods to facilitate groundwater recharge. The Madera General Plan, along with the Madera County Local Hazard Mitigation Plan, and the Federal Emergency Management Agency (FEMA) Flood Insurance Study have noted the Madera County area as having good drainage.[7,8]

Stormwater from the City is sent to retention basins to recharge and manage the Madera Subbasin. During drier periods of time, the City has the option to use small purchases of surface water from the Madera Irrigation District (MID) to send to the City's stormwater basins. The proposed Project site is located in minimal flood hazard area according to FEMA. The Project site currently contains an existing temporary drainage basin that collects drainage on-site, percolating drainage water through the on-site soil base.

4.10.2 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. Clearing, grading, excavation, and construction activities have the potential to impact water quality through soil erosion and increased silt and debris discharged into runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. Temporary storage of construction material and equipment in work areas or staging areas could create the potential for a release of hazardous materials, trash, or sediment to the storm drain system.

The Project would disturb more than one acre of soil on the Project site. Therefore, the Project would be required to comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Permit (GCP). The GCP requires the submittal of Permit Registration Documents (PRDs) to the State Water Resources Board (SWRCB) prior to the start of the construction. The PRDs include a Notice of Intent (NOI), risk assessment, site map, annual fee, signed certification statement, Stormwater Pollution Prevention Plan (SWPPP), and post-construction water balance calculations. The SWPPP

[5] City of Madera, City of Madera General Plan Update, Draft Environmental Impact Report, p 4.9-1.
[6] County of Madera (2017). Madera County Storm Water Resource Plan. Accessed August 6, 2021, https://www.maderacountywater.com/wp-content/uploads/2018/06/FINAL_MaderaSWRP_171228.pdf
[7] City of Madera (2010). General Plan.
[8] County of Madera (2017). Madera County Local Hazard Mitigation Plan Update. Accessed August 6, 2021, https://www.maderacounty.com/home/showdocument?id=362

describes the incorporation of best management practices to control sedimentation, erosion, and the potential for hazardous materials contamination of runoff during construction.

Upon completion of the Project, stormwater would runoff on-site into the existing ponding basin located on the Project site or into the City's stormwater system. The existing basin would be reconfigured to be 0.63 acres in total size. The Project would be required to implement applicable portions of the City's Storm Water Quality Management Program, ensuring that effective and adequate Best Management Practices (BMPs) would be in place to minimize the pollutant load in storm drainage, thereby protecting surface water quality. In addition, implementation of General Plan policies would further protect surface quality by requiring the Storm Water Quality Management Program to be updated to include newly available BMPs. The Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Therefore, the Project would have a **less than significant impact.**

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?

Less than Significant Impact. Water demands for the City of Madera are increasing each year. The proposed Project lies in the City of Madera water service area. The City of Madera 2015 Urban Water Management Plans (UWMP) anticipated having a 2020 minimum supply of 15,700-acre feet per year (AFY) with a demand based on a 2020 population of 71,555 persons. The population as of 2020 was approximately 66,000 persons. Further, the Project is consistent with the General Plan designation of Industrial evaluated under the UWMP. Therefore, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. Therefore, the Project would have a **less than significant 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;

Less than Significant Impact. Erosion is a natural process in which soil is moved from place to place by wind or from flowing water. The Project site does not contain any natural waterways and therefore implementation of the Project would not affect a stream or river. However, the Project would require grading or soil exposure during construction. If not controlled, the transport of these materials via local stormwater systems into local waterways could temporarily increase sediment concentrations. To minimize this impact, the Project would be required to comply with all of the requirements of the State GCP, including preparation of PRDs and submittal of a SWPPP to the SWRCB prior to start of construction activities. Mandatory compliance with State regulations would ensure that the Project would have a **less than significant impact**.

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

Less than Significant Impact. The Project would increase the amount of impervious surface area on the Project site. However, the Project would be required to comply with all of the requirements of the State

GCP as described above to ensure the adequate control of runoff and prevention of on-site flooding. Therefore, the potential impacts to flooding on- or off-site would have a **less than significant impact**.

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

Less than Significant Impact. The Project would not substantially alter the existing drainage pattern of the site or area. While the Project would reconfigure the existing drainage basin on-site, drainage would continue to flow to this temporary basin. The Project would be required to comply with the City's Master Plan, ordinances, and standard practices for stormwater drainage. Therefore, the Project would have a **less than significant impact**.

c-iv) impede or redirect flood flows?

Less than Significant Impact. Although the construction of the proposed Project would result in impervious surface, drainage patterns would not be altered since there are no drainages that cross the Project area that would be altered. Runoff from the Project would be conveyed to storm drain inlets and then carried to the existing temporary retention basin to infiltrate into soil. While the existing basin would be reconfigured, flood flows would continue to flow into the basin. Thus, the Project would not impede or redirect flood flows and therefore, the Project would have a **less than significant impact**.

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

No Impact. The Project is not located in flood hazard, tsunami, or seiche zones. The Project site is designated as Zone X, and it will not risk the release of pollutants due to Project inundation. In addition, the Project area, as well as the City of Madera as a whole, has historically been subject to low to moderate ground shaking and has a relatively low probability of shaking. Seiches are unlikely to form due to the low seismic energy produced in the area. Therefore, as a low-risk area, the Project would have **no impact** as it relates to the risk release of pollutants due to Project inundations.

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

Less than Significant Impact. The City of Madera is located in the Madera Subbasin. The City of Madera adopted the Joint Groundwater Sustainability Plan (GSP) in January 2020. The GSP includes two City of Madera projects, which include the installation of water meters and the construction of Berry Basin, a groundwater recharge basin[9]. The Project is also required to install water meters. Therefore, the Project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. Therefore, there would be a **less than significant impact**.

[9] Madera Subbasin Coordination Committee. Madera Subbasin Sustainable Groundwater Management Act Joint Groundwater Sustainability Plan. January 2020.

4.11 Land Use and Planning

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?	☐	☐	☐	☒

4.11.1 Environmental Setting

The Project site is within the City Limits. The site is designated in the City's General Plan as Industrial and zoned I (Industrial). The Project is compatible with industrial land uses and is consistent with all applicable General Plan policies and Zoning Ordinance development standards.

4.11.2 Impact Assessment

a) Would the project physically divide an established community?

No impact. The Project would not physically divide an established community. The Project is located on an industrial parcel and proposes to further expand its current operations, as anticipated by the General Plan. Industrial and agricultural zoned properties surround the Project site. Therefore, there would be **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?

No Impact. As noted above, the proposed use is consistent with the General Plan land use designations. Development of the proposed Project is in accordance with the General Plan and would not conflict with a land policy or regulation adopted for the purpose of avoiding or mitigating an environment effect. As a result, there will be **no impact.**

4.12 Mineral Resources

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?	☐	☐	☐	☒

4.12.1 Environmental Setting

The California Geological Survey (CGS) is responsible for the classification and designation of areas within California containing or potentially containing significant mineral resources. The CGS classifies lands into Aggregate and Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geologic Board, as mandated by the Surface Mining and Reclamation Act of 1975. These MRZs identify whether known or inferred significant mineral resources are presented in areas. Lead agencies are required to incorporate identified MRZs resource areas delineated by the State into their general plans resource.[10] According to the findings of the City of Madera General Plan Update EIR, the Project site does not have the potential to affect the availability of any State or locally designated mineral resource.

4.12.2 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 not located in an area designated for mineral resource preservation or recovery. Therefore, the Project would not 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. Therefore, the Project would have **no impact**.

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. As described above, the Project site is not located in an area designated for mineral resource preservation or recovery. Therefore, the Project would not 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. As a result, there would be **no impact.**

[10]California Department of Conservation. "Surface Mining and Reclamation Act Mineral Lands Classification data portal." Accessed July 29, 2021, https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc

4.13 Noise

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 be residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

4.13.1 Environmental Setting

The site is located in an industrial zone and the Project itself entails the expansion of the existing Miles Chemical Company. To the west of the Project site is an existing food processing company with noise occurring during daylight hours. To the south are agricultural properties and to the east is vacant property, which is also zoned for industrial use. To the north of the Project site is the railroad spur and vacant land zoned for industrial uses.

In general, there are two (2) types of noise sources: 1) mobile source and 2) stationary sounds. Mobile source noises are typically associated with transportation activities including automobiles, trains, and aircraft. Stationary sounds are sources that do not move such as machinery or construction sites. The Madera General Plan Noise Element and Madera Municipal Code outlines policies and regulations to diminish health effects of noise in the community and prevent exposures to excessive noise levels.

4.13.2 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. The Project may be a source for the ambient noise during the construction phase due to use of large construction equipment, including rollers, pavers, dozers, and graders resulting increased noise level at the Project site. Compliance with the General Plan and Chapter 11 of the Madera

Municipal Code requirements would result in the Project's compliance with applicable standards. The Project will be conditioned to restrict construction to the hours between 7am to 10 pm in accordance with the General Plan and for compliance with the Section 7[11], Specific Noise Prohibitions, of the Madera Municipal Code. Further, there are no residential uses within 50 feet of the Project site. Therefore, construction-related noise would have a **less than significant impact.**

Short-Term Noise: Construction. Construction would result in short-term noise impacts. Temporary construction noise impacts from construction activities would be generated from the use of construction equipment for grading the site and building the proposed structures. Project construction is not expected to result in a significant impact because the noise would be generated during daylight hours and not during evening or more noise-sensitive time periods; and the increase in noise would cease upon completion of the Project. As is the case for this Project, the site is within an area that is experiencing ongoing development of vacant sites. For these reasons, the Project would have a **less than significant impact**.

Long-Term Noise: Operations. As indicated by General Plan Policy N-13, a 5 decibel (dB) increase in Community Noise Equivalent Level (CNEL) or Ldn (average noise level over a 24-hour period) noise levels shall be normally considered to be a significant increase in noise. Therefore, the significance criteria define a significant impact to occur if a project would result in a substantial (5 dBA [A-weighted sound levels] or greater) permanent increase in ambient noise levels in the project vicinity above levels existing without the project. There will not be significant change in the existing noise levels and there are no residential land uses within 200 ft. Therefore, the impacts will be **less than significant.**

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

Less than Significant Impact. As described under item a) above, the Project is not expected to generate any potentially significant adverse impacts from noise. While construction activity would result in the introduction of ground borne vibrations to the site, construction related noise and vibrations would be temporary and cease upon completion of Project construction. In addition, ground borne vibrations from construction equipment would be located over 150 feet from the nearest building on adjacent properties. The Project is not expected to result in the generation of excessive ground borne vibrations during operation. Thus, the Project would have a **less than significant impact**.

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

No Impact. The Project is not located in any airport compatibility zone as designated by the 2015 Madera Countywide Airport Land Use Compatibility Plan. The Project would not result in the generation of excessive noise for those working or residing within two miles of an adopted airport land use compatibility plan or within two miles of a public or private airport or airstrip. Therefore, there would be **no impact.**

[11] https://online.encodeplus.com/regs/maderacounty-ca-gp/doc-viewer.aspx?ajax=0&tocid=001.001.005.007#secid-98

4.14 Population and Housing

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?	☐	☐	☐	☒

4.14.1 Environmental Setting

The Project site is an expansion of an existing chemical company, undeveloped property to the north, industrial development to the west, vacant land to the east zoned for industrial uses, and agricultural properties to the south. The site is zoned for industrial uses.

4.14.2 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. The Project area is planned for industrial development including 57,600 square feet of warehouse buildings and chemical tanks. The proposed Project is consistent with the industrial planned General Plan land use designation and Zoning Ordinance. Therefore, the Project will have a **less than significant impact.**

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

No Impact. The Project site is currently used for industrial uses and there is no housing in the immediate vicinity of the Project site. The Project will not necessitate the construction of replacement housing elsewhere. Therefore, there would be **no impact.**

4.15 Public Services

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:				
v) Fire protection?	☐	☐	☒	☐
vi) Police protection?	☐	☐	☒	☐
vii) Schools?	☐	☐	☐	☒
viii) Parks?	☐	☐	☐	☒
ix) Other public facilities?	☐	☐	☐	☒

4.15.1 Environmental Setting

Fire, emergency, medical, and police protection services for the Project site are provided by the City of Madera. The City of Madera has a contract service with CalFire to provide management and staffing of the City's fire stations and equipment. Ambulance services are provided by a private contractor. The Project site is located within the Madera Unified School District (District). The District oversees pre-K through 12 education services. Parks are operated and maintained by the City of Madera.

4.15.2 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:

Fire Protection:

Less than Significant Impact. The Project site is within the City limits and therefore is served by the Madera Fire Department. The site is located within the City's fire service area and no additional fire facilities are required. The Project would be required to comply with standard requirements including the Madera Municipal Code and current California Fire Code, including the provision of fire hydrants. The Project would also not result in a need for new or altered facilities and therefore, would have a **less than significant impact**.

Police Protection:

Less than Significant Impact. The Project site will be within City limits and therefore will be served by the Madera Police Department. The Project site is located in an area currently served by the Police Department; the Department would not need to expand its existing service area or any patrol requirements during construction in a new facility to serve the Project site. Therefore, the Project would have a **less than significant impact.**

Schools:

No Impact. The Project would not result in the construction of new residences and no additional employees would be required to operate or maintain the Project. Therefore, the Project would have **no impact** on school facilities.

Parks:

No impact. The Project would not result in the construction of new residences and no additional employees would be required to operate or maintain the Project. Therefore, the Project would have **no impact** on parks.

Other Facilities Other Public Facilities:

No impact. Due to the nature of the Project, the Project would not result in a need for additional or other public facilities. The Project would have **no impact.**

4.16 Recreation

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?	☐	☐	☐	☒

4.16.1 Environmental Setting

The area is located in the I-Industrial Zone District of the City of Madera, which operates and maintains a number of recreational activities in the city, including parks. The nearest located park is Lions Town Park or Country Park that is nearly one mile from the existing site.

4.16.2 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?

