

## Rule 1200 Health Risk Assessment

Facility Name: Elkhorn Services, LLC  
Facility ID: APCD2025-SITE-04957  
Application: APCD2025-APP-008964 - 008969  
Project Engineer: Hawzhin S Muhamed  
Modeler: Bill Reeve  
Toxics Risk Analyst: Ben Wong  
Date Submitted to Toxics: 2/25/2025  
Date Completed by Toxics: 2/25/2026  
HRA Tools Used: Lakes-AERMOD (Version 24142)/HARP (v 22118)

The following estimated risks are valid only for the input data provided by the Project Engineer.

Estimated residential risk does not exceed the worker risk. Therefore, only worker risk is presented in the following results.

### Estimated Risk Levels:

Maximum Individual Cancer Risk (Worker)	1.47 in one million
Chronic Noncancer Health Hazard Index (Worker)	= 1.13E-03
8-Hour Noncancer Health Hazard Index (Worker)	= No Health Data
Acute Health Hazard Index (*PMI)	= 6.46E-01

\*Point of Maximum Impact

**The proposed application is for 6 stationary diesel emergency engines. The CARB Air Toxics Control Measure (ATCM) limits non-emergency operations to 50 hours per year.**

**The estimated cancer risk for the application meets the Rule 1200 limit of 10 in one million (equipped with T-BACT) at 50 hours per year for each of the 6 engines; therefore, the project is within Rule 1200 thresholds.**

Rule 1200 Health Risk Assessment Report

Elkhorn Services, LLC, APCD2025-SITE-04957  
 Application Number APCD2025-APP-008964 - 008969

page 2 of 3  
 2/25/2026

**Input Data Provided by Project Engineer:**

Type of Source: 6 Identical Emergency Diesel IC Engine.  
 Controls Description: DPF

**Worst-Case TAC Emissions Increase per Engine:**

Toxic Air Contaminant	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lb/yr)
DIESEL PARTICULATE*	N/A	1.97E+00
ACETALDEHYDE	5.65E-02	2.83E+00
ACROLEIN**	2.45E-03	1.22E-01
ARSENIC COMPOUNDS	1.16E-04	5.78E-03
BENZENE	1.35E-02	6.73E-01
BUTADIENE, 1,3-	1.57E-02	7.83E-01
CADMIUM AND COMPOUNDS	1.08E-04	5.42E-03
CHLOROBENZENE	1.44E-05	7.22E-04
CHROMIUM (HEXAVALENT)	7.22E-06	3.61E-04
COPPER AND COMPOUNDS	2.96E-04	1.48E-02
ETHYL BENZENE	7.87E-04	3.93E-02
FORMALDEHYDE	1.25E-01	6.23E+00
HEXANE-N	1.94E-03	9.71E-02
HYDROCHLORIC ACID	1.35E-02	6.73E-01
LEAD & COMPOUNDS	5.99E-04	3.00E-02
MANGANESE AND COMPOUNDS	2.24E-04	1.12E-02
MERCURY AND COMPOUNDS	1.44E-04	7.22E-03
NAPHTHALENE	1.42E-03	7.11E-02
NICKEL AND NICKEL COMPOUNDS	2.82E-04	1.41E-02
POLYCYCLIC AROM. HC (PAH) [Treat as B(a)P for HRA]	2.61E-03	1.31E-01
PROPYLENE	3.37E-02	1.69E+00
SELENIUM AND COMPOUNDS	1.59E-04	7.94E-03
TOLUENE	7.61E-03	3.80E-01
AMMONIA (only if SCR)	N/A	N/A
XYLENES	3.06E-03	1.53E-01

Source: Acute TACs – Ventura County, 5/17/01.

\*Diesel particulate exhaust is a surrogate for all toxic air contaminant annual emissions from diesel-fueled engines when determining the potential cancer risk and noncancer chronic hazard index. Speciated toxic air contaminant hourly emissions are used when determining the potential noncancer acute hazard index.

\*\*acrolein emissions are excluded from risk calculations

**Process Data for Each Engine:**

Operation Parameter	Value
Diesel particulate emission factor (g/hp-hr)	0.012
Engine horsepower (bhp)	1490
Fuel Consumption (gal/hr)	72.20
Annual hours of operation	50

**Release Parameters for Each Engine:**

Stack Height (ft)	18.7
Stack Diameter (ft)	1.33
Temperature (deg F)	890
Exhaust Flow Rate (acfm)	7540
Stack Orientation	Vertical (flapper)

**Discussion**

The HRA was conducted in accordance with EPA and OEHHA guidance and District standard procedures. 6 point sources were modeled with refined air dispersion modeling using EPA’s AERMOD model, AERMET (Version 24142) processed Palomar 2019/2021 ustar updated meteorology data, AERMAP terrain processing, and urban dispersion coefficients. Building downwash effects were calculated using the EPA BPIP-Prime model. The receptor grid was sufficiently dense to identify maximum impacts.

An occupational Ground Level Concentration (GLC) adjustment factor was applied to calculate worker cancer risk assuming source emissions are released 8 hours per day and 5 days a week.

These risk results are based on the risk scenario calculations and health data at the time of the review, and should not be scaled with revised emissions rates without consulting with the Toxics Section.

