

# Vierra Reinforcement Project

## Data Request Set No. 1 Part C and 2 Part B – Completion of PG&E Responses

December 18, 2018

The following submissions complete the responses for Data Requests #1 and #2.

**AQ-9** In its 2015 Risk Assessment Guidelines, the Office of Environmental Health Hazard Assessment (OEHHA) recommends assessing cancer risk for projects where the maximally-exposed individual resident or sensitive receptor is exposed for two months or longer. According to the PEA, constructing the substation expansion would take approximately 12 to 18 months to complete and would likely begin prior to power line construction, which is estimated to take approximately 3 to 4 months to complete. Please justify why a health risk assessment (HRA) was not conducted.

**PG&E Response:** Please find attached a Health Risk Assessment prepared for the project. The assessment concludes that construction activities will have a less-than-significant impact.

**AQ-11** The Project Description of the PEA states that there would be some remote work at other substations and installation of microwave towers and dishes/antennas for telecommunication. Please provide estimates of vehicle trips and construction equipment use for the remote end work at other substations and work at telecommunication towers. Please provide Air Quality and Greenhouse Gas emissions estimates for the remote end work at other substations and work for telecommunication tower improvements.

**PG&E Response:** Please find attached a revised equipment usage table that includes the estimates of construction equipment usage for the remote end work. Also attached is the corresponding revised air quality and greenhouse gas emissions estimates. As indicated in the attached file “Emissions Summary Full Project”, emissions will not exceed air quality and greenhouse gas thresholds.



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December 13, 2018  
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Mr. Bob Donovan  
Senior Land Planner  
Pacific Gas & Electric Company  
245 Market Street  
San Francisco, CA 94105

**RE: Health Risk Assessment for Pacific Gas & Electric Company's Vierra Substation  
Vierra Reinforcement Project (CPUC Application No. 18-06-004)**  
Vierra Road  
Lathrop, California 95330

Dear Mr. Donovan:

On behalf of Pacific Gas & Electric Company (PG&E), TRC Solutions, Inc. (TRC) has prepared a screening Health Risk Assessment (HRA) for the Vierra Reinforcement Project (project) in order to evaluate the potential health risks due to construction activities that will be taking place at Vierra Substation located on Vierra Road in Lathrop, California (site). The HRA was prepared in response to the California Public Utilities Commission's (CPUC) Data Request Set No. 1, Item AQ-9. This HRA presents the project background and regulatory background, identification of expected air toxic emissions, a description of the methodology for the HRA, and the results.

#### **VIERRA REINFORCEMENT PROJECT BACKGROUND**

The project will provide more electrical capacity and reliability in the surrounding areas of San Joaquin County by building a new, double-circuit 115 kilovolt (kV) power line west from the site approximately one mile to the existing Tesla-Stockton Cogen Junction 115 kV Power Line. As part of the project, the substation will be expanding from the current 1.6 acres to a total of 5.0 acres, which will accommodate the new power line and substation site modifications. The expansion will extend approximately 340 feet west of the existing substation and approximately 33 feet farther back from Vierra Road than the existing substation. Modifications to the site will include converting the 115 kV bus into a four-bay breaker-and-a-half bus arrangement and installing a Modular Protection and Automation Control building, battery building, and a microwave communication tower.

Although temporary construction work areas will be located around each pole along the project route from the site to the Tesla-Stockton Cogen Junction 115 kV power line, these areas are not included in the HRA. These temporary construction work areas have a short construction duration that is far less than the

two-month threshold for preparing an HRA<sup>1</sup> and will use less construction equipment than the expansion activities associated with the site.

## REGULATORY BACKGROUND

In California, emission standards are controlled at both the federal and state level, with guidance at the local level typically administered by regional air districts. The regional air district that the project is located in is the San Joaquin Valley Air Pollution Control District (SJVAPCD).

National emission standards to limit emissions of hazardous air pollutants (HAPs) are established by Title 40 Code of Federal Regulations (CFR) Part 63. HAPs are air pollutants identified by the United States Environmental Protection Agency (USEPA) that do not have an established National Ambient Air Quality Standard and are causing or contributing to adverse health effects.

In 1987, California adopted the Air Toxics "Hot Spots" Information and Assessment Act, also known as Assembly Bill 2588 (AB 2588). The goals of the Act are to collect emissions data of toxic air contaminants (TACs), identify facilities having localized impacts, determine health risks, and notify affected individuals. Many TACs are also classified as HAPs.

Both 40 CFR Part 63 and AB 2588 are regulations that manage stationary emission sources. The project is not installing stationary sources that emit HAPs/TACs. However, the project will be temporarily emitting diesel particulate matter (DPM), which is identified as a TAC, during construction activities associated with the expansion of the site. Therefore, the project is not considered a stationary source of toxic emissions.

The SJVAPCD has developed the following documents that represent their policies:

- *Guidance for Assessing and Mitigating Air Quality Impacts* published March 19, 2015; and
- *Framework for Performing Health Risk Assessments* (APR – 1906) published June 30, 2015 and revised July 1, 2018.

These documents were used in conjunction with the Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics Hot Spots Program's February 2015 *Guidance Manual for Preparation of Health Risk Assessments* (HRA Guidance Manual), which was adopted March 2015.

## EMISSIONS OF AIR TOXICS

During construction activities associated with the expansion of the site, DPM is the only TAC expected to be emitted from diesel-fueled construction equipment and vehicles operated within the site. DPM is also the only TAC to be included in this screening HRA. DPM is emitted from the combustion of diesel fuel and is assumed to be equal to particulate matter with an aerodynamic diameter of less than 10 microns (PM<sub>10</sub>).

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<sup>1</sup> Section 8.2.10 of the Office of Environmental Hazard Assessment (OEHHA) Guidance Manual states that due to the uncertainty in assessing cancer risks from very short-term exposures, assessing cancer risk for projects less than two months at the Maximally Exposed Individual Resident (MEIR) is not recommended. (OEHHA, 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments. Available online: <https://oehha.ca.gov/air/air-toxics-hot-spots>.)

Construction emissions (excluding those from helicopters) for the entire project, including those from soil disturbance and vehicle travel on paved and unpaved roads, were estimated using California Emissions Estimator Model Version 2016.3.1 (CalEEMod). For the purpose of estimating emissions in PG&E's Proponent's Environmental Assessment, different types of off-road construction equipment used during substation construction were categorized by weeks of usage. For example, all equipment that would be used for up to 10 weeks or less was assigned to the 10-week category and emissions were conservatively calculated as if the equipment was operating for the entire 10 weeks. Calculating the emissions in this manner results in an overestimate of annual emissions. For purposes of this HRA, the model input was adjusted to more accurately reflect the actual hours of operation and provide a better estimate of annual emissions. These calculations are provided in Appendix A.

PM10 emissions estimated by CalEEMod also include fugitive dust sources. These emissions were excluded from the HRA because they are not expected to include DPM. Other sources of emissions that were excluded because they are not expected to include DPM are gasoline-fueled, light-duty trucks and light-duty autos/trucks. In addition, the following sources of DPM emission were excluded because they occur off-site or over the entire travel distance and would not be expected significantly contribute to localized impacts of DPM: construction activities not occurring at the substation, material haul truck trips, and worker commute trips.

The annual DPM emissions related to construction activities at the substation site were estimated to be 69.2 pounds/year.

## SCREENING HRA METHODOLOGY

TRC modeled the air dispersion of DPM emissions from construction activities at the site using the American Meteorological Society/USEPA Regulatory Model (AERMOD). The modeled output (maximum annual DPM concentration) and OEHHA's February 2015 HRA Guidance Manual were used to estimate the cancer and non-cancer health risks for residential and worker exposure to DPM emissions.

Details regarding model selection, inputs, and calculation methodology are presented below.

### *Air Dispersion Modeling*

Emissions of DPM have been estimated for the construction project related to the expansion of the substation. These emissions result from the operation of diesel-powered construction equipment that are projected to operate at the Site. For this analysis, the latest version of the USEPA's AERMOD air quality dispersion model (Version 18081) has been used. This model is routinely used for HRAs in California and throughout the country. This model is particularly well suited to simulate the point source emissions associated with a diesel engine.

Some specific aspects of the analysis for this particular case are summarized as follows.

- The model was configured in regulatory default mode as defined in the USEPA's Guideline on Air Quality Models (2017).
- Only emissions from the construction area due to operation of diesel engines have been considered.
- In the proposed construction area, 27 different random locations (see Figure 1 at the end of this document) have been set up as point sources in the model. These locations are only meant to represent possible locations where the construction equipment may operate over the course of the construction period and do not represent that there are or may be 27 pieces of construction equipment. For each location, the following parameters were assumed:

	Height (m)	Temperature (K)	Velocity (m/s)	Diameter (m)
Each of 27 Stacks	4.6	533	18	0.127

- The San Joaquin Valley Air Pollution Control District has developed AERMOD-ready hourly meteorological data. For this analysis, 5 years of hourly meteorological data from the Stockton Airport has been used. This data site is less than 10 miles from the project site.
- A review of the wind rose for the Stockton meteorological station (see Figure 2 at the end of this document) indicates a pronounced prevailing northwesterly wind regime in this area. Consequently, long-term average impacts from the project will be at a maximum south of the project site. In addition, the receptors of most interest in the analysis (residences and a church) are located south of the site. There are no receptors of reasonable concern directly east, west, or north of the site. Consequently, a receptor network was set up south of the project site that included 348 receptors (see Figure 3 at the end of this document). Figure 3 also shows the locations of residences and a church.
- The analysis assumed the construction emissions take place for 10 hours per day (7am-5pm) and 5 days per week (Monday-Friday). The emissions were distributed equally over the 27 locations described above.
- It has been assumed that the total calculated annual DPM emissions are equally distributed over the 27 emission unit locations throughout the course of one year (the construction period).
- The model was executed for each meteorological year (there are 5 years of meteorological data for the analysis) to identify the highest predicted annual average impact of DPM in micrograms/cubic meter ( $\mu\text{g}/\text{m}^3$ ).

The results of the air dispersion model show a maximum annual DPM impact of  $0.0551 \mu\text{g}/\text{m}^3$ . As expected, due to prevailing wind conditions, the maximum predicted annual impacts were found immediately southeast of the project site. The maximum overall predicted impact was used for the risk calculations. A detailed summary of the modeling inputs is presented in Appendix B.

### **Health Risk Estimates**

This screening HRA followed OEHHA's February 2015 HRA Guidance Manual and SJVAPCD's guidelines to calculate cancer risks and non-cancer hazards. There are three aspects that are considered when evaluating cancer risks and non-cancer hazards: exposure assessment, toxicity assessment, and risk characterization.

Exposure Assessment: An exposure assessment is the process of estimating potential human exposure to a chemical in the environment. It is conducted to estimate the magnitude of actual and/or potential human exposures, and the frequency and duration of these exposures.

The site is directly across Vierra Road to the north of a residence. As discussed above, the prevailing wind is from the northwest toward the residence. Modeling of DPM emissions identified the maximum annual concentration of DPM to be deposited at the border of Vierra Road and the residence.

Typically, HRAs are evaluated for the Point of Maximum Impact (PMI), Maximally Exposed Individual Resident (MEIR), Maximally Exposed Individual Worker (MEIW), and maximum exposed sensitive receptor. However, this HRA only focused on the PMI calculation because the maximum annual concentration of DPM is located at the border of Vierra Road and the residence, which also represents the MEIR, MEIW, and the maximum exposed sensitive receptor.

The two receptors that are evaluated in this HRA are residential and worker receptors. OEHHA recommends a 30-year exposure duration for residential receptors with exposure starting during the third trimester, and a 25-year exposure duration starting from 16 to 40 years old. Because the construction activities associated with the expansion of the site are scheduled to last only one year, each year for the 30-year exposure duration for residential receptors was evaluated individually and only one year was evaluated for the worker receptors. Each age group for a residential receptor has values for the specific parameters that evaluate the dose and risks, whereas the values for the specific parameters for worker receptors are the same for 16 to 40 years old.

The dose through the inhalation route was calculated using the following equations:

Residential Receptors:

$$Dose_{air} = C_{air} \times BR/BW \times A \times EF \times 10^{-6}$$

Worker Receptors:

$$Dose_{air} = (C_{air} \times WAF) \times BR/BW \times A \times EF \times 10^{-6}$$

Where:

- $Dose_{air}$  = Dose through inhalation (milligrams per kilogram per day [mg/kg-day])
- $C_{air}$  = Annual DPM concentration ( $\mu\text{g}/\text{m}^3$ )
- WAF = Worker air concentration adjustment factor (unitless)
- BR/BW = Breathing rate normalized to body weight (liter per kilogram body weight per day); an 8-hour rate assumed for a worker
- A = Inhalation absorption factor (unitless)
- EF = Exposure frequency (unitless: days/365 days)
- $10^{-6}$  = Micrograms to milligrams conversion, liters to cubic meters conversion

A Tier 1 evaluation, which uses the 95<sup>th</sup> percentile breathing rates, consistent with SJVAPCD recommendations, was completed in order to avoid underestimating risks. The exposure parameters and dose calculations are provided in Appendix C.

Toxicity Assessment. The purpose of the toxicity assessment is accomplished in two steps (USEPA, 1989):

1. Hazard Identification; and
2. Dose-Response Assessment.

Hazard identification entails determining if a chemical can cause an increase in a particular adverse effect (e.g., cancer) and the likelihood that the adverse effect will occur in humans. The result of hazard identification is a profile of the available toxicological information and its relevance to human exposure under conditions present in the environment. This process has been completed by OEHHA for DPM.

Dose-response assessment entails quantifying the relationship between the dose of a chemical and the incidence of adverse effects in the exposed population. The result of the dose-response assessment is toxicity criteria that are used in the risk characterization to estimate the likelihood of adverse effects occurring in humans at different exposure levels. The toxicity criteria used to estimate cancer risks are inhalation cancer potency factor and for non-cancer hazards are inhalation Reference Exposure Level (REL).

An inhalation cancer potency factor is used to estimate the upper-bound probability of an individual developing cancer as a result of a lifetime of exposure to a particular level of a potential carcinogen in this HRA for DPM. Specifically, an inhalation cancer potency factor is a plausible upper-bound estimate of the probability of a response per unit intake of a chemical over a lifetime and is usually the 95 percent upper confidence limit (UCL) of the slope of the dose-response curve expressed in  $(\text{mg}/\text{kg}\text{-day})^{-1}$ .

The REL is an estimate of the maximum air concentration that can be present over a specified time period without an appreciable risk of deleterious effects. Chronic RELs are generally used to evaluate the potential non-cancer effects associated with exposure periods. Although acute health risks are typically calculated for HRAs, acute health risks were not evaluated because there is no acute REL for DPM.

The inhalation cancer potency factor and chronic REL for DPM were obtained from OEHHA's August 20, 2018 *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values*, and the values are provided in Appendix C.

Risk Characterization: The toxicity and exposure assessments were integrated into quantitative expressions of cancer risks and non-cancer hazards.

Cancer risks were calculated using the following equations:

Residential Receptors:

$$\text{Risk} = \text{Dose}_{\text{air}} \times \text{CPF} \times \text{ASF} \times \text{ED}/\text{AT} \times \text{FAH}$$

Worker Receptors:

$$\text{Risk} = \text{Dose}_{\text{air}} \times \text{CPF} \times \text{ASF} \times \text{ED}/\text{AT}$$

Where:

- Risk = Inhalation cancer risk (unitless)
- $\text{Dose}_{\text{air}}$  = Dose through inhalation ( $\text{mg}/\text{kg}\text{-day}$ )
- CPF = Cancer potency factor  $(\text{mg}/\text{kg}\text{-day})^{-1}$
- ASF = Age sensitivity factor for a specified age group (unitless)
- ED = Exposure duration for a specified age group (years)
- AT = Averaging time for lifetime cancer risk (years)
- FAH = Fraction of time spent at home (unitless)

A target significance threshold for cancer risks is 10 in a million. The maximum cancer risk for a residential receptor is 7.7 in a million for the 1- and 2-year-old age group, and for a worker receptor is 0.14 in a million. The cancer risk is below the target significance threshold of 10 in a million. The cancer risks are provided in Appendix C.

The non-cancer hazard was calculated using the following equation:

$$\text{Hazard} = C_{\text{air}}/\text{REL}$$

Where:

- $C_{\text{air}}$  = Annual DPM concentration ( $\mu\text{g}/\text{m}^3$ )
- REL = Reference exposure level  $(\mu\text{g}/\text{m}^3)^{-1}$

A target significance threshold for non-cancer hazards is 1.0. The non-cancer hazard is 0.01102 for both residential and worker receptors. The non-cancer hazard is below the target significance threshold of 1.0. The non-cancer hazards are provided in Appendix C.

## RESULTS

The results of the screening HRA for construction activities show that the excess cancer risk and non-cancer hazard based on the maximum annual DPM concentration are 7.7 and 0.01102, respectively, which are less than the significance thresholds of 10.0 in 1 million for cancer risks and 1.0 for non-cancer hazards. Therefore, predicted impacts associated with construction activities associated with the site expansion are less than significant.

If you have any questions, please call me at the number below and we will be glad to discuss them with you.

Sincerely,

Karin Greenacre, PE, TRC

530-292-6753

cc Jo Lynn Lambert, PG&E  
Janet Liver, TRC

### Attachments:

Appendix A: Emission Calculations

Appendix B: AERMOD Files

Appendix C: Risk Calculations



Figure 1. Construction Equipment Locations



Figure 2. Wind Rose for Lathrop Area (from Stockton Surface Site)