No Impact. Increased demand for existing parks or other recreational facilities is typically driven by an increase in population. The Project would not result in an increase of residents at the Project site. Therefore, the Project would not contribute to the substantial deterioration of existing facilities or require the construction of new facilities or expansion of existing facilities. Therefore, there is **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. As discussed above, the Project would not require the construction or expansion of recreational facilities that might have adverse physical effect in the environment. Therefore, Project has **no impact.**

4.17 Transportation

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?	☐	☐	☒	☐

4.17.1 Environmental Setting

Under Senate Bill 743 (SB743), traffic impacts are related to Vehicle Miles Traveled (VMT). The VMT metric became mandatory on July 1, 2020. To-date, a VMT significance threshold has not been adopted by the City of Madera or County of Madera. To evaluate the significance of the Project as it relates to VMT, Section 15064.3 of the CEQA Guidelines and the Office of Planning and Research (OPR) 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA were used. Pursuant to Section 15064.3(b) of the CEQA Guidelines, if existing models or methods are not available to estimate the VMT for the particular project being considered, a Lead Agency may analyze the project's VMT qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc.

The Project Area is located at the southern edge of the City of Madera within the City limits. West Pecan Avenue provides the primary access to the site.

4.17.2 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 would not conflict with any program plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities. The Project will be conditioned to widen Pecan Avenue along the Project site's street frontage to a width of 100 feet, consistent with the arterial designation for Pecan by the Circulation Element of the General Plan. The Project is required to submit improvement plans, including roadway improvements, for review and

approval by the City Engineer to ensure improvements will be consistent with City standards. Therefore, there would be a **less than significant impact.**

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

Less than Significant Impact. Miles Chemical would have a work force of approximately 20 people. While the Project site would add new buildings and structures to support the Miles Chemical Company operations, the existing office is not proposed to be expanded upon. As a result, the Project would not result in a change in workforce that the site does not already support, and therefore VMT would not substantially increase resulting from the proposed Project. Expansion of the existing food grade building and the construction of a new warehouse and flammables building would not result in a new workforce size that would create a significant impact on the environment through GHG emissions from any net increase in total employees traveling to and from the site. Therefore, the Project would have **less than significant impact.**

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. Site access would be provided by two points of access; both of which are along West Pecan Avenue. The Project would be required to comply with standard ingress/egress requirements included in the Madera Municipal Code. Given the fact that the Project would be required to meet standard requirements, which would minimize the need for services, and that the Project would not result in a need for new or altered facilities, the Project would have a **less than significant impact.**

d) Would the project result in inadequate emergency access?

Less than Significant Impact. The Project would not result in inadequate emergency access. Any roadwork improvements that would result in lane closures or delays would be reviewed and approved by the City of Madera Engineering Department prior to commencement. Therefore, impacts would be **less than significant.**

4.18 Tribal Cultural Resources

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.	☐	☐	☒	☐

4.18.1 Environmental Setting

A previous sacred lands search completed for General Plan Environmental Impact Report (EIR) did not identify any sensitive Native American cultural resources either within or near the Project site. California Native American tribes traditionally and culturally affiliated with the Project area did not request consultation pursuant to Public Resources Code Section 21080.3.1.

4.18.2 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:

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

No Impact. The Project site does not contain any property or site features that are eligible for listing in the California Register of Historical Sources, or in a local register of historical resources as defined in PRC Section 5020.1(k). Madera General Plan Action Item HC-9.2 imposes the following condition on all discretionary projects, which may cause ground disturbance pursuant to Public Resources Code Section 21082.2: "The Planning Department shall be notified immediately if any prehistoric, archaeologic, or fossil artifact or resource is uncovered during construction. All construction must stop and an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to evaluate the finds and recommend appropriate action." Thus, if such resources were discovered, implementation of the required condition of approval would reduce the impact to less-than-significant. As such, the Project would have a **no impact**.

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public 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 Impact. The Project site is not a resource determined by the lead agency (City of Madera), 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. The Project site is not listed as a historical resource in the California Register of Historical Sources. As described above, no known tribal cultural resources have been identified (as defined in Section 21074) within the Project area, and no substantial information has been provided to the City to indicate otherwise. Therefore, the Project would have a **less than significant impact** on the significance of a tribal cultural resource.

4.19 Utilities and Service Systems

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?	☐	☐	☒	☐

4.19.1 Environmental Setting

The Project site is expansion of the existing site, so it has been connected to all the necessary utility services in the past. The Project sites land uses were analyzed in several utility planning documents, including the Water System Master Plan, Sanitary Sewer System Master Plan, and Urban Water Management Plan.

4.19.2 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 City has sufficient water supplies available to serve the Project and its existing commitments during normal, dry, and multiple dry years. The Project must comply with the requirements of the Engineering Department for the construction of water, wastewater, and storm water drainage infrastructure.

Electricity and natural gas and Telecommunications. PG&E, the natural gas and electric service provider for the area, incrementally expands and updates its service system as needed to serve its users. Accordingly, telecommunications providers in the area incrementally expand and update their service systems in response to usage and demand. PG&E, the natural gas and electric service provider for the area, incrementally expands and updates its service system as needed to serve its users. The Project will utilize the existing electrical panel/equipment responsible for the payment of development impact fees to off-set potential impacts to these facilities resulting in **less than significant impacts.**

In addition, the City has, and will continue to review the Project to ensure compliance with applicable requirements and regulations in addition to determining adequate capacity in these systems to accommodate development within the Project area. Further, while this has no effects on expanded water or storm water drainage, electric power, natural gas or telecommunications facilities, the construction or relocation of which could cause significant environmental effects and therefore would have a **less than significant impact**.

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?

Less than Significant Impact. The City is the water supplier for the Project site. The completion of the Project would not result in the City of Madera's water demand to exceed its supply. As discussed in further detail in Section 4.10, Hydrology and Water Quality, the City has the water supply to meet future demands in association with future development. The Project aligns with the City of Madera's General Plan and aligns with the anticipated future development of the City. Therefore, the Project would have a **less than significant 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?

Less than Significant Impact. The City of Madera Wastewater Treatment Plant (WWTP) is the regional facility for disposal of wastewater for residential, commercial, and industrial accounts. As previously mentioned, the Project is consistent with the planned land use designation previously accounted for in the Madera General Plan. The wastewater impacts for the Project were and continue to be evaluated by the City Engineer to ensure compliance with the City's wastewater treatment requirements and capacity. The City has previously determined that there is adequate capacity based on the estimated sewage collection and treatment demand. For these reasons, the Project would not exceed wastewater treatment requirements such that a new facility would be required, nor would the existing WWTP Facility need to be expanded. As such, the Project would have a **less than significant 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. The Project would be required to comply with Madera Municipal Code, Title V: Sanitation and Health, Chapter 3: Garbage, Refuse, and Recycling, which outlines requirements and specifications for solid waste collection. For construction and demolition recycling, the Project would be subject to compliance with Madera Municipal Code Section 5-3.30: Construction and Demolition Debris Recycling which is in accordance with Assembly Bill (AB) 939 and CALGreen. In addition, the Madera General Plan outlines goals and policies for source reduction and recycling including Policy C1-62, C1-63, C1-64, and C1-65. Compliance with these measures and policies would serve to reduce impacts of solid waste by promoting regular collection and encouraging the recycling of materials. For this reason, the Project would have a **less than significant impact.**

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

Less than Significant Impact. Project construction and operations would not generate substantial amounts of solid waste and thus, the Project would not conflict with any federal, State, and local management and reduction statutes and regulations related to solid waste. Further, the Project would be subject to compliance with existing statutes and regulations by the City, State, or federal law. Therefore, the Project would have a **less than significant impact.**

4.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant with Mitigation 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?	☐	☐	☐	☒

4.20.1 Environmental Setting

The Project site is located on a relatively flat property within the City's Urban Growth Area planned for urban uses. Further, the Project site is not identified by the California Department of Forestry and Fire Protection (Cal Fire) or the City of Madera as a Very High Fire Hazard Severity Zone (VHFHSZ); rather, the site is within an "area of local responsibility" as defined by Cal Fire and is considered an area of low fire risk.[12]

4.20.2 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?

[12] Cal Fire, "FHSZ Viewer." Accessed on Sep 20, 2021, https://egis.fire.ca.gov/FHSZ/

No Impact. The Project site is within an "area of local responsibility" and is not identified by Cal Fire as a Very High Fire Hazard Severity Zone (VHFHSZ). Further, the Project would be conditioned to comply with adopted emergency response plans and emergency evacuation plans and thereby would not substantially impair any such plans. As such, the Project would have **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 site is located on a relatively flat property with minimal slope and is not subject to strong prevailing winds or other factors that would exacerbate wildfire risks. Further, the site is not identified by Cal Fire or the City as a VHFHSZ. Therefore, the Project would have **no impact**.

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

No Impact. The Project site is located on property within the City's Urban Growth Area planned for urban uses. Further, the site is within a low fire risk area that is not designated by Cal Fire or the City as a VHFHSZ. Therefore, the Project would have **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 site is located on a relatively flat property with minimal slope and is not subject to downslope, downstream flooding, or landslides. Therefore, the Project would have **no impact.**

4.21 CEQA Mandatory Findings of Significance

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?	☐	☐	☒	☐

4.21.1 Environmental Setting

The potential impacts identified in this Initial Study are considered to be less than significant since they do not exceed a threshold of significance. Therefore, a **Negative Declaration** is the appropriate level of documentation for this Project.

4.21.2 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 Impact. The analyses of environmental issues contained in this Initial Study indicate that the Project is not expected to have substantial impact on the environment or on any resources identified in the Initial Study. Standard requirements will be implemented through Conditions of Approval. Therefore, the Project would have a **less than significant impact.**

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(i)states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of a project are cumulatively considerable. Due to the nature of the Project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. All Project-related impacts were determined to be less than significant or have no impact. The Project site was anticipated for urbanization with the development of the City's General Plan. Therefore, implementation of the Project would not result in significant cumulative impacts and the Project would have a **less than significant** impact through the implementation of basic regulatory requirements incorporated into 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 Impact. The analyses of environmental issues contained in this Initial Study indicate that the Project is not expected to have substantial impact on human beings, either directly or indirectly. Standard requirements and conditions of approval have been incorporated in the Project to reduce all potentially significant impacts to less than significant. Therefore, the Project would have a **less than significant impact.**

Chapter 5 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
Hazards and Hazardous Materials				
HAZ-1: Hazardous Material Release Response Plan				
A Hazardous Material Release Response Plan shall be submitted and accepted by the County of Madera Office of Environmental Health before operational activity commences on-site.	During Operation	Daily	County of Madera Office of Environmental Health	Submittal of Plan to the County of Madera Office of Environmental Health

Appendix A

Technical Studies

APPENDIX A

CalEEMod Emissions Worksheets

Miles Chemical Expansion - Madera County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Miles Chemical Expansion

Madera County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	73.63	1000sqft	1.69	73,625.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.9	**Precipitation Freq (Days)**	51
Climate Zone	3			**Operational Year**	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - Updated for Trip Rates Associated with Warehousing - See Trip Generation Memo Prepared for Project

Table Name	Column Name	Default Value	New Value
tblVehicleTrips	ST_TR	6.42	0.15
tblVehicleTrips	SU_TR	5.09	0.06
tblVehicleTrips	WD_TR	3.93	2.20

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0824	0.6695	0.5822	1.0800e-003	0.0310	0.0330	0.0640	0.0127	0.0314	0.0441	0.0000	92.4123	92.4123	0.0166	1.2900e-003	93.2134
2022	0.6449	0.9882	1.0488	2.0100e-003	0.0241	0.0449	0.0690	6.5400e-003	0.0433	0.0498	0.0000	170.2203	170.2203	0.0252	3.0500e-003	171.7611
Maximum	**0.6449**	**0.9882**	**1.0488**	**2.0100e-003**	**0.0310**	**0.0449**	**0.0690**	**0.0127**	**0.0433**	**0.0498**	**0.0000**	**170.2203**	**170.2203**	**0.0252**	**3.0500e-003**	**171.7611**

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	0.0824	0.6695	0.5822	1.0800e-003	0.0310	0.0330	0.0640	0.0127	0.0314	0.0441	0.0000	92.4122	92.4122	0.0166	1.2900e-003	93.2134
2022	0.6449	0.9882	1.0488	2.0100e-003	0.0241	0.0449	0.0690	6.5400e-003	0.0433	0.0498	0.0000	170.2201	170.2201	0.0252	3.0500e-003	171.7609
Maximum	**0.6449**	**0.9882**	**1.0488**	**2.0100e-003**	**0.0310**	**0.0449**	**0.0690**	**0.0127**	**0.0433**	**0.0498**	**0.0000**	**170.2201**	**170.2201**	**0.0252**	**3.0500e-003**	**171.7609**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-8-2021**	**12-7-2021**	0.6039	0.6039
2	**12-8-2021**	**3-7-2022**	0.4969	0.4969
3	**3-8-2022**	**6-7-2022**	0.4940	0.4940
4	**6-8-2022**	**9-7-2022**	0.7886	0.7886
		Highest	0.7886	0.7886

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	0.3388	1.0000e-005	6.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3200e-003	1.3200e-003	0.0000	0.0000	1.4000e-003
Energy	8.2200e-003	0.0747	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003	0.0000	139.9803	139.9803	0.0111	2.6400e-003	141.0436
Mobile	0.0727	0.1282	0.6648	1.4500e-003	0.1290	1.4600e-003	0.1304	0.0346	1.3800e-003	0.0359	0.0000	133.9799	133.9799	7.7300e-003	7.7800e-003	136.4931
Waste						0.0000	0.0000		0.0000	0.0000	18.5331	0.0000	18.5331	1.0953	0.0000	45.9149
Water						0.0000	0.0000		0.0000	0.0000	5.4019	8.5245	13.9263	0.5562	0.0133	31.7852
Total	**0.4197**	**0.2029**	**0.7283**	**1.9000e-003**	**0.1290**	**7.1400e-003**	**0.1361**	**0.0346**	**7.0600e-003**	**0.0416**	**23.9349**	**282.4860**	**306.4209**	**1.6703**	**0.0237**	**355.2382**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.3388	1.0000e-005	6.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3200e-003	1.3200e-003	0.0000	0.0000	1.4000e-003
Energy	8.2200e-003	0.0747	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003	0.0000	139.9803	139.9803	0.0111	2.6400e-003	141.0436
Mobile	0.0727	0.1282	0.6648	1.4500e-003	0.1290	1.4600e-003	0.1304	0.0346	1.3800e-003	0.0359	0.0000	133.9799	133.9799	7.7300e-003	7.7800e-003	136.4931
Waste						0.0000	0.0000		0.0000	0.0000	18.5331	0.0000	18.5331	1.0953	0.0000	45.9149
Water						0.0000	0.0000		0.0000	0.0000	5.4019	8.5245	13.9263	0.5562	0.0133	31.7852
Total	**0.4197**	**0.2029**	**0.7283**	**1.9000e-003**	**0.1290**	**7.1400e-003**	**0.1361**	**0.0346**	**7.0600e-003**	**0.0416**	**23.9349**	**282.4860**	**306.4209**	**1.6703**	**0.0237**	**355.2382**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/8/2021	10/5/2021	5	20	
2	Site Preparation	Site Preparation	10/6/2021	10/7/2021	5	2	
3	Grading	Grading	10/8/2021	10/13/2021	5	4	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	10/14/2021	7/20/2022	5	200	
5	Paving	Paving	7/21/2022	8/3/2022	5	10	
6	Architectural Coating	Architectural Coating	8/4/2022	8/17/2022	5	10	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 110,438; Non-Residential Outdoor: 36,813; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
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
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
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
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	31.00	12.00	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	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**		**0.0104**	**0.0104**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 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	5.3000e-004	3.9000e-004	4.4000e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0400e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9177	0.9177	4.0000e-005	3.0000e-005	0.9277
Total	**5.3000e-004**	**3.9000e-004**	**4.4000e-003**	**1.0000e-005**	**1.0400e-003**	**1.0000e-005**	**1.0400e-003**	**2.8000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.9177**	**0.9177**	**4.0000e-005**	**3.0000e-005**	**0.9277**