HARP2 - HRACalc (dated 22118) 2/25/2026 12:03:15 PM - Output Log

GLCs loaded successfully  
Pollutants loaded successfully  
Pathway receptors loaded successfully

\*\*\*\*\*

RISK SCENARIO SETTINGS

Receptor Type: Worker  
Scenario: All  
Calculation Method: Derived

\*\*\*\*\*

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 16  
Total Exposure Duration: 25

Exposure Duration Bin Distribution

3rd Trimester Bin: 0  
0<2 Years Bin: 0  
2<9 Years Bin: 0  
2<16 Years Bin: 0  
16<30 Years Bin: 0  
16 to 70 Years Bin: 25

\*\*\*\*\*

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True  
Soil: True  
Dermal: True  
Mother's milk: False  
Water: False  
Fish: False  
Homegrown crops: False  
Beef: False  
Dairy: False  
Pig: False  
Chicken: False  
Egg: False

\*\*\*\*\*

INHALATION

Daily breathing rate: Moderate8HR

**\*\*Worker Adjustment Factors\*\***

NOTE: The worker adjustment factors below are only used for cancer assessments. However, the GLC adjustment factor is also applied to 8-hr noncancer chronic assessments.

Worker adjustments factors enabled: YES

GLC adjustment factor: 4.2

Exposure frequency: 250

**\*\*Fraction at time at home\*\***

3rd Trimester to 16 years: OFF

16 years to 70 years: OFF

\*\*\*\*\*

**SOIL & DERMAL PATHWAY SETTINGS**

Deposition rate (m/s): 0.02

Soil mixing depth (m): 0.01

Dermal climate: Warm

\*\*\*\*\*

**TIER 2 SETTINGS**

Tier2 not used.

\*\*\*\*\*

**Calculating cancer risk**

Cancer risk breakdown by pollutant and receptor saved to:

C:\Users\bwong\Desktop\INITIAL RISK\hra\WAF4.2\_CancerRisk.csv

Cancer risk total by receptor saved to: C:\Users\bwong\Desktop\INITIAL RISK\hra\WAF4.2\_CancerRiskSumByRec.csv

**Calculating chronic risk**

Chronic risk breakdown by pollutant and receptor saved to:

C:\Users\bwong\Desktop\INITIAL RISK\hra\WAF4.2\_NCChronicRisk.csv

Chronic risk total by receptor saved to: C:\Users\bwong\Desktop\INITIAL RISK\hra\WAF4.2\_NCChronicRiskSumByRec.csv

**Calculating acute risk**

Acute risk breakdown by pollutant and receptor saved to:

C:\Users\bwong\Desktop\INITIAL RISK\hra\WAF4.2\_NCAcuteRisk.csv

Acute risk total by receptor saved to: C:\Users\bwong\Desktop\INITIAL RISK\hra\WAF4.2\_NCAcuteRiskSumByRec.csv

HRA ran successfully

\*HARP - HRACalc v22118 2/25/2026 12:03:15 PM - **Cancer Risk** - Input File: C:\Users\lbwong\Desktop\INITIAL RISK\hra\WAF4.2\_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBREV	RISK_SUM	SCENARIO
5912	ALL		474946	3664783	0.005672	9901	DieselExhPM	1.47E-06	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	75070	Acetaldehyde	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	7440382	Arsenic	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	71432	Benzene	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	106990	1,3-Butadiene	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	7440439	Cadmium	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	108907	Chlorobenzn	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	18540299	Cr(VI)	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	7440508	Copper	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	100414	Ethyl Benzene	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	50000	Formaldehyde	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	110543	Hexane	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	7647010	HCl	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	7439921	Lead	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	7439965	Manganese	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	7439976	Mercury	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	91203	Naphthalene	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	7440020	Nickel	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	1151	PAHs-w/o	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	115071	Propylene	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	7782492	Selenium	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	108883	Toluene	0.00E+00	25YrCancerDerived_InhSoilDerm
5912	ALL		474946	3664783	0	1330207	Xylenes	0.00E+00	25YrCancerDerived_InhSoilDerm

**1.47E-06**

\*HARP - HRAcalc v22118 2/25/2026 12:03:15 PM - **Chronic Risk** - Input File: C:\Users\bwong\Desktop\INITIAL RISK\hra\WAF4.2\_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBREV	SCENARIO	RESP
5912	ALL		474946	3664783	0.005672	9901	DieselExhPM	NonCancerChronicDerived_InhSoilDerm	1.13E-03
5912	ALL		474946	3664783	0	75070	Acetaldehyde	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	7440382	Arsenic	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	71432	Benzene	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	106990	1,3-Butadiene	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	7440439	Cadmium	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	108907	Chlorobenzn	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	18540299	Cr(VI)	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	7440508	Copper	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	100414	Ethyl Benzene	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	50000	Formaldehyde	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	110543	Hexane	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	7647010	HCl	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	7439921	Lead	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	7439965	Manganese	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	7439976	Mercury	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	91203	Naphthalene	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	7440020	Nickel	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	1151	PAHs-w/o	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	115071	Propylene	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	7782492	Selenium	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	108883	Toluene	NonCancerChronicDerived_InhSoilDerm	0.00E+00
5912	ALL		474946	3664783	0	1330207	Xylenes	NonCancerChronicDerived_InhSoilDerm	0.00E+00
									<b><u>1.13E-03</u></b>

\*HARP - HRACalc v22118 2/25/2026 12:03:15 PM - **Acute Risk** - Input File: C:\Users\bwong\Desktop\INITIAL RISK\hra\WAF4.2\_HRAInput.hra