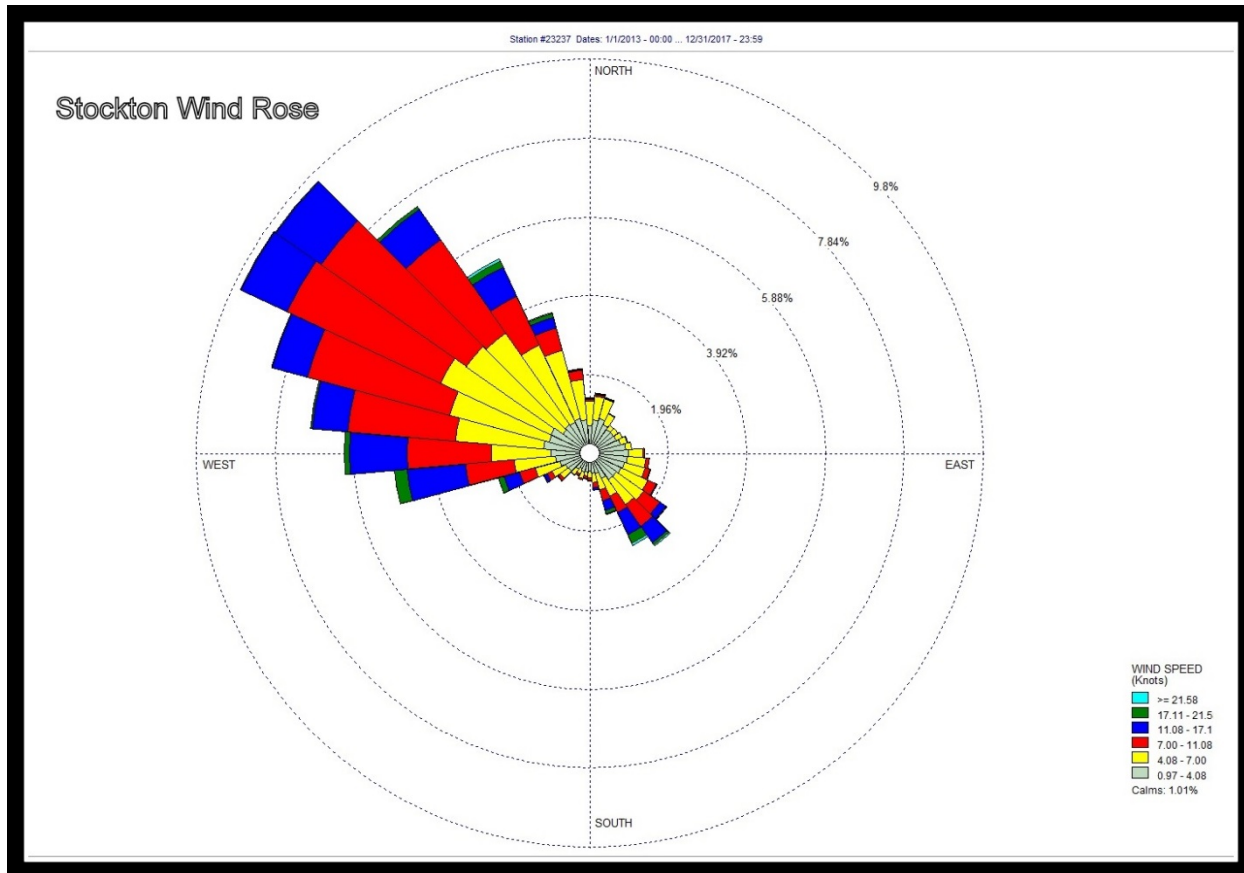
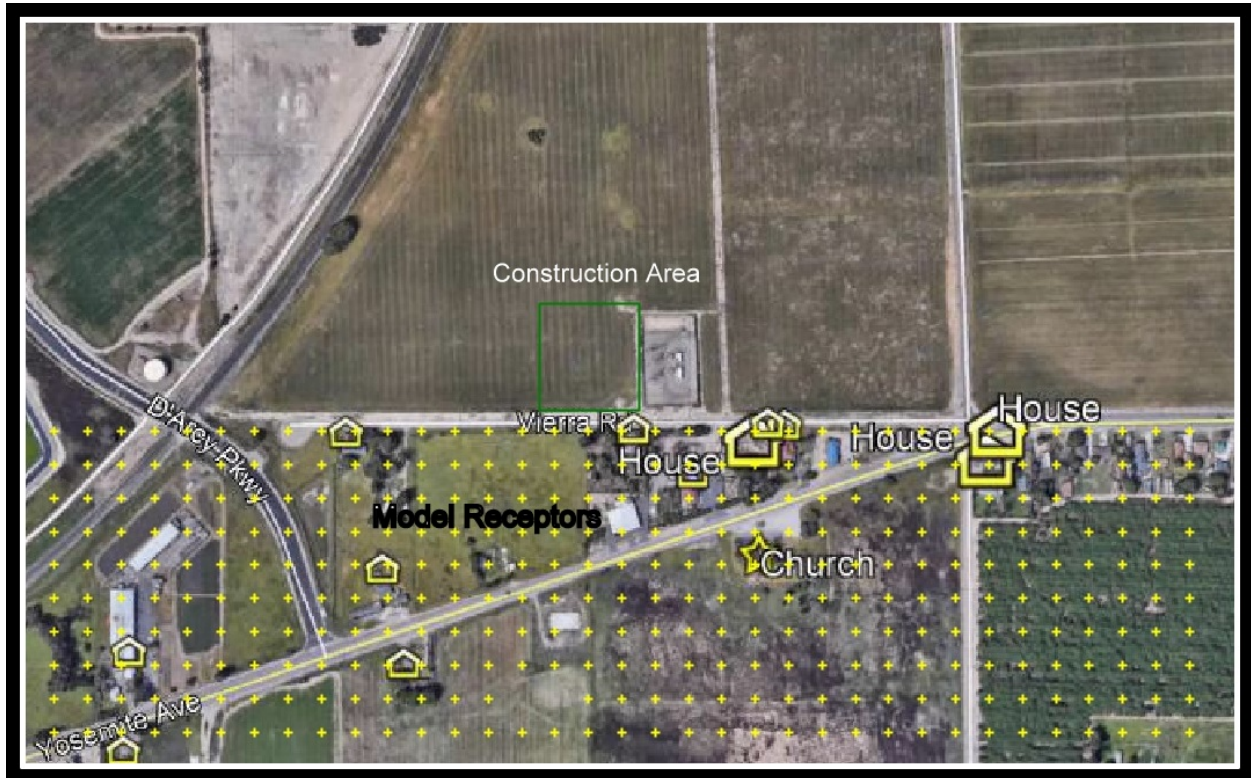


Figure 3. Receptor Locations



## **Appendix A – Emission Calculations**

Appendix A  
Construction Equipment

Activity	Total Number of On-Site Workers	Estimated Quantity of Equipment		CalEEMod Equipment Type	Horsepower	CalEEMod Default HP (y/n)	Estimated Days per Week of Operation	Estimated Hours per Day of Operation	Estimated Duration of Use (weeks)	Total Hours of Operation	Adjusted Days per Week of Operation	Adjusted Hrs/Day	Adjusted Duration of Use (weeks)	Adjusted Total Hours of Operation	
Vegetation Trimming	2	1	Leaf blower	Other Construction Equipment	9	n	2	10	1	20	2	10	1	20	
		1	Weed mower	Other Construction Equipment	20	n	2	10	1	20	2	10	1	20	
		1	Pickup truck	On-road vehicle - Add as vendor trip	NA	NA	2	10	1	NA	NA	NA	NA	NA	
Traffic Control	4	2	Work site protection type vehicles	On-road vehicle - Add as vendor trip	NA	NA	6	2	12	NA	NA	NA	NA	NA	
		2	Flasher board	Assume battery powered - no emissions	NA	NA	6	8	12	NA	NA	NA	NA	NA	NA
Substation Expansion A	19	2	Concrete Truck	Off-Highway Trucks	402	y	3	3	8	72	5	1.8	8	72	
		1	D-3 Bulldozer	Rubber Tired Dozers	247	y	5	6	2	60	5	1.5	8	60	
		1	Bucket truck	On-road vehicle - Add as vendor trip	NA	NA	5	6	2	NA	NA	NA	NA	NA	
		1	Line Truck	On-road vehicle - Add as vendor trip	NA	NA	5	6	2	NA	NA	NA	NA	NA	
		1	50-ton crane	Cranes	231	y	5	6	1	30	5	0.8	8	30	
		2	Water Truck	Add as vendor trip	NA	NA	5	6	8	NA	NA	NA	NA	NA	
		2	Compactor	Plate Compactors	8	y	5	6	6	180	5	4.5	8	180	
		1	Road grader, six wheel	Graders	187	y	5	6	2	60	5	1.5	8	60	
		1	Elevating scraper	Scrapers	367	y	5	6	2	60	5	1.5	8	60	
		2	Mini excavator	Excavators	50	y	5	8	8	320	5	8.0	8	320	
Substation Expansion B	18	1	Large excavator drill	Excavators	158	y	5	6	4	120	5	3.0	8	120	
		3	Aerial man Lift	Aerial Lifts	63	y	5	5	20	500	5	3.3	30	500	
		1	2-ton flatbed trucks	Add as vendor trip	NA	NA	5	4	20	NA	NA	NA	NA	NA	
		2	Fork Lift	Forklifts	89	y	5	5	20	500	5	3.3	30	500	
		2	Backhoe	Tractors/Loaders/Backhoes	97	y	5	6	20	600	5	4.0	30	600	
		2	Skid-steer bobcat	Skid Steer Loaders	65	y	5	4	30	600	5	4.0	30	600	
		1	Boom truck	On-road vehicle - Add as vendor trip	NA	NA	5	6	20	NA	NA	NA	NA	NA	
Substation Expansion C	0	2	Air compressor	Air Compressors	78	y	5	2	30	300	5	2.0	30	300	
		1	Portable generators	Generator Sets	84	y	5	4	30	600	5	4.0	30	600	
Substation Expansion D	7	2	Dump truck	On-road vehicle - Add as haul trip	NA	NA	5	NA	4	NA	NA	NA	NA	NA	
Telecom: Vierra Substation	MW Tower/Monopole Foundation Work (Digging, Framing, Rebar, Concrete Pour, Concrete Test, Concrete Curing)	8	5	Pickup truck	On-road vehicle - Add as vendor trip	NA	NA	5	4	52	NA	NA	NA	NA	
			1	Backhoe	Tractors/Loaders/Backhoes	97	y	4	10	2	80	5	8.0	2	80
			1	Pickup Truck	On-road vehicle - Add as vendor trip	NA	NA	4	10	2	NA	NA	NA	NA	NA
			1	Dump Truck	Off-Highway Trucks	402	y	2	10	1	20	5	2.0	2	20
	MW Tower/Monopole Stacking and Waveguide Bridge	4	1	Concrete Truck	Off-Highway Trucks	402	y	2	10	1	20	5	2.0	2	20
			1	Crane	Cranes	231	y	4	10	2	80	5	8.0	2	80
MW Antenna and Waveguide Installation	3	1	Pickup Truck	On-road vehicle - Add as vendor trip	NA	NA	4	10	2	NA	NA	NA	NA	NA	
			1	Crane	Cranes	231	y	2	10	1	20	5	2.0	2	20

**Notes:**

Days per week, hours per day, and duration of use for off-road equipment were adjusted in order to group inputs for input to CalEEMod without changing the total hours of operation.  
On-road vehicles (e.g. pickup trucks) modeled in CalEEMod as vendor trips, 2 trips (approximately 15 vehicle miles) per day per vehicle.  
No worker trips or haul trips included in CalEEMod run for HRA.

tblProjectCharacteristics

ProjectName	LocationSc	EMFAC_ID	WindSpeer	Precipitatic	ClimateZor	Urbanizatic	Operationa	UtilityComr	CO2Intens	CH4Intensi	N2OIntens	TotalPopul	TotalLotAc	UsingHisto	ConstructionPhase	StartDate
Vierra Reinforcement Project	C	SJ	2.7	51	2	Urban	2023	Pacific Gas	641.35	0.029	0.006	0	0	0	2022/01/01	

tblPollutants

PollutantSeq	PollutantFcl	PollutantName
1	Reactive O	ROG
1	Nitrogen O	NOX
1	Carbon Mo	CO
1	Sulfur Diox	SO2
1	Particulate	PM10
1	Particulate	PM2_5
1	Fugitive PM	PM10_FUG
1	Fugitive PM	PM25_FUG
1	Biogenic C	CO2_BIO
1	Non-Biogen	CO2_NBIO
1	Carbon Dic	CO2
1	Methane (C	CH4
1	Nitrous Oxi	N2O
1	CO2 Equiv	CO2E

tblLandUse

LandUseTy	LandUseSt	LandUseUi	LandUseSi	LotAcreage	LandUseSr	Population	BuildingSp	GreenSpac	RecSwimmingArea	AllowEdit
Commerci	User Defin	0	User Defin	0	0	0	0	0	0	0
Parking	Other Asp	0	Acre	0	0	0	0	0	0	0
Residential	User Defin	0	Dwelling U	0	0	0	0	0	0	0



## tblConstructionPhase

PhaseNumber	PhaseName	PhaseType	PhaseStartDate	PhaseEndDate	NumDaysWeek	NumDays	PhaseDescription
1	Phase 1 - Site Preparation	Site Preparation	2022/01/03	2022/01/04	5	2	
2	Phase 5A - Substation Expansion	Grading	2022/01/03	2022/02/25	5	40	
3	Phase 2 - Traffic Control	Building Construction	2022/01/03	2022/03/26	6	72	
4	Phase 5B - Substation Expansion	Building Construction	2022/01/03	2022/07/29	5	150	
5	Phase 5D - Substation Expansion	Building Construction	2022/01/03	2022/12/30	5	260	
6	Phase 5C - Substation Expansion	Grading	2022/05/16	2022/06/10	5	20	
7	Phase 6 - Vierra Substation	Building Construction	2022/07/01	2022/07/14	5	10	

## tblOffRoadEquipment

PhaseName	OffRoadEquipmentType	OffRoadEquipmentUnitAmount	UsageHours	HorsePower	LoadFactor
Phase 1 - Site Preparation	Other Construction Equipment	1	10	9	0.42
Phase 1 - Site Preparation	Other Construction Equipment	1	10	20	0.42
Phase 5A - Substation Expansion	Cranes	1	0.75	231	0.29
Phase 5A - Substation Expansion	Excavators	2	8	50	0.38
Phase 5A - Substation Expansion	Excavators	1	3	158	0.38
Phase 5A - Substation Expansion	Graders	1	1.5	187	0.41
Phase 5A - Substation Expansion	Off-Highway Trucks	2	1.8	402	0.38
Phase 5A - Substation Expansion	Plate Compactors	2	4.5	8	0.43
Phase 5A - Substation Expansion	Rubber Tired Dozers	1	1.5	247	0.4
Phase 5A - Substation Expansion	Scrapers	1	1.5	367	0.48
Phase 2 - Traffic Control	Excavators	0	7	158	0.38
Phase 5B - Substation Expansion	Aerial Lifts	3	3.3	63	0.31
Phase 5B - Substation Expansion	Air Compressors	2	2	78	0.48
Phase 5B - Substation Expansion	Forklifts	2	3.3	89	0.2
Phase 5B - Substation Expansion	Generator Sets	1	4	84	0.74
Phase 5B - Substation Expansion	Skid Steer Loaders	2	4	65	0.37
Phase 5B - Substation Expansion	Tractors/Loaders/Backhoes	2	4	97	0.37
Phase 5C - Substation Expansion	Excavators	0	7	158	0.38
Phase 5D - Substation Expansion	Excavators	0	7	158	0.38
Phase 6 - Vierra Substation	Tractors/Loaders/Backhoes	1	8	97	0.37
Phase 6 - Vierra Substation	Off-Highway Trucks	2	2	402	0.38
Phase 6 - Vierra Substation	Cranes	1	8	231	0.29
Phase 6 - Vierra Substation	Cranes	1	2	231	0.29

tblTripsAndVMT

PhaseName	WorkerTrip	VendorTrip	HaulingTriç	WorkerTrip	VendorTrip	HaulingTriç	WorkerVeh	VendorVeh	HaulingVehicleClass
Phase 1 - Site Preparation	0	2	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT
Phase 5A - Substation Expansion	0	4	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT
Phase 5A - Substation Expansion	0	2	0	10.8	30	20	LD_Mix	HDT_Mix	HHDT
Phase 2 - Traffic Control	0	4	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT
Phase 5B - Substation Expansion	0	4	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT
Phase 5C - Substation Expansion	0	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT
Phase 5D - Substation Expansion	0	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT
Phase 6 - Vierra Substation	0	4	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT

## tblOnRoadDust

PhaseName	WorkerPer	VendorPer	HaulingPer	RoadSiltLo	MaterialSilt	MaterialMo	AverageVe	MeanVehicleSpeed
Phase 1 - Site Preparation	100	100	100	0.1	8.5	0.5	2.4	40
Phase 5A - Substation Expansion	100	100	100	0.1	8.5	0.5	2.4	40
Phase 2 - Traffic Control	100	100	100	0.1	8.5	0.5	2.4	40
Phase 5B - Substation Expansion	100	100	100	0.1	8.5	0.5	2.4	40
Phase 5C - Substation Expansion	100	100	100	0.1	8.5	0.5	2.4	40
Phase 5D - Substation Expansion	100	100	100	0.1	8.5	0.5	2.4	40
Phase 6 - Vierra Substation	100	100	100	0.1	8.5	0.5	2.4	40

tblDemolition

PhaseNam Demolition: DemolitionUnitAmount

tblGrading

PhaseNam	MaterialImj	MaterialExj	GradingSiz	ImportExpc	MeanVehic	AcresOfGr	MaterialMo	MaterialMo	MaterialSiltContent
Phase 1 - S	0	0		0	7.1		7.9	12	6.9
Phase 5A -	0	0		0	7.1		7.9	12	6.9
Phase 5C -	0	0		0	7.1		7.9	12	6.9

tblArchitecturalCoating

PhaseNam Architectur: Architectur: EF\_Reside ConstArea, EF\_Reside ConstArea, EF\_Nonres ConstArea, EF\_Nonres ConstArea, EF\_Parkinç ConstArea, Parking

tblPaving

ParkingLotAcreage



## tblVehicleTrips

VehicleTrip	VehicleTrip	WD_TR	ST_TR	SU_TR	HW_TL	HS_TL	HO_TL	CC_TL	CW_TL	CNW_TL	PR_TP	DV_TP	PB_TP	HW_TTP	HS_TTP	HO_TTP	CC_TTP	CW_TTP	CNW_TTP
Other Asph Acre		0	0	0	0	0	0	7.3	9.5	7.3	0	0	0	0	0	0	0	0	0
User Defin	User Defin	0	0	0	0	0	0	7.3	9.5	7.3	0	0	0	0	0	0	0	0	0
User Defin	Dwelling U	0	0	0	10.8	7.3	7.5	0	0	0	0	0	0	45.6	19	35.4	0	0	0

tblVehicleEF

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	FleetMix	0.56138	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767
A	CH4_IDLE	0	0	0	0	0.004792	0.003175	0.016116	0.779896	0.011872	0	0	0.834796	0
A	CH4_RUN	0.003549	0.009907	0.005314	0.010389	0.018811	0.00883	0.004327	0.011574	0.012135	1.384831	0.427193	0.012251	0.034417
A	CH4_STRE	0.005199	0.01613	0.007488	0.018442	0.017668	0.007109	0.052611	0.077033	0.030281	0.0678	0.163103	0.069981	0.025534
A	CO_IDLEX	0	0	0	0	0.137778	0.117581	0.292849	1.84392	0.245169	0	0	6.224282	0
A	CO_RUNE	0.501609	1.215171	0.69505	1.138438	1.189941	0.684601	0.355521	0.591727	0.747829	8.316027	21.25273	0.742672	2.430328
A	CO_STRE	1.151589	3.169693	1.595741	3.231663	2.300491	1.123467	4.978286	1.440863	6.353634	13.19688	10.12236	6.349638	5.919886
A	CO2_NBIC	0	0	0	0	9.364603	14.48299	165.7015	5450.809	64.81029	0	0	1220.877	0
A	CO2_NBIC	242.8809	305.1833	343.4163	475.2124	687.2179	708.2143	1198.068	1512.404	1290.176	1955.804	169.7807	1103.641	1226.008
A	CO2_NBIC	55.65704	69.6834	78.26189	107.5666	28.26438	22.05302	46.73168	4.556531	70.64246	108.7911	46.81478	41.30429	58.27775
A	NOX_IDLE	0	0	0	0	0.094892	0.114089	0.455911	15.64236	0.122122	0	0	10.52542	0
A	NOX_RUN	0.045589	0.131605	0.076911	0.148806	2.022416	1.218411	1.19105	1.803989	0.723684	8.319114	1.177831	4.193449	1.696584
A	NOX_STRE	0.067704	0.182597	0.12466	0.294992	0.926112	0.446866	12.85809	20.3097	1.972783	15.08359	0.317544	14.33929	0.87519
A	PM10_IDL	0	0	0	0	0.001054	0.001331	0.00013	0.005101	0.000011	0	0	0.01012	0
A	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.061096	0.13034	0.585014	0.01176	0.7448	0.13034
A	PM10_PM	0.008	0.008	0.008	0.008	0.010264	0.010845	0.012	0.035568	0.012	0.012	0.004	0.010834	0.012931
A	PM10_RUI	0.001599	0.002413	0.001623	0.001686	0.022252	0.017834	0.003187	0.005927	0.002174	0.140416	0.001866	0.022965	0.035207
A	PM10_STF	0.002278	0.003472	0.00237	0.002433	0.000839	0.00039	0.000736	0.000034	0.000904	0.001132	0.003498	0.000633	0.001119
A	PM25_IDL	0	0	0	0	0.001009	0.001273	0.000124	0.00488	0.000011	0	0	0.009682	0
A	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.026184	0.05586	0.25072	0.00504	0.3192	0.05586
A	PM25_PM	0.002	0.002	0.002	0.002	0.002566	0.002711	0.003	0.008892	0.003	0.003	0.001	0.002709	0.003233
A	PM25_RUI	0.001473	0.002222	0.001492	0.001555	0.021249	0.017041	0.003044	0.00567	0.002051	0.13431	0.001747	0.021957	0.033626
A	PM25_STF	0.002095	0.003193	0.002179	0.002238	0.000772	0.000359	0.000677	0.000031	0.000831	0.001041	0.003298	0.000582	0.001029
A	ROG_DIUF	0.040467	0.152924	0.058175	0.093403	0.003	0.00109	0.001092	0.000053	0.001808	0.004982	1.315166	0.003184	1.1974
A	ROG_HTS	0.102294	0.31442	0.125802	0.213857	0.099241	0.034733	0.038979	0.002129	0.020828	0.068388	0.875988	0.025598	0.083869
A	ROG_IDLE	0	0	0	0	0.015717	0.013024	0.020245	0.491781	0.031056	0	0	0.739242	0
A	ROG_RES	0.030193	0.102775	0.046569	0.078217	0.001355	0.000516	0.000488	0.000029	0.00067	0.002015	0.678661	0.001151	0.351017
A	ROG_RUN	0.008923	0.02465	0.013179	0.025991	0.149104	0.120602	0.047136	0.08301	0.048979	0.61982	2.245344	0.107824	0.11431
A	ROG_RUN	0.033582	0.189431	0.06955	0.123451	0.307269	0.077207	0.017825	0.000157	0.051748	0.013889	0.599215	0.011551	0.024814
A	ROG_STR	0.070116	0.21753	0.10099	0.248714	0.238278	0.095879	0.296358	0.034133	0.390513	0.91436	2.226145	0.315981	0.344356
A	SO2_IDLE	0	0	0	0	0.000093	0.000141	0.00159	0.051906	0.000631	0	0	0.011857	0
A	SO2_RUN	0.002431	0.003066	0.003439	0.004759	0.006731	0.00688	0.011482	0.014402	0.012677	0.012613	0.002109	0.010622	0.012171
A	SO2_STRE	0.000576	0.000753	0.00081	0.001133	0.000326	0.000241	0.000554	0.000069	0.000818	0.001323	0.000699	0.000522	0.000686
A	TOG_DIUF	0.040467	0.152924	0.058175	0.093403	0.003	0.00109	0.001092	0.000053	0.001808	0.004982	1.315166	0.003184	1.1974
A	TOG_HTS	0.102294	0.31442	0.125802	0.213857	0.099241	0.034733	0.038979	0.002129	0.020828	0.068388	0.875988	0.025598	0.083869
A	TOG_IDLE	0	0	0	0	0.021537	0.017132	0.028241	0.562669	0.044244	0	0	1.061463	0
A	TOG_RES	0.030193	0.102775	0.046569	0.078217	0.001355	0.000516	0.000488	0.000029	0.00067	0.002015	0.678661	0.001151	0.351017
A	TOG_RUN	0.012968	0.035918	0.019219	0.037817	0.180405	0.140192	0.055578	0.102244	0.064603	2.069018	2.754059	0.129245	0.156241
A	TOG_RUN	0.033582	0.189431	0.06955	0.123451	0.307269	0.077207	0.017825	0.000157	0.051748	0.013889	0.599215	0.011551	0.024814
A	TOG_STR	0.076767	0.238166	0.11057	0.272306	0.260885	0.104976	0.324475	0.037371	0.427563	1.001109	2.421852	0.345959	0.377026
S	FleetMix	0.56138	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767