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	0.0199	0.1970	0.1449	2.4000e-004		0.0104	0.0104		9.7100e-003	9.7100e-003	0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total	**0.0199**	**0.1970**	**0.1449**	**2.4000e-004**		**0.0104**	**0.0104**		**9.7100e-003**	**9.7100e-003**	**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 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	5.3000e-004	3.9000e-004	4.4000e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0400e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9177	0.9177	4.0000e-005	3.0000e-005	0.9277
Total	**5.3000e-004**	**3.9000e-004**	**4.4000e-003**	**1.0000e-005**	**1.0400e-003**	**1.0000e-005**	**1.0400e-003**	**2.8000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.9177**	**0.9177**	**4.0000e-005**	**3.0000e-005**	**0.9277**

3.3 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					6.2700e-003	0.0000	6.2700e-003	3.0000e-003	0.0000	3.0000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5600e-003	0.0174	7.5600e-003	2.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total	**1.5600e-003**	**0.0174**	**7.5600e-003**	**2.0000e-005**	**6.2700e-003**	**7.7000e-004**	**7.0400e-003**	**3.0000e-003**	**7.0000e-004**	**3.7000e-003**	**0.0000**	**1.5118**	**1.5118**	**4.9000e-004**	**0.0000**	**1.5241**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	3.0000e-005	2.0000e-005	2.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0565	0.0565	0.0000	0.0000	0.0571
Total	**3.0000e-005**	**2.0000e-005**	**2.7000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0565**	**0.0565**	**0.0000**	**0.0000**	**0.0571**

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					6.2700e-003	0.0000	6.2700e-003	3.0000e-003	0.0000	3.0000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5600e-003	0.0174	7.5600e-003	2.0000e-005		7.7000e-004	7.7000e-004		7.0000e-004	7.0000e-004	0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total	**1.5600e-003**	**0.0174**	**7.5600e-003**	**2.0000e-005**	**6.2700e-003**	**7.7000e-004**	**7.0400e-003**	**3.0000e-003**	**7.0000e-004**	**3.7000e-003**	**0.0000**	**1.5118**	**1.5118**	**4.9000e-004**	**0.0000**	**1.5241**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 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	3.0000e-005	2.0000e-005	2.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0565	0.0565	0.0000	0.0000	0.0571
Total	**3.0000e-005**	**2.0000e-005**	**2.7000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0565**	**0.0565**	**0.0000**	**0.0000**	**0.0571**

3.4 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					0.0142	0.0000	0.0142	6.8500e-003	0.0000	6.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6500e-003	0.0404	0.0195	4.0000e-005		1.8300e-003	1.8300e-003		1.6800e-003	1.6800e-003	0.0000	3.6208	3.6208	1.1700e-003	0.0000	3.6501
Total	**3.6500e-003**	**0.0404**	**0.0195**	**4.0000e-005**	**0.0142**	**1.8300e-003**	**0.0160**	**6.8500e-003**	**1.6800e-003**	**8.5300e-003**	**0.0000**	**3.6208**	**3.6208**	**1.1700e-003**	**0.0000**	**3.6501**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	8.0000e-005	6.0000e-005	6.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1412	0.1412	1.0000e-005	0.0000	0.1427
Total	**8.0000e-005**	**6.0000e-005**	**6.8000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1412**	**0.1412**	**1.0000e-005**	**0.0000**	**0.1427**

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					0.0142	0.0000	0.0142	6.8500e-003	0.0000	6.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6500e-003	0.0404	0.0195	4.0000e-005		1.8300e-003	1.8300e-003		1.6800e-003	1.6800e-003	0.0000	3.6208	3.6208	1.1700e-003	0.0000	3.6501
Total	**3.6500e-003**	**0.0404**	**0.0195**	**4.0000e-005**	**0.0142**	**1.8300e-003**	**0.0160**	**6.8500e-003**	**1.6800e-003**	**8.5300e-003**	**0.0000**	**3.6208**	**3.6208**	**1.1700e-003**	**0.0000**	**3.6501**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	8.0000e-005	6.0000e-005	6.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1412	0.1412	1.0000e-005	0.0000	0.1427
Total	**8.0000e-005**	**6.0000e-005**	**6.8000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1412**	**0.1412**	**1.0000e-005**	**0.0000**	**0.1427**

3.5 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	0.0517	0.3886	0.3676	6.3000e-004		0.0195	0.0195		0.0188	0.0188	0.0000	51.7411	51.7411	9.2400e-003	0.0000	51.9720
Total	**0.0517**	**0.3886**	**0.3676**	**6.3000e-004**		**0.0195**	**0.0195**		**0.0188**	**0.0188**	**0.0000**	**51.7411**	**51.7411**	**9.2400e-003**	**0.0000**	**51.9720**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 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	1.3000e-003	0.0229	7.2900e-003	7.0000e-005	2.2600e-003	4.1000e-004	2.6800e-003	6.5000e-004	4.0000e-004	1.0500e-003	0.0000	7.1153	7.1153	6.0000e-005	1.0500e-003	7.4288
Worker	3.6200e-003	2.6200e-003	0.0299	7.0000e-005	7.0400e-003	5.0000e-005	7.0900e-003	1.8700e-003	4.0000e-005	1.9100e-003	0.0000	6.2366	6.2366	2.5000e-004	2.1000e-004	6.3049
Total	**4.9200e-003**	**0.0256**	**0.0372**	**1.4000e-004**	**9.3000e-003**	**4.6000e-004**	**9.7700e-003**	**2.5200e-003**	**4.4000e-004**	**2.9600e-003**	**0.0000**	**13.3520**	**13.3520**	**3.1000e-004**	**1.2600e-003**	**13.7338**

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	0.0517	0.3886	0.3676	6.3000e-004		0.0195	0.0195		0.0188	0.0188	0.0000	51.7410	51.7410	9.2400e-003	0.0000	51.9719
Total	**0.0517**	**0.3886**	**0.3676**	**6.3000e-004**		**0.0195**	**0.0195**		**0.0188**	**0.0188**	**0.0000**	**51.7410**	**51.7410**	**9.2400e-003**	**0.0000**	**51.9719**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 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	1.3000e-003	0.0229	7.2900e-003	7.0000e-005	2.2600e-003	4.1000e-004	2.6800e-003	6.5000e-004	4.0000e-004	1.0500e-003	0.0000	7.1153	7.1153	6.0000e-005	1.0500e-003	7.4288
Worker	3.6200e-003	2.6200e-003	0.0299	7.0000e-005	7.0400e-003	5.0000e-005	7.0900e-003	1.8700e-003	4.0000e-005	1.9100e-003	0.0000	6.2366	6.2366	2.5000e-004	2.1000e-004	6.3049
Total	**4.9200e-003**	**0.0256**	**0.0372**	**1.4000e-004**	**9.3000e-003**	**4.6000e-004**	**9.7700e-003**	**2.5200e-003**	**4.4000e-004**	**2.9600e-003**	**0.0000**	**13.3520**	**13.3520**	**3.1000e-004**	**1.2600e-003**	**13.7338**

3.5 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	0.1179	0.8940	0.9099	1.5800e-003		0.0421	0.0421		0.0407	0.0407	0.0000	129.8275	129.8275	0.0226	0.0000	130.3928
Total	**0.1179**	**0.8940**	**0.9099**	**1.5800e-003**		**0.0421**	**0.0421**		**0.0407**	**0.0407**	**0.0000**	**129.8275**	**129.8275**	**0.0226**	**0.0000**	**130.3928**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 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	2.0000e-003	0.0474	0.0150	1.8000e-004	5.6700e-003	5.4000e-004	6.2100e-003	1.6400e-003	5.2000e-004	2.1600e-003	0.0000	17.4219	17.4219	1.0000e-004	2.5600e-003	18.1862
Worker	8.2900e-003	5.7100e-003	0.0678	1.7000e-004	0.0177	1.1000e-004	0.0178	4.6900e-003	1.0000e-004	4.8000e-003	0.0000	15.1597	15.1597	5.5000e-004	4.8000e-004	15.3155
Total	**0.0103**	**0.0531**	**0.0828**	**3.5000e-004**	**0.0233**	**6.5000e-004**	**0.0240**	**6.3300e-003**	**6.2000e-004**	**6.9600e-003**	**0.0000**	**32.5816**	**32.5816**	**6.5000e-004**	**3.0400e-003**	**33.5017**

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	0.1179	0.8940	0.9099	1.5800e-003		0.0421	0.0421		0.0407	0.0407	0.0000	129.8273	129.8273	0.0226	0.0000	130.3926
Total	**0.1179**	**0.8940**	**0.9099**	**1.5800e-003**		**0.0421**	**0.0421**		**0.0407**	**0.0407**	**0.0000**	**129.8273**	**129.8273**	**0.0226**	**0.0000**	**130.3926**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 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	2.0000e-003	0.0474	0.0150	1.8000e-004	5.6700e-003	5.4000e-004	6.2100e-003	1.6400e-003	5.2000e-004	2.1600e-003	0.0000	17.4219	17.4219	1.0000e-004	2.5600e-003	18.1862
Worker	8.2900e-003	5.7100e-003	0.0678	1.7000e-004	0.0177	1.1000e-004	0.0178	4.6900e-003	1.0000e-004	4.8000e-003	0.0000	15.1597	15.1597	5.5000e-004	4.8000e-004	15.3155
Total	**0.0103**	**0.0531**	**0.0828**	**3.5000e-004**	**0.0233**	**6.5000e-004**	**0.0240**	**6.3300e-003**	**6.2000e-004**	**6.9600e-003**	**0.0000**	**32.5816**	**32.5816**	**6.5000e-004**	**3.0400e-003**	**33.5017**

3.6 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	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9315
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4400e-003**	**0.0339**	**0.0440**	**7.0000e-005**		**1.7400e-003**	**1.7400e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**5.8848**	**5.8848**	**1.8700e-003**	**0.0000**	**5.9315**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 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	2.4000e-004	1.7000e-004	1.9900e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4446	0.4446	2.0000e-005	1.0000e-005	0.4491
Total	**2.4000e-004**	**1.7000e-004**	**1.9900e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4446**	**0.4446**	**2.0000e-005**	**1.0000e-005**	**0.4491**

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	3.4400e-003	0.0339	0.0440	7.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9314
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4400e-003**	**0.0339**	**0.0440**	**7.0000e-005**		**1.7400e-003**	**1.7400e-003**		**1.6000e-003**	**1.6000e-003**	**0.0000**	**5.8848**	**5.8848**	**1.8700e-003**	**0.0000**	**5.9314**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 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	2.4000e-004	1.7000e-004	1.9900e-003	0.0000	5.2000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4446	0.4446	2.0000e-005	1.0000e-005	0.4491
Total	**2.4000e-004**	**1.7000e-004**	**1.9900e-003**	**0.0000**	**5.2000e-004**	**0.0000**	**5.2000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4446**	**0.4446**	**2.0000e-005**	**1.0000e-005**	**0.4491**

3.7 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	0.5119					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.5129**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 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	1.1000e-004	8.0000e-005	9.2000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2052	0.2052	1.0000e-005	1.0000e-005	0.2073
Total	**1.1000e-004**	**8.0000e-005**	**9.2000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.2052**	**0.2052**	**1.0000e-005**	**1.0000e-005**	**0.2073**

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	0.5119					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.5129**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 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	1.1000e-004	8.0000e-005	9.2000e-004	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.2052	0.2052	1.0000e-005	1.0000e-005	0.2073
Total	**1.1000e-004**	**8.0000e-005**	**9.2000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.2052**	**0.2052**	**1.0000e-005**	**1.0000e-005**	**0.2073**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0727	0.1282	0.6648	1.4500e-003	0.1290	1.4600e-003	0.1304	0.0346	1.3800e-003	0.0359	0.0000	133.9799	133.9799	7.7300e-003	7.7800e-003	136.4931
Unmitigated	0.0727	0.1282	0.6648	1.4500e-003	0.1290	1.4600e-003	0.1304	0.0346	1.3800e-003	0.0359	0.0000	133.9799	133.9799	7.7300e-003	7.7800e-003	136.4931

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	161.98	11.04	4.42	344,225	344,225
Total	161.98	11.04	4.42	344,225	344,225

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 Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.491491	0.052949	0.173689	0.164683	0.034990	0.008766	0.010778	0.027771	0.000810	0.000210	0.026873	0.002020	0.004972

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	58.6519	58.6519	9.4900e-003	1.1500e-003	59.2318
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	58.6519	58.6519	9.4900e-003	1.1500e-003	59.2318
NaturalGas Mitigated	8.2200e-003	0.0747	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003	0.0000	81.3284	81.3284	1.5600e-003	1.4900e-003	81.8117
NaturalGas Unmitigated	8.2200e-003	0.0747	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003	0.0000	81.3284	81.3284	1.5600e-003	1.4900e-003	81.8117