REC	GRP	NETID	X	Y	CONC	POLID	POLABBREV	SCENARIO	EYE
5617	ALL		474916	3664863	0	9901	DieselExhPM	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	15.25507	75070	Acetaldehyde	NonCancerAcute	3.25E-02
5617	ALL		474916	3664863	0.031173	7440382	Arsenic	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	3.629654	71432	Benzene	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	4.227777	106990	1,3-Butadiene	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	0.029224	7440439	Cadmium	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	0.003897	108907	Chlorobenzn	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	0.001948	18540299	Cr(VI)	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	0.07988	7440508	Copper	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	0.212363	100414	Ethyl Benzene	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	33.62934	50000	Formaldehyde	NonCancerAcute	6.11E-01
5617	ALL		474916	3664863	0.524089	110543	Hexane	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	3.629654	7647010	HCl	NonCancerAcute	1.73E-03
5617	ALL		474916	3664863	0.161708	7439921	Lead	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	0.060397	7439965	Manganese	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	0.038966	7439976	Mercury	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	0.383812	91203	Naphthalene	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	0.075983	7440020	Nickel	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	0.705279	1151	PAHs-w/o	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	9.09849	115071	Propylene	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	0.042862	7782492	Selenium	NonCancerAcute	0.00E+00
5617	ALL		474916	3664863	2.053492	108883	Toluene	NonCancerAcute	4.11E-04
5617	ALL		474916	3664863	0.826073	1330207	Xylenes	NonCancerAcute	3.75E-05
									<b><u>6.46E-01</u></b>

**FACILITY NAME:** Elkhorn Services, LLC

Fuel Consumption (gal/hr): 72.20  
 Diesel Particulate Emission Factor (g/hp-hr): 0.012  
 Brake Horsepower (hp): 1490  
 Annual Hours of Operation (hrs): 50

FACILITY ID: APCD2025-SITE-04957  
 APPLICATION NO.: APCD2025-APP-008964  
 ENGINEER: Hawzhin Muhamed