## tblVehicleEF

S	CH4_IDLE	0	0	0	0	0.004792	0.003175	0.014975	0.73498	0.011863	0	0	0.834366	0
S	CH4_RUNI	0.004036	0.01117	0.006026	0.011778	0.019328	0.008956	0.00441	0.011592	0.012496	1.38742	0.41575	0.012524	0.036068
S	CH4_STRE	0.004277	0.013218	0.006158	0.015158	0.01662	0.006721	0.049464	0.072406	0.028244	0.059622	0.136768	0.057503	0.023705
S	CO_IDLE	0	0	0	0	0.137778	0.117581	0.203054	1.339876	0.241555	0	0	6.092947	0
S	CO_RUNE	0.612788	1.451579	0.844396	1.378406	1.211693	0.690118	0.360152	0.595105	0.767865	8.397413	20.9872	0.758423	2.528776
S	CO_STRE	0.930225	2.541225	1.288794	2.608117	2.12439	1.041298	4.588493	1.328166	5.746939	10.59523	9.02131	4.45754	5.321392
S	CO2_NBIC	0	0	0	0	9.364603	14.48299	175.6507	5774.646	67.63158	0	0	1281.308	0
S	CO2_NBIC	265.0422	331.8121	373.9883	516.3695	687.2179	708.2143	1198.068	1512.404	1290.176	1955.804	169.7807	1103.641	1226.008
S	CO2_NBIC	55.65704	69.6834	78.26189	107.5666	28.26438	22.05302	46.73168	4.556531	70.64246	108.7911	46.81478	41.30429	58.27775
S	NOX_IDLE	0	0	0	0	0.094892	0.114089	0.470591	16.14553	0.125974	0	0	10.8621	0
S	NOX_RUN	0.041501	0.118332	0.069751	0.134844	1.917057	1.158411	1.129024	1.718571	0.673359	7.864747	1.018402	3.976542	1.577995
S	NOX_STRI	0.06174	0.166393	0.113682	0.268986	0.866879	0.421458	12.81353	20.30233	1.904282	14.96856	0.291898	14.3045	0.81828
S	PM10_IDL	0	0	0	0	0.001054	0.001331	0.000109	0.004301	0.000009	0	0	0.008531	0
S	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.061096	0.13034	0.585014	0.01176	0.7448	0.13034
S	PM10_PMI	0.008	0.008	0.008	0.008	0.010264	0.010845	0.012	0.035568	0.012	0.012	0.004	0.010834	0.012931
S	PM10_RUI	0.001599	0.002413	0.001623	0.001686	0.022252	0.017834	0.003187	0.005927	0.002174	0.140416	0.001866	0.022965	0.035207
S	PM10_STF	0.002278	0.003472	0.00237	0.002433	0.000839	0.00039	0.000736	0.000034	0.000904	0.001132	0.003498	0.000633	0.001119
S	PM25_IDL	0	0	0	0	0.001009	0.001273	0.000105	0.004115	0.000009	0	0	0.008162	0
S	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.026184	0.05586	0.25072	0.00504	0.3192	0.05586
S	PM25_PMI	0.002	0.002	0.002	0.002	0.002566	0.002711	0.003	0.008892	0.003	0.003	0.001	0.002709	0.003233
S	PM25_RUI	0.001473	0.002222	0.001492	0.001555	0.021249	0.017041	0.003044	0.00567	0.002051	0.13431	0.001747	0.021957	0.033626
S	PM25_STF	0.002095	0.003193	0.002179	0.002238	0.000772	0.000359	0.000677	0.000031	0.000831	0.001041	0.003298	0.000582	0.001029
S	ROG_DIUF	0.0985	0.375927	0.140241	0.222764	0.007271	0.002635	0.00271	0.000129	0.00441	0.012694	3.457024	0.007781	2.968926
S	ROG_HTS	0.118538	0.381026	0.146281	0.241719	0.114809	0.040291	0.046154	0.002374	0.022951	0.087385	1.281222	0.027363	0.096063
S	ROG_IDLE	0	0	0	0	0.015717	0.013024	0.018859	0.463459	0.030863	0	0	0.736147	0
S	ROG_RES	0.063727	0.21927	0.096821	0.160032	0.002748	0.001043	0.00104	0.000059	0.001274	0.004225	1.762183	0.00219	0.682484
S	ROG_RUN	0.01013	0.027782	0.014944	0.029441	0.150383	0.120914	0.047343	0.083052	0.049872	0.626227	2.170407	0.1085	0.118394
S	ROG_RUN	0.032254	0.180663	0.066284	0.118158	0.302268	0.075901	0.017594	0.000155	0.050837	0.012998	0.575081	0.009937	0.024418
S	ROG_STR	0.057681	0.178262	0.083053	0.204423	0.224133	0.090644	0.278633	0.032082	0.364237	0.804069	1.866543	0.25964	0.319685
S	SO2_IDLE	0	0	0	0	0.000093	0.000141	0.001684	0.05499	0.000658	0	0	0.012434	0
S	SO2_RUNI	0.002654	0.003336	0.003747	0.005174	0.006731	0.00688	0.011482	0.014402	0.012678	0.012615	0.002102	0.010622	0.012172
S	SO2_STRI	0.000572	0.000741	0.000804	0.001121	0.000323	0.000239	0.000548	0.000067	0.000807	0.001279	0.00067	0.000491	0.000676
S	TOG_DIUF	0.0985	0.375927	0.140241	0.222764	0.007271	0.002635	0.00271	0.000129	0.00441	0.012694	3.457024	0.007781	2.968926
S	TOG_HTS	0.118538	0.381026	0.146281	0.241719	0.114809	0.040291	0.046154	0.002374	0.022951	0.087385	1.281222	0.027363	0.096063
S	TOG_IDLE	0	0	0	0	0.021537	0.017132	0.026294	0.530264	0.044025	0	0	1.057939	0
S	TOG_RES	0.063727	0.21927	0.096821	0.160032	0.002748	0.001043	0.00104	0.000059	0.001274	0.004225	1.762183	0.00219	0.682484
S	TOG_RUN	0.014729	0.040486	0.021795	0.042846	0.182272	0.140648	0.05588	0.102306	0.065906	2.078367	2.665207	0.130232	0.162201
S	TOG_RUN	0.032254	0.180663	0.066284	0.118158	0.302268	0.075901	0.017594	0.000155	0.050837	0.012998	0.575081	0.009937	0.024418
S	TOG_STRI	0.063152	0.195172	0.090933	0.223814	0.245398	0.099244	0.305068	0.035126	0.398794	0.880354	2.030731	0.284273	0.350015
W	FleetMix	0.56138	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767
W	CH4_IDLE	0	0	0	0	0.004792	0.003175	0.017266	0.841922	0.011885	0	0	0.835389	0
W	CH4_RUNI	0.003378	0.009509	0.005061	0.00992	0.018335	0.008712	0.004246	0.011558	0.011785	1.382562	0.445176	0.012	0.032908

tblVehicleEF

W	CH4_STRE	0.006045	0.018843	0.008706	0.021466	0.018731	0.007501	0.055824	0.081783	0.032193	0.075817	0.193417	0.081909	0.027325
W	CO_IDLE	0	0	0	0	0.137778	0.117581	0.385797	2.53998	0.250159	0	0	6.405649	0
W	CO_RUNE	0.473834	1.160134	0.657918	1.080843	1.17015	0.679563	0.351161	0.588558	0.728897	8.244326	23.01709	0.72847	2.339724
W	CO_STRE	1.386294	3.83566	1.920697	3.894641	2.494452	1.213477	5.402825	1.563457	6.962722	15.88302	11.67629	8.337987	6.545363
W	CO2_NBIC	0	0	0	0	9.364603	14.48299	152.2445	5003.605	60.91422	0	0	1137.425	0
W	CO2_NBIC	235.8976	296.7922	333.7826	462.2432	687.2179	708.2143	1198.068	1512.404	1290.176	1955.804	169.7807	1103.641	1226.008
W	CO2_NBIC	55.65704	69.6834	78.26189	107.5666	28.26438	22.05302	46.73168	4.556531	70.64246	108.7911	46.81478	41.30429	58.27775
W	NOX_IDLE	0	0	0	0	0.094892	0.114089	0.435661	14.94751	0.116803	0	0	10.06047	0
W	NOX_RUN	0.049951	0.144899	0.084448	0.1634	2.066551	1.242333	1.214597	1.837967	0.748284	8.498525	1.278149	4.278483	1.755366
W	NOX_STR	0.07461	0.201168	0.137364	0.325052	0.988439	0.473686	12.90503	20.31746	2.044984	15.19596	0.342362	14.37237	0.935118
W	PM10_IDL	0	0	0	0	0.001054	0.001331	0.000158	0.006206	0.000013	0	0	0.012314	0
W	PM10_PMI	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.061096	0.13034	0.585014	0.01176	0.7448	0.13034
W	PM10_PM	0.008	0.008	0.008	0.008	0.010264	0.010845	0.012	0.035568	0.012	0.012	0.004	0.010834	0.012931
W	PM10_RUI	0.001599	0.002413	0.001623	0.001686	0.022252	0.017834	0.003187	0.005927	0.002174	0.140416	0.001866	0.022965	0.035207
W	PM10_STF	0.002278	0.003472	0.00237	0.002433	0.000839	0.00039	0.000736	0.000034	0.000904	0.001132	0.003498	0.000633	0.001119
W	PM25_IDL	0	0	0	0	0.001009	0.001273	0.000151	0.005937	0.000013	0	0	0.011781	0
W	PM25_PMI	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.026184	0.05586	0.25072	0.00504	0.3192	0.05586
W	PM25_PM	0.002	0.002	0.002	0.002	0.002566	0.002711	0.003	0.008892	0.003	0.003	0.001	0.002709	0.003233
W	PM25_RUI	0.001473	0.002222	0.001492	0.001555	0.021249	0.017041	0.003044	0.00567	0.002051	0.13431	0.001747	0.021957	0.033626
W	PM25_STF	0.002095	0.003193	0.002179	0.002238	0.000772	0.000359	0.000677	0.000031	0.000831	0.001041	0.003298	0.000582	0.001029
W	ROG_DIUF	0.013627	0.050013	0.020111	0.033257	0.001053	0.00039	0.000363	0.00002	0.000682	0.001808	0.351909	0.001203	0.399536
W	ROG_HTS	0.104228	0.327459	0.128131	0.216829	0.10628	0.0365	0.040117	0.002173	0.021067	0.073592	0.953673	0.025715	0.096013
W	ROG_IDLE	0	0	0	0	0.015717	0.013024	0.021719	0.530893	0.031322	0	0	0.743517	0
W	ROG_RES	0.012654	0.042726	0.019759	0.033702	0.000635	0.000243	0.000216	0.000013	0.000358	0.001015	0.213559	0.000617	0.184264
W	ROG_RUN	0.008499	0.023667	0.012554	0.024837	0.147926	0.12031	0.046938	0.082969	0.048114	0.614204	2.357682	0.107203	0.110575
W	ROG_RUN	0.039163	0.229575	0.083726	0.147212	0.338873	0.085439	0.019963	0.000174	0.056308	0.017282	0.702658	0.014839	0.026529
W	ROG_STR	0.081525	0.254125	0.117416	0.289499	0.252616	0.101154	0.314455	0.036238	0.41516	1.02248	2.640143	0.36984	0.368507
W	SO2_IDLE	0	0	0	0	0.000093	0.000141	0.001463	0.047647	0.000594	0	0	0.011061	0
W	SO2_RUN	0.002361	0.002982	0.003342	0.004628	0.00673	0.00688	0.011482	0.014402	0.012677	0.012612	0.002141	0.010622	0.012169
W	SO2_STRE	0.00058	0.000764	0.000815	0.001144	0.00033	0.000243	0.000562	0.000071	0.000828	0.001369	0.000737	0.000555	0.000697
W	TOG_DIUF	0.013627	0.050013	0.020111	0.033257	0.001053	0.00039	0.000363	0.00002	0.000682	0.001808	0.351909	0.001203	0.399536
W	TOG_HTS	0.104228	0.327459	0.128131	0.216829	0.10628	0.0365	0.040117	0.002173	0.021067	0.073592	0.953673	0.025715	0.096013
W	TOG_IDLE	0	0	0	0	0.021537	0.017132	0.030289	0.607419	0.044547	0	0	1.066328	0
W	TOG_RES	0.012654	0.042726	0.019759	0.033702	0.000635	0.000243	0.000216	0.000013	0.000358	0.001015	0.213559	0.000617	0.184264
W	TOG_RUN	0.01235	0.034483	0.018307	0.03613	0.178686	0.139766	0.055288	0.102185	0.06334	2.060824	2.888161	0.128339	0.150791
W	TOG_RUN	0.039163	0.229575	0.083726	0.147212	0.338873	0.085439	0.019963	0.000174	0.056308	0.017282	0.702658	0.014839	0.026529
W	TOG_STR	0.089258	0.278232	0.128555	0.316959	0.276582	0.110751	0.344289	0.039676	0.454548	1.119487	2.872098	0.404928	0.403469

tblRoadDust

RoadPerce	RoadSiltLo	MaterialSilt	MaterialMo	MobileAver	MeanVehic	CARB_PM_VMT
100	0.1	4.3	0.5	2.4	40	0

tblWoodstoves

Woodstove Number	Co Number	Ca Number	No Number	Pe Number	Woodstove	Woodstove	WoodMass
User Defin	0	0	0	0	82	3019.2	

tblFireplaces

FireplacesI	NumberWc	NumberGa	NumberPrc	NumberNo	FireplaceH	FireplaceD	FireplaceWoodMass
User Defin	0	0	0	0	3	82	3078.4

ROG_EF	ROG_EF_I	ROG_EF_Pesticides	Fertilizers
2.14E-05	3.54E-07	5.15E-08	



tblAreaCoating

Area_EF_F	Area_Resi	Area_EF_F	Area_Resi	Area_EF_M	Area_Nonr	Area_EF_M	Area_Nonr	Reapplicati	Area_EF_F	Area_Parking
150	0	150	0	150	0	150	0	10	150	0

tblLandscapeEquipment

NumberSn	NumberSummerDays
0	180

tblEnergyUse

EnergyUse T24E	NT24E	LightingEle	T24NG	NT24NG	
Other Aspl	0	0	0	0	0
User Defin	0	0	0	0	0
User Defin	0	0	0	0	0

tblWater

WaterLand	WaterLand	IndoorWat	OutdoorW	Electricity	Electricity	Electricity	Electricity	SepticTank	AerobicPer	Anaerobic	AnaDigest	AnaDigest	Cogen	CombDigest	Gas	Percent
Other Asph	Acre	0	0	2117	111	1272	1911	10.33	87.46	2.21	100	0				
User Defini	User Defini	0	0	2117	111	1272	1911	10.33	87.46	2.21	100	0				
User Defini	Dwelling U	0	0	2117	111	1272	1911	10.33	87.46	2.21	100	0				

tblSolidWaste

SolidWaste	SolidWaste	SolidWaste	LandfillNoC	LandfillCap	LandfillCapture	GasEnergyRecovery
Other Asph Acre		0	6	94	0	
User Defin	User Defin	0	6	94	0	
User Defin	Dwelling U	0	6	94	0	

tblLandUseChange

Vegetation Vegetation AcresBegin AcresEnd CO2peracre

BroadSpec NumberOf CO2perTree

## tblConstEquipMitigation

ConstMitigationEquipmentType	FuelType	Tier	NumberOff	TotalNumb	DPF	OxidationCatalyst
Aerial Lifts	Diesel	No Change	0	3	No Change	0
Air Compressors	Diesel	No Change	0	2	No Change	0
Cranes	Diesel	No Change	0	3	No Change	0
Excavators	Diesel	No Change	0	3	No Change	0
Forklifts	Diesel	No Change	0	2	No Change	0
Generator Sets	Diesel	No Change	0	1	No Change	0
Graders	Diesel	No Change	0	1	No Change	0
Off-Highway Trucks	Diesel	No Change	0	4	No Change	0
Other Construction Equipment	Diesel	No Change	0	2	No Change	0
Rollers	Diesel	No Change	0	2	No Change	0
Rubber Tired Dozers	Diesel	No Change	0	1	No Change	0
Scrapers	Diesel	No Change	0	1	No Change	0
Skid Steer Loaders	Diesel	No Change	0	2	No Change	0
Tractors/Loaders/Backhoes	Diesel	No Change	0	3	No Change	0



tblConstDustMitigation

SoilStabiliz	SoilStabiliz	SoilStabiliz	ReplaceGr	ReplaceGr	ReplaceGr	WaterExpc	WaterExpc	WaterExpc	WaterExpc	WaterUnpæ	WaterUnpæ	WaterUnpæ	WaterUnpæ	CleanPavedRoadPercentReductic
0			0			0				0	0			0

tblLandUseMitigation

ProjectSett IncreaseD€ IncreaseD€ IncreaseD€ IncreaseDi ImproveW€ ImproveW€ ImproveDe ImproveDe IncreaseTr IncreaseTr IntegrateB€ IntegrateB€

tblLandUseMitigation

ImprovePe ImprovePe ProvideTra ProvideTra ProvideTra ImplementI LimitParkin LimitParkin UnbundleP UnbundleP OnStreetM OnStreetM ProvideBR

tblLandUseMitigation

ProvideBR ExpandTra ExpandTra IncreaseTr IncreaseTr IncreaseTransitFrequencyHeadwaysPercentReduction