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	1.52404e+006	8.2200e-003	0.0747	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003	0.0000	81.3284	81.3284	1.5600e-003	1.4900e-003	81.8117
Total		**8.2200e-003**	**0.0747**	**0.0628**	**4.5000e-004**		**5.6800e-003**	**5.6800e-003**		**5.6800e-003**	**5.6800e-003**	**0.0000**	**81.3284**	**81.3284**	**1.5600e-003**	**1.4900e-003**	**81.8117**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	1.52404e+006	8.2200e-003	0.0747	0.0628	4.5000e-004		5.6800e-003	5.6800e-003		5.6800e-003	5.6800e-003	0.0000	81.3284	81.3284	1.5600e-003	1.4900e-003	81.8117
Total		**8.2200e-003**	**0.0747**	**0.0628**	**4.5000e-004**		**5.6800e-003**	**5.6800e-003**		**5.6800e-003**	**5.6800e-003**	**0.0000**	**81.3284**	**81.3284**	**1.5600e-003**	**1.4900e-003**	**81.8117**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	633911	58.6519	9.4900e-003	1.1500e-003	59.2318
Total		**58.6519**	**9.4900e-003**	**1.1500e-003**	**59.2318**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	633911	58.6519	9.4900e-003	1.1500e-003	59.2318
Total		**58.6519**	**9.4900e-003**	**1.1500e-003**	**59.2318**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.3388	1.0000e-005	6.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3200e-003	1.3200e-003	0.0000	0.0000	1.4000e-003
Unmitigated	0.3388	1.0000e-005	6.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3200e-003	1.3200e-003	0.0000	0.0000	1.4000e-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	0.0512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2875					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3200e-003	1.3200e-003	0.0000	0.0000	1.4000e-003
Total	**0.3388**	**1.0000e-005**	**6.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.3200e-003**	**1.3200e-003**	**0.0000**	**0.0000**	**1.4000e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0512					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2875					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3200e-003	1.3200e-003	0.0000	0.0000	1.4000e-003
Total	**0.3388**	**1.0000e-005**	**6.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.3200e-003**	**1.3200e-003**	**0.0000**	**0.0000**	**1.4000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	13.9263	0.5562	0.0133	31.7852
Unmitigated	13.9263	0.5562	0.0133	31.7852

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	17.0269 / 0	13.9263	0.5562	0.0133	31.7852
Total		**13.9263**	**0.5562**	**0.0133**	**31.7852**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	17.0269 / 0	13.9263	0.5562	0.0133	31.7852
Total		**13.9263**	**0.5562**	**0.0133**	**31.7852**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.5331	1.0953	0.0000	45.9149
Unmitigated	18.5331	1.0953	0.0000	45.9149

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	91.3	18.5331	1.0953	0.0000	45.9149
Total		**18.5331**	**1.0953**	**0.0000**	**45.9149**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	91.3	18.5331	1.0953	0.0000	45.9149
Total		**18.5331**	**1.0953**	**0.0000**	**45.9149**

9.0 Operational Offroad

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

Project Emissions Calculations

Name	**Prioritization Calculator**				
Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.				
Author or updater	Matthew Cegielski	*Last Update*	November 2, 2020		
Facility:	Miles Chemical				
ID#:	Truck Trips (EMFAC T7 Tractor)				
Project #:					
Unit and Process#					
Operating Hours hr/yr	3,640.00				

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	4.02E-01	1.44E-03	0.00E+00	4.02E-01
100≤R<250	**0.250**	1.01E-01	3.59E-04	0.00E+00	1.01E-01
250≤R<500	**0.040**	1.61E-02	5.74E-05	0.00E+00	1.61E-02
500≤R<1000	**0.011**	4.43E-03	1.58E-05	0.00E+00	4.43E-03
1000≤R<1500	**0.003**	1.21E-03	4.31E-06	0.00E+00	1.21E-03
1500≤R<2000	**0.002**	8.05E-04	2.87E-06	0.00E+00	8.05E-04
2000<R	**0.001**	4.02E-04	1.44E-06	0.00E+00	4.02E-04

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

0	Enter the unit's CAS# of the substances emitted and their amounts.				Prioritzation score for each substance generated below. Totals on last row.		
Substance	**CAS#**	**Annual Emissions (lbs/yr)**	**Maximum Hourly (lbs/hr)**	**Average Hourly (lbs/hr)**	**Cancer**	**Chronic**	**Acute**
Diesel engine exhaust, particulate matter (Diesel PM)	**9901**	1.74E-01	4.79E-05	4.79E-05	4.02E-01	1.44E-03	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**4.02E-01**	**1.44E-03**	**0.00E+00**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.	
Substance	CAS# Finder
Diesel engine exhaust, particulate matter (Diesel PM)	9901

Prioritization Calculator

Name	Prioritization Calculator
Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.
Author or updater	Matthew Cegielski — *Last Update* November 2, 2020
Facility:	Miles Chemical
ID#:	Tanks
Project #:	
Unit and Process#	
Operating Hours hr/yr	8,760.00

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	0.00E+00	4.17E+00	1.03E+01	1.03E+01
100≤R<250	**0.250**	0.00E+00	1.04E+00	2.58E+00	2.58E+00
250≤R<500	**0.040**	0.00E+00	1.67E-01	4.13E-01	4.13E-01
500≤R<1000	**0.011**	0.00E+00	4.59E-02	1.14E-01	1.14E-01
1000≤R<1500	**0.003**	0.00E+00	1.25E-02	3.10E-02	3.10E-02
1500≤R<2000	**0.002**	0.00E+00	8.34E-03	2.07E-02	2.07E-02
2000<R	**0.001**	0.00E+00	4.17E-03	1.03E-02	1.03E-02

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Glycol ethers (and their acetates)	1115

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

0

Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute	
Ethylene glycol	**107211**	3.00E+01	3.42E-03	3.42E-03	0.00E+00	1.28E-03	0.00E+00	Tank 1M
Propylene glycol monomethyl ether	**107982**	1.33E+00	1.51E-04	1.51E-04	0.00E+00	3.24E-06	0.00E+00	Tank 2M
Hydrochloric acid	**7647010**	3.99E+02	4.55E-02	4.55E-02	0.00E+00	7.59E-01	3.25E-02	Tank 1A
Phosphoric acid	**7664382**	8.70E+01	9.93E-03	9.93E-03	0.00E+00	2.13E-01	0.00E+00	Tank 5A
Nitric acid	**7697372**	5.90E+01	6.74E-03	6.74E-03	0.00E+00	0.00E+00	1.17E-01	Tank 4A
Sulfuric acid	**7664939**	1.86E+02	2.12E-02	2.12E-02	0.00E+00	3.18E+00	2.65E-01	Tank 6A and 8A
Sodium hydroxide	**1310732**	4.62E+02	5.27E-02	5.27E-02	0.00E+00	0.00E+00	9.89E+00	Tank 1B and 3B
Isopropyl alcohol	**67630**	4.21E+02	4.80E-02	4.80E-02	0.00E+00	1.03E-03	2.25E-02	Tank 2F
Methanol	**67561**	6.20E+02	7.08E-02	7.08E-02	0.00E+00	2.65E-03	3.79E-03	Tank 3F
Ethylene glycol monobutyl ether	**111762**	2.30E+01	2.63E-03	2.63E-03	0.00E+00	4.80E-03	8.38E-04	Tank 4F
Xylene	**1330207**	1.88E+02	2.15E-02	2.15E-02	0.00E+00	4.60E-03	1.46E-03	Tank 7F
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				Totals	**0.00E+00**	**4.17E+00**	**1.03E+01**	

Name | **Prioritization Calculator**

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.
Author or updater	Matthew Cegielski — *Last Update* November 2, 2020
Facility:	Miles Chemical
ID#:	Water Heater/Boiler (x3)
Project #:	
Unit and Process#	
Operating Hours hr/yr	8,760.00

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	1.96E-01	1.14E-02	1.53E-02	1.96E-01
100≤R<250	**0.250**	4.90E-02	2.86E-03	3.83E-03	4.90E-02
250≤R<500	**0.040**	7.84E-03	4.58E-04	6.13E-04	7.84E-03
500≤R<1000	**0.011**	2.16E-03	1.26E-04	1.69E-04	2.16E-03
1000≤R<1500	**0.003**	5.88E-04	3.43E-05	4.60E-05	5.88E-04
1500≤R<2000	**0.002**	3.92E-04	2.29E-05	3.07E-05	3.92E-04
2000<R	**0.001**	1.96E-04	1.14E-05	1.53E-05	1.96E-04

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

0

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Acetaldehyde	**75070**	2.26E-01	2.58E-05	2.58E-05	4.70E-03	2.76E-05	8.23E-05
Acrolein	**107028**	1.42E-01	1.62E-05	1.62E-05	0.00E+00	6.95E-03	9.73E-03
Benzene	**71432**	4.20E-01	4.79E-05	4.79E-05	9.38E-02	2.40E-03	2.66E-03
Ethyl benzene	**100414**	4.99E-01	5.70E-05	5.70E-05	9.61E-03	4.27E-06	0.00E+00
Formaldehyde	**50000**	8.94E-01	1.02E-04	1.02E-04	4.13E-02	1.70E-03	2.78E-03
Hexane	**110543**	3.31E-01	3.78E-05	3.78E-05	0.00E+00	8.10E-07	0.00E+00
Naphthalene	**91203**	1.60E-02	1.83E-06	1.83E-06	4.19E-03	3.04E-05	0.00E+00
PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	**1151**	5.00E-03	5.71E-07	5.71E-07	4.24E-02	0.00E+00	0.00E+00
Propylene	**115071**	3.84E+01	4.39E-03	4.39E-03	0.00E+00	2.19E-04	0.00E+00
Toluene	**108883**	1.92E+00	2.20E-04	2.20E-04	0.00E+00	7.84E-05	6.59E-05
Xylene	**1330207**	1.43E+00	1.63E-04	1.63E-04	0.00E+00	3.50E-05	1.11E-05
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**1.96E-01**	**1.14E-02**	**1.53E-02**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Benzene	71432

Name

Prioritization Calculator

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.			
Author or updater	Matthew Cegielski	*Last Update*	November 2, 2020	
Facility:	Miles Chemical			
ID#:	Peacock Model 3056			
Project #:				
Unit and Process#				
Operating Hours hr/yr	8,760.00			

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	2.39E-02	1.13E-03	1.52E-03	2.39E-02
100≤R<250	**0.250**	5.98E-03	2.84E-04	3.80E-04	5.98E-03
250≤R<500	**0.040**	9.57E-04	4.54E-05	6.07E-05	9.57E-04
500≤R<1000	**0.011**	2.63E-04	1.25E-05	1.67E-05	2.63E-04
1000≤R<1500	**0.003**	7.18E-05	3.40E-06	4.56E-06	7.18E-05
1500≤R<2000	**0.002**	4.78E-05	2.27E-06	3.04E-06	4.78E-05
2000<R	**0.001**	2.39E-05	1.13E-06	1.52E-06	2.39E-05

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

0

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritzation score for each substance generated below. Totals on last row.

Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Acetaldehyde	**75070**	2.30E-02	2.63E-06	2.63E-06	4.78E-04	2.81E-06	8.38E-06
Acrolein	**107028**	1.40E-02	1.60E-06	1.60E-06	0.00E+00	6.85E-04	9.59E-04
Benzene	**71432**	4.20E-02	4.79E-06	4.79E-06	9.38E-03	2.40E-04	2.66E-04
Ethyl benzene	**100414**	5.00E-02	5.71E-06	5.71E-06	9.63E-04	4.28E-07	0.00E+00
Formaldehyde	**50000**	8.90E-02	1.02E-05	1.02E-05	4.11E-03	1.69E-04	2.77E-04
Hexane	**110543**	3.30E-02	3.77E-06	3.77E-06	0.00E+00	8.07E-08	0.00E+00
Naphthalene	**91203**	2.00E-03	2.28E-07	2.28E-07	5.24E-04	3.81E-06	0.00E+00
PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	**1151**	1.00E-03	1.14E-07	1.14E-07	8.47E-03	0.00E+00	0.00E+00
Propylene	**115071**	3.84E+00	4.39E-04	4.39E-04	0.00E+00	2.19E-05	0.00E+00
Toluene	**108883**	1.92E-01	2.19E-05	2.19E-05	0.00E+00	7.83E-06	6.58E-06
Xylene	**1330207**	1.43E-01	1.63E-05	1.63E-05	0.00E+00	3.50E-06	1.11E-06
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**2.39E-02**	**1.13E-03**	**1.52E-03**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Asbestos	1332214

		0	0	0	0	
Receptor Proximity and Proximity Factors		**Max Score**	**Max Score**	**Max Score**	**Max Score**	**Total Max Score**
0< R<100	**1.000**	4.02E-01	1.03E+01	1.96E-01	2.39E-02	1.10E+01
100≤R<250	**0.250**	1.01E-01	2.58E+00	4.90E-02	5.98E-03	2.74E+00
250≤R<500	**0.040**	1.61E-02	4.13E-01	7.84E-03	9.57E-04	4.38E-01
500≤R<1000	**0.011**	4.43E-03	1.14E-01	2.16E-03	2.63E-04	1.21E-01
1000≤R<1500	**0.003**	1.21E-03	3.10E-02	5.88E-04	7.18E-05	3.29E-02
1500≤R<2000	**0.002**	8.05E-04	2.07E-02	3.92E-04	4.78E-05	2.19E-02
2000<R	**0.001**	4.02E-04	1.03E-02	1.96E-04	2.39E-05	1.10E-02

Receptor Proximity and Proximity Factors		Truck Trips Max Score	Storge Tanks Max Score	Water Heater/ Boiler Max Score	Peacock Model 3056 Max Score	Total Max Score
0< R<100	**1.000**	4.02E-01	1.03E+01	1.96E-01	2.39E-02	1.10E+01
100≤R<250	**0.250**	1.01E-01	2.58E+00	4.90E-02	5.98E-03	2.74E+00
250≤R<500	**0.040**	1.61E-02	4.13E-01	7.84E-03	9.57E-04	4.38E-01
500≤R<1000	**0.011**	4.43E-03	1.14E-01	2.16E-03	2.63E-04	1.21E-01
1000≤R<1500	**0.003**	1.21E-03	3.10E-02	5.88E-04	7.18E-05	3.29E-02
1500≤R<2000	**0.002**	8.05E-04	2.07E-02	3.92E-04	4.78E-05	2.19E-02
2000<R	**0.001**	4.02E-04	1.03E-02	1.96E-04	2.39E-05	1.10E-02