**RISK ANALYST ONLY**

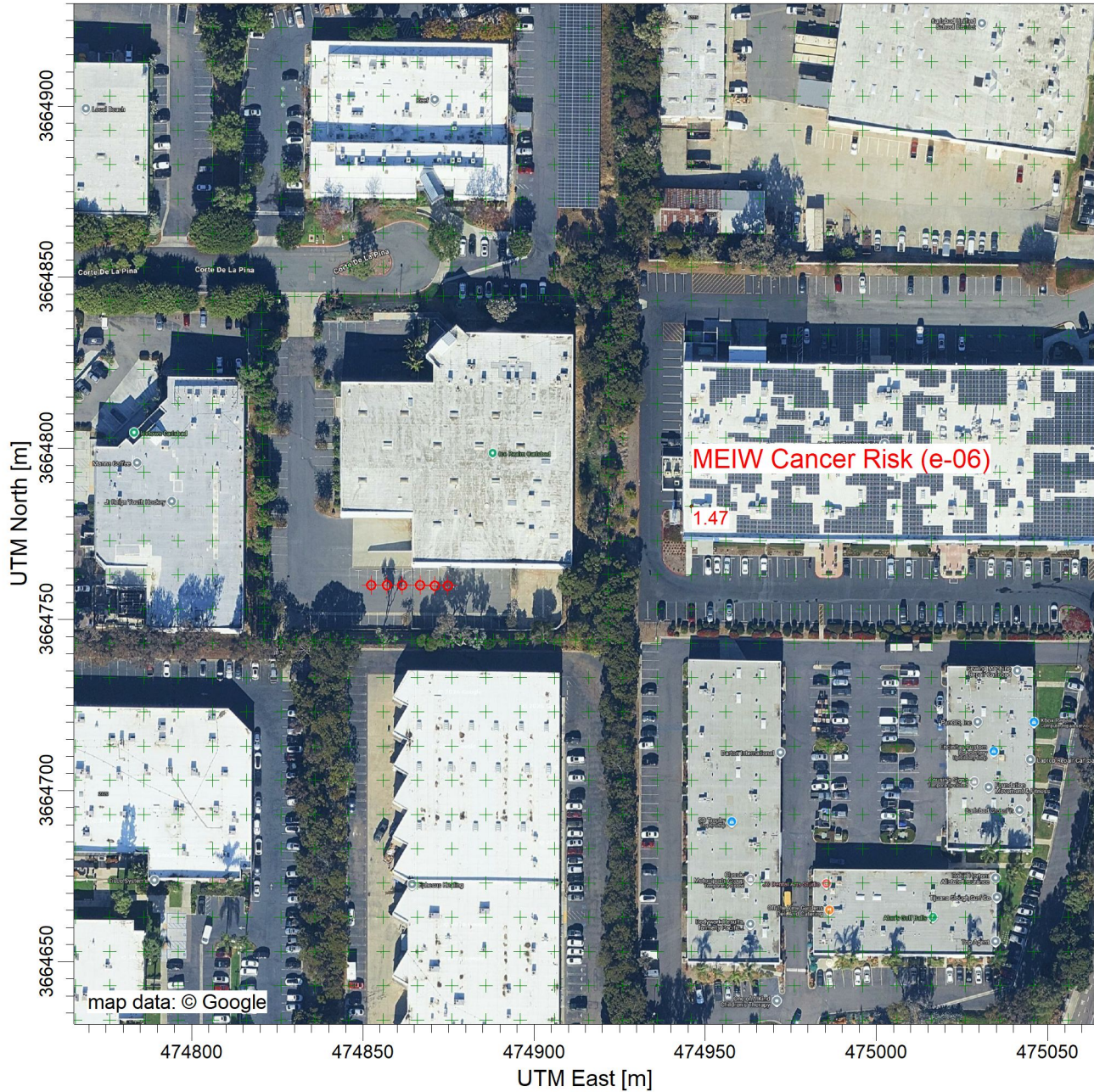
**DISPERSION MODELING DATA**

Annual Receptor Type: Resident  
 ANNUAL DISPERSION FACTOR (µg/m3)/(g/s):  
 Distance (m):  
 Hourly Receptor Type: PMI  
 HOURLY DISPERSION FACTOR (µg/m3)/(g/s):  
 Distance (m):

CHEMICAL NAME	Emission Factor lb/1000 gal	Acute Emission Rate lb/hr	Annual Emission Rate lb/yr	Acute Emissions Rate g/s	Annual Emission Rate g/s	Hourly GLC µg/m <sup>3</sup>	Annual GLC µg/m <sup>3</sup>
DIESEL PARTICULATE			1.97E+00		2.83E-05		
ACETALDEHYDE	7.83E-01	5.65E-02	2.83E+00	7.12E-03			
ACROLEIN*	3.39E-02	2.45E-03	1.22E-01	3.08E-04			
ARSENIC COMPOUNDS	1.60E-03	1.16E-04	5.78E-03	1.46E-05			
BENZENE	1.86E-01	1.35E-02	6.73E-01	1.69E-03			
BUTADIENE, 1,3-	2.17E-01	1.57E-02	7.83E-01	1.97E-03			
CADMIUM AND COMPOUNDS	1.50E-03	1.08E-04	5.42E-03	1.36E-05			
CHLOROBENZENE	2.00E-04	1.44E-05	7.22E-04	1.82E-06			
CHROMIUM (HEXAVALENT)	1.00E-04	7.22E-06	3.61E-04	9.10E-07			
COPPER AND COMPOUNDS	4.10E-03	2.96E-04	1.48E-02	3.73E-05			
ETHYL BENZENE	1.09E-02	7.87E-04	3.93E-02	9.92E-05			
FORMALDEHYDE	1.73E+00	1.25E-01	6.23E+00	1.57E-02			
HEXANE-N	2.69E-02	1.94E-03	9.71E-02	2.45E-04			
HYDROCHLORIC ACID	1.86E-01	1.35E-02	6.73E-01	1.69E-03			
LEAD & COMPOUNDS	8.30E-03	5.99E-04	3.00E-02	7.55E-05			
MANGANESE AND COMPOUNDS	3.10E-03	2.24E-04	1.12E-02	2.82E-05			
MERCURY AND COMPOUNDS (INORGANIC)	2.00E-03	1.44E-04	7.22E-03	1.82E-05			
NAPHTHALENE	1.97E-02	1.42E-03	7.11E-02	1.79E-04			
NICKEL AND NICKEL COMPOUNDS	3.90E-03	2.82E-04	1.41E-02	3.55E-05			
POLYCYCLIC AROM. HC (PAH) [Treat as B(a)P for H	3.62E-02	2.61E-03	1.31E-01	3.29E-04			
PROPYLENE	4.67E-01	3.37E-02	1.69E+00	4.25E-03			
SELENIUM AND COMPOUNDS	2.20E-03	1.59E-04	7.94E-03	2.00E-05			
TOLUENE	1.05E-01	7.61E-03	3.80E-01	9.59E-04			
AMMONIA (only if SCR)	N/A						
XYLENES	4.24E-02	3.06E-03	1.53E-01	3.86E-04			

PROJECT TITLE:

**MEIW Cancer Risk (e-06)**



COMMENTS:

SOURCES:

**6**

COMPANY NAME:

RECEPTORS:

**34425**

MODELER:

OUTPUT TYPE:

**Concentration**

SCALE:

1:1,876

0  0.05 km

MAX:

**1.47 ug/m<sup>3</sup>**

DATE:

**2/25/2026**

PROJECT NO.:

PROJECT TITLE:

**MEIW Chronic Risk**



COMMENTS:

SOURCES:

**6**

COMPANY NAME:

RECEPTORS:

**34425**

MODELER:

OUTPUT TYPE:

**Concentration**

SCALE:

1:1,912

0  0.05 km

MAX:

**1.1E-03 ug/m<sup>3</sup>**

DATE:

**2/25/2026**

PROJECT NO.:

PROJECT TITLE:

**PMI Acute Risk**



COMMENTS:

SOURCES:

COMPANY NAME:

**6**

RECEPTORS:

MODELER:

**34425**

OUTPUT TYPE:

SCALE: 1:1,876

**Concentration**

0 0.05 km

MAX:

DATE: **2/25/2026**

PROJECT NO.:

**0.646 ug/m<sup>3</sup>**



for Total of 1 Urban Area(s):  
Urban Population = 383008.0 ; Urban Roughness Length = 1.000 m  
\* Urban Roughness Length of 1.0 Meter Used.  
\* ADJ\_U\* - Use ADJ\_U\* option for SBL in AERMET  
\* CCVR\_Sub - Meteorological data includes CCVR substitutions  
\* TEMP\_Sub - Meteorological data includes TEMP substitutions  
\* NOTURBST - Meteorological data Ignore turbulence - stable hours  
\* Model Assumes No FLAGPOLE Receptor Heights.  
\* The User Specified a Pollutant Type of: OTHER

\*\*Model Calculates 1 Short Term Average(s) of: 1-HR  
and Calculates PERIOD Averages

\*\*This Run Includes: 6 Source(s); 7 Source Group(s); and 34425 Receptor(s)

with: 6 POINT(s), including  
0 POINTCAP(s) and 0 POINTHOR(s)  
and: 0 VOLUME source(s)  
and: 0 AREA type source(s)  
and: 0 LINE source(s)  
and: 0 RLINE/RLINEXT source(s)  
and: 0 OPENPIT source(s)  
and: 0 BUOYANT LINE source(s) with a total of 0 line(s)  
and: 0 SWPOINT source(s)

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

\*\*The AERMET Input Meteorological Data Version Date: 24142

\*\*Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor  
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)  
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)  
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

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



\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

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

Surface file: C:\Users\breeve\OneDrive - County of San Diego\Meteorology Documents\AERMET File Met Version: 24142  
 Profile file: C:\Users\breeve\OneDrive - County of San Diego\Meteorology Documents\AERMET File  
 Surface format: FREE  
 Profile format: FREE  
 Surface station no.: 3177 Upper air station no.: 3190  
 Name: UNKNOWN Name: UNKNOWN  
 Year: 2019 Year: 2019

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
19	01	01	1	01	-7.7	0.111	-9.000	-9.000	-999.	89.	16.0	0.05	0.59	1.00	1.57	25.	7.9	280.3	2.0			
19	01	01	1	02	-9.9	0.126	-9.000	-9.000	-999.	108.	18.1	0.04	0.59	1.00	1.79	35.	7.9	279.8	2.0			
19	01	01	1	03	-17.8	0.177	-9.000	-9.000	-999.	178.	34.4	0.04	0.59	1.00	2.45	31.	7.9	279.2	2.0			
19	01	01	1	04	-9.7	0.125	-9.000	-9.000	-999.	106.	17.8	0.04	0.59	1.00	1.77	41.	7.9	278.1	2.0			
19	01	01	1	05	-15.0	0.156	-9.000	-9.000	-999.	148.	26.8	0.04	0.59	1.00	2.18	30.	7.9	279.2	2.0			
19	01	01	1	06	-14.3	0.153	-9.000	-9.000	-999.	143.	25.7	0.05	0.59	1.00	2.10	24.	7.9	278.8	2.0			
19	01	01	1	07	-15.7	0.161	-9.000	-9.000	-999.	154.	28.4	0.05	0.59	1.00	2.20	6.	7.9	279.8	2.0			
19	01	01	1	08	-17.4	0.253	-9.000	-9.000	-999.	305.	83.4	0.04	0.59	0.50	3.42	40.	7.9	280.9	2.0			
19	01	01	1	09	23.3	0.220	0.443	0.005	134.	247.	-40.9	0.04	0.59	0.29	2.61	41.	7.9	283.1	2.0			
19	01	01	1	10	59.8	0.240	0.721	0.005	225.	283.	-20.9	0.05	0.59	0.22	2.67	7.	7.9	284.8	2.0			
19	01	01	1	11	84.9	0.240	1.082	0.005	536.	281.	-14.5	0.05	0.59	0.20	2.57	17.	7.9	286.4	2.0			
19	01	01	1	12	96.9	0.246	1.299	0.005	814.	292.	-13.7	0.05	0.59	0.19	2.62	2.	7.9	287.0	2.0			
19	01	01	1	13	95.3	0.301	1.341	0.005	908.	396.	-25.6	0.05	0.59	0.19	3.35	353.	7.9	287.5	2.0			
19	01	01	1	14	80.5	0.261	1.301	0.005	982.	320.	-19.8	0.05	0.59	0.20	2.88	7.	7.9	288.8	2.0			
19	01	01	1	15	52.7	0.247	1.146	0.005	1027.	294.	-25.5	0.03	0.59	0.23	3.07	64.	7.9	288.8	2.0			
19	01	01	1	16	13.9	0.315	0.738	0.005	1035.	424.	-201.4	0.03	0.59	0.32	4.29	87.	7.9	287.0	2.0			
19	01	01	1	17	-26.3	0.294	-9.000	-9.000	-999.	384.	95.4	0.05	0.59	0.60	3.93	114.	7.9	285.3	2.0			
19	01	01	1	18	-7.3	0.108	-9.000	-9.000	-999.	125.	15.5	0.05	0.59	1.00	1.53	116.	7.9	283.8	2.0			
19	01	01	1	19	-7.7	0.111	-9.000	-9.000	-999.	89.	15.9	0.05	0.59	1.00	1.57	98.	7.9	282.0	2.0			
19	01	01	1	20	-3.9	0.078	-9.000	-9.000	-999.	53.	11.2	0.05	0.59	1.00	1.11	98.	7.9	279.8	2.0			
19	01	01	1	21	-6.4	0.101	-9.000	-9.000	-999.	77.	14.3	0.05	0.59	1.00	1.43	25.	7.9	279.8	2.0			
19	01	01	1	22	-8.3	0.115	-9.000	-9.000	-999.	93.	16.3	0.04	0.59	1.00	1.64	39.	7.9	279.2	2.0			
19	01	01	1	23	-17.8	0.176	-9.000	-9.000	-999.	177.	34.1	0.04	0.59	1.00	2.44	49.	7.9	279.2	2.0			