Implement	Implement	Implement	TransitSub	TransitSub	TransitSub	Implement	Implement	Workplace	Workplace	Workplace	Encourage	Encourage	Encourage	Encourage	MarketCon	MarketCon	Employee\	Employee\	Employee\	ProvideRid	ProvideRid	Implement	Implement	SchoolBusProgramPer
0			0			0		0			0				0		0		2	0		0		

tblAreaMitigation

Landscape	Landscape	Landscape	Landscape	Landscape	Landscape	UseLowVC	UseLowVC	UseLowVC	UseLowVC	UseLowVC	UseLowVC	UseLowVC	UseLowVC	HearthOnly	NoHearthC	UseLowVC	UseLowVC	UseLowVOC	PaintPark
0	0	0	0	0	0	150	0	150	0	150	0	150	0	150	0	0	0	0	150

tblEnergyMitigation

ExceedTitle ExceedTitle InstallHigh InstallHigh OnSiteRen KwhGener: KwhGener: PercentOfE PercentOfElectricityUseGenerated

tblApplianceMitigation

ApplianceT	ApplianceL	PercentImprovement
ClothWasher		30
DishWasher		15
Fan		50
Refrigerator		15



tblWaterMitigation

ApplyWate	ApplyWate	ApplyWate	UseReclair	PercentOu	PercentInd	UseGreyW	PercentOu	PercentInd	InstallLowF	PercentRe	InstallLowF	PercentRe
0			0			0			0	32	0	18

tblWaterMitigation

InstallLowF	PercentRei	InstallLowF	PercentRei	TurfReduct	TurfReduct	TurfReduct	UseWaterE	UseWaterE	WaterEffici	MAWA	ETWU
0	20	0	20	0			0	6.1	0		

tblWasteMitigation

InstituteRe InstituteRecyclingAndCompostingServicesWastePercentReduction

tblOperationalOffRoadEquipment

OperOffRo OperOffRo OperHours OperDaysF OperHorse OperLoadF OperFuelType

tblFleetMix

FleetMixLa LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	
Other Asph	0.56138	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767
User Defin	0.56138	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767
User Defin	0.56138	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767

tblStationaryGeneratorsPumpsUse

Generators NumberOf Generators HorsePower Load\_Factor HoursPerD HoursPerY GeneratorsPumpsEquipmentDescription

tblStationaryBoilersUse

BoilerEquip NumberOf BoilerFuel BoilerRatin DailyHeatlr AnnualHea BoilerEquipmentDescription

tblStationaryUserDefined

UserDefine UserDefine TOG\_lb\_d; TOG\_tpy ROG\_lb\_d; ROG\_tpy CO\_lb\_day CO\_tpy NOX\_lb\_d; NOX\_tpy SO2\_lb\_d; SO2\_tpy PM10\_lb\_c



tblStationaryUserDefined

PM10\_tpy PM2\_5\_lb\_ PM2\_5\_tpy CO2\_lb\_da CO2\_tpy CH4\_lb\_da CH4\_tpy

tblStationaryGeneratorsPumpsEF

Generators TOG\_EF TOG\_EF\_L ROG\_EF ROG\_EF\_ICO\_EF CO\_EF\_U NOX\_EF NOX\_EF\_L SO2\_EF SO2\_EF\_L PM10\_EF PM10\_EF\_L

tblStationaryGeneratorsPumpsEF

PM2\_5\_EF PM2\_5\_EF CO2\_EF CO2\_EF\_L CH4\_EF CH4\_EF\_UOM

tblStationaryBoilersEF

BoilerEquip TOG\_EF TOG\_EF\_L ROG\_EF ROG\_EF\_L CO\_EF\_U NOX\_EF NOX\_EF\_L SO2\_EF SO2\_EF\_L PM10\_EF PM10\_EF\_L

tblStationaryBoilersEF

PM2\_5\_EF PM2\_5\_EF CO2\_EF CO2\_EF\_L CH4\_EF CH4\_EF\_UOM

tblRemarks

SubModule	PhaseNam	Season	Remarks
1			
3			Substation expansion area
4			Project specific inputs
5	Phase 1 - Site Prepar		Project specific inputs.
5	Phase 5A - Substation		Project specific inputs
5	Phase 5B - Substation		Project specific inputs
5	Phase 5C - Substation		Project specific inputs
6			Project specific inputs.
9			Only substation expansion area being graded.
13		A	
13		S	
13		W	

Vierra Reinforcement Project - San Joaquin County, Annual

**Vierra Reinforcement Project**  
**San Joaquin County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	0.00	User Defined Unit	0.00	0.00	0
Other Asphalt Surfaces	0.00	Acre	0.00	0.00	0
User Defined Residential	0.00	Dwelling Unit	0.00	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.7	<b>Precipitation Freq (Days)</b>	51
<b>Climate Zone</b>	2			<b>Operational Year</b>	2023
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	641.35	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

- Project Characteristics -
- Land Use - Substation expansion area
- Construction Phase - Project specific inputs
- Off-road Equipment - Project specific inputs.
- Off-road Equipment - Project specific inputs
- Off-road Equipment - Project specific inputs
- Off-road Equipment - Project specific inputs
- Trips and VMT - Project specific inputs.

Grading - Only substation expansion area being graded.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblFleetMix	FleetMixLandUseSubType	User Defined Commercial	Other Asphalt Surfaces
tblFleetMix	FleetMixLandUseSubType	Other Asphalt Surfaces	User Defined Commercial
tblOffRoadEquipment	HorsePower	158.00	50.00
tblOffRoadEquipment	HorsePower	172.00	9.00
tblOffRoadEquipment	HorsePower	172.00	20.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	3.30
tblOffRoadEquipment	UsageHours	1.00	1.50
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2018	2023
tblTripsAndVMT	VendorTripLength	7.30	30.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	5.00	0.00
tblTripsAndVMT	WorkerTripNumber	28.00	0.00
tblTripsAndVMT	WorkerTripNumber	28.00	0.00

## 2.0 Emissions Summary



## 2.1 Overall Construction

### Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0793	0.8018	0.8832	1.6800e-003	0.0332	0.0346	0.0678	0.0144	0.0326	0.0470	0.0000	147.5087	147.5087	0.0335	0.0000	148.3459
<b>Maximum</b>	<b>0.0793</b>	<b>0.8018</b>	<b>0.8832</b>	<b>1.6800e-003</b>	<b>0.0332</b>	<b>0.0346</b>	<b>0.0678</b>	<b>0.0144</b>	<b>0.0326</b>	<b>0.0470</b>	<b>0.0000</b>	<b>147.5087</b>	<b>147.5087</b>	<b>0.0335</b>	<b>0.0000</b>	<b>148.3459</b>

### 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					
2022	0.0793	0.8018	0.8832	1.6800e-003	0.0332	0.0346	0.0678	0.0144	0.0326	0.0470	0.0000	147.5085	147.5085	0.0335	0.0000	148.3457
<b>Maximum</b>	<b>0.0793</b>	<b>0.8018</b>	<b>0.8832</b>	<b>1.6800e-003</b>	<b>0.0332</b>	<b>0.0346</b>	<b>0.0678</b>	<b>0.0144</b>	<b>0.0326</b>	<b>0.0470</b>	<b>0.0000</b>	<b>147.5085</b>	<b>147.5085</b>	<b>0.0335</b>	<b>0.0000</b>	<b>148.3457</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2022	3-31-2022	0.0012	0.0012
		<b>Highest</b>	0.0012	0.0012



Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
-------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1 - Site Preparation	Site Preparation	1/3/2022	1/4/2022	5	2	
2	Phase 5A - Substation Expansion	Grading	1/3/2022	2/25/2022	5	40	
3	Phase 2 - Traffic Control	Building Construction	1/3/2022	3/26/2022	6	72	
4	Phase 5B - Substation Expansion	Building Construction	1/3/2022	7/29/2022	5	150	
5	Phase 5D - Substation Expansion	Building Construction	1/3/2022	12/30/2022	5	260	
6	Phase 5C - Substation Expansion	Grading	5/16/2022	6/10/2022	5	20	
7	Phase 6 - Vierra Substation	Building Construction	7/1/2022	7/14/2022	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase 1 - Site Preparation	Other Construction Equipment	1	10.00	9	0.42
Phase 1 - Site Preparation	Other Construction Equipment	1	10.00	20	0.42
Phase 5A - Substation Expansion	Cranes	1	0.75	231	0.29
Phase 5A - Substation Expansion	Excavators	2	8.00	50	0.38
Phase 5A - Substation Expansion	Excavators	1	3.00	158	0.38

Phase 5A - Substation Expansion	Graders	1	1.50	187	0.41
Phase 5A - Substation Expansion	Off-Highway Trucks	2	1.80	402	0.38
Phase 5A - Substation Expansion	Plate Compactors	2	4.50	8	0.43
Phase 5A - Substation Expansion	Rubber Tired Dozers	1	1.50	247	0.40
Phase 5A - Substation Expansion	Scrapers	1	1.50	367	0.48
Phase 2 - Traffic Control	Excavators	0	7.00	158	0.38
Phase 5B - Substation Expansion	Aerial Lifts	3	3.30	63	0.31
Phase 5B - Substation Expansion	Air Compressors	2	2.00	78	0.48
Phase 5B - Substation Expansion	Forklifts	2	3.30	89	0.20
Phase 5B - Substation Expansion	Generator Sets	1	4.00	84	0.74
Phase 5B - Substation Expansion	Skid Steer Loaders	2	4.00	65	0.37
Phase 5B - Substation Expansion	Tractors/Loaders/Backhoes	2	4.00	97	0.37
Phase 5C - Substation Expansion	Excavators	0	7.00	158	0.38
Phase 5D - Substation Expansion	Excavators	0	7.00	158	0.38
Phase 6 - Vierra Substation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Phase 6 - Vierra Substation	Off-Highway Trucks	2	2.00	402	0.38
Phase 6 - Vierra Substation	Cranes	1	8.00	231	0.29
Phase 6 - Vierra Substation	Cranes	1	2.00	231	0.29

### Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Phase 1 - Site Preparation	2	0.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 5A - Substation Expansion	11	0.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 5A - Substation Expansion	11	0.00	2.00	0.00	10.80	30.00	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2 - Traffic Control	0	0.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 5B - Substation Expansion	12	0.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 5C - Substation Expansion	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 5D - Substation Expansion	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Phase 6 - Vierra Substation	5	0.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Phase 1 - Site Preparation - 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					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5000e-004	1.2700e-003	1.3900e-003	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.1289	0.1289	4.0000e-005	0.0000	0.1300
<b>Total</b>	<b>2.5000e-004</b>	<b>1.2700e-003</b>	<b>1.3900e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>0.1289</b>	<b>0.1289</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.1300</b>

#### 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	1.0000e-005	2.0000e-004	4.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0527	0.0527	0.0000	0.0000	0.0528
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.0000e-005</b>	<b>2.0000e-004</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0527</b>	<b>0.0527</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0528</b>

#### Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5000e-004	1.2700e-003	1.3900e-003	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.1289	0.1289	4.0000e-005	0.0000	0.1300
<b>Total</b>	<b>2.5000e-004</b>	<b>1.2700e-003</b>	<b>1.3900e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>0.1289</b>	<b>0.1289</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.1300</b>

**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	1.0000e-005	2.0000e-004	4.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0527	0.0527	0.0000	0.0000	0.0528
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>1.0000e-005</b>	<b>2.0000e-004</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0527</b>	<b>0.0527</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0528</b>

**3.3 Phase 5A - Substation Expansion - 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					

Fugitive Dust					0.0286	0.0000	0.0286	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0221	0.1988	0.1640	3.7000e-004		8.1400e-003	8.1400e-003		7.5100e-003	7.5100e-003	0.0000	31.8853	31.8853	0.0102	0.0000	32.1392
<b>Total</b>	<b>0.0221</b>	<b>0.1988</b>	<b>0.1640</b>	<b>3.7000e-004</b>	<b>0.0286</b>	<b>8.1400e-003</b>	<b>0.0367</b>	<b>0.0131</b>	<b>7.5100e-003</b>	<b>0.0206</b>	<b>0.0000</b>	<b>31.8853</b>	<b>31.8853</b>	<b>0.0102</b>	<b>0.0000</b>	<b>32.1392</b>

**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	5.8000e-004	0.0170	3.5600e-003	6.0000e-005	1.6100e-003	6.0000e-005	1.6700e-003	4.7000e-004	6.0000e-005	5.2000e-004	0.0000	5.6809	5.6809	2.0000e-004	0.0000	5.6859
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>5.8000e-004</b>	<b>0.0170</b>	<b>3.5600e-003</b>	<b>6.0000e-005</b>	<b>1.6100e-003</b>	<b>6.0000e-005</b>	<b>1.6700e-003</b>	<b>4.7000e-004</b>	<b>6.0000e-005</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>5.6809</b>	<b>5.6809</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>5.6859</b>

**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					0.0286	0.0000	0.0286	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0221	0.1988	0.1640	3.7000e-004		8.1400e-003	8.1400e-003		7.5100e-003	7.5100e-003	0.0000	31.8852	31.8852	0.0102	0.0000	32.1392
<b>Total</b>	<b>0.0221</b>	<b>0.1988</b>	<b>0.1640</b>	<b>3.7000e-004</b>	<b>0.0286</b>	<b>8.1400e-003</b>	<b>0.0367</b>	<b>0.0131</b>	<b>7.5100e-003</b>	<b>0.0206</b>	<b>0.0000</b>	<b>31.8852</b>	<b>31.8852</b>	<b>0.0102</b>	<b>0.0000</b>	<b>32.1392</b>

**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	5.8000e-004	0.0170	3.5600e-003	6.0000e-005	1.6100e-003	6.0000e-005	1.6700e-003	4.7000e-004	6.0000e-005	5.2000e-004	0.0000	5.6809	5.6809	2.0000e-004	0.0000	5.6859
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>5.8000e-004</b>	<b>0.0170</b>	<b>3.5600e-003</b>	<b>6.0000e-005</b>	<b>1.6100e-003</b>	<b>6.0000e-005</b>	<b>1.6700e-003</b>	<b>4.7000e-004</b>	<b>6.0000e-005</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>5.6809</b>	<b>5.6809</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>5.6859</b>

**3.4 Phase 2 - Traffic Control - 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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Unmitigated Construction Off-Site**





Vendor	4.4000e-004	0.0146	2.9300e-003	4.0000e-005	9.5000e-004	4.0000e-005	9.9000e-004	2.7000e-004	4.0000e-005	3.1000e-004	0.0000	3.7961	3.7961	2.1000e-004	0.0000	3.8014
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>4.4000e-004</b>	<b>0.0146</b>	<b>2.9300e-003</b>	<b>4.0000e-005</b>	<b>9.5000e-004</b>	<b>4.0000e-005</b>	<b>9.9000e-004</b>	<b>2.7000e-004</b>	<b>4.0000e-005</b>	<b>3.1000e-004</b>	<b>0.0000</b>	<b>3.7961</b>	<b>3.7961</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>3.8014</b>

### 3.5 Phase 5B - Substation Expansion - 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	0.0506	0.4928	0.6733	1.0300e-003		0.0242	0.0242		0.0231	0.0231	0.0000	90.0935	90.0935	0.0200	0.0000	90.5933
<b>Total</b>	<b>0.0506</b>	<b>0.4928</b>	<b>0.6733</b>	<b>1.0300e-003</b>		<b>0.0242</b>	<b>0.0242</b>		<b>0.0231</b>	<b>0.0231</b>	<b>0.0000</b>	<b>90.0935</b>	<b>90.0935</b>	<b>0.0200</b>	<b>0.0000</b>	<b>90.5933</b>

#### 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	9.2000e-004	0.0304	6.1100e-003	8.0000e-005	1.9800e-003	8.0000e-005	2.0600e-003	5.7000e-004	8.0000e-005	6.5000e-004	0.0000	7.9085	7.9085	4.5000e-004	0.0000	7.9197
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>9.2000e-004</b>	<b>0.0304</b>	<b>6.1100e-003</b>	<b>8.0000e-005</b>	<b>1.9800e-003</b>	<b>8.0000e-005</b>	<b>2.0600e-003</b>	<b>5.7000e-004</b>	<b>8.0000e-005</b>	<b>6.5000e-004</b>	<b>0.0000</b>	<b>7.9085</b>	<b>7.9085</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>7.9197</b>

**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	0.0506	0.4928	0.6733	1.0300e-003		0.0242	0.0242		0.0231	0.0231	0.0000	90.0933	90.0933	0.0200	0.0000	90.5932
<b>Total</b>	<b>0.0506</b>	<b>0.4928</b>	<b>0.6733</b>	<b>1.0300e-003</b>		<b>0.0242</b>	<b>0.0242</b>		<b>0.0231</b>	<b>0.0231</b>	<b>0.0000</b>	<b>90.0933</b>	<b>90.0933</b>	<b>0.0200</b>	<b>0.0000</b>	<b>90.5932</b>

**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	9.2000e-004	0.0304	6.1100e-003	8.0000e-005	1.9800e-003	8.0000e-005	2.0600e-003	5.7000e-004	8.0000e-005	6.5000e-004	0.0000	7.9085	7.9085	4.5000e-004	0.0000	7.9197
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>9.2000e-004</b>	<b>0.0304</b>	<b>6.1100e-003</b>	<b>8.0000e-005</b>	<b>1.9800e-003</b>	<b>8.0000e-005</b>	<b>2.0600e-003</b>	<b>5.7000e-004</b>	<b>8.0000e-005</b>	<b>6.5000e-004</b>	<b>0.0000</b>	<b>7.9085</b>	<b>7.9085</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>7.9197</b>

**3.6 Phase 5D - Substation Expansion - 2022**

**Unmitigated Construction On-Site**





**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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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
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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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### 3.8 Phase 6 - Vierra Substation - 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	4.4800e-003	0.0446	0.0314	8.0000e-005		1.9000e-003	1.9000e-003		1.7500e-003	1.7500e-003	0.0000	7.4356	7.4356	2.4000e-003	0.0000	7.4957
<b>Total</b>	<b>4.4800e-003</b>	<b>0.0446</b>	<b>0.0314</b>	<b>8.0000e-005</b>		<b>1.9000e-003</b>	<b>1.9000e-003</b>		<b>1.7500e-003</b>	<b>1.7500e-003</b>	<b>0.0000</b>	<b>7.4356</b>	<b>7.4356</b>	<b>2.4000e-003</b>	<b>0.0000</b>	<b>7.4957</b>

#### 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	6.0000e-005	2.0300e-003	4.1000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5272	0.5272	3.0000e-005	0.0000	0.5280

Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>6.0000e-005</b>	<b>2.0300e-003</b>	<b>4.1000e-004</b>	<b>1.0000e-005</b>	<b>1.3000e-004</b>	<b>1.0000e-005</b>	<b>1.4000e-004</b>	<b>4.0000e-005</b>	<b>1.0000e-005</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.5272</b>	<b>0.5272</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.5280</b>

**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	4.4800e-003	0.0446	0.0314	8.0000e-005		1.9000e-003	1.9000e-003		1.7500e-003	1.7500e-003	0.0000	7.4356	7.4356	2.4000e-003	0.0000	7.4957
<b>Total</b>	<b>4.4800e-003</b>	<b>0.0446</b>	<b>0.0314</b>	<b>8.0000e-005</b>		<b>1.9000e-003</b>	<b>1.9000e-003</b>		<b>1.7500e-003</b>	<b>1.7500e-003</b>	<b>0.0000</b>	<b>7.4356</b>	<b>7.4356</b>	<b>2.4000e-003</b>	<b>0.0000</b>	<b>7.4957</b>

**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	6.0000e-005	2.0300e-003	4.1000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5272	0.5272	3.0000e-005	0.0000	0.5280
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>6.0000e-005</b>	<b>2.0300e-003</b>	<b>4.1000e-004</b>	<b>1.0000e-005</b>	<b>1.3000e-004</b>	<b>1.0000e-005</b>	<b>1.4000e-004</b>	<b>4.0000e-005</b>	<b>1.0000e-005</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.5272</b>	<b>0.5272</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.5280</b>

**4.0 Operational Detail - Mobile**



#### 4.1 Mitigation Measures Mobile

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

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
User Defined Commercial	0.00	0.00	0.00		
User Defined Residential	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

#### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Commercial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
User Defined Residential	10.80	7.30	7.50	45.60	19.00	35.40	0	0	0

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.561380	0.034626	0.184829	0.116141	0.016642	0.004535	0.016185	0.056706	0.001192	0.001407	0.004983	0.000606	0.000767



User Defined Residential	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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

**6.2 Area by SubCategory**

**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

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

## 7.2 Water by Land Use

### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

### Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
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Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

#### Category/Year

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

### 8.2 Waste by Land Use

#### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

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

**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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## User Defined Equipment

Equipment Type	Number
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## 11.0 Vegetation

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## Appendix B – AERMOD Files

\*\* BREEZE AERMOD  
\*\* Trinity Consultants  
\*\* VERSION 8.1

CO STARTING  
CO TITLEONE Vierra  
CO MODELOPT CONC NODRYDPLT NOWETDPLT  
CO RUNORNOT RUN  
CO AVERTIME ANNUAL  
CO POLLUTID OTHER  
CO FINISHED