TANK SCHEDULE

Tank Mark	Contents	CAS #	Vol. (Gal.)	Contents/Month (gal)	Gallons/Year	Pounds/Year	A1[a]	A2	A3[a]	A4	A5[a]	A6	Total Air Emissions (lbs/yr)
MISCELLANEOUS													
1M	Ethylene Glycol	107211	25,000	10,000	120,000	1,098,000	1	12	1	3	1	12	30
FLAMMABLES													
4F	Glycol Ether EB	111762	30,000	5,000	60,000	549,000	1	6	7	1	1	7	23
7F	Xylene	1330207	30,000	10,000	120,000	882,000	43	10	94	3	28	10	188
ACID													
1A	Hydrochloric Acid	7647010	25,000	20,000	240,000	2,359,200	72	26	179	7	89	26	399
4A	Nitric Acid	7697372	25,000	10,000	120,000	1,404,000	4	15	16	4	5	15	59
5A	Phosphoric Acid 75%	7664382	25,000	20,000	240,000	3,362,400	1	37	1	10	1	37	87
6A	Sulfuric Acid 93%	7664939	25,000	20,000	240,000	3,672,000	0	41	0	11	0	41	93
8A	Sulfuric Acid 98%	7664939	25,000	20,000	240,000	3,672,000	0	41	0	11	0	41	93
BASE													
1B	Sodium Hydroxide 50%	1310732	25,000	50,000	600,000	9,180,000	0	103	0	26	0	102	231
3B	Hydroxide 50%	1310732	25,000	50,000	600,000	9,180,000	0	103	0	26	0	102	231

Source: EPA 745-R-99-005 - EPCRA Section 313 'Look-Up Tables for Estimating Toxic Release Inventory Air Emissions from Chemcal Distribution Facilities', March 1999

a: City Correction Factor for Bakersfield, CA (1.38) was applied

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AQD Storage Tank Calculation Tool (20202)
Calculation Report
Based on AP-42 (06/2020) Section 7.1: Organic Liquid Storage Tanks

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INPUT SUMMARY

Identification

Tank type	Vertical Fixed Roof
Tank identifier	2F
Description:	Iso Propyl Alcohol (IPA)

Meteorological Data:

Nearest major city:	Fresno, CA

Tank Contents:

Liquid category	Other Organic Liquids
Liquid name	Isopropyl alcohol {isopropanol}

Tank Dimensions:

Tank shell height, ft	H_S	37.7000
Tank diameter, ft	D	11.7500
Maximum liquid height, ft	H_{LX}	36.7000
Minimum liquid height, ft	H_{LN}	1.0000
Liquid height, ft	H_L	18.3500
Number of turnovers per year, dimensionless	N	4.1435
Annual net throughput, gal/yr		120,000.0000
Annual net throughput, bbl/yr	Q	2,857.1429
Vapor balanced?		Yes

Paint Characteristics:

Shell color/shade	Gray: Medium
Shell condition	New
Roof color/shade	Gray: Medium
Roof condition	New

Roof Characteristics:

Roof type		Dome Roof
Tank roof height, ft	H_R	0.0000
Tank dome roof radius, ft	R_R	11.75

Breather Vent Settings:

Breather vent vacuum setting, psig	P_{BV}	-0.0300
Breather vent pressure setting, psig	P_{BP}	0.0300

Insulation Characteristics:

Tank insulation	None
Tank heating	No

METEOROLOGICAL DATA

Nearest major city:		Fresno, CA
Average daily ambient temperature, °R	T_{AA}	524.1500
Average daily minimum ambient temperature, °R	T_{AN}	512.5000
Average daily maximum ambient temperature, °R	T_{AX}	535.8000
Average daily ambient temperature range, °R	ΔT_A	23.3000
Average wind speed, mph	v	6.0000
Average daily total insolation factor, Btu/ft^2•d	I	1,639.0000
Atmospheric pressure, psi	P_A	14.5200

LIQUID DATA

Liquid category		Other Organic Liquids
Liquid name		Isopropyl alcohol {isopropanol}
Liquid bulk temperature, °R	T_B	527.4936
Average daily liquid surface temperature, °R	T_{LA}	529.8719
Average daily minimum liquid surface temperature, °R	T_{LN}	520.6662
Average daily maximum liquid surface temperature, °R	T_{LX}	539.0775
Vapor pressure at average daily liquid surface temperature, psia	P_{VA}	0.6486
Vapor pressure at the average daily minimum liquid surface temperature, psia	P_{VN}	0.4604
Vapor pressure at the average daily maximum liquid surface temperature, psia	P_{VX}	0.8994
Vapor molecular weight, lb/lb-mole	M_V	60.1000
Constant in vapor pressure equation, dimensionless	A	7.7360

equation, dimensionless	A	7.7500
Constant in vapor pressure equation, °C	B	1,357.4000
Constant in vapor pressure equation, °C	C	197.3400

CALCULATION DETAILS

Standing Losses

Standing losses, lb/yr	L_S	311.3419
Vapor space volume, ft^3	V_V	2,185.4744
Vapor density, lb/ft^3	W_V	0.0068
Vapor space expansion factor, per day	K_E	0.0968
Vented vapor saturation factor, dimensionless	K_S	0.5907

Vapor Space Volume

Vapor space volume, ft^3	V_V	2,185.4744
Tank diameter, ft	D	11.7500
Vapor space outage, ft	H_{VO}	20.1549

Vapor Space Outage

Vapor space outage, ft	H_{VO}	20.1549
Tank shell height, ft	H_S	37.7000
Liquid height, ft	H_L	18.3500
Roof outage, ft	H_{RO}	0.8049

Roof Outage

Roof outage, ft	H_{RO}	0.8049
Tank roof height, ft	H_R	1.5745
Tank shell radius, ft	R_S	5.8750
Tank dome roof radius, ft	R_R	11.7500

Vapor Density

Vapor density, lb/ft^3	W_V	0.0068
Vapor molecular weight, lb/lb-mole	M_V	60.1000
Vapor pressure at average daily liquid surface temperature, psia	P_{VA}	0.6486
Ideal gas constant, psia•ft^3/lb-mole•°R	R	10.7310
Average vapor temperature, °R	T_V	532.2502
Tank roof surface solar absorptance, dimensionless	α_R	0.6800

Tank shell surface solar absorptance, dimensionless	α_S	0.6800
Average daily total insolation factor, Btu/ft^2•d	I	1,639.0000

Vapor Space Expansion Factor

Vapor space expansion factor, per day	K_E	0.0968
Average daily vapor temperature range, °R	ΔT_V	36.8225
Average daily vapor pressure range, psi	ΔP_V	0.4390
Breather vent pressure setting range, psig	ΔP_B	0.0600
Atmospheric pressure, psi	P_A	14.5200
Vapor pressure at average daily liquid surface temperature, psia	P_{VA}	0.6486
Average daily liquid surface temperature, °R	T_{LA}	529.8719

Vented Vapor Saturation Factor

Vented vapor saturation factor, dimensionless	K_S	0.5907
Vapor pressure at average daily liquid surface temperature, psia	P_{VA}	0.6486
Vapor space outage, ft	H_{VO}	20.1549

Working Losses

Working losses, lb/yr	L_W	109.4631
Net working loss throughput, ft^3/yr	V_Q	16,040.0000
Turnover factor, dimensionless	K_N	1.0000
Working loss product factor for fixed roof tanks, dimensionless	K_P	1.0000
Vapor density, lb/ft^3	W_V	0.0068
Vent setting correction factor, dimensionless	K_B	1.0000

EMISSIONS SUMMARY

Total Losses

Standing losses, lb/yr	L_S	311.3419
Working losses, lb/yr	L_W	109.4631
Total routine losses, lb/yr	L_T	420.8049

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AQD Storage Tank Calculation Tool (20202)
Calculation Report
Based on AP-42 (06/2020) Section 7.1: Organic Liquid Storage Tanks

Print this page

INPUT SUMMARY

Identification

Tank type		Vertical Fixed Roof
Tank identifier		2M
Description:		Propylene Glycol

Meteorological Data:

Nearest major city:		Fresno, CA

Tank Contents:

Liquid category		Other Organic Liquids
Liquid name		Propylene glycol (1,2) {1,2 propanediol}

Tank Dimensions:

Tank shell height, ft	H_S	31.7000
Tank diameter, ft	D	11.7500
Maximum liquid height, ft	H_{LX}	30.7000
Minimum liquid height, ft	H_{LN}	1.0000
Liquid height, ft	H_L	15.3500
Number of turnovers per year, dimensionless	N	4.9806
Annual net throughput, gal/yr		120,000.0000
Annual net throughput, bbl/yr	Q	2,857.1429
Vapor balanced?		Yes

Paint Characteristics:

Shell color/shade		Gray: Medium
Shell condition		New
Roof color/shade		Gray: Medium
Roof condition		New

Roof Characteristics:

Roof type		Dome Roof
Tank roof height, ft	H_R	0.0000
Tank dome roof radius, ft	R_R	11.75

Breather Vent Settings:

Breather vent vacuum setting, psig	P_{BV}	-0.0300
Breather vent pressure setting, psig	P_{BP}	0.0300

Insulation Characteristics:

Tank insulation	None
Tank heating	No

METEOROLOGICAL DATA

Nearest major city:		Fresno, CA
Average daily ambient temperature, °R	T_{AA}	524.1500
Average daily minimum ambient temperature, °R	T_{AN}	512.5000
Average daily maximum ambient temperature, °R	T_{AX}	535.8000
Average daily ambient temperature range, °R	ΔT_A	23.3000
Average wind speed, mph	v	6.0000
Average daily total insolation factor, Btu/ft^2•d	I	1,639.0000
Atmospheric pressure, psi	P_A	14.5200

LIQUID DATA

Liquid category		Other Organic Liquids
Liquid name		Propylene glycol (1,2) {1,2 propanediol}
Liquid bulk temperature, °R	T_B	527.4936
Average daily liquid surface temperature, °R	T_{LA}	529.9804
Average daily minimum liquid surface temperature, °R	T_{LN}	520.7622
Average daily maximum liquid surface temperature, °R	T_{LX}	539.1986
Vapor pressure at average daily liquid surface temperature, psia	P_{VA}	0.0016
Vapor pressure at the average daily minimum liquid surface temperature, psia	P_{VN}	0.0010
Vapor pressure at the average daily maximum liquid surface temperature, psia	P_{VX}	0.0026
Vapor molecular weight, lb/lb-mole	M_V	76.0900
Constant in vapor pressure equation, dimensionless	A	8.2080

Constant in vapor pressure equation, °C	B	2,085.9000
Constant in vapor pressure equation, °C	C	203.5400

CALCULATION DETAILS

Standing Losses

Standing losses, lb/yr	L_S	0.9744
Vapor space volume, ft^3	V_V	1,860.1723
Vapor density, lb/ft^3	W_V	0.0000
Vapor space expansion factor, per day	K_E	0.0656
Vented vapor saturation factor, dimensionless	K_S	0.9985

Vapor Space Volume

Vapor space volume, ft^3	V_V	1,860.1723
Tank diameter, ft	D	11.7500
Vapor space outage, ft	H_{VO}	17.1549

Vapor Space Outage

Vapor space outage, ft	H_{VO}	17.1549
Tank shell height, ft	H_S	31.7000
Liquid height, ft	H_L	15.3500
Roof outage, ft	H_{RO}	0.8049

Roof Outage

Roof outage, ft	H_{RO}	0.8049
Tank roof height, ft	H_R	1.5745
Tank shell radius, ft	R_S	5.8750
Tank dome roof radius, ft	R_R	11.7500

Vapor Density

Vapor density, lb/ft^3	W_V	0.0000
Vapor molecular weight, lb/lb-mole	M_V	76.0900
Vapor pressure at average daily liquid surface temperature, psia	P_{VA}	0.0016
Ideal gas constant, psia•ft^3/lb-mole•°R	R	10.7310
Average vapor temperature, °R	T_V	532.4673
Tank roof surface solar absorptance, dimensionless	α_R	0.6800
Tank shell surface solar absorptance, dimensionless	α_S	0.6800

Average daily total insolation factor, Btu/ft^2•d	I	1,639.0000

Vapor Space Expansion Factor

Vapor space expansion factor, per day	K_E	0.0656
Average daily vapor temperature range, °R	ΔT_V	36.8728
Average daily vapor pressure range, psi	ΔP_V	0.0016
Breather vent pressure setting range, psig	ΔP_B	0.0600
Atmospheric pressure, psi	P_A	14.5200
Vapor pressure at average daily liquid surface temperature, psia	P_{VA}	0.0016
Average daily liquid surface temperature, °R	T_{LA}	529.9804

Vented Vapor Saturation Factor

Vented vapor saturation factor, dimensionless	K_S	0.9985
Vapor pressure at average daily liquid surface temperature, psia	P_{VA}	0.0016
Vapor space outage, ft	H_{VO}	17.1549

Working Losses

Working losses, lb/yr	L_W	0.3517
Net working loss throughput, ft^3/yr	V_Q	16,040.0000
Turnover factor, dimensionless	K_N	1.0000
Working loss product factor for fixed roof tanks, dimensionless	K_P	1.0000
Vapor density, lb/ft^3	W_V	0.0000
Vent setting correction factor, dimensionless	K_B	1.0000

EMISSIONS SUMMARY

Total Losses

Standing losses, lb/yr	L_S	0.9744
Working losses, lb/yr	L_W	0.3517
Total routine losses, lb/yr	L_T	1.3261

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AQD Storage Tank Calculation Tool (20202)
Calculation Report
Based on AP-42 (06/2020) Section 7.1: Organic Liquid Storage Tanks

Print this page

INPUT SUMMARY

Identification

Tank type	Vertical Fixed Roof
Tank identifier	3F
Description:	Methanol

Meteorological Data:

Nearest major city:	Fresno, CA

Tank Contents:

Liquid category	Other Organic Liquids
Liquid name	Methyl alcohol {methanol}

Tank Dimensions:

Tank shell height, ft	H_S	37.7000
Tank diameter, ft	D	11.7500
Maximum liquid height, ft	H_{LX}	36.7000
Minimum liquid height, ft	H_{LN}	1.0000
Liquid height, ft	H_L	18.3500
Number of turnovers per year, dimensionless	N	4.1435
Annual net throughput, gal/yr		120,000.0000
Annual net throughput, bbl/yr	Q	2,857.1429
Vapor balanced?		Yes

Paint Characteristics:

Shell color/shade	Gray: Medium
Shell condition	New
Roof color/shade	Gray: Medium
Roof condition	New

Roof Characteristics:

Roof type		Dome Roof
Tank roof height, ft	H_R	0.0000
Tank dome roof radius, ft	R_R	11.75

Breather Vent Settings:

Breather vent vacuum setting, psig	P_{BV}	-0.0300
Breather vent pressure setting, psig	P_{BP}	0.0300

Insulation Characteristics:

Tank insulation	None
Tank heating	No

METEOROLOGICAL DATA

Nearest major city:		Fresno, CA
Average daily ambient temperature, °R	T_{AA}	524.1500
Average daily minimum ambient temperature, °R	T_{AN}	512.5000
Average daily maximum ambient temperature, °R	T_{AX}	535.8000
Average daily ambient temperature range, °R	ΔT_A	23.3000
Average wind speed, mph	v	6.0000
Average daily total insolation factor, Btu/ft^2•d	I	1,639.0000
Atmospheric pressure, psi	P_A	14.5200

LIQUID DATA

Liquid category		Other Organic Liquids
Liquid name		Methyl alcohol {methanol}
Liquid bulk temperature, °R	T_B	527.4936
Average daily liquid surface temperature, °R	T_{LA}	529.8719
Average daily minimum liquid surface temperature, °R	T_{LN}	520.6662
Average daily maximum liquid surface temperature, °R	T_{LX}	539.0775
Vapor pressure at average daily liquid surface temperature, psia	P_{VA}	2.0134
Vapor pressure at the average daily minimum liquid surface temperature, psia	P_{VN}	1.5231
Vapor pressure at the average daily maximum liquid surface temperature, psia	P_{VX}	2.6332
Vapor molecular weight, lb/lb-mole	M_V	32.0400
Constant in vapor pressure equation, dimensionless	A	8.0790

Constant in vapor pressure equation, °C	B	1,581.3000
Constant in vapor pressure equation, °C	C	239.6500

CALCULATION DETAILS

Standing Losses

Standing losses, lb/yr	L_S	438.8210
Vapor space volume, ft^3	V_V	2,185.4744
Vapor density, lb/ft^3	W_V	0.0113
Vapor space expansion factor, per day	K_E	0.1535
Vented vapor saturation factor, dimensionless	K_S	0.3174

Vapor Space Volume

Vapor space volume, ft^3	V_V	2,185.4744
Tank diameter, ft	D	11.7500
Vapor space outage, ft	H_{VO}	20.1549

Vapor Space Outage

Vapor space outage, ft	H_{VO}	20.1549
Tank shell height, ft	H_S	37.7000
Liquid height, ft	H_L	18.3500
Roof outage, ft	H_{RO}	0.8049

Roof Outage

Roof outage, ft	H_{RO}	0.8049
Tank roof height, ft	H_R	1.5745
Tank shell radius, ft	R_S	5.8750
Tank dome roof radius, ft	R_R	11.7500

Vapor Density

Vapor density, lb/ft^3	W_V	0.0113
Vapor molecular weight, lb/lb-mole	M_V	32.0400
Vapor pressure at average daily liquid surface temperature, psia	P_{VA}	2.0134
Ideal gas constant, psia•ft^3/lb-mole•°R	R	10.7310
Average vapor temperature, °R	T_V	532.2502
Tank roof surface solar absorptance, dimensionless	α_R	0.6800
Tank shell surface solar absorptance, dimensionless	α_S	0.6800

Average daily total insolation factor, Btu/ft^2•d	I	1,639.0000

Vapor Space Expansion Factor

Vapor space expansion factor, per day	K_E	0.1535
Average daily vapor temperature range, °R	ΔT_V	36.8225
Average daily vapor pressure range, psi	ΔP_V	1.1101
Breather vent pressure setting range, psig	ΔP_B	0.0600
Atmospheric pressure, psi	P_A	14.5200
Vapor pressure at average daily liquid surface temperature, psia	P_{VA}	2.0134
Average daily liquid surface temperature, °R	T_{LA}	529.8719

Vented Vapor Saturation Factor

Vented vapor saturation factor, dimensionless	K_S	0.3174
Vapor pressure at average daily liquid surface temperature, psia	P_{VA}	2.0134
Vapor space outage, ft	H_{VO}	20.1549

Working Losses

Working losses, lb/yr	L_W	181.1675
Net working loss throughput, ft^3/yr	V_Q	16,040.0000
Turnover factor, dimensionless	K_N	1.0000
Working loss product factor for fixed roof tanks, dimensionless	K_P	1.0000
Vapor density, lb/ft^3	W_V	0.0113
Vent setting correction factor, dimensionless	K_B	1.0000

EMISSIONS SUMMARY

Total Losses

Standing losses, lb/yr	L_S	438.8210
Working losses, lb/yr	L_W	181.1675
Total routine losses, lb/yr	L_T	619.9885

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Madera
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Co	NOx RUNE	NOx IDLE	NOx STRE	PM2.5 RU	PM2.5 IDI	PM2.5 STI	PM2.5 PN	PM2.5 PM	PM10 RUI	PM10 IDL	PM10 STR	PM10 PM	PM10 PM	CO2 RUNI	CO2 IDLEI	CO2 STRE	CH4 RUNI	CH4 IDLE	CH4 STRE	N2O RUNI	N2O IDLE	N2O STRE	ROG RUN	ROG IDLE	ROG STRE	ROG HOT	ROG RUN	ROG DIUR	TOG RUN	TOG IDLE	TOG STRE	TOG HOT	TOG RUN	TOG DIUR	NH3 RUNI	CO RUNEI	CO_IDLEX	CO STREX	SOx RUNE	SOx IDLEX	SOx_STREX
Madera	2022	All Other E	Aggregate	Aggregate	Diesel	10.52281	549.9457	549.9457	0	93.65298	0	3.580556	4.591363	0.982307	0.066371	0.019266	0	0.003	0.016148	0.068372	0.020137	0	0.012	0.046137	1173.464	678.552	0	0.010926	0.004843	0	0.18488	0.106906	0	0.235238	0.104274	0	0	0	0	0.267801	0.118708	0	0	0	0.162829	0.631381	1.889733	0	0.011112	0.006425	0
Madera	2022	LDA	Aggregate	Aggregate	Diesel	194.5539	6404.717	6404.717	0	831.504	0	0.303092	0	0	0.018794	0	0	0.002	0.001579	0.019644	0	0	0.008	0.004511	239.0706	0	0	0.001359	0	0	0.037666	0	0	0.029259	0	0	0	0	0	0.03331	0	0	0	0	0.0031	0.342393	0	0	0.002265	0	0
Madera	2022	LDT1	Aggregate	Aggregate	Diesel	3.90407	40.11843	40.11843	0	11.55648	0	1.744046	0	0	0.233675	0	0	0.002	0.002209	0.24424	0	0	0.008	0.006311	415.4642	0	0	0.013517	0	0	0.065457	0	0	0.291018	0	0	0	0	0	0.331304	0	0	0	0	0.0031	1.957086	0	0	0.003937	0	0
Madera	2022	LDT2	Aggregate	Aggregate	Diesel	66.67445	2774.812	2774.812	0	314.2526	0	0.077233	0	0	0.008749	0	0	0.002	0.001803	0.009145	0	0	0.008	0.00515	321.0169	0	0	0.000756	0	0	0.050576	0	0	0.01627	0	0	0	0	0	0.018522	0	0	0	0	0.0031	0.1237	0	0	0.003042	0	0
Madera	2022	LHD1	Aggregate	Aggregate	Diesel	3463.023	122553.3	122553.3	0	43560.47	0	2.786201	2.369801	0	0.054983	0.026748	0	0.003	0.0273	0.057469	0.027957	0	0.012	0.078	638.2987	138.0514	0	0.011675	0.005098	0	0.100564	0.02175	0	0.251354	0.10976	0	0	0	0	0.28615	0.124954	0	0	0	0.132362	0.751261	0.909745	0	0.006048	0.001308	0
Madera	2022	LHD2	Aggregate	Aggregate	Diesel	1202.441	44844.19	44844.19	0	15125.19	0	2.022766	2.320187	0	0.045671	0.02619	0	0.003	0.03185	0.047736	0.027374	0	0.012	0.091	782.7446	220.1744	0	0.009831	0.005098	0	0.123322	0.034689	0	0.211646	0.10976	0	0	0	0	0.240945	0.124954	0	0	0	0.156418	0.590463	0.909745	0	0.007417	0.002086	0
Madera	2022	MDV	Aggregate	Aggregate	Diesel	487.7578	19541.38	19541.38	0	2290.229	0	0.113733	0	0	0.007436	0	0	0.002	0.001889	0.007772	0	0	0.008	0.005398	429.6751	0	0	0.000608	0	0	0.067695	0	0	0.013091	0	0	0	0	0	0.014903	0	0	0	0	0.0031	0.201296	0	0	0.004071	0	0
Madera	2022	MH	Aggregate	Aggregate	Diesel	253.7138	2168.117	2168.117	0	25.37138	0	6.048338	0	0	0.162881	0	0	0.004	0.015695	0.170246	0	0	0.016	0.044842	1078.732	0	0	0.00806	0	0	0.169955	0	0	0.173517	0	0	0	0	0	0.197538	0	0	0	0	0.101438	0.600512	0	0	0.010222	0	0
Madera	2022	Motor Coa	Aggregate	Aggregate	Diesel	15.78886	2258.227	2258.227	0	362.828	0	2.139685	52.84858	1.913528	0.028789	0.018086	0	0.003	0.026246	0.03009	0.018903	0	0.012	0.07499	1774.853	10766.52	0	0.001121	0.185688	0	0.279629	1.696269	0	0.024143	3.997813	0	0	0	0	0.027485	4.552106	0	0	0	0.210709	0.100752	55.36167	0	0.016807	0.101952	0
Madera	2022	PTO	Aggregate	Aggregate	Diesel	0	2416.656	2416.656	0	0	0	3.75213	0	0	0.008115	0	0	0	0	0.008482	0	0	0	0	2148.46	0	0	0.00338	0	0	0.338491	0	0	0.072767	0	0	0	0	0	0.08284	0	0	0	0	0.208579	0.412496	0	0	0.020945	0	0
Madera	2022	SBUS	Aggregate	Aggregate	Diesel	185.9514	4215.724	4215.724	0	2692.576	0	5.01845	22.87519	0.472156	0.030466	0.034469	0	0.003	0.015721	0.031844	0.036027	0	0.012	0.044917	1147.396	2191.393	0	0.003225	0.00909	0	0.180773	0.345255	0	0.069425	0.195706	0	0	0	0	0.079035	0.222796	0	0	0	0.137914	0.209351	4.442759	0	0.010865	0.020751	0
Madera	2022	T6 CAIRP h	Aggregate	Aggregate	Diesel	19.67962	4106.406	4106.406	0	452.2376	0	0.641308	3.025508	0.563958	0.007735	0.000715	0	0.003	0.01481	0.008085	0.000747	0	0.012	0.042314	1061.653	609.7221	0	0.000414	0.002342	0	0.167264	0.096062	0	0.008908	0.050418	0	0	0	0	0.010142	0.057397	0	0	0	0.213722	0.03878	2.022195	0	0.010053	0.005774	0
Madera	2022	T6 CAIRP s	Aggregate	Aggregate	Diesel	17.51651	3087.84	3087.84	0	402.5295	0	0.587396	3.191407	0.572986	0.008912	0.002495	0	0.003	0.01481	0.009315	0.002608	0	0.012	0.042314	1132.741	605.6499	0	0.000566	0.002557	0	0.179464	0.09542	0	0.012176	0.055055	0	0	0	0	0.013861	0.062676	0	0	0	0.21298	0.044327	2.040918	0	0.010726	0.005735	0
Madera	2022	T6 instate	Aggregate	Aggregate	Diesel	258.5742	13572.31	13572.31	0	3024.051	0	1.404949	13.19324	1.670304	0.008299	0.033655	0	0.003	0.015751	0.008674	0.035177	0	0.012	0.045003	1101.139	2336.909	0	0.001205	0.013024	0	0.173485	0.368181	0	0.025944	0.280414	0	0	0	0	0.029535	0.31923	0	0	0	0.206802	0.108367	7.269255	0	0.010427	0.022129	0
Madera	2022	T6 instate	Aggregate	Aggregate	Diesel	817.235	33768.34	33768.34	0	9767.965	0	1.612808	14.60635	1.526416	0.025022	0.054819	0	0.003	0.015815	0.026154	0.057298	0	0.012	0.045185	1148.937	2274.945	0	0.002807	0.015133	0	0.181015	0.359049	0	0.06043	0.325799	0	0	0	0	0.068795	0.370898	0	0	0	0.198112	0.191827	7.60093	0	0.01088	0.02158	0
Madera	2022	T6 OOS he	Aggregate	Aggregate	Diesel	11.27546	2841.192	2841.192	0	259.11	0	0.661086	3.038794	0.560568	0.00776	0.000718	0	0.003	0.01481	0.00811	0.000751	0	0.012	0.042314	1060.46	610.1394	0	0.000426	0.002345	0	0.167076	0.096128	0	0.009164	0.050494	0	0	0	0	0.010432	0.057484	0	0	0	0.212642	0.039339	2.017655	0	0.010042	0.005778	0
Madera	2022	T6 OOS sm	Aggregate	Aggregate	Diesel	10.51367	649.2863	649.2863	0	241.6041	0	0.6357	3.248632	0.56863	0.009906	0.00319	0	0.003	0.01481	0.010354	0.003334	0	0.012	0.042314	1132.415	606.4458	0	0.000656	0.002644	0	0.178412	0.095546	0	0.014134	0.056919	0	0	0	0	0.016091	0.064798	0	0	0	0.21206	0.049101	2.044971	0	0.010723	0.005743	0
Madera	2022	T6 Public	Aggregate	Aggregate	Diesel	91.37587	3484.057	3484.057	0	468.7582	0	6.09349	39.19385	0.826466	0.03684	0.09687	0	0.003	0.016159	0.038506	0.10125	0	0.012	0.046169	1250.959	3378.114	0	0.004132	0.019914	0	0.197089	0.532223	0	0.088956	0.428753	0	0	0	0	0.102169	0.488103	0	0	0	0.122526	0.205727	6.375578	0	0.011846	0.031989	0
Madera	2022	T6 Utility	Aggregate	Aggregate	Diesel	21.34134	896.0077	896.0077	0	273.1691	0	0.796362	9.008239	1.318697	0.003961	0.002173	0	0.003	0.015924	0.00414	0.002271	0	0.012	0.045497	1127.81	1709.696	0	0.000718	0.00657	0	0.177687	0.263963	0	0.015453	0.141458	0	0	0	0	0.017592	0.161039	0	0	0	0.20946	0.070165	5.396299	0	0.01068	0.01619	0
Madera	2022	T7 CAIRP	Aggregate	Aggregate	Diesel	677.2269	138552.1	138552.1	0	15562.67	0	1.989701	129.0084	2.076112	0.032722	0.04373	0	0.009	0.026131	0.034202	0.045708	0	0.036	0.074661	1574.903	25479.84	0	0.001007	0.48453	0	0.248127	4.01436	0	0.021676	10.43179	0	0	0	0	0.024677	11.8758	0	0	0	0.213279	0.088663	148.9977	0	0.014913	0.241279	0
Madera	2022	T7 NNOOS	Aggregate	Aggregate	Diesel	607.544	163811.3	163811.3	0	13961.36	0	1.722478	156.8754	2.202678	0.030463	0.053647	0	0.009	0.026046	0.03184	0.056072	0	0.036	0.074416	1584.925	30935.68	0	0.000786	0.601465	0	0.249706	4.87393	0	0.016919	12.94938	0	0	0	0	0.019261	14.74189	0	0	0	0.216562	0.068647	188.08	0	0.015008	0.292942	0
Madera	2022	T7 NOOS	Aggregate	Aggregate	Diesel	253.097	59509.72	59509.72	0	5816.169	0	2.048288	160.0809	2.083848	0.033588	0.054272	0	0.009	0.026145	0.035107	0.056726	0	0.036	0.074701	1575.726	31586.93	0	0.001061	0.601369	0	0.248256	4.976533	0	0.022834	12.94731	0	0	0	0	0.025995	14.73953	0	0	0	0.212856	0.091742	184.966	0	0.014921	0.299109	0
Madera	2022	T7 Other P	Aggregate	Aggregate	Diesel	13.98161	2413.152	2413.152	0	228.7391	0	3.140738	51.89239	1.639741	0.023563	0.018267	0	0.009	0.031113	0.024628	0.019093	0	0.036	0.088895	1681.905	9296.19	0	0.002995	0.1591	0	0.264985	1.464619	0	0.064473	3.425374	0	0	0	0	0.073397	3.899528	0	0	0	0.187095	0.245565	41.34676	0	0.015927	0.088029	0
Madera	2022	T7 POAK	Aggregate	Aggregate	Diesel	61.08027	5999.657	5999.657	0	999.2732	0	3.462805	50.98822	1.732522	0.025515	0.0206	0	0.009	0.031518	0.026669	0.021532	0	0.036	0.090052	1681.558	9180.656	0	0.003562	0.159782	0	0.26493	1.446416	0	0.076691	3.440363	0	0	0	0	0.087307	3.91625	0	0	0	0.180283	0.281129	42.59126	0	0.015923	0.086935	0
Madera	2022	T7 POLA	Aggregate	Aggregate	Diesel	68.35833	8926.088	8926.088	0	1118.342	0	4.168929	55.89267	1.467371	0.02738	0.020131	0	0.009	0.03221	0.028618	0.021041	0	0.036	0.093028	1702.957	9523.041	0	0.004763	0.159356	0	0.268302	1.503359	0	0.102541	3.430898	0	0	0	0	0.116735	3.905817	0	0	0	0.161878	0.345762	38.92476	0	0.016126	0.090178	0
Madera	2022	T7 Public	Aggregate	Aggregate	Diesel	115.1865	4940.145	4940.145	0	590.9069	0	9.624132	37.07884	2.883645	0.054413	0.092518	0	0.009	0.04033	0.056874	0.096701	0	0.036	0.115229	1907.237	3300.591	0	0.005775	0.052213	0	0.300486	0.520009	0	0.124331	1.124123	0	0	0	0	0.141541	1.279728	0	0	0	0.122878	0.401759	9.347368	0	0.01806	0.031255	0
Madera	2022	T7 Single	Aggregate	Aggregate	Diesel	203.0451	11698.27	11698.27	0	1912.685	0	2.013514	24.35445	2.598516	0.018212	0.034401	0	0.009	0.028559	0.019035	0.035956	0	0.036	0.081598	1663.498	4779.246	0	0.001364	0.090273	0	0.262085	0.752972	0	0.029363	1.94355	0	0	0	0	0.033428	2.212583	0	0	0	0.208605	0.13161	24.84459	0	0.015752	0.045257	0
Madera	2022	T7 SWCV	Aggregate	Aggregate	Diesel	23.64333	1532.672	1532.672	0	108.7593	0	13.78878	54.72433	1.457181	0.012214	0.086594	0	0.009	0.0735	0.012766	0.09051	0	0.036	0.21	4166.776	3823.874	0	0.000383	0.043033	0	0.656477	0.602453	0	0.008254	0.926485	0	0	0	0	0.009396	1.054733	0	0	0	0.071333	0.02533	7.449159	0	0.039457	0.03621	0
Madera	2022	T7 Tractor	Aggregate	Aggregate	Diesel	1160.813	94948.15	94948.15	0	16866.62	0	2.304402	46.39896	3.358786	0.023558	0.018615	0	0.009	0.028065	0.024623	0.019457	0	0.036	0.080186	1575.403	8870.363	0	0.001571	0.160439	0	0.248205	1.397529	0	0.033817	3.454199	0	0	0	0	0.038498	3.932343	0	0	0	0.20257	0.13464	46.23822	0	0.014918	0.083997	0
Madera	2022	T7 Utility	Aggregate	Aggregate	Diesel	10.37143	488.6496	488.6496	0	132.7543	0	1.780057	8.708349	4.458952	0.008284	0.002992	0	0.009	0.033704	0.008659	0.005128	0	0.036	0.062298	1750.294	1651.997	0	0.001478	0.02955	0	0.27576	0.260273	0	0.031828	0.636211	0	0	0	0	0.036234	0.724278	0	0	0	0.204886	0.177068	8.655806	0	0.016574	0.015643	0
Madera	2022	UBUS	Aggregate	Aggregate	Diesel	1.411388	75.86483	75.86483	0	5.645551	0	0.161589	0	0	0.004096	0	0	0.003	0.03734	0.004281	0	0	0.012	0.106687	778.4939	0	0	0.001946	0	0	0.122653	0	0	0.04189	0	0	0	0	0	0.047689	0	0	0	0	0.22	0.053242	0	0	0.007577	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Madera
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for CVMT and EVMT, g/mile for RUNEX, PMBW and PMTW, mph for Speed