19 01 01 1 24 -26.3 0.262 -9.000 -9.000 -999. 321. 75.4 0.03 0.59 1.00 3.83 69. 7.9 280.3 2.0

First hour of profile data

YR MO DY HR HEIGHT F WDIR WSPD AMB\_TMP sigmaA sigmaW sigmaV  
19 01 01 01 7.9 1 25. 1.57 280.4 99.0 -99.00 -99.00

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

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\*\*\* 02/25/26

\*\*\* AERMET - VERSION 24142 \*\*\* \*\*\*

\*\*\* 09:28:33

PAGE 4

\*\*\* MODELOPTs: RegDFault CONC ELEV URBAN ADJ\_U\*

\*\*\* THE SUMMARY OF MAXIMUM PERIOD ( 26304 HRS) RESULTS \*\*\*

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
STCK1	1ST HIGHEST VALUE IS	32.18442 AT ( 474946.00, 3664783.00, 92.85, 92.85, 0.00)	DC	
	2ND HIGHEST VALUE IS	31.90047 AT ( 474956.00, 3664803.00, 92.82, 92.82, 0.00)	DC	
	3RD HIGHEST VALUE IS	31.11857 AT ( 474956.00, 3664793.00, 93.06, 93.06, 0.00)	DC	
	4TH HIGHEST VALUE IS	30.53111 AT ( 474946.00, 3664793.00, 92.76, 92.76, 0.00)	DC	
	5TH HIGHEST VALUE IS	29.98022 AT ( 474956.00, 3664813.00, 92.66, 92.66, 0.00)	DC	
	6TH HIGHEST VALUE IS	29.68098 AT ( 474936.00, 3664773.00, 92.74, 93.79, 0.00)	DC	
	7TH HIGHEST VALUE IS	28.90553 AT ( 474912.25, 3664844.75, 81.53, 93.89, 0.00)	DC	
	8TH HIGHEST VALUE IS	27.80382 AT ( 474946.00, 3664803.00, 92.65, 92.65, 0.00)	DC	
	9TH HIGHEST VALUE IS	26.32133 AT ( 474956.00, 3664783.00, 93.25, 93.25, 0.00)	DC	
	10TH HIGHEST VALUE IS	26.24328 AT ( 474921.82, 3664806.42, 89.00, 93.85, 0.00)	DC	
STCK2	1ST HIGHEST VALUE IS	32.97104 AT ( 474946.00, 3664783.00, 92.85, 92.85, 0.00)	DC	
	2ND HIGHEST VALUE IS	32.01082 AT ( 474956.00, 3664803.00, 92.82, 92.82, 0.00)	DC	
	3RD HIGHEST VALUE IS	31.22049 AT ( 474956.00, 3664793.00, 93.06, 93.06, 0.00)	DC	
	4TH HIGHEST VALUE IS	30.66261 AT ( 474946.00, 3664793.00, 92.76, 92.76, 0.00)	DC	
	5TH HIGHEST VALUE IS	30.49596 AT ( 474936.00, 3664773.00, 92.74, 93.79, 0.00)	DC	
	6TH HIGHEST VALUE IS	30.29043 AT ( 474956.00, 3664813.00, 92.66, 92.66, 0.00)	DC	

7TH HIGHEST VALUE IS 29.41864 AT ( 474912.25, 3664844.75, 81.53, 93.89, 0.00) DC  
 8TH HIGHEST VALUE IS 27.89944 AT ( 474946.00, 3664803.00, 92.65, 92.65, 0.00) DC  
 9TH HIGHEST VALUE IS 26.85562 AT ( 474921.71, 3664763.23, 90.03, 93.85, 0.00) DC  
 10TH HIGHEST VALUE IS 26.69364 AT ( 474926.00, 3664763.00, 91.88, 93.12, 0.00) DC

STCK3 1ST HIGHEST VALUE IS 33.45123 AT ( 474946.00, 3664783.00, 92.85, 92.85, 0.00) DC  
 2ND HIGHEST VALUE IS 32.16461 AT ( 474956.00, 3664803.00, 92.82, 92.82, 0.00) DC  
 3RD HIGHEST VALUE IS 31.47638 AT ( 474956.00, 3664793.00, 93.06, 93.06, 0.00) DC  
 4TH HIGHEST VALUE IS 31.39640 AT ( 474936.00, 3664773.00, 92.74, 93.79, 0.00) DC  
 5TH HIGHEST VALUE IS 30.88290 AT ( 474946.00, 3664793.00, 92.76, 92.76, 0.00) DC  
 6TH HIGHEST VALUE IS 30.05168 AT ( 474956.00, 3664813.00, 92.66, 92.66, 0.00) DC  
 7TH HIGHEST VALUE IS 29.55989 AT ( 474912.25, 3664844.75, 81.53, 93.89, 0.00) DC  
 8TH HIGHEST VALUE IS 28.01588 AT ( 474946.00, 3664803.00, 92.65, 92.65, 0.00) DC  
 9TH HIGHEST VALUE IS 27.72261 AT ( 474926.00, 3664763.00, 91.88, 93.12, 0.00) DC  
 10TH HIGHEST VALUE IS 27.68008 AT ( 474921.71, 3664763.23, 90.03, 93.85, 0.00) DC