SO STARTING  
SO ELEVUNIT METERS  
SO LOCATION E1 POINTHOR 651818.5 4184838.1 6.18  
SO LOCATION E2 POINTHOR 651830.0 4184823.1 6.13  
SO LOCATION E3 POINTHOR 651840.2 4184838.4 6.23  
SO LOCATION E4 POINTHOR 651851.7 4184822.4 6.15  
SO LOCATION E5 POINTHOR 651862.2 4184838.1 6.32  
SO LOCATION E6 POINTHOR 651874.7 4184822.9 6.17  
SO LOCATION E7 POINTHOR 651885.4 4184838.8 6.36  
SO LOCATION E8 POINTHOR 651897.0 4184820.3 6.14  
SO LOCATION E9 POINTHOR 651905.3 4184839.5 6.35  
SO LOCATION E10 POINTHOR 651816.8 4184804.7 6.03  
SO LOCATION E11 POINTHOR 651827.3 4184790.7 5.94  
SO LOCATION E12 POINTHOR 651838.5 4184805 6.03  
SO LOCATION E13 POINTHOR 651849.5 4184791.6 5.94  
SO LOCATION E14 POINTHOR 651860.5 4184804.7 6.02  
SO LOCATION E15 POINTHOR 651872.5 4184791.6 5.94  
SO LOCATION E16 POINTHOR 651883.7 4184805.4 6.02  
SO LOCATION E17 POINTHOR 651894.8 4184790.4 5.92  
SO LOCATION E18 POINTHOR 651903.6 4184806.1 6.02  
SO LOCATION E19 POINTHOR 651816.3 4184759.5 5.8  
SO LOCATION E20 POINTHOR 651828.2 4184775.6 5.86  
SO LOCATION E21 POINTHOR 651838.0 4184759.8 5.8  
SO LOCATION E22 POINTHOR 651849.5 4184776.1 5.86  
SO LOCATION E23 POINTHOR 651860.0 4184759.5 5.81  
SO LOCATION E24 POINTHOR 651873.3 4184774.4 5.86  
SO LOCATION E25 POINTHOR 651883.2 4184760.2 5.82  
SO LOCATION E26 POINTHOR 651895.9 4184776.1 5.86  
SO LOCATION E27 POINTHOR 651903.1 4184760.9 5.82  
SO SRCPARAM E1 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E2 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E3 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E4 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E5 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E6 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E7 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E8 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E9 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E10 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E11 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E12 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E13 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E14 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E15 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E16 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E17 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E18 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E19 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E20 0.00012421 4.6 533 18 0.127  
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SO SRCPARAM E22 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E23 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E24 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E25 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E26 0.00012421 4.6 533 18 0.127  
SO SRCPARAM E27 0.00012421 4.6 533 18 0.127  
SO EMISFACT E1 HRDOW 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0  
SO EMISFACT E1 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E1 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E2 HRDOW 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0  
SO EMISFACT E2 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E2 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E3 HRDOW 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0  
SO EMISFACT E3 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E3 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E4 HRDOW 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0  
SO EMISFACT E4 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E4 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E5 HRDOW 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0  
SO EMISFACT E5 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E5 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E6 HRDOW 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0  
SO EMISFACT E6 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E6 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E7 HRDOW 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0  
SO EMISFACT E7 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E7 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E8 HRDOW 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0  
SO EMISFACT E8 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E8 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E9 HRDOW 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0  
SO EMISFACT E9 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
SO EMISFACT E9 HRDOW 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0



RE DISCCART	651335	4184440	5.96	5.96
RE DISCCART	651370	4184440	5.92	5.92
RE DISCCART	651405	4184440	5.85	5.85
RE DISCCART	651440	4184440	5.89	5.89
RE DISCCART	651475	4184440	5.88	5.88
RE DISCCART	651510	4184440	5.74	5.74
RE DISCCART	651545	4184440	5.55	5.55
RE DISCCART	651580	4184440	5.38	5.38
RE DISCCART	651615	4184440	5.28	5.28
RE DISCCART	651650	4184440	5.28	5.28
RE DISCCART	651685	4184440	5.28	5.28
RE DISCCART	651720	4184440	5.28	5.28
RE DISCCART	651755	4184440	5.28	5.28
RE DISCCART	651860	4184440	5.28	5.28
RE DISCCART	651895	4184440	5.35	5.35
RE DISCCART	651930	4184440	5.56	5.56
RE DISCCART	651965	4184440	5.71	5.71
RE DISCCART	652000	4184440	5.9	5.9
RE DISCCART	652035	4184440	6.12	6.12
RE DISCCART	652070	4184440	6.25	6.25
RE DISCCART	652105	4184440	6.48	6.48
RE DISCCART	652140	4184440	6.59	6.59
RE DISCCART	652175	4184440	6.77	6.77
RE DISCCART	652210	4184440	6.81	6.81
RE DISCCART	652245	4184440	6.81	6.81
RE DISCCART	652280	4184440	6.81	6.81
RE DISCCART	652315	4184440	6.81	6.81
RE DISCCART	652350	4184440	6.81	6.81
RE DISCCART	652385	4184440	6.81	6.81
RE DISCCART	652420	4184440	6.81	6.81
RE DISCCART	652455	4184440	6.81	6.81
RE DISCCART	652490	4184440	6.81	6.81
RE DISCCART	651300	4184475	5.48	5.48
RE DISCCART	651335	4184475	5.52	5.52
RE DISCCART	651370	4184475	5.58	5.58
RE DISCCART	651405	4184475	5.73	5.73
RE DISCCART	651440	4184475	5.8	5.8
RE DISCCART	651475	4184475	5.75	5.75
RE DISCCART	651510	4184475	5.55	5.55
RE DISCCART	651545	4184475	5.39	5.39
RE DISCCART	651580	4184475	5.28	5.28
RE DISCCART	651615	4184475	5.28	5.28
RE DISCCART	651650	4184475	5.28	5.28
RE DISCCART	651685	4184475	5.28	5.28
RE DISCCART	651720	4184475	5.28	5.28
RE DISCCART	651755	4184475	5.28	5.28
RE DISCCART	651790	4184475	5.28	5.28
RE DISCCART	651825	4184475	5.28	5.28
RE DISCCART	651860	4184475	5.28	5.28
RE DISCCART	651895	4184475	5.35	5.35
RE DISCCART	651930	4184475	5.61	5.61
RE DISCCART	651965	4184475	5.79	5.79
RE DISCCART	652000	4184475	5.97	5.97
RE DISCCART	652035	4184475	6.16	6.16
RE DISCCART	652070	4184475	6.25	6.25
RE DISCCART	652105	4184475	6.48	6.48
RE DISCCART	652140	4184475	6.6	6.6
RE DISCCART	652175	4184475	6.79	6.79
RE DISCCART	652210	4184475	6.81	6.81
RE DISCCART	652245	4184475	6.81	6.81
RE DISCCART	652280	4184475	6.81	6.81
RE DISCCART	652315	4184475	6.81	6.81
RE DISCCART	652350	4184475	6.81	6.81
RE DISCCART	652385	4184475	6.81	6.81
RE DISCCART	652420	4184475	6.81	6.81
RE DISCCART	652455	4184475	6.81	6.81
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RE DISCCART	651300	4184510	5.28	5.28
RE DISCCART	651335	4184510	5.36	5.36
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RE DISCCART	651510	4184510	5.38	5.38
RE DISCCART	651545	4184510	5.28	5.28
RE DISCCART	651580	4184510	5.28	5.28
RE DISCCART	651615	4184510	5.28	5.28
RE DISCCART	651650	4184510	5.28	5.28
RE DISCCART	651685	4184510	5.28	5.28
RE DISCCART	651720	4184510	5.28	5.28
RE DISCCART	651755	4184510	5.28	5.28
RE DISCCART	651790	4184510	5.28	5.28
RE DISCCART	651825	4184510	5.28	5.28
RE DISCCART	651860	4184510	5.28	5.28
RE DISCCART	651895	4184510	5.35	5.35
RE DISCCART	651930	4184510	5.7	5.7
RE DISCCART	651965	4184510	5.91	5.91
RE DISCCART	652000	4184510	6.09	6.09
RE DISCCART	652035	4184510	6.2	6.2
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RE DISCCART	651685	4184545	5.28	5.28
RE DISCCART	651720	4184545	5.28	5.28
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RE DISCCART	651790	4184545	5.28	5.28
RE DISCCART	651825	4184545	5.28	5.28
RE DISCCART	651860	4184545	5.28	5.28
RE DISCCART	651895	4184545	5.35	5.35
RE DISCCART	651930	4184545	5.69	5.69
RE DISCCART	651965	4184545	5.9	5.9
RE DISCCART	652000	4184545	6.08	6.08
RE DISCCART	652035	4184545	6.21	6.21
RE DISCCART	652070	4184545	6.37	6.37
RE DISCCART	652105	4184545	6.5	6.5
RE DISCCART	652140	4184545	6.61	6.61
RE DISCCART	652175	4184545	6.79	6.79
RE DISCCART	652210	4184545	6.81	6.81
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RE DISCCART	652455	4184545	6.81	6.81
RE DISCCART	652490	4184545	6.81	6.81
RE DISCCART	651300	4184580	5.28	5.28
RE DISCCART	651335	4184580	5.28	5.28
RE DISCCART	651370	4184580	5.28	5.28
RE DISCCART	651405	4184580	5.28	5.28
RE DISCCART	651440	4184580	5.28	5.28
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RE DISCCART	651510	4184580	5.28	5.28
RE DISCCART	651545	4184580	5.28	5.28
RE DISCCART	651580	4184580	5.28	5.28
RE DISCCART	651615	4184580	5.28	5.28
RE DISCCART	651650	4184580	5.28	5.28
RE DISCCART	651685	4184580	5.28	5.28
RE DISCCART	651720	4184580	5.28	5.28
RE DISCCART	651755	4184580	5.28	5.28
RE DISCCART	651790	4184580	5.28	5.28
RE DISCCART	651825	4184580	5.28	5.28
RE DISCCART	651860	4184580	5.28	5.28
RE DISCCART	651895	4184580	5.35	5.35
RE DISCCART	651930	4184580	5.69	5.69
RE DISCCART	651965	4184580	5.9	5.9
RE DISCCART	652000	4184580	6.08	6.08
RE DISCCART	652035	4184580	6.22	6.22
RE DISCCART	652070	4184580	6.44	6.44
RE DISCCART	652105	4184580	6.5	6.5
RE DISCCART	652140	4184580	6.61	6.61
RE DISCCART	652175	4184580	6.8	6.8
RE DISCCART	652210	4184580	6.81	6.81
RE DISCCART	652245	4184580	6.81	6.81
RE DISCCART	652280	4184580	6.83	6.83
RE DISCCART	652315	4184580	6.81	6.81
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RE DISCCART	651545	4184615	5.28	5.28
RE DISCCART	651580	4184615	5.28	5.28
RE DISCCART	651615	4184615	5.28	5.28
RE DISCCART	651650	4184615	5.28	5.28
RE DISCCART	651685	4184615	5.28	5.28
RE DISCCART	651720	4184615	5.28	5.28
RE DISCCART	651755	4184615	5.28	5.28
RE DISCCART	651790	4184615	5.28	5.28
RE DISCCART	651825	4184615	5.28	5.28
RE DISCCART	651860	4184615	5.28	5.28
RE DISCCART	651895	4184615	5.35	5.35

RE DISCCART	651930	4184615	5.69	5.69
RE DISCCART	651965	4184615	5.9	5.9
RE DISCCART	652000	4184615	6.08	6.08
RE DISCCART	652035	4184615	6.22	6.22
RE DISCCART	652070	4184615	6.44	6.44
RE DISCCART	652105	4184615	6.5	6.5
RE DISCCART	652140	4184615	6.61	6.61
RE DISCCART	652175	4184615	6.8	6.8
RE DISCCART	652210	4184615	6.81	6.81
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RE DISCCART	652385	4184615	6.81	6.81
RE DISCCART	652420	4184615	6.81	6.81
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RE DISCCART	651335	4184650	5.28	5.28
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RE DISCCART	651580	4184650	5.28	5.28
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RE DISCCART	651720	4184650	5.28	5.28
RE DISCCART	651755	4184650	5.28	5.28
RE DISCCART	651790	4184650	5.28	5.28
RE DISCCART	651825	4184650	5.28	5.28
RE DISCCART	651860	4184650	5.28	5.28
RE DISCCART	651895	4184650	5.35	5.35
RE DISCCART	651930	4184650	5.69	5.69
RE DISCCART	651965	4184650	5.89	5.89
RE DISCCART	652000	4184650	6.08	6.08
RE DISCCART	652035	4184650	6.3	6.3
RE DISCCART	652070	4184650	6.46	6.46
RE DISCCART	652105	4184650	6.51	6.51
RE DISCCART	652140	4184650	6.67	6.67
RE DISCCART	652175	4184650	6.8	6.8
RE DISCCART	652210	4184650	6.82	6.82
RE DISCCART	652245	4184650	7.01	7.01
RE DISCCART	652280	4184650	7.11	7.11
RE DISCCART	652315	4184650	7.09	7.09
RE DISCCART	652350	4184650	7.03	7.03
RE DISCCART	652385	4184650	6.9	6.9
RE DISCCART	652420	4184650	6.83	6.83
RE DISCCART	652455	4184650	6.85	6.85
RE DISCCART	652490	4184650	6.82	6.82
RE DISCCART	651300	4184685	4.97	4.97
RE DISCCART	651335	4184685	5.23	5.23
RE DISCCART	651370	4184685	5.28	5.28
RE DISCCART	651405	4184685	5.28	5.28
RE DISCCART	651440	4184685	5.28	5.28
RE DISCCART	651475	4184685	5.28	5.28
RE DISCCART	651510	4184685	5.28	5.28
RE DISCCART	651545	4184685	5.28	5.28
RE DISCCART	651580	4184685	5.28	5.28
RE DISCCART	651615	4184685	5.28	5.28
RE DISCCART	651650	4184685	5.3	5.3
RE DISCCART	651685	4184685	5.41	5.41
RE DISCCART	651720	4184685	5.41	5.41
RE DISCCART	651755	4184685	5.41	5.41
RE DISCCART	651790	4184685	5.42	5.42
RE DISCCART	651825	4184685	5.42	5.42
RE DISCCART	651860	4184685	5.41	5.41
RE DISCCART	651895	4184685	5.35	5.35
RE DISCCART	651930	4184685	5.7	5.7
RE DISCCART	651965	4184685	5.89	5.89
RE DISCCART	652000	4184685	6.07	6.07
RE DISCCART	652035	4184685	6.41	6.41
RE DISCCART	652070	4184685	6.51	6.51
RE DISCCART	652105	4184685	6.66	6.66
RE DISCCART	652140	4184685	6.78	6.78
RE DISCCART	652175	4184685	6.8	6.8
RE DISCCART	652210	4184685	6.83	6.83
RE DISCCART	652245	4184685	7.04	7.04
RE DISCCART	652280	4184685	7.11	7.11
RE DISCCART	652315	4184685	7.11	7.11
RE DISCCART	652350	4184685	7.11	7.11
RE DISCCART	652385	4184685	7.1	7.1
RE DISCCART	652420	4184685	6.97	6.97
RE DISCCART	652455	4184685	7.02	7.02
RE DISCCART	652490	4184685	6.85	6.85
RE DISCCART	651300	4184720	4.71	4.71
RE DISCCART	651335	4184720	4.99	4.99
RE DISCCART	651370	4184720	5.25	5.25
RE DISCCART	651405	4184720	5.28	5.28
RE DISCCART	651440	4184720	5.28	5.28
RE DISCCART	651475	4184720	5.28	5.28
RE DISCCART	651510	4184720	5.28	5.28
RE DISCCART	651545	4184720	5.28	5.28

RE DISCCART 651580 4184720 5.28 5.28  
RE DISCCART 651615 4184720 5.29 5.29  
RE DISCCART 651650 4184720 5.43 5.43  
RE DISCCART 651685 4184720 5.59 5.59  
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RE DISCCART 651755 4184720 5.58 5.58  
RE DISCCART 651790 4184720 5.58 5.58  
RE DISCCART 651825 4184720 5.58 5.58  
RE DISCCART 651860 4184720 5.56 5.56  
RE DISCCART 651895 4184720 5.47 5.47  
RE DISCCART 651930 4184720 5.66 5.66  
RE DISCCART 651965 4184720 5.98 5.98  
RE DISCCART 652000 4184720 6.13 6.13  
RE DISCCART 652035 4184720 6.41 6.41  
RE DISCCART 652070 4184720 6.67 6.67  
RE DISCCART 652105 4184720 6.79 6.79  
RE DISCCART 652140 4184720 6.81 6.81  
RE DISCCART 652175 4184720 6.81 6.81  
RE DISCCART 652210 4184720 6.81 6.81  
RE DISCCART 652245 4184720 6.9 6.9  
RE DISCCART 652280 4184720 7.08 7.08  
RE DISCCART 652315 4184720 7.11 7.11  
RE DISCCART 652350 4184720 7.11 7.11  
RE DISCCART 652385 4184720 7.19 7.19  
RE DISCCART 652420 4184720 7.28 7.28  
RE DISCCART 652455 4184720 7.13 7.13  
RE DISCCART 652490 4184720 6.84 6.84  
RE FINISHED

ME STARTING  
ME SURFFILE "C:\MODEL\STOCKTON\_2013-2017.SFC.TXT"  
\*\* SURFFILE "C:\MODEL\STOCKTON\_2013-2017.SFC.TXT"  
ME PROFFILE "C:\MODEL\STOCKTON\_2013-2017.PFL.TXT"  
\*\* PROFFILE "C:\MODEL\STOCKTON\_2013-2017.PFL.TXT"  
ME SURFDATA 23237 2013 STOCKTON  
ME UAIRDATA 23230 2013 UPPERRAIR  
ME PROFBASE 6 METERS  
ME STARTEND 2014 1 1 1 2014 12 31 24  
ME FINISHED

OU STARTING  
OU FILEFORM FIX  
OU FINISHED

\*\*\* Message Summary For AERMOD Model Setup \*\*\*

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)  
A Total of 2 Warning Message(s)  
A Total of 0 Informational Message(s)

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*  
ME W186 514 MEOPEN: THRESH\_1MIN 1-min ASOS wind speed threshold used 0.50  
ME W187 514 MEOPEN: ADJ\_U\* Option for Stable Low Winds used in AERMET

\*\*\*\*\*  
\*\*\* SETUP Finishes Successfully \*\*\*  
\*\*\*\*\*



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\*\*\* AERMET - VERSION 18081 \*\*\* \*\*\* \*\*\* 09:46:20  
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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* MODEL SETUP OPTIONS SUMMARY \*\*\*

\*\*Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --  
\*\*NO GAS DEPOSITION Data Provided.  
\*\*NO PARTICLE DEPOSITION Data Provided.  
\*\*Model Uses NO DRY DEPLETION. DRYDPLT = F  
\*\*Model Uses NO WET DEPLETION. WETDPLT = F

\*\*Model Uses RURAL Dispersion Only.

\*\*Model Allows User-Specified Options:  
1. Stack-tip Downwash.  
2. Model Accounts for ELEVated Terrain Effects.  
3. Use Calms Processing Routine.  
4. Use Missing Data Processing Routine.  
5. No Exponential Decay.  
6. Full Conversion Assumed for NO2.  
6. Option for Capped & Horiz Stacks Selected With:

0 Capped Stack(s); and 27 Horizontal Stack(s)

\*\*Other Options Specified:  
ADJ\_U\* - Use ADJ\_U\* option for SBL in AERMET  
CCVR\_Sub - Meteorological data includes CCVR substitutions  
TEMP\_Sub - Meteorological data includes TEMP substitutions

\*\*Model Assumes No FLAGPOLE Receptor Heights.

\*\*The User Specified a Pollutant Type of: OTHER

\*\*Model Calculates ANNUAL Averages Only

\*\*This Run Includes: 27 Source(s); 1 Source Group(s); and 348 Receptor(s)

with: 27 POINT(s), including  
0 POINTCAP(s) and 27 POINTHOR(s)  
and: 0 VOLUME source(s)  
and: 0 AREA type source(s)  
and: 0 LINE source(s)  
and: 0 OPENPIT source(s)  
and: 0 BUOYANT LINE source(s) with 0 line(s)

\*\*Model Set To Continue RUNning After the Setup Testing.

\*\*The AERMET Input Meteorological Data Version Date: 18081

\*\*Output Options Selected:  
Model Outputs Tables of ANNUAL Averages by Receptor

\*\*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours  
m for Missing Hours  
b for Both Calm and Missing Hours

\*\*Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 6.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0  
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07  
Output Units = MICROGRAMS/M\*\*3

\*\*Approximate Storage Requirements of Model = 3.6 MB of RAM.