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Total VMT	CVMT	EVMT	NOx_RUNE	PM2.5_RU	PM10_RUI	CO2_RUNE	CH4_RUNE	N2O_RUNI	ROG_RUNI	TOG_RUNI	CO_RUNEX	SOx_RUNE	NH3_RUNI	PM10_PMI	PM2.5_PM	Fuel Consu	Energy Consumption	
Madera	2022	All Other B	Aggregate	10	Diesel	26.72194	26.72194	0	7.378268	0.182828	0.191095	2038.711	0.049043	0.3212	1.055886	1.202046	1.828686	0.019305	0.162829	0.061496	0.021524	182.1173	0	
Madera	2022	LDA	Aggregate	10	Diesel	0.005331	0.005331	0	0.29694	0.053969	0.05641	509.1794	0.009758	0.080221	0.210087	0.23917	3.13563	0.004825	0.0031	0.007465	0.002613	45.48479	0	
Madera	2022	LDT1	Aggregate	10	Diesel	3.34E-05	3.34E-05	0	1.164943	0.68825	0.719369	884.3691	0.039862	0.139333	0.858206	0.97701	3.442522	0.00838	0.0031	0.012144	0.00425	79.00034	0	
Madera	2022	LDT2	Aggregate	10	Diesel	0.00231	0.00231	0	0.158688	0.024343	0.025443	683.3259	0.00981	0.107658	0.211204	0.240442	1.869112	0.006475	0.0031	0.009912	0.003469	61.04123	0	
Madera	2022	LHD1	Aggregate	10	Diesel	7166.501	7166.501	0	3.12658	0.104961	0.109707	1056.063	0.022073	0.166383	0.475229	0.541016	1.505376	0.010007	0.132362	0.078	0.0273	94.33765	0	
Madera	2022	LHD2	Aggregate	10	Diesel	2622.336	2622.336	0	2.51156	0.085442	0.089305	1274.468	0.017971	0.200793	0.386899	0.440459	1.201629	0.012076	0.156418	0.091	0.03185	113.8477	0	
Madera	2022	MDV	Aggregate	10	Diesel	0.016266	0.016266	0	0.180123	0.020389	0.021311	865.525	0.008093	0.136364	0.174227	0.198346	3.140085	0.008201	0.0031	0.010388	0.003636	77.31701	0	
Madera	2022	MH	Aggregate	10	Diesel	88.79499	88.79499	0	13.65986	0.340947	0.356363	1950.303	0.044061	0.307271	0.948614	1.079934	2.189214	0.01848	0.101438	0.061496	0.021524	174.2198	0	
Madera	2022	Motor Coa	Aggregate	10	Diesel	9.443611	9.443611	0	8.19189	0.011807	0.012341	3135.323	0.008138	0.493971	0.175205	0.199458	1.093502	0.02969	0.210709	0.13874	0.048559	280.0771	0	
Madera	2022	SBUS	Aggregate	10	Diesel	71.26722	71.26722	0	10.58398	0.097097	0.101488	2077.407	0.020746	0.327296	0.446654	0.508482	0.722394	0.019672	0.137914	0.061496	0.021524	185.5739	0	
Madera	2022	T6 CAIRP h	Aggregate	10	Diesel	17.17245	17.17245	0	2.194553	0.004478	0.00468	1906.447	0.002739	0.300362	0.058962	0.067124	0.278809	0.018053	0.213722	0.061496	0.021524	170.3022	0	
Madera	2022	T6 CAIRP s	Aggregate	10	Diesel	4.549206	4.549206	0	1.971923	0.017082	0.017854	1981.14	0.004601	0.312129	0.09906	0.112772	0.281065	0.01876	0.21298	0.061496	0.021524	176.9744	0	
Madera	2022	T6 instate l	Aggregate	10	Diesel	306.8537	306.8537	0	3.585951	0.009361	0.009784	2008.289	0.005481	0.316407	0.117999	0.134333	0.499112	0.019017	0.206726	0.061496	0.021524	179.3996	0	
Madera	2022	T6 instate s	Aggregate	10	Diesel	795.236	795.236	0	3.834866	0.088571	0.092576	2031.718	0.017307	0.320098	0.372609	0.424187	0.696249	0.019239	0.198326	0.061496	0.021524	181.4926	0	
Madera	2022	T6 OOS he	Aggregate	10	Diesel	11.88149	11.88149	0	2.229538	0.004647	0.004857	1903.352	0.002911	0.299874	0.062671	0.071347	0.28691	0.018024	0.212642	0.061496	0.021524	170.0256	0	
Madera	2022	T6 OOS sm	Aggregate	10	Diesel	2.71523	2.71523	0	2.066675	0.022332	0.023342	1981.934	0.005555	0.312254	0.119593	0.136147	0.306677	0.018768	0.21206	0.061496	0.021524	177.0453	0	
Madera	2022	T6 Public	Aggregate	10	Diesel	235.1445	235.1445	0	11.24866	0.086391	0.090297	2097.167	0.016355	0.33041	0.352116	0.400857	0.548591	0.019859	0.122526	0.061496	0.021524	187.3391	0	
Madera	2022	T6 Utility	Aggregate	10	Diesel	45.87966	45.87966	0	2.07254	0.004315	0.00451	1981.354	0.002943	0.312163	0.063372	0.072144	0.281897	0.018762	0.20946	0.061496	0.021524	176.9936	0	
Madera	2022	T7 CAIRP	Aggregate	10	Diesel	579.4066	579.4066	0	8.513794	0.012131	0.012679	2757.087	0.007143	0.43438	0.153792	0.175081	1.016886	0.026108	0.213279	0.138129	0.048345	246.2895	0	
Madera	2022	T7 NNOOS	Aggregate	10	Diesel	685.0373	685.0373	0	8.086199	0.010459	0.010932	2690.654	0.00515	0.423914	0.110883	0.126232	0.826276	0.025479	0.216562	0.137676	0.048186	240.3551	0	
Madera	2022	T7 NOOS	Aggregate	10	Diesel	248.8619	248.8619	0	8.683823	0.012677	0.01325	2753.075	0.007634	0.433748	0.164366	0.187118	1.051323	0.02607	0.212856	0.138205	0.048372	245.9311	0	
Madera	2022	T7 Other P	Aggregate	10	Diesel	34.1731	34.1731	0	9.123365	0.018242	0.019067	3030.888	0.017609	0.477518	0.379119	0.431599	1.623384	0.028701	0.187095	0.142982	0.050044	270.748	0	
Madera	2022	T7 POAK	Aggregate	10	Diesel	84.96226	84.96226	0	9.560684	0.021722	0.022704	3055.119	0.021302	0.481335	0.458636	0.522122	1.813828	0.02893	0.180283	0.14485	0.050697	272.9125	0	
Madera	2022	T7 POLA	Aggregate	10	Diesel	126.404	126.404	0	10.59379	0.027329	0.028565	3131.861	0.028781	0.493426	0.61965	0.705425	2.236363	0.029657	0.161878	0.148036	0.051813	279.7679	0	
Madera	2022	T7 Public	Aggregate	10	Diesel	300.83	300.83	0	18.56077	0.123065	0.128629	3129.273	0.023624	0.493018	0.508624	0.57903	1.109066	0.029632	0.122878	0.160546	0.056191	279.5368	0	
Madera	2022	T7 Single	Aggregate	10	Diesel	138.6166	138.6166	0	6.51035	0.012986	0.013573	3039.828	0.008245	0.478926	0.177519	0.202092	1.022005	0.028785	0.208605	0.139214	0.048725	271.5467	0	
Madera	2022	T7 SWCV	Aggregate	10	Diesel	66.03014	66.03014	0	26.87257	0.023927	0.025009	7118.026	0.00158	1.121448	0.034024	0.038734	0.101424	0.067403	0.071333	0.21	0.0735	635.8504	0	
Madera	2022	T7 Tractor	Aggregate	10	Diesel	768.7943	768.7943	0	8.094688	0.013434	0.014042	2878.192	0.011035	0.45346	0.237571	0.270457	1.208327	0.027255	0.20257	0.140265	0.049093	257.1078	0	
Madera	2022	T7 Utility	Aggregate	10	Diesel	26.32506	26.32506	0	5.106856	0.00716	0.007483	2969.885	0.006054	0.467907	0.13034	0.148382	0.79307	0.028123	0.204886	0.140283	0.049099	265.2987	0	
Madera	2022	UBUS	Aggregate	10	Diesel	1.989019	1.989019	0	0.56476	0.011689	0.012218	1249.32	0.004836	0.196831	0.104117	0.118529	0.212381	0.011838	0.22	0.100283	0.035099	111.6013	0	