STCK4 1ST HIGHEST VALUE IS 33.84340 AT ( 474946.00, 3664783.00, 92.85, 92.85, 0.00) DC  
 2ND HIGHEST VALUE IS 32.76311 AT ( 474936.00, 3664773.00, 92.74, 93.79, 0.00) DC  
 3RD HIGHEST VALUE IS 32.19794 AT ( 474956.00, 3664803.00, 92.82, 92.82, 0.00) DC  
 4TH HIGHEST VALUE IS 31.67886 AT ( 474956.00, 3664793.00, 93.06, 93.06, 0.00) DC  
 5TH HIGHEST VALUE IS 30.99834 AT ( 474946.00, 3664793.00, 92.76, 92.76, 0.00) DC  
 6TH HIGHEST VALUE IS 30.01911 AT ( 474956.00, 3664813.00, 92.66, 92.66, 0.00) DC  
 7TH HIGHEST VALUE IS 29.41997 AT ( 474912.25, 3664844.75, 81.53, 93.89, 0.00) DC  
 8TH HIGHEST VALUE IS 28.80516 AT ( 474926.00, 3664763.00, 91.88, 93.12, 0.00) DC  
 9TH HIGHEST VALUE IS 28.72137 AT ( 474921.71, 3664763.23, 90.03, 93.85, 0.00) DC  
 10TH HIGHEST VALUE IS 27.97427 AT ( 474946.00, 3664803.00, 92.65, 92.65, 0.00) DC

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 \*\*\* AERMET - VERSION 24142 \*\*\* \*\*\* \*\*\* 09:28:33  
 PAGE 5

\*\*\* MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ\_U\*

\*\*\* THE SUMMARY OF MAXIMUM PERIOD ( 26304 HRS) RESULTS \*\*\*

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

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
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STCK5	1ST HIGHEST VALUE IS	33.88845	AT (	474946.00,	3664783.00,	92.85,	92.85,	0.00)	DC
	2ND HIGHEST VALUE IS	33.17989	AT (	474936.00,	3664773.00,	92.74,	93.79,	0.00)	DC
	3RD HIGHEST VALUE IS	32.01318	AT (	474956.00,	3664803.00,	92.82,	92.82,	0.00)	DC
	4TH HIGHEST VALUE IS	31.69409	AT (	474956.00,	3664793.00,	93.06,	93.06,	0.00)	DC
	5TH HIGHEST VALUE IS	30.87338	AT (	474946.00,	3664793.00,	92.76,	92.76,	0.00)	DC
	6TH HIGHEST VALUE IS	29.74941	AT (	474956.00,	3664813.00,	92.66,	92.66,	0.00)	DC
	7TH HIGHEST VALUE IS	29.39936	AT (	474926.00,	3664763.00,	91.88,	93.12,	0.00)	DC
	8TH HIGHEST VALUE IS	28.92718	AT (	474921.71,	3664763.23,	90.03,	93.85,	0.00)	DC
	9TH HIGHEST VALUE IS	28.62493	AT (	474912.25,	3664844.75,	81.53,	93.89,	0.00)	DC
	10TH HIGHEST VALUE IS	28.28305	AT (	474946.00,	3664773.00,	93.61,	93.61,	0.00)	DC
STCK6	1ST HIGHEST VALUE IS	33.94039	AT (	474946.00,	3664783.00,	92.85,	92.85,	0.00)	DC
	2ND HIGHEST VALUE IS	33.67219	AT (	474936.00,	3664773.00,	92.74,	93.79,	0.00)	DC
	3RD HIGHEST VALUE IS	32.16824	AT (	474956.00,	3664803.00,	92.82,	92.82,	0.00)	DC
	4TH HIGHEST VALUE IS	31.66698	AT (	474956.00,	3664793.00,	93.06,	93.06,	0.00)	DC
	5TH HIGHEST VALUE IS	30.51502	AT (	474946.00,	3664793.00,	92.76,	92.76,	0.00)	DC
	6TH HIGHEST VALUE IS	29.88171	AT (	474926.00,	3664763.00,	91.88,	93.12,	0.00)	DC
	7TH HIGHEST VALUE IS	29.38470	AT (	474956.00,	3664813.00,	92.66,	92.66,	0.00)	DC
	8TH HIGHEST VALUE IS	29.21696	AT (	474946.00,	3664773.00,	93.61,	93.61,	0.00)	DC
	9TH HIGHEST VALUE IS	28.49374	AT (	474921.71,	3664763.23,	90.03,	93.85,	0.00)	DC
	10TH HIGHEST VALUE IS	28.45092	AT (	474956.00,	3664783.00,	93.25,	93.25,	0.00)	DC
ALL	1ST HIGHEST VALUE IS	200.27894	AT (	474946.00,	3664783.00,	92.85,	92.85,	0.00)	DC
	2ND HIGHEST VALUE IS	192.45526	AT (	474956.00,	3664803.00,	92.82,	92.82,	0.00)	DC
	3RD HIGHEST VALUE IS	191.18854	AT (	474936.00,	3664773.00,	92.74,	93.79,	0.00)	DC
	4TH HIGHEST VALUE IS	188.85538	AT (	474956.00,	3664793.00,	93.06,	93.06,	0.00)	DC
	5TH HIGHEST VALUE IS	184.46336	AT (	474946.00,	3664793.00,	92.76,	92.76,	0.00)	DC
	6TH HIGHEST VALUE IS	179.47556	AT (	474956.00,	3664813.00,	92.66,	92.66,	0.00)	DC
	7TH HIGHEST VALUE IS	173.91991	AT (	474912.25,	3664844.75,	81.53,	93.89,	0.00)	DC
	8TH HIGHEST VALUE IS	167.78442	AT (	474926.00,	3664763.00,	91.88,	93.12,	0.00)	DC
	9TH HIGHEST VALUE IS	165.51182	AT (	474921.71,	3664763.23,	90.03,	93.85,	0.00)	DC
	10TH HIGHEST VALUE IS	164.84841	AT (	474946.00,	3664803.00,	92.65,	92.65,	0.00)	DC