\*\*Input Runstream File: aermod.inp  
\*\*Output Print File: aermod.out

\*\*\* AERMOD - VERSION 18081 \*\*\* \*\*\* Vierra  
 \*\*\* AERMET - VERSION 18081 \*\*\* \*\*\*

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 \*\*\* 09:46:20  
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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* POINT SOURCE DATA \*\*\*

RATE	NUMBER	EMISSION RATE			BASE	STACK	STACK	STACK	STACK	BLDG	URBAN	CAP/	EMIS
SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	TEMP.	EXIT VEL.	DIAMETER	EXISTS	SOURCE	HOR	SCALAR
ID	CATS.		(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)	(M/SEC)	(METERS)				VARY BY
E1	0	0.12421E-03	651818.5	4184838.1	6.2	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E2	0	0.12421E-03	651830.0	4184823.1	6.1	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E3	0	0.12421E-03	651840.2	4184838.4	6.2	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E4	0	0.12421E-03	651851.7	4184822.4	6.1	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E5	0	0.12421E-03	651862.2	4184838.1	6.3	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E6	0	0.12421E-03	651874.7	4184822.9	6.2	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E7	0	0.12421E-03	651885.4	4184838.8	6.4	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E8	0	0.12421E-03	651897.0	4184820.3	6.1	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E9	0	0.12421E-03	651905.3	4184839.5	6.3	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E10	0	0.12421E-03	651816.8	4184804.7	6.0	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E11	0	0.12421E-03	651827.3	4184790.7	5.9	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E12	0	0.12421E-03	651838.5	4184805.0	6.0	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E13	0	0.12421E-03	651849.5	4184791.6	5.9	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E14	0	0.12421E-03	651860.5	4184804.7	6.0	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E15	0	0.12421E-03	651872.5	4184791.6	5.9	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E16	0	0.12421E-03	651883.7	4184805.4	6.0	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E17	0	0.12421E-03	651894.8	4184790.4	5.9	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E18	0	0.12421E-03	651903.6	4184806.1	6.0	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E19	0	0.12421E-03	651816.3	4184759.5	5.8	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E20	0	0.12421E-03	651828.2	4184775.6	5.9	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E21	0	0.12421E-03	651838.0	4184759.8	5.8	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E22	0	0.12421E-03	651849.5	4184776.1	5.9	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E23	0	0.12421E-03	651860.0	4184759.5	5.8	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E24	0	0.12421E-03	651873.3	4184774.4	5.9	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E25	0	0.12421E-03	651883.2	4184760.2	5.8	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E26	0	0.12421E-03	651895.9	4184776.1	5.9	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW
E27	0	0.12421E-03	651903.1	4184760.9	5.8	4.60	533.00	18.00	0.13	NO	NO	HOR	HRDOW

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* SOURCE IDs DEFINING SOURCE GROUPS \*\*\*

SRCGROUP ID	SOURCE IDs								
-----	-----								
ALL	E1	, E2	, E3	, E4	, E5	, E6	, E7	, E8	,
	E9	, E10	, E11	, E12	, E13	, E14	, E15	, E16	,
	E17	, E18	, E19	, E20	, E21	, E22	, E23	, E24	,
	E25	, E26	, E27	,					

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E1		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E2		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

```
SOURCE ID = E3 ; SOURCE TYPE = POINTHOR :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR
-----
          DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .1000E+01 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
          DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
          DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

```
SOURCE ID = E4 ; SOURCE TYPE = POINTHOR :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
-----
          DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .1000E+01 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
          DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
          DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E5		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00



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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E6		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E7		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E8		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E9		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E10		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

\*\*\* AERMOD - VERSION 18081 \*\*\* \*\* Vierra  
\*\*\* AERMET - VERSION 18081 \*\*\* \*\*

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

```
SOURCE ID = E11 ; SOURCE TYPE = POINTHOR :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR
-----
          DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .1000E+01 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
          DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
          DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
```

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E12		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E13		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00



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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E14		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E15		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E16		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E17		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

\*\*\* AERMOD - VERSION 18081 \*\*\* \*\* Vierra  
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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E18		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E19		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E20		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

\*\*\* AERMOD - VERSION 18081 \*\*\* \*\* Vierra  
\*\*\* AERMET - VERSION 18081 \*\*\* \*\*

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E21		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00



\*\*\* AERMOD - VERSION 18081 \*\*\* \*\* Vierra  
\*\*\* AERMET - VERSION 18081 \*\*\* \*\*

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

```
SOURCE ID = E22 ; SOURCE TYPE = POINTHOR :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR
-----
          DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .1000E+01 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
          DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
          DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
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\*\*\* AERMOD - VERSION 18081 \*\*\* \*\*\* Vierra  
\*\*\* AERMET - VERSION 18081 \*\*\* \*\*\*

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\*\*\* 09:46:20  
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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

```
SOURCE ID = E23 ; SOURCE TYPE = POINTHOR :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR
-----
          DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .1000E+01 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
          DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
          DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
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\*\*\* AERMOD - VERSION 18081 \*\*\* \*\*\* Vierra  
 \*\*\* AERMET - VERSION 18081 \*\*\* \*\*\*

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E24		; SOURCE TYPE = POINTHOR :													
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR		
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00		
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