Name — **Prioritization Calculator**

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.
Author or updater	Matthew Cegielski — *Last Update* November 2, 2020
Facility:	Miles Chemical
ID#:	Truck Trips (EMFAC T7 Tractor)
Project #:	
Unit and Process#	
Operating Hours hr/yr	3,640.00

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	4.02E-01	1.44E-03	0.00E+00	4.02E-01
100≤R<250	**0.250**	1.01E-01	3.59E-04	0.00E+00	1.01E-01
250≤R<500	**0.040**	1.61E-02	5.74E-05	0.00E+00	1.61E-02
500≤R<1000	**0.011**	4.43E-03	1.58E-05	0.00E+00	4.43E-03
1000≤R<1500	**0.003**	1.21E-03	4.31E-06	0.00E+00	1.21E-03
1500≤R<2000	**0.002**	8.05E-04	2.87E-06	0.00E+00	8.05E-04
2000<R	**0.001**	4.02E-04	1.44E-06	0.00E+00	4.02E-04

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

0

Enter the unit's CAS# of the substances emitted and their amounts.

Prioritization score for each substance generated below. Totals on last row.

Substance	**CAS#**	**Annual Emissions (lbs/yr)**	**Maximum Hourly (lbs/hr)**	**Average Hourly (lbs/hr)**	**Cancer**	**Chronic**	**Acute**
Diesel engine exhaust, particulate matter (Diesel PM)	**9901**	1.74E-01	4.79E-05	4.79E-05	4.02E-01	1.44E-03	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**4.02E-01**	**1.44E-03**	**0.00E+00**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Diesel engine exhaust, particulate matter (Diesel PM)	9901

Name

Prioritization Calculator

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.		
Author or updater	Matthew Cegielski	*Last Update*	November 2, 2020
Facility:	Miles Chemical		
ID#:	Tanks		
Project #:			
Unit and Process#			
Operating Hours hr/yr	8,760.00		

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	0.00E+00	4.17E+00	1.03E+01	1.03E+01
100≤R<250	**0.250**	0.00E+00	1.04E+00	2.58E+00	2.58E+00
250≤R<500	**0.040**	0.00E+00	1.67E-01	4.13E-01	4.13E-01
500≤R<1000	**0.011**	0.00E+00	4.59E-02	1.14E-01	1.14E-01
1000≤R<1500	**0.003**	0.00E+00	1.25E-02	3.10E-02	3.10E-02
1500≤R<2000	**0.002**	0.00E+00	8.34E-03	2.07E-02	2.07E-02
2000<R	**0.001**	0.00E+00	4.17E-03	1.03E-02	1.03E-02

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

0	Enter the unit's CAS# of the substances emitted and their amounts.				Prioritzation score for each substance generated below. Totals on last row.			
Substance	**CAS#**	**Annual Emissions (lbs/yr)**	**Maximum Hourly (lbs/hr)**	**Average Hourly (lbs/hr)**	**Cancer**	**Chronic**	**Acute**	
Ethylene glycol	**107211**	3.00E+01	3.42E-03	3.42E-03	0.00E+00	1.28E-03	0.00E+00	Tank 1M
Propylene glycol monomethyl ether	**107982**	1.33E+00	1.51E-04	1.51E-04	0.00E+00	3.24E-06	0.00E+00	Tank 2M
Hydrochloric acid	**7647010**	3.99E+02	4.55E-02	4.55E-02	0.00E+00	7.59E-01	3.25E-02	Tank 1A
Phosphoric acid	**7664382**	8.70E+01	9.93E-03	9.93E-03	0.00E+00	2.13E-01	0.00E+00	Tank 5A
Nitric acid	**7697372**	5.90E+01	6.74E-03	6.74E-03	0.00E+00	0.00E+00	1.17E-01	Tank 4A
Sulfuric acid	**7664939**	1.86E+02	2.12E-02	2.12E-02	0.00E+00	3.18E+00	2.65E-01	Tank 6A and 8A
Sodium hydroxide	**1310732**	4.62E+02	5.27E-02	5.27E-02	0.00E+00	0.00E+00	9.89E+00	Tank 1B and 3B
Isopropyl alcohol	**67630**	4.21E+02	4.80E-02	4.80E-02	0.00E+00	1.03E-03	2.25E-02	Tank 2F
Methanol	**67561**	6.20E+02	7.08E-02	7.08E-02	0.00E+00	2.65E-03	3.79E-03	Tank 3F
Ethylene glycol monobutyl ether	**111762**	2.30E+01	2.63E-03	2.63E-03	0.00E+00	4.80E-03	8.38E-04	Tank 4F
Xylene	**1330207**	1.88E+02	2.15E-02	2.15E-02	0.00E+00	4.60E-03	1.46E-03	Tank 7F
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				0.00E+00	0.00E+00	0.00E+00	0.00E+00	
				Totals	**0.00E+00**	**4.17E+00**	**1.03E+01**	

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Glycol ethers (and their acetates)	1115

Name — **Prioritization Calculator**

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.
Author or updater	Matthew Cegielski · *Last Update* November 2, 2020
Facility:	Miles Chemical
ID#:	Water Heater/Boiler (x3)
Project #:	
Unit and Process#	
Operating Hours hr/yr	8,760.00

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	1.96E-01	1.14E-02	1.53E-02	1.96E-01
100≤R<250	**0.250**	4.90E-02	2.86E-03	3.83E-03	4.90E-02
250≤R<500	**0.040**	7.84E-03	4.58E-04	6.13E-04	7.84E-03
500≤R<1000	**0.011**	2.16E-03	1.26E-04	1.69E-04	2.16E-03
1000≤R<1500	**0.003**	5.88E-04	3.43E-05	4.60E-05	5.88E-04
1500≤R<2000	**0.002**	3.92E-04	2.29E-05	3.07E-05	3.92E-04
2000<R	**0.001**	1.96E-04	1.14E-05	1.53E-05	1.96E-04

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

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Enter the unit's CAS# of the substances emitted and their amounts.

Prioritization score for each substance generated below. Totals on last row.

Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Acetaldehyde	**75070**	2.26E-01	2.58E-05	2.58E-05	4.70E-03	2.76E-05	8.23E-05
Acrolein	**107028**	1.42E-01	1.62E-05	1.62E-05	0.00E+00	6.95E-03	9.73E-03
Benzene	**71432**	4.20E-01	4.79E-05	4.79E-05	9.38E-02	2.40E-03	2.66E-03
Ethyl benzene	**100414**	4.99E-01	5.70E-05	5.70E-05	9.61E-03	4.27E-06	0.00E+00
Formaldehyde	**50000**	8.94E-01	1.02E-04	1.02E-04	4.13E-02	1.70E-03	2.78E-03
Hexane	**110543**	3.31E-01	3.78E-05	3.78E-05	0.00E+00	8.10E-07	0.00E+00
Naphthalene	**91203**	1.60E-02	1.83E-06	1.83E-06	4.19E-03	3.04E-05	0.00E+00
PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	**1151**	5.00E-03	5.71E-07	5.71E-07	4.24E-02	0.00E+00	0.00E+00
Propylene	**115071**	3.84E+01	4.39E-03	4.39E-03	0.00E+00	2.19E-04	0.00E+00
Toluene	**108883**	1.92E+00	2.20E-04	2.20E-04	0.00E+00	7.84E-05	6.59E-05
Xylene	**1330207**	1.43E+00	1.63E-04	1.63E-04	0.00E+00	3.50E-05	1.11E-05
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**1.96E-01**	**1.14E-02**	**1.53E-02**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Benzene	71432

Name

Prioritization Calculator

Applicability	Use to provide a Prioritization score based on the emission potency method. Entries required in yellow areas, output in gray areas.
Author or updater	Matthew Cegielski — *Last Update* November 2, 2020
Facility:	Miles Chemical
ID#:	Peacock Model 3056
Project #:	
Unit and Process#	
Operating Hours hr/yr	8,760.00

Receptor Proximity and Proximity Factors		Cancer Score	Chronic Score	Acute Score	Max Score
0< R<100	**1.000**	2.39E-02	1.13E-03	1.52E-03	2.39E-02
100≤R<250	**0.250**	5.98E-03	2.84E-04	3.80E-04	5.98E-03
250≤R<500	**0.040**	9.57E-04	4.54E-05	6.07E-05	9.57E-04
500≤R<1000	**0.011**	2.63E-04	1.25E-05	1.67E-05	2.63E-04
1000≤R<1500	**0.003**	7.18E-05	3.40E-06	4.56E-06	7.18E-05
1500≤R<2000	**0.002**	4.78E-05	2.27E-06	3.04E-06	4.78E-05
2000<R	**0.001**	2.39E-05	1.13E-06	1.52E-06	2.39E-05

Receptor proximity is in meters. Priortization scores are calculated by multiplying the total scores summed below by the proximity factors. Record the Max score for your receptor distance. If the substance list for the unit is longer than the number of rows here or if there are multiple processes use additional worksheets and sum the totals of the Max Scores.

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Enter the unit's CAS# of the substances emitted and their amounts.

Prioritization score for each substance generated below. Totals on last row.

Substance	CAS#	Annual Emissions (lbs/yr)	Maximum Hourly (lbs/hr)	Average Hourly (lbs/hr)	Cancer	Chronic	Acute
Acetaldehyde	**75070**	2.30E-02	2.63E-06	2.63E-06	4.78E-04	2.81E-06	8.38E-06
Acrolein	**107028**	1.40E-02	1.60E-06	1.60E-06	0.00E+00	6.85E-04	9.59E-04
Benzene	**71432**	4.20E-02	4.79E-06	4.79E-06	9.38E-03	2.40E-04	2.66E-04
Ethyl benzene	**100414**	5.00E-02	5.71E-06	5.71E-06	9.63E-04	4.28E-07	0.00E+00
Formaldehyde	**50000**	8.90E-02	1.02E-05	1.02E-05	4.11E-03	1.69E-04	2.77E-04
Hexane	**110543**	3.30E-02	3.77E-06	3.77E-06	0.00E+00	8.07E-08	0.00E+00
Naphthalene	**91203**	2.00E-03	2.28E-07	2.28E-07	5.24E-04	3.81E-06	0.00E+00
PAHs, total, w/o individ. components reported [Treated as B(a)P for HRA]	**1151**	1.00E-03	1.14E-07	1.14E-07	8.47E-03	0.00E+00	0.00E+00
Propylene	**115071**	3.84E+00	4.39E-04	4.39E-04	0.00E+00	2.19E-05	0.00E+00
Toluene	**108883**	1.92E-01	2.19E-05	2.19E-05	0.00E+00	7.83E-06	6.58E-06
Xylene	**1330207**	1.43E-01	1.63E-05	1.63E-05	0.00E+00	3.50E-06	1.11E-06
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				0.00E+00	0.00E+00	0.00E+00	0.00E+00
				Totals	**2.39E-02**	**1.13E-03**	**1.52E-03**

Use the substance dropdown list in the CAS# Finder to locate CAS# of substances.

Substance	CAS# Finder
Asbestos	1332214

		0	0	0	0	
Receptor Proximity and Proximity Factors		Max Score	Max Score	Max Score	Max Score	Total Max Score
0< R<100	1.000	4.02E-01	1.03E+01	1.96E-01	2.39E-02	1.10E+01
100≤R<250	0.250	1.01E-01	2.58E+00	4.90E-02	5.98E-03	2.74E+00
250≤R<500	0.040	1.61E-02	4.13E-01	7.84E-03	9.57E-04	4.38E-01
500≤R<1000	0.011	4.43E-03	1.14E-01	2.16E-03	2.63E-04	1.21E-01
1000≤R<1500	0.003	1.21E-03	3.10E-02	5.88E-04	7.18E-05	3.29E-02
1500≤R<2000	0.002	8.05E-04	2.07E-02	3.92E-04	4.78E-05	2.19E-02
2000<R	0.001	4.02E-04	1.03E-02	1.96E-04	2.39E-05	1.10E-02

Receptor Proximity and Proximity Factors		Truck Trips Max Score	Storge Tanks Max Score	Water Heater/ Boiler Max Score	Peacock Model 3056 Max Score	Total Max Score
0< R<100	1.000	4.02E-01	1.03E+01	1.96E-01	2.39E-02	1.10E+01
100≤R<250	0.250	1.01E-01	2.58E+00	4.90E-02	5.98E-03	2.74E+00
250≤R<500	0.040	1.61E-02	4.13E-01	7.84E-03	9.57E-04	4.38E-01
500≤R<1000	0.011	4.43E-03	1.14E-01	2.16E-03	2.63E-04	1.21E-01
1000≤R<1500	0.003	1.21E-03	3.10E-02	5.88E-04	7.18E-05	3.29E-02
1500≤R<2000	0.002	8.05E-04	2.07E-02	3.92E-04	4.78E-05	2.19E-02
2000<R	0.001	4.02E-04	1.03E-02	1.96E-04	2.39E-05	1.10E-02