\*\*\* AERMOD - VERSION 18081 \*\*\* \*\* Vierra  
\*\*\* AERMET - VERSION 18081 \*\*\* \*\*

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

```
SOURCE ID = E25 ; SOURCE TYPE = POINTHOR :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR
-----
          DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .1000E+01 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
          DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
          DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
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\*\*\* AERMOD - VERSION 18081 \*\*\* \*\* Vierra  
\*\*\* AERMET - VERSION 18081 \*\*\* \*\*

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E26		; SOURCE TYPE = POINTHOR :											
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01
17	.1000E+01	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00

\*\*\* AERMOD - VERSION 18081 \*\*\* \*\* Vierra  
\*\*\* AERMET - VERSION 18081 \*\*\* \*\*

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) \*

SOURCE ID = E27 ; SOURCE TYPE = POINTHOR :  
-----  
DAY OF WEEK = WEEKDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .1000E+01  
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01  
17 .1000E+01 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00  
DAY OF WEEK = SATURDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00  
DAY OF WEEK = SUNDAY  
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00  
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00  
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00  
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\*\*\* AERMOD - VERSION 18081 \*\*\* \*\* Vierra  
\*\*\* AERMET - VERSION 18081 \*\*\* \*\*

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\*\*\* MODELOPTS: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* DISCRETE CARTESIAN RECEPTORS \*\*\*  
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)  
(METERS)

( 651300.0, 4184405.0, 6.2, 6.2, 0.0);	( 651335.0, 4184405.0, 6.2, 6.2, 0.0);
( 651370.0, 4184405.0, 6.4, 6.4, 0.0);	( 651405.0, 4184405.0, 6.3, 6.3, 0.0);
( 651440.0, 4184405.0, 6.2, 6.2, 0.0);	( 651475.0, 4184405.0, 6.1, 6.1, 0.0);
( 651510.0, 4184405.0, 5.9, 5.9, 0.0);	( 651545.0, 4184405.0, 5.7, 5.7, 0.0);
( 651580.0, 4184405.0, 5.6, 5.6, 0.0);	( 651615.0, 4184405.0, 5.3, 5.3, 0.0);
( 651650.0, 4184405.0, 5.3, 5.3, 0.0);	( 651685.0, 4184405.0, 5.3, 5.3, 0.0);
( 651720.0, 4184405.0, 5.3, 5.3, 0.0);	( 651755.0, 4184405.0, 5.3, 5.3, 0.0);
( 651790.0, 4184405.0, 5.3, 5.3, 0.0);	( 651825.0, 4184405.0, 5.3, 5.3, 0.0);
( 651860.0, 4184405.0, 5.3, 5.3, 0.0);	( 651895.0, 4184405.0, 5.4, 5.4, 0.0);
( 651930.0, 4184405.0, 5.6, 5.6, 0.0);	( 651965.0, 4184405.0, 5.7, 5.7, 0.0);
( 652000.0, 4184405.0, 5.9, 5.9, 0.0);	( 652035.0, 4184405.0, 6.1, 6.1, 0.0);
( 652070.0, 4184405.0, 6.2, 6.2, 0.0);	( 652105.0, 4184405.0, 6.4, 6.4, 0.0);
( 652140.0, 4184405.0, 6.5, 6.5, 0.0);	( 652175.0, 4184405.0, 6.7, 6.7, 0.0);
( 652210.0, 4184405.0, 6.8, 6.8, 0.0);	( 652245.0, 4184405.0, 6.8, 6.8, 0.0);
( 652280.0, 4184405.0, 6.8, 6.8, 0.0);	( 652315.0, 4184405.0, 6.8, 6.8, 0.0);
( 652350.0, 4184405.0, 6.8, 6.8, 0.0);	( 652385.0, 4184405.0, 6.8, 6.8, 0.0);
( 652420.0, 4184405.0, 6.8, 6.8, 0.0);	( 652455.0, 4184405.0, 6.8, 6.8, 0.0);
( 652490.0, 4184405.0, 6.8, 6.8, 0.0);	( 651300.0, 4184440.0, 5.8, 5.8, 0.0);
( 651335.0, 4184440.0, 6.0, 6.0, 0.0);	( 651370.0, 4184440.0, 5.9, 5.9, 0.0);
( 651405.0, 4184440.0, 5.8, 5.8, 0.0);	( 651440.0, 4184440.0, 5.9, 5.9, 0.0);
( 651475.0, 4184440.0, 5.9, 5.9, 0.0);	( 651510.0, 4184440.0, 5.7, 5.7, 0.0);
( 651545.0, 4184440.0, 5.5, 5.5, 0.0);	( 651580.0, 4184440.0, 5.4, 5.4, 0.0);
( 651615.0, 4184440.0, 5.3, 5.3, 0.0);	( 651650.0, 4184440.0, 5.3, 5.3, 0.0);
( 651685.0, 4184440.0, 5.3, 5.3, 0.0);	( 651720.0, 4184440.0, 5.3, 5.3, 0.0);
( 651755.0, 4184440.0, 5.3, 5.3, 0.0);	( 651860.0, 4184440.0, 5.3, 5.3, 0.0);
( 651895.0, 4184440.0, 5.3, 5.3, 0.0);	( 651930.0, 4184440.0, 5.6, 5.6, 0.0);
( 651965.0, 4184440.0, 5.7, 5.7, 0.0);	( 652000.0, 4184440.0, 5.9, 5.9, 0.0);
( 652035.0, 4184440.0, 6.1, 6.1, 0.0);	( 652070.0, 4184440.0, 6.2, 6.2, 0.0);
( 652105.0, 4184440.0, 6.5, 6.5, 0.0);	( 652140.0, 4184440.0, 6.6, 6.6, 0.0);
( 652175.0, 4184440.0, 6.8, 6.8, 0.0);	( 652210.0, 4184440.0, 6.8, 6.8, 0.0);
( 652245.0, 4184440.0, 6.8, 6.8, 0.0);	( 652280.0, 4184440.0, 6.8, 6.8, 0.0);
( 652315.0, 4184440.0, 6.8, 6.8, 0.0);	( 652350.0, 4184440.0, 6.8, 6.8, 0.0);
( 652385.0, 4184440.0, 6.8, 6.8, 0.0);	( 652420.0, 4184440.0, 6.8, 6.8, 0.0);
( 652455.0, 4184440.0, 6.8, 6.8, 0.0);	( 652490.0, 4184440.0, 6.8, 6.8, 0.0);
( 651300.0, 4184475.0, 5.5, 5.5, 0.0);	( 651335.0, 4184475.0, 5.5, 5.5, 0.0);
( 651370.0, 4184475.0, 5.6, 5.6, 0.0);	( 651405.0, 4184475.0, 5.7, 5.7, 0.0);
( 651440.0, 4184475.0, 5.8, 5.8, 0.0);	( 651475.0, 4184475.0, 5.8, 5.8, 0.0);
( 651510.0, 4184475.0, 5.5, 5.5, 0.0);	( 651545.0, 4184475.0, 5.4, 5.4, 0.0);
( 651580.0, 4184475.0, 5.3, 5.3, 0.0);	( 651615.0, 4184475.0, 5.3, 5.3, 0.0);
( 651650.0, 4184475.0, 5.3, 5.3, 0.0);	( 651685.0, 4184475.0, 5.3, 5.3, 0.0);
( 651720.0, 4184475.0, 5.3, 5.3, 0.0);	( 651755.0, 4184475.0, 5.3, 5.3, 0.0);
( 651790.0, 4184475.0, 5.3, 5.3, 0.0);	( 651825.0, 4184475.0, 5.3, 5.3, 0.0);
( 651860.0, 4184475.0, 5.3, 5.3, 0.0);	( 651895.0, 4184475.0, 5.3, 5.3, 0.0);
( 651930.0, 4184475.0, 5.6, 5.6, 0.0);	( 651965.0, 4184475.0, 5.8, 5.8, 0.0);
( 652000.0, 4184475.0, 6.0, 6.0, 0.0);	( 652035.0, 4184475.0, 6.2, 6.2, 0.0);

\*\*\* AERMOD - VERSION 18081 \*\*\* \*\* Vierra  
\*\*\* AERMET - VERSION 18081 \*\*\* \*\*

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* DISCRETE CARTESIAN RECEPTORS \*\*\*  
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)  
(METERS)

( 652070.0, 4184475.0, 6.2, 6.2, 0.0);	( 652105.0, 4184475.0, 6.5, 6.5, 0.0);
( 652140.0, 4184475.0, 6.6, 6.6, 0.0);	( 652175.0, 4184475.0, 6.8, 6.8, 0.0);
( 652210.0, 4184475.0, 6.8, 6.8, 0.0);	( 652245.0, 4184475.0, 6.8, 6.8, 0.0);
( 652280.0, 4184475.0, 6.8, 6.8, 0.0);	( 652315.0, 4184475.0, 6.8, 6.8, 0.0);
( 652350.0, 4184475.0, 6.8, 6.8, 0.0);	( 652385.0, 4184475.0, 6.8, 6.8, 0.0);
( 652420.0, 4184475.0, 6.8, 6.8, 0.0);	( 652455.0, 4184475.0, 6.8, 6.8, 0.0);
( 652490.0, 4184475.0, 6.8, 6.8, 0.0);	( 651300.0, 4184510.0, 5.3, 5.3, 0.0);
( 651335.0, 4184510.0, 5.4, 5.4, 0.0);	( 651370.0, 4184510.0, 5.5, 5.5, 0.0);
( 651405.0, 4184510.0, 5.4, 5.4, 0.0);	( 651440.0, 4184510.0, 5.4, 5.4, 0.0);
( 651475.0, 4184510.0, 5.5, 5.5, 0.0);	( 651510.0, 4184510.0, 5.4, 5.4, 0.0);
( 651545.0, 4184510.0, 5.3, 5.3, 0.0);	( 651580.0, 4184510.0, 5.3, 5.3, 0.0);
( 651615.0, 4184510.0, 5.3, 5.3, 0.0);	( 651650.0, 4184510.0, 5.3, 5.3, 0.0);
( 651685.0, 4184510.0, 5.3, 5.3, 0.0);	( 651720.0, 4184510.0, 5.3, 5.3, 0.0);
( 651755.0, 4184510.0, 5.3, 5.3, 0.0);	( 651790.0, 4184510.0, 5.3, 5.3, 0.0);
( 651825.0, 4184510.0, 5.3, 5.3, 0.0);	( 651860.0, 4184510.0, 5.3, 5.3, 0.0);
( 651895.0, 4184510.0, 5.3, 5.3, 0.0);	( 651930.0, 4184510.0, 5.7, 5.7, 0.0);
( 651965.0, 4184510.0, 5.9, 5.9, 0.0);	( 652000.0, 4184510.0, 6.1, 6.1, 0.0);
( 652035.0, 4184510.0, 6.2, 6.2, 0.0);	( 652070.0, 4184510.0, 6.2, 6.2, 0.0);
( 652105.0, 4184510.0, 6.5, 6.5, 0.0);	( 652140.0, 4184510.0, 6.6, 6.6, 0.0);
( 652175.0, 4184510.0, 6.8, 6.8, 0.0);	( 652210.0, 4184510.0, 6.8, 6.8, 0.0);
( 652245.0, 4184510.0, 6.8, 6.8, 0.0);	( 652280.0, 4184510.0, 6.8, 6.8, 0.0);
( 652315.0, 4184510.0, 6.8, 6.8, 0.0);	( 652350.0, 4184510.0, 6.8, 6.8, 0.0);
( 652385.0, 4184510.0, 6.8, 6.8, 0.0);	( 652420.0, 4184510.0, 6.8, 6.8, 0.0);
( 652455.0, 4184510.0, 6.8, 6.8, 0.0);	( 652490.0, 4184510.0, 6.8, 6.8, 0.0);
( 651300.0, 4184545.0, 5.3, 5.3, 0.0);	( 651335.0, 4184545.0, 5.3, 5.3, 0.0);
( 651370.0, 4184545.0, 5.3, 5.3, 0.0);	( 651405.0, 4184545.0, 5.3, 5.3, 0.0);
( 651440.0, 4184545.0, 5.3, 5.3, 0.0);	( 651475.0, 4184545.0, 5.3, 5.3, 0.0);
( 651510.0, 4184545.0, 5.3, 5.3, 0.0);	( 651545.0, 4184545.0, 5.3, 5.3, 0.0);
( 651580.0, 4184545.0, 5.3, 5.3, 0.0);	( 651615.0, 4184545.0, 5.3, 5.3, 0.0);
( 651650.0, 4184545.0, 5.3, 5.3, 0.0);	( 651685.0, 4184545.0, 5.3, 5.3, 0.0);
( 651720.0, 4184545.0, 5.3, 5.3, 0.0);	( 651755.0, 4184545.0, 5.3, 5.3, 0.0);
( 651790.0, 4184545.0, 5.3, 5.3, 0.0);	( 651825.0, 4184545.0, 5.3, 5.3, 0.0);
( 651860.0, 4184545.0, 5.3, 5.3, 0.0);	( 651895.0, 4184545.0, 5.3, 5.3, 0.0);
( 651930.0, 4184545.0, 5.7, 5.7, 0.0);	( 651965.0, 4184545.0, 5.9, 5.9, 0.0);
( 652000.0, 4184545.0, 6.1, 6.1, 0.0);	( 652035.0, 4184545.0, 6.2, 6.2, 0.0);
( 652070.0, 4184545.0, 6.4, 6.4, 0.0);	( 652105.0, 4184545.0, 6.5, 6.5, 0.0);
( 652140.0, 4184545.0, 6.6, 6.6, 0.0);	( 652175.0, 4184545.0, 6.8, 6.8, 0.0);
( 652210.0, 4184545.0, 6.8, 6.8, 0.0);	( 652245.0, 4184545.0, 6.8, 6.8, 0.0);
( 652280.0, 4184545.0, 6.8, 6.8, 0.0);	( 652315.0, 4184545.0, 6.8, 6.8, 0.0);
( 652350.0, 4184545.0, 6.8, 6.8, 0.0);	( 652385.0, 4184545.0, 6.8, 6.8, 0.0);
( 652420.0, 4184545.0, 6.8, 6.8, 0.0);	( 652455.0, 4184545.0, 6.8, 6.8, 0.0);
( 652490.0, 4184545.0, 6.8, 6.8, 0.0);	( 651300.0, 4184580.0, 5.3, 5.3, 0.0);
( 651335.0, 4184580.0, 5.3, 5.3, 0.0);	( 651370.0, 4184580.0, 5.3, 5.3, 0.0);
( 651405.0, 4184580.0, 5.3, 5.3, 0.0);	( 651440.0, 4184580.0, 5.3, 5.3, 0.0);
( 651475.0, 4184580.0, 5.3, 5.3, 0.0);	( 651510.0, 4184580.0, 5.3, 5.3, 0.0);



\*\*\* AERMOD - VERSION 18081 \*\*\* \*\* Vierra  
\*\*\* AERMET - VERSION 18081 \*\*\* \*\*

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* DISCRETE CARTESIAN RECEPTORS \*\*\*  
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)  
(METERS)

( 651545.0, 4184580.0, 5.3, 5.3, 0.0);	( 651580.0, 4184580.0, 5.3, 5.3, 0.0);
( 651615.0, 4184580.0, 5.3, 5.3, 0.0);	( 651650.0, 4184580.0, 5.3, 5.3, 0.0);
( 651685.0, 4184580.0, 5.3, 5.3, 0.0);	( 651720.0, 4184580.0, 5.3, 5.3, 0.0);
( 651755.0, 4184580.0, 5.3, 5.3, 0.0);	( 651790.0, 4184580.0, 5.3, 5.3, 0.0);
( 651825.0, 4184580.0, 5.3, 5.3, 0.0);	( 651860.0, 4184580.0, 5.3, 5.3, 0.0);
( 651895.0, 4184580.0, 5.3, 5.3, 0.0);	( 651930.0, 4184580.0, 5.7, 5.7, 0.0);
( 651965.0, 4184580.0, 5.9, 5.9, 0.0);	( 652000.0, 4184580.0, 6.1, 6.1, 0.0);
( 652035.0, 4184580.0, 6.2, 6.2, 0.0);	( 652070.0, 4184580.0, 6.4, 6.4, 0.0);
( 652105.0, 4184580.0, 6.5, 6.5, 0.0);	( 652140.0, 4184580.0, 6.6, 6.6, 0.0);
( 652175.0, 4184580.0, 6.8, 6.8, 0.0);	( 652210.0, 4184580.0, 6.8, 6.8, 0.0);
( 652245.0, 4184580.0, 6.8, 6.8, 0.0);	( 652280.0, 4184580.0, 6.8, 6.8, 0.0);
( 652315.0, 4184580.0, 6.8, 6.8, 0.0);	( 652350.0, 4184580.0, 6.8, 6.8, 0.0);
( 652385.0, 4184580.0, 6.8, 6.8, 0.0);	( 652420.0, 4184580.0, 6.8, 6.8, 0.0);
( 652455.0, 4184580.0, 6.8, 6.8, 0.0);	( 652490.0, 4184580.0, 6.8, 6.8, 0.0);
( 651300.0, 4184615.0, 5.3, 5.3, 0.0);	( 651335.0, 4184615.0, 5.3, 5.3, 0.0);
( 651370.0, 4184615.0, 5.3, 5.3, 0.0);	( 651405.0, 4184615.0, 5.3, 5.3, 0.0);
( 651440.0, 4184615.0, 5.3, 5.3, 0.0);	( 651475.0, 4184615.0, 5.3, 5.3, 0.0);
( 651510.0, 4184615.0, 5.3, 5.3, 0.0);	( 651545.0, 4184615.0, 5.3, 5.3, 0.0);
( 651580.0, 4184615.0, 5.3, 5.3, 0.0);	( 651615.0, 4184615.0, 5.3, 5.3, 0.0);
( 651650.0, 4184615.0, 5.3, 5.3, 0.0);	( 651685.0, 4184615.0, 5.3, 5.3, 0.0);
( 651720.0, 4184615.0, 5.3, 5.3, 0.0);	( 651755.0, 4184615.0, 5.3, 5.3, 0.0);
( 651790.0, 4184615.0, 5.3, 5.3, 0.0);	( 651825.0, 4184615.0, 5.3, 5.3, 0.0);
( 651860.0, 4184615.0, 5.3, 5.3, 0.0);	( 651895.0, 4184615.0, 5.3, 5.3, 0.0);
( 651930.0, 4184615.0, 5.7, 5.7, 0.0);	( 651965.0, 4184615.0, 5.9, 5.9, 0.0);
( 652000.0, 4184615.0, 6.1, 6.1, 0.0);	( 652035.0, 4184615.0, 6.2, 6.2, 0.0);
( 652070.0, 4184615.0, 6.4, 6.4, 0.0);	( 652105.0, 4184615.0, 6.5, 6.5, 0.0);
( 652140.0, 4184615.0, 6.6, 6.6, 0.0);	( 652175.0, 4184615.0, 6.8, 6.8, 0.0);
( 652210.0, 4184615.0, 6.8, 6.8, 0.0);	( 652245.0, 4184615.0, 6.9, 6.9, 0.0);
( 652280.0, 4184615.0, 7.0, 7.0, 0.0);	( 652315.0, 4184615.0, 6.9, 6.9, 0.0);
( 652350.0, 4184615.0, 6.8, 6.8, 0.0);	( 652385.0, 4184615.0, 6.8, 6.8, 0.0);
( 652420.0, 4184615.0, 6.8, 6.8, 0.0);	( 652455.0, 4184615.0, 6.8, 6.8, 0.0);
( 652490.0, 4184615.0, 6.8, 6.8, 0.0);	( 651300.0, 4184650.0, 5.3, 5.3, 0.0);
( 651335.0, 4184650.0, 5.3, 5.3, 0.0);	( 651370.0, 4184650.0, 5.3, 5.3, 0.0);
( 651405.0, 4184650.0, 5.3, 5.3, 0.0);	( 651440.0, 4184650.0, 5.3, 5.3, 0.0);
( 651475.0, 4184650.0, 5.3, 5.3, 0.0);	( 651510.0, 4184650.0, 5.3, 5.3, 0.0);
( 651545.0, 4184650.0, 5.3, 5.3, 0.0);	( 651580.0, 4184650.0, 5.3, 5.3, 0.0);
( 651615.0, 4184650.0, 5.3, 5.3, 0.0);	( 651650.0, 4184650.0, 5.3, 5.3, 0.0);
( 651685.0, 4184650.0, 5.3, 5.3, 0.0);	( 651720.0, 4184650.0, 5.3, 5.3, 0.0);
( 651755.0, 4184650.0, 5.3, 5.3, 0.0);	( 651790.0, 4184650.0, 5.3, 5.3, 0.0);
( 651825.0, 4184650.0, 5.3, 5.3, 0.0);	( 651860.0, 4184650.0, 5.3, 5.3, 0.0);
( 651895.0, 4184650.0, 5.3, 5.3, 0.0);	( 651930.0, 4184650.0, 5.7, 5.7, 0.0);
( 651965.0, 4184650.0, 5.9, 5.9, 0.0);	( 652000.0, 4184650.0, 6.1, 6.1, 0.0);
( 652035.0, 4184650.0, 6.3, 6.3, 0.0);	( 652070.0, 4184650.0, 6.5, 6.5, 0.0);
( 652105.0, 4184650.0, 6.5, 6.5, 0.0);	( 652140.0, 4184650.0, 6.7, 6.7, 0.0);
( 652175.0, 4184650.0, 6.8, 6.8, 0.0);	( 652210.0, 4184650.0, 6.8, 6.8, 0.0);

\*\*\* AERMOD - VERSION 18081 \*\*\* \*\* Vierra  
\*\*\* AERMET - VERSION 18081 \*\*\* \*\*

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\*\*\* MODELOPTS: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* DISCRETE CARTESIAN RECEPTORS \*\*\*  
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)  
(METERS)

( 652245.0, 4184650.0, 7.0, 7.0, 0.0);	( 652280.0, 4184650.0, 7.1, 7.1, 0.0);
( 652315.0, 4184650.0, 7.1, 7.1, 0.0);	( 652350.0, 4184650.0, 7.0, 7.0, 0.0);
( 652385.0, 4184650.0, 6.9, 6.9, 0.0);	( 652420.0, 4184650.0, 6.8, 6.8, 0.0);
( 652455.0, 4184650.0, 6.8, 6.8, 0.0);	( 652490.0, 4184650.0, 6.8, 6.8, 0.0);
( 651300.0, 4184685.0, 5.0, 5.0, 0.0);	( 651335.0, 4184685.0, 5.2, 5.2, 0.0);
( 651370.0, 4184685.0, 5.3, 5.3, 0.0);	( 651405.0, 4184685.0, 5.3, 5.3, 0.0);
( 651440.0, 4184685.0, 5.3, 5.3, 0.0);	( 651475.0, 4184685.0, 5.3, 5.3, 0.0);
( 651510.0, 4184685.0, 5.3, 5.3, 0.0);	( 651545.0, 4184685.0, 5.3, 5.3, 0.0);
( 651580.0, 4184685.0, 5.3, 5.3, 0.0);	( 651615.0, 4184685.0, 5.3, 5.3, 0.0);
( 651650.0, 4184685.0, 5.3, 5.3, 0.0);	( 651685.0, 4184685.0, 5.4, 5.4, 0.0);
( 651720.0, 4184685.0, 5.4, 5.4, 0.0);	( 651755.0, 4184685.0, 5.4, 5.4, 0.0);
( 651790.0, 4184685.0, 5.4, 5.4, 0.0);	( 651825.0, 4184685.0, 5.4, 5.4, 0.0);
( 651860.0, 4184685.0, 5.4, 5.4, 0.0);	( 651895.0, 4184685.0, 5.3, 5.3, 0.0);
( 651930.0, 4184685.0, 5.7, 5.7, 0.0);	( 651965.0, 4184685.0, 5.9, 5.9, 0.0);
( 652000.0, 4184685.0, 6.1, 6.1, 0.0);	( 652035.0, 4184685.0, 6.4, 6.4, 0.0);
( 652070.0, 4184685.0, 6.5, 6.5, 0.0);	( 652105.0, 4184685.0, 6.7, 6.7, 0.0);
( 652140.0, 4184685.0, 6.8, 6.8, 0.0);	( 652175.0, 4184685.0, 6.8, 6.8, 0.0);
( 652210.0, 4184685.0, 6.8, 6.8, 0.0);	( 652245.0, 4184685.0, 7.0, 7.0, 0.0);
( 652280.0, 4184685.0, 7.1, 7.1, 0.0);	( 652315.0, 4184685.0, 7.1, 7.1, 0.0);
( 652350.0, 4184685.0, 7.1, 7.1, 0.0);	( 652385.0, 4184685.0, 7.1, 7.1, 0.0);
( 652420.0, 4184685.0, 7.0, 7.0, 0.0);	( 652455.0, 4184685.0, 7.0, 7.0, 0.0);
( 652490.0, 4184685.0, 6.8, 6.8, 0.0);	( 651300.0, 4184720.0, 4.7, 4.7, 0.0);
( 651335.0, 4184720.0, 5.0, 5.0, 0.0);	( 651370.0, 4184720.0, 5.2, 5.2, 0.0);
( 651405.0, 4184720.0, 5.3, 5.3, 0.0);	( 651440.0, 4184720.0, 5.3, 5.3, 0.0);
( 651475.0, 4184720.0, 5.3, 5.3, 0.0);	( 651510.0, 4184720.0, 5.3, 5.3, 0.0);
( 651545.0, 4184720.0, 5.3, 5.3, 0.0);	( 651580.0, 4184720.0, 5.3, 5.3, 0.0);
( 651615.0, 4184720.0, 5.3, 5.3, 0.0);	( 651650.0, 4184720.0, 5.4, 5.4, 0.0);
( 651685.0, 4184720.0, 5.6, 5.6, 0.0);	( 651720.0, 4184720.0, 5.6, 5.6, 0.0);
( 651755.0, 4184720.0, 5.6, 5.6, 0.0);	( 651790.0, 4184720.0, 5.6, 5.6, 0.0);
( 651825.0, 4184720.0, 5.6, 5.6, 0.0);	( 651860.0, 4184720.0, 5.6, 5.6, 0.0);
( 651895.0, 4184720.0, 5.5, 5.5, 0.0);	( 651930.0, 4184720.0, 5.7, 5.7, 0.0);
( 651965.0, 4184720.0, 6.0, 6.0, 0.0);	( 652000.0, 4184720.0, 6.1, 6.1, 0.0);
( 652035.0, 4184720.0, 6.4, 6.4, 0.0);	( 652070.0, 4184720.0, 6.7, 6.7, 0.0);
( 652105.0, 4184720.0, 6.8, 6.8, 0.0);	( 652140.0, 4184720.0, 6.8, 6.8, 0.0);
( 652175.0, 4184720.0, 6.8, 6.8, 0.0);	( 652210.0, 4184720.0, 6.8, 6.8, 0.0);
( 652245.0, 4184720.0, 6.9, 6.9, 0.0);	( 652280.0, 4184720.0, 7.1, 7.1, 0.0);
( 652315.0, 4184720.0, 7.1, 7.1, 0.0);	( 652350.0, 4184720.0, 7.1, 7.1, 0.0);
( 652385.0, 4184720.0, 7.2, 7.2, 0.0);	( 652420.0, 4184720.0, 7.3, 7.3, 0.0);
( 652455.0, 4184720.0, 7.1, 7.1, 0.0);	( 652490.0, 4184720.0, 6.8, 6.8, 0.0);



\*\*\* AERMOD - VERSION 18081 \*\*\* \*\* Vierra  
 \*\*\* AERMET - VERSION 18081 \*\*\* \*\*

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA \*\*\*

Surface file: C:\MODEL\STOCKTON\_2013-2017.SFC.TXT Met Version: 18081  
 Profile file: C:\MODEL\STOCKTON\_2013-2017.PFL.TXT  
 Surface format: FREE  
 Profile format: FREE  
 Surface station no.: 23237 Upper air station no.: 23230  
 Name: STOCKTON Name: UPPERAIR  
 Year: 2013 Year: 2013

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA	HT
13	01	01	1	01	-22.0	0.211	-9.000	-9.000	-999.	232.	48.8	0.07	2.20	1.00	2.78	149.	10.0	273.8	2.0			
13	01	01	1	02	-14.6	0.158	-9.000	-9.000	-999.	152.	27.6	0.04	2.20	1.00	2.37	77.	10.0	273.8	2.0			
13	01	01	1	03	-18.4	0.181	-9.000	-9.000	-999.	185.	36.0	0.06	2.20	1.00	2.52	97.	10.0	273.1	2.0			
13	01	01	1	04	-6.7	0.105	-9.000	-9.000	-999.	84.	16.0	0.04	2.20	1.00	1.63	349.	10.0	272.5	2.0			
13	01	01	1	05	-20.1	0.193	-9.000	-9.000	-999.	203.	40.9	0.04	2.20	1.00	2.86	356.	10.0	274.2	2.0			
13	01	01	1	06	-3.9	0.081	-9.000	-9.000	-999.	64.	12.6	0.04	2.20	1.00	1.23	77.	10.0	273.8	2.0			
13	01	01	1	07	-18.3	0.180	-9.000	-9.000	-999.	184.	35.8	0.06	2.20	1.00	2.52	255.	10.0	273.1	2.0			
13	01	01	1	08	-26.9	0.259	-9.000	-9.000	-999.	316.	73.8	0.08	2.20	0.73	3.29	287.	10.0	274.2	2.0			
13	01	01	1	09	-1.9	0.212	-9.000	-9.000	-999.	236.	461.6	0.05	2.20	0.39	2.81	315.	10.0	275.9	2.0			
13	01	01	1	10	61.1	0.155	0.630	0.005	150.	147.	-5.5	0.04	2.20	0.27	1.60	336.	10.0	277.5	2.0			
13	01	01	1	11	110.2	0.238	1.137	0.005	488.	279.	-11.2	0.06	2.20	0.23	2.45	228.	10.0	279.9	2.0			
13	01	01	1	12	137.1	0.276	1.492	0.008	886.	347.	-14.0	0.08	2.20	0.22	2.69	286.	10.0	280.4	2.0			
13	01	01	1	13	141.1	0.271	1.531	0.007	929.	339.	-12.9	0.05	2.20	0.21	2.88	325.	10.0	282.5	2.0			
13	01	01	1	14	121.3	0.232	1.475	0.006	965.	269.	-9.4	0.04	2.20	0.22	2.57	356.	10.0	283.8	2.0			
13	01	01	1	15	78.7	0.218	1.287	0.005	988.	244.	-12.0	0.04	2.20	0.26	2.47	357.	10.0	284.2	2.0			
13	01	01	1	16	17.6	0.265	0.783	0.005	993.	327.	-96.0	0.03	2.20	0.35	3.59	2.	10.0	284.2	2.0			
13	01	01	1	17	-11.2	0.143	-9.000	-9.000	-999.	139.	24.1	0.04	2.20	0.60	2.16	346.	10.0	282.5	2.0			
13	01	01	1	18	-8.7	0.125	-9.000	-9.000	-999.	107.	20.6	0.08	2.20	1.00	1.67	273.	10.0	279.2	2.0			
13	01	01	1	19	-13.3	0.154	-9.000	-9.000	-999.	145.	26.0	0.06	2.20	1.00	2.15	238.	10.0	278.1	2.0			
13	01	01	1	20	-10.2	0.134	-9.000	-9.000	-999.	117.	21.4	0.06	2.20	1.00	1.89	230.	10.0	275.9	2.0			
13	01	01	1	21	-12.5	0.148	-9.000	-9.000	-999.	137.	24.2	0.05	2.20	1.00	2.11	300.	10.0	276.4	2.0			
13	01	01	1	22	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.05	2.20	1.00	0.00	0.	10.0	275.9	2.0			
13	01	01	1	23	-24.0	0.230	-9.000	-9.000	-999.	264.	57.9	0.04	2.20	1.00	3.36	80.	10.0	274.2	2.0			
13	01	01	1	24	-16.1	0.169	-9.000	-9.000	-999.	167.	31.3	0.06	2.20	1.00	2.36	100.	10.0	274.2	2.0			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB	TMP	sigmaA	sigmaW	sigmaV
13	01	01	01	10.0	1	149.	2.78	273.8	99.0	-99.00	-99.00	

F indicates top of profile (=1) or below (=0)

\*\*\* AERMOD - VERSION 18081 \*\*\* \*\*\* Vierra  
 \*\*\* AERMET - VERSION 18081 \*\*\* \*\*\*

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL \*\*\*  
 INCLUDING SOURCE(S): E1 , E2 , E3 , E4 , E5 ,  
 E6 , E7 , E8 , E9 , E10 , E11 , E12 , E13 ,  
 E14 , E15 , E16 , E17 , E18 , E19 , E20 , E21 ,  
 E22 , E23 , E24 , E25 , E26 , E27 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

** CONC OF OTHER			IN MICROGRAMS/M**3			**		
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
651300.00	4184405.00	0.00046	651335.00	4184405.00	0.00047			
651370.00	4184405.00	0.00048	651405.00	4184405.00	0.00051			
651440.00	4184405.00	0.00055	651475.00	4184405.00	0.00060			
651510.00	4184405.00	0.00066	651545.00	4184405.00	0.00072			
651580.00	4184405.00	0.00077	651615.00	4184405.00	0.00080			
651650.00	4184405.00	0.00082	651685.00	4184405.00	0.00083			
651720.00	4184405.00	0.00086	651755.00	4184405.00	0.00095			
651790.00	4184405.00	0.00110	651825.00	4184405.00	0.00127			
651860.00	4184405.00	0.00143	651895.00	4184405.00	0.00158			
651930.00	4184405.00	0.00180	651965.00	4184405.00	0.00211			
652000.00	4184405.00	0.00247	652035.00	4184405.00	0.00282			
652070.00	4184405.00	0.00309	652105.00	4184405.00	0.00325			
652140.00	4184405.00	0.00331	652175.00	4184405.00	0.00328			
652210.00	4184405.00	0.00318	652245.00	4184405.00	0.00303			
652280.00	4184405.00	0.00286	652315.00	4184405.00	0.00267			
652350.00	4184405.00	0.00247	652385.00	4184405.00	0.00229			
652420.00	4184405.00	0.00211	652455.00	4184405.00	0.00195			
652490.00	4184405.00	0.00180	651300.00	4184440.00	0.00050			
651335.00	4184440.00	0.00051	651370.00	4184440.00	0.00053			
651405.00	4184440.00	0.00055	651440.00	4184440.00	0.00059			
651475.00	4184440.00	0.00064	651510.00	4184440.00	0.00070			
651545.00	4184440.00	0.00076	651580.00	4184440.00	0.00083			
651615.00	4184440.00	0.00088	651650.00	4184440.00	0.00092			
651685.00	4184440.00	0.00094	651720.00	4184440.00	0.00098			
651755.00	4184440.00	0.00107	651860.00	4184440.00	0.00168			
651895.00	4184440.00	0.00191	651930.00	4184440.00	0.00224			
651965.00	4184440.00	0.00267	652000.00	4184440.00	0.00314			
652035.00	4184440.00	0.00355	652070.00	4184440.00	0.00383			
652105.00	4184440.00	0.00395	652140.00	4184440.00	0.00394			
652175.00	4184440.00	0.00383	652210.00	4184440.00	0.00364			
652245.00	4184440.00	0.00341	652280.00	4184440.00	0.00316			
652315.00	4184440.00	0.00291	652350.00	4184440.00	0.00266			
652385.00	4184440.00	0.00244	652420.00	4184440.00	0.00223			
652455.00	4184440.00	0.00204	652490.00	4184440.00	0.00187			
651300.00	4184475.00	0.00053	651335.00	4184475.00	0.00055			
651370.00	4184475.00	0.00057	651405.00	4184475.00	0.00060			
651440.00	4184475.00	0.00063	651475.00	4184475.00	0.00068			
651510.00	4184475.00	0.00074	651545.00	4184475.00	0.00081			
651580.00	4184475.00	0.00089	651615.00	4184475.00	0.00097			
651650.00	4184475.00	0.00103	651685.00	4184475.00	0.00108			

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\*\*\* MODELOPTS: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL \*\*\*  
 INCLUDING SOURCE(S): E1 , E2 , E3 , E4 , E5 ,  
 E6 , E7 , E8 , E9 , E10 , E11 , E12 , E13 ,  
 E14 , E15 , E16 , E17 , E18 , E19 , E20 , E21 ,  
 E22 , E23 , E24 , E25 , E26 , E27 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

** CONC OF OTHER			IN MICROGRAMS/M**3			**		
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
651720.00	4184475.00	0.00112	651755.00	4184475.00	0.00123			
651790.00	4184475.00	0.00143	651825.00	4184475.00	0.00171			
651860.00	4184475.00	0.00201	651895.00	4184475.00	0.00237			
651930.00	4184475.00	0.00286	651965.00	4184475.00	0.00346			
652000.00	4184475.00	0.00407	652035.00	4184475.00	0.00453			
652070.00	4184475.00	0.00479	652105.00	4184475.00	0.00483			
652140.00	4184475.00	0.00471	652175.00	4184475.00	0.00446			
652210.00	4184475.00	0.00415	652245.00	4184475.00	0.00381			
652280.00	4184475.00	0.00347	652315.00	4184475.00	0.00314			
652350.00	4184475.00	0.00284	652385.00	4184475.00	0.00257			
652420.00	4184475.00	0.00233	652455.00	4184475.00	0.00211			
652490.00	4184475.00	0.00192	651300.00	4184510.00	0.00055			
651335.00	4184510.00	0.00058	651370.00	4184510.00	0.00061			
651405.00	4184510.00	0.00065	651440.00	4184510.00	0.00068			
651475.00	4184510.00	0.00073	651510.00	4184510.00	0.00079			
651545.00	4184510.00	0.00088	651580.00	4184510.00	0.00097			
651615.00	4184510.00	0.00108	651650.00	4184510.00	0.00117			
651685.00	4184510.00	0.00125	651720.00	4184510.00	0.00131			
651755.00	4184510.00	0.00143	651790.00	4184510.00	0.00168			
651825.00	4184510.00	0.00204	651860.00	4184510.00	0.00248			
651895.00	4184510.00	0.00303	651930.00	4184510.00	0.00377			
651965.00	4184510.00	0.00463	652000.00	4184510.00	0.00539			
652035.00	4184510.00	0.00588	652070.00	4184510.00	0.00604			
652105.00	4184510.00	0.00592	652140.00	4184510.00	0.00559			
652175.00	4184510.00	0.00516	652210.00	4184510.00	0.00468			
652245.00	4184510.00	0.00420	652280.00	4184510.00	0.00376			
652315.00	4184510.00	0.00335	652350.00	4184510.00	0.00299			
652385.00	4184510.00	0.00268	652420.00	4184510.00	0.00240			
652455.00	4184510.00	0.00216	652490.00	4184510.00	0.00194			
651300.00	4184545.00	0.00057	651335.00	4184545.00	0.00060			
651370.00	4184545.00	0.00064	651405.00	4184545.00	0.00068			
651440.00	4184545.00	0.00073	651475.00	4184545.00	0.00079			
651510.00	4184545.00	0.00086	651545.00	4184545.00	0.00095			
651580.00	4184545.00	0.00106	651615.00	4184545.00	0.00120			
651650.00	4184545.00	0.00133	651685.00	4184545.00	0.00146			
651720.00	4184545.00	0.00156	651755.00	4184545.00	0.00172			
651790.00	4184545.00	0.00202	651825.00	4184545.00	0.00250			
651860.00	4184545.00	0.00315	651895.00	4184545.00	0.00404			
651930.00	4184545.00	0.00518	651965.00	4184545.00	0.00639			
652000.00	4184545.00	0.00730	652035.00	4184545.00	0.00772			

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL \*\*\*  
 INCLUDING SOURCE(S): E1 , E2 , E3 , E4 , E5 ,  
 E6 , E7 , E8 , E9 , E10 , E11 , E12 , E13 ,  
 E14 , E15 , E16 , E17 , E18 , E19 , E20 , E21 ,  
 E22 , E23 , E24 , E25 , E26 , E27 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

** CONC OF OTHER			IN MICROGRAMS/M**3		
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
652070.00	4184545.00	0.00764	652105.00	4184545.00	0.00721
652140.00	4184545.00	0.00658	652175.00	4184545.00	0.00588
652210.00	4184545.00	0.00519	652245.00	4184545.00	0.00456
652280.00	4184545.00	0.00400	652315.00	4184545.00	0.00351
652350.00	4184545.00	0.00309	652385.00	4184545.00	0.00273
652420.00	4184545.00	0.00243	652455.00	4184545.00	0.00216
652490.00	4184545.00	0.00194	651300.00	4184580.00	0.00058
651335.00	4184580.00	0.00062	651370.00	4184580.00	0.00066
651405.00	4184580.00	0.00071	651440.00	4184580.00	0.00077
651475.00	4184580.00	0.00084	651510.00	4184580.00	0.00092
651545.00	4184580.00	0.00103	651580.00	4184580.00	0.00116
651615.00	4184580.00	0.00133	651650.00	4184580.00	0.00153
651685.00	4184580.00	0.00172	651720.00	4184580.00	0.00190
651755.00	4184580.00	0.00211	651790.00	4184580.00	0.00250
651825.00	4184580.00	0.00317	651860.00	4184580.00	0.00419
651895.00	4184580.00	0.00565	651930.00	4184580.00	0.00747
651965.00	4184580.00	0.00914	652000.00	4184580.00	0.01011
652035.00	4184580.00	0.01020	652070.00	4184580.00	0.00962
652105.00	4184580.00	0.00866	652140.00	4184580.00	0.00759
652175.00	4184580.00	0.00656	652210.00	4184580.00	0.00563
652245.00	4184580.00	0.00483	652280.00	4184580.00	0.00416
652315.00	4184580.00	0.00360	652350.00	4184580.00	0.00313
652385.00	4184580.00	0.00273	652420.00	4184580.00	0.00240
652455.00	4184580.00	0.00213	652490.00	4184580.00	0.00189
651300.00	4184615.00	0.00062	651335.00	4184615.00	0.00065
651370.00	4184615.00	0.00069	651405.00	4184615.00	0.00074
651440.00	4184615.00	0.00080	651475.00	4184615.00	0.00088
651510.00	4184615.00	0.00098	651545.00	4184615.00	0.00110
651580.00	4184615.00	0.00126	651615.00	4184615.00	0.00147
651650.00	4184615.00	0.00174	651685.00	4184615.00	0.00204
651720.00	4184615.00	0.00235	651755.00	4184615.00	0.00268
651790.00	4184615.00	0.00322	651825.00	4184615.00	0.00420
651860.00	4184615.00	0.00590	651895.00	4184615.00	0.00846
651930.00	4184615.00	0.01139	651965.00	4184615.00	0.01357
652000.00	4184615.00	0.01420	652035.00	4184615.00	0.01343
652070.00	4184615.00	0.01188	652105.00	4184615.00	0.01014
652140.00	4184615.00	0.00849	652175.00	4184615.00	0.00708
652210.00	4184615.00	0.00591	652245.00	4184615.00	0.00496
652280.00	4184615.00	0.00419	652315.00	4184615.00	0.00357
652350.00	4184615.00	0.00308	652385.00	4184615.00	0.00267

\*\*\* AERMOD - VERSION 18081 \*\*\* \*\*\* Vierra  
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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL \*\*\*  
 INCLUDING SOURCE(S): E1 , E2 , E3 , E4 , E5 ,  
 E6 , E7 , E8 , E9 , E10 , E11 , E12 , E13 ,  
 E14 , E15 , E16 , E17 , E18 , E19 , E20 , E21 ,  
 E22 , E23 , E24 , E25 , E26 , E27 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

** CONC OF OTHER			IN MICROGRAMS/M**3		
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
652420.00	4184615.00	0.00233	652455.00	4184615.00	0.00205
652490.00	4184615.00	0.00182	651300.00	4184650.00	0.00067
651335.00	4184650.00	0.00070	651370.00	4184650.00	0.00074
651405.00	4184650.00	0.00079	651440.00	4184650.00	0.00085
651475.00	4184650.00	0.00093	651510.00	4184650.00	0.00103
651545.00	4184650.00	0.00116	651580.00	4184650.00	0.00135
651615.00	4184650.00	0.00160	651650.00	4184650.00	0.00195
651685.00	4184650.00	0.00240	651720.00	4184650.00	0.00292
651755.00	4184650.00	0.00350	651790.00	4184650.00	0.00433
651825.00	4184650.00	0.00589	651860.00	4184650.00	0.00903
651895.00	4184650.00	0.01379	651930.00	4184650.00	0.01851
651965.00	4184650.00	0.02079	652000.00	4184650.00	0.01989
652035.00	4184650.00	0.01719	652070.00	4184650.00	0.01409
652105.00	4184650.00	0.01132	652140.00	4184650.00	0.00906
652175.00	4184650.00	0.00730	652210.00	4184650.00	0.00594
652245.00	4184650.00	0.00489	652280.00	4184650.00	0.00408
652315.00	4184650.00	0.00344	652350.00	4184650.00	0.00294
652385.00	4184650.00	0.00254	652420.00	4184650.00	0.00222
652455.00	4184650.00	0.00195	652490.00	4184650.00	0.00173
651300.00	4184685.00	0.00071	651335.00	4184685.00	0.00076
651370.00	4184685.00	0.00081	651405.00	4184685.00	0.00086
651440.00	4184685.00	0.00093	651475.00	4184685.00	0.00101
651510.00	4184685.00	0.00111	651545.00	4184685.00	0.00125
651580.00	4184685.00	0.00144	651615.00	4184685.00	0.00173
651650.00	4184685.00	0.00215	651685.00	4184685.00	0.00277
651720.00	4184685.00	0.00361	651755.00	4184685.00	0.00466
651790.00	4184685.00	0.00612	651825.00	4184685.00	0.00894
651860.00	4184685.00	0.01566	651895.00	4184685.00	0.02482
651930.00	4184685.00	0.03191	651965.00	4184685.00	0.03195
652000.00	4184685.00	0.02668	652035.00	4184685.00	0.02060
652070.00	4184685.00	0.01556	652105.00	4184685.00	0.01180
652140.00	4184685.00	0.00909	652175.00	4184685.00	0.00713
652210.00	4184685.00	0.00570	652245.00	4184685.00	0.00463
652280.00	4184685.00	0.00384	652315.00	4184685.00	0.00322
652350.00	4184685.00	0.00275	652385.00	4184685.00	0.00237
652420.00	4184685.00	0.00207	652455.00	4184685.00	0.00182
652490.00	4184685.00	0.00161	651300.00	4184720.00	0.00073
651335.00	4184720.00	0.00079	651370.00	4184720.00	0.00085
651405.00	4184720.00	0.00092	651440.00	4184720.00	0.00100
651475.00	4184720.00	0.00110	651510.00	4184720.00	0.00121



\*\*\* AERMOD - VERSION 18081 \*\*\* \*\*\* Vierra  
 \*\*\* AERMET - VERSION 18081 \*\*\* \*\*\*

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL \*\*\*  
 INCLUDING SOURCE(S): E1 , E2 , E3 , E4 , E5 ,  
 E6 , E7 , E8 , E9 , E10 , E11 , E12 , E13 ,  
 E14 , E15 , E16 , E17 , E18 , E19 , E20 , E21 ,  
 E22 , E23 , E24 , E25 , E26 , E27 ,

\*\*\* DISCRETE CARTESIAN RECEPTOR POINTS \*\*\*

** CONC OF OTHER			IN MICROGRAMS/M**3			**		
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
651545.00	4184720.00	0.00137	651580.00	4184720.00	0.00158			
651615.00	4184720.00	0.00189	651650.00	4184720.00	0.00237			
651685.00	4184720.00	0.00314	651720.00	4184720.00	0.00434			
651755.00	4184720.00	0.00617	651790.00	4184720.00	0.00881			
651825.00	4184720.00	0.01415	651860.00	4184720.00	0.03053			
651895.00	4184720.00	0.04690	651930.00	4184720.00	0.05508			
651965.00	4184720.00	0.04533	652000.00	4184720.00	0.03185			
652035.00	4184720.00	0.02203	652070.00	4184720.00	0.01552			
652105.00	4184720.00	0.01129	652140.00	4184720.00	0.00848			
652175.00	4184720.00	0.00657	652210.00	4184720.00	0.00521			
652245.00	4184720.00	0.00423	652280.00	4184720.00	0.00349			
652315.00	4184720.00	0.00294	652350.00	4184720.00	0.00251			
652385.00	4184720.00	0.00217	652420.00	4184720.00	0.00189			
652455.00	4184720.00	0.00167	652490.00	4184720.00	0.00149			

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\*\*\* MODELOPTS: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*3 \*\*

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.05508 AT ( 651930.00, 4184720.00,	5.66, 5.66, 0.00)	DC
	2ND HIGHEST VALUE IS	0.04690 AT ( 651895.00, 4184720.00,	5.47, 5.47, 0.00)	DC
	3RD HIGHEST VALUE IS	0.04533 AT ( 651965.00, 4184720.00,	5.98, 5.98, 0.00)	DC
	4TH HIGHEST VALUE IS	0.03195 AT ( 651965.00, 4184685.00,	5.89, 5.89, 0.00)	DC
	5TH HIGHEST VALUE IS	0.03191 AT ( 651930.00, 4184685.00,	5.70, 5.70, 0.00)	DC
	6TH HIGHEST VALUE IS	0.03185 AT ( 652000.00, 4184720.00,	6.13, 6.13, 0.00)	DC
	7TH HIGHEST VALUE IS	0.03053 AT ( 651860.00, 4184720.00,	5.56, 5.56, 0.00)	DC
	8TH HIGHEST VALUE IS	0.02668 AT ( 652000.00, 4184685.00,	6.07, 6.07, 0.00)	DC
	9TH HIGHEST VALUE IS	0.02482 AT ( 651895.00, 4184685.00,	5.35, 5.35, 0.00)	DC
	10TH HIGHEST VALUE IS	0.02203 AT ( 652035.00, 4184720.00,	6.41, 6.41, 0.00)	DC

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
GP = GRIDPOLR  
DC = DISCCART  
DP = DISCPOLR

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\*\*\* MODELOPTs: CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ\_U\*

\*\*\* Message Summary : AERMOD Model Execution \*\*\*

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)  
A Total of 2 Warning Message(s)  
A Total of 372 Informational Message(s)  
  
A Total of 8760 Hours Were Processed  
  
A Total of 109 Calm Hours Identified  
  
A Total of 50 Missing Hours Identified ( 0.57 Percent)

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*  
\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*  
ME W186 514 MEOpen: THRESH 1MIN 1-min ASOS wind speed threshold used 0.50  
ME W187 514 MEOpen: ADJ\_U\* Option for Stable Low Winds used in AERMET

\*\*\*\*\*  
\*\*\* AERMOD Finishes Successfully \*\*\*  
\*\*\*\*\*

## Appendix C – Risk Calculations

**Appendix C: Table C1  
 Constants for Cancer Risks  
 PG&E: Vierra Substation Reinforcement Project**

Constant	Symbol	Units	Value
<b>Dose Constants<sup>a</sup></b>			
Daily Breathing Rate Normalized to Body Weight			
Residential			
0 years (3rd Trimester)	BR/BW	L/kg BW-day	361
1 to 2 years	BR/BW	L/kg BW-day	1,090
3 to 8 years	BR/BW	L/kg BW-day	861
9 to 15 years	BR/BW	L/kg BW-day	745
16 to 30 years	BR/BW	L/kg BW-day	335
Worker (16 to 40 years)	BR/BW	L/kg BW-day	230
Absorption Factor	A	unitless	1
Exposure Frequency			
Residential	EF	unitless	0.96
Worker	EF	unitless	0.68
Conversion Factor	CF	L/m <sup>3</sup>	0.000001
Worker Air Concentration Adjustment Factor	WAF	unitless	1
<b>Risk Constants<sup>a</sup></b>			
Age Sensitivity Factor			
Residential			
0 years (3rd Trimester)	ASF	unitless	10
1 to 2 years	ASF	unitless	10
3 to 15 years	ASF	unitless	3
16 to 30 years	ASF	unitless	1
Worker (16 to 40 years)	ASF	unitless	1
Exposure Duration			
Residential			
0 years (3rd Trimester)	ED	years	0.25
1 to 30 years	ED	years	1
Worker (16 to 40 years)	ED	years	1
Fraction of Time Spent at Home			
Residential			
0 years (3rd Trimester)	FAH	unitless	0.85
1 to 2 years	FAH	unitless	0.85
3 to 15 years	FAH	unitless	0.72
16 to 30 years	FAH	unitless	0.73
Averaging Time	AT	years	70
Diesel Particulate Matter Cancer Potency Factor - Inhalation			
	CPF	(mg/kg-day) <sup>-1</sup>	1.1
<b>Highest Predicted Annual Concentration in Air<sup>b</sup></b>			
Diesel Particulate Matter Concentration in Air	Cair	µg/m <sup>3</sup>	0.0551

**Abbreviations:**

L/kg BW-day = liter per kilogram of body weight per day

L/m<sup>3</sup> = liters per cubic meter

mg/kg-day = milligrams per kilogram per day

µg/m<sup>3</sup> = micrograms per cubic meter

**Footnotes:**

<sup>a</sup> Values from Office of Environmental Health Hazard Assessment (OEHHA) Air Toxics Hot Spots Program Risk Assessment Guidelines, *Guidance Manual for Preparation of Health Risk Assessments* published February 2015.

<sup>b</sup> Modeled values from Appendix B. The location of highest predicted annual concentration of diesel particulate matter is not only the point of maximum impact (PMI), but also the maximally exposed individual resident (MEIR), maximum exposed sensitive receptor, and maximally exposed individual worker (MEIW).

**Appendix C: Table C2  
Cancer Risks Due to Diesel Particulate Matter  
PG&E: Vierra Substation Reinforcement Project**

Year <sup>a</sup>	Diesel Particulate Matter Dose in Air <sup>b</sup>	Cancer Risk <sup>c</sup>	
		Unitless	per Million
<b>Residential</b>			
0 (3rd Trimester)	1.9E-05	6.4E-07	0.6
1	5.8E-05	7.7E-06	7.7
2	5.8E-05	7.7E-06	7.7
3	4.6E-05	1.5E-06	1.5
4	4.6E-05	1.5E-06	1.5
5	4.6E-05	1.5E-06	1.5
6	4.6E-05	1.5E-06	1.5
7	4.6E-05	1.5E-06	1.5
8	4.6E-05	1.5E-06	1.5
9	3.9E-05	1.3E-06	1.3
10	3.9E-05	1.3E-06	1.3
11	3.9E-05	1.3E-06	1.3
12	3.9E-05	1.3E-06	1.3
13	3.9E-05	1.3E-06	1.3
14	3.9E-05	1.3E-06	1.3
15	3.9E-05	1.3E-06	1.3
16	1.8E-05	2.0E-07	0.20
17	1.8E-05	2.0E-07	0.20
18	1.8E-05	2.0E-07	0.20
19	1.8E-05	2.0E-07	0.20
20	1.8E-05	2.0E-07	0.20
21	1.8E-05	2.0E-07	0.20
22	1.8E-05	2.0E-07	0.20
23	1.8E-05	2.0E-07	0.20
24	1.8E-05	2.0E-07	0.20
25	1.8E-05	2.0E-07	0.20
26	1.8E-05	2.0E-07	0.20
27	1.8E-05	2.0E-07	0.20
28	1.8E-05	2.0E-07	0.20
29	1.8E-05	2.0E-07	0.20
30	1.8E-05	2.0E-07	0.20
<b>Worker</b>			
1	8.6E-06	1.4E-07	0.14
2	8.6E-06	1.4E-07	0.14

**Bolded** values indicate exceedance of the target cancer risk of  $1 \times 10^{-5}$  or 10 in 1-million.

**Abbreviations:**

-- = not calculated

**Footnotes:**

<sup>a</sup> The year associated with a resident indicates the age of the resident, whereas, the year for the worker indicates individual years working construction at the project site.

<sup>b</sup> The dose was calculated using the following equations:

$$\text{Residential Dose-Air} = C_{\text{air}} \times BR/BW \times A \times EF \times CF$$

$$\text{Worker Dose-Air} = (C_{\text{air}} \times WAF) \times BR/BW \times A \times EF \times CF$$

Values for the dose constants are provided in Table C1.

<sup>c</sup> The cancer risk was calculated using the following equations:

$$\text{Residential Cancer Risk} = (\text{Dose-Air} \times CPF \times ASF \times ED \times FAH) / AT$$

$$\text{Worker Cancer Risk} = (\text{Dose-Air} \times CPF \times ASF \times ED) / AT$$

Values for the cancer risk constants are provided in Table C1.

**Appendix C: Table C3**  
**Chronic Impacts Due to Diesel Particulate Matter**  
**PG&E: Vierra Substation Reinforcement Project**

Receptor Type	Pollutant	Maximum Annual Modeled Concentration <sup>a</sup>	Reference Exposure Levels (RELs) <sup>b</sup>	Chronic Hazard Index
		$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	unitless
Point of Maximum Impact (PMI) <sup>c</sup>	Diesel Particulate Matter	0.0551	5	0.01102

**Abbreviations:**

$\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

**Footnotes:**

<sup>a</sup> From Table C1.

<sup>b</sup> From Office of Environmental Health Hazard Assessment (OEHHA) Toxicity Criteria Database. Accessed November 5, 2018. <https://oehha.ca.gov/chemicals/diesel-exhaust-particulate>

<sup>c</sup> The PMI receptor type is also the maximally exposed individual resident (MEIR), maximum exposed sensitive receptor, and maximally exposed individual worker (MEIW).