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



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

A Total of           0 Fatal Error Message(s)  
A Total of           2 Warning Message(s)  
A Total of         1273 Informational Message(s)  
  
A Total of           26304 Hours Were Processed  
  
A Total of           701 Calm Hours Identified  
  
A Total of           571 Missing Hours Identified ( 2.17 Percent)

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

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*  
ME W186     292        MEOPEN: THRESH\_1MIN 1-min ASOS wind speed threshold used        0.50  
ME W187     292        MEOPEN: ADJ\_U\* Option for Stable Low Winds used in AERMET

Facility Name: Elkhorn Services, LLC  
 Application Number: APCD2025-APP-008964 008965 008966 008967 008968 008969 6 engines  
 Site ID Number: APCD2025-SITE-04957  
 Equipment Address: 2293 Cosmos Court 2293 Cosmos Court, Carlsbad, California 92011  
 Carlsbad, California 92011  
 Contact Name: Bill Winchester  
 Contact Title: Principal Scientist  
 Contact Affiliation: Elkhorn Services, LLC  
 Contact Number: (909) 226-1108  
 Contact E-Mail: bwinchester@montrose-env.com  
 Project Engineer: Hawzhin Muhamed

Make: Cummins, Inc 6 identical engines  
 Model: QST30-G5 NR2  
 S/N: TBD  
 Fuel Type: Diesel  
 BHP Rating: 1490 backpressure 27 inches of water  
 Model Year: 2024  
 Tier Level: 2  
 Engine Family Number: RCEXL030.AAD NOx, g/BHP-hr: + NMHC, g/BHP-hr: 3.93  
 Device Driven: 1000 kW  
 Control: DPF JM, Oxidation Catalyst MODEL#: JM-CRT(+)-8-N-CS-BITO-16/16-RT  
 NOx, g/BHP-hr: 3.90 5.23 g/kW-hr  
 CO, g/BHP-hr: 0.10 0.13 g/kW-hr DPF 80% Reduction  
 NMHC, g/BHP-hr: 0.03 0.04 g/kW-hr DPF 70% Reduction  
 PM10, g/BHP-hr: 0.012 0.02 g/kW-hr DPF 85% Reduction  
 NH3 Slip from SCR (yes/no) no 0 ppm (default 10 ppm if applicable)

Fuel Usage, gal/hr: 72.2  
 Operating Schedule, hrs/day: 3  
 Operating Schedule, hrs/yr: 50

Exhaust Flow Rate, cfm: 7540  
 Exhaust Temperature, °F: 890  
 Stack Height above ground, ft: 18.71  
 Stack Diameter, ft: 1.33

Nearest School, ft: 936  
 Residential Receptor, m: 262.13 860 ft  
 Occupational Receptor, m: 25.00 80 ft  
 Acute Receptor, m: 25.00 80 ft

School Notification  
 Aspirations School of Learning

Vertical Exhaust? (yes/no): yes  
 Flapper Valve? (flapper/raincap): Flapper  
 Plot Plan? (yes/no): yes  
 Flow Obstructions: no

**San Diego Air Pollution Control District  
Supplemental Application Information  
Rule 1200 Toxics Evaluation**

(ALL REQUESTED INFORMATION IS IMPORTANT - PLEASE FILL BLUE CELLS)

Facility Name:	Elkhorn Services, LLC			
Equipment Location:	#REF!			
Project Description:	Emergency Diesel Engine			
Control Equipment:	None			
Operating Schedule:	Hours per Day:	24	Weeks per Year:	50
	Days per Week:	7	Days per Year:	50

**RELEASE POINT DATA**

How are the emissions from this project released into the outdoor air? (Check all that apply)

Point Source	Non-Point Source		
<input checked="" type="checkbox"/> Exhaust Stack or Duct	<input type="checkbox"/> Passive Ventilation	<input type="checkbox"/> Released through windows and/or roll-up doors	<input type="checkbox"/> Fugitive Emissions

Point Source

Parameter	Point Source #1	Point Source #2	Point Source #3
Height of release above ground (ft)	18.7	#REF!	
Stack Diameter (or length x width) (ft)	1.33	#REF!	
Exhaust Gas Temperature (°F) <sup>1</sup>	890	#REF!	
Exhaust Gas Flow (ACFM)	7540	#REF!	
Direction of Flow <sup>2</sup>	vertical	#REF!	
Flow Obstruction <sup>3</sup>	no	#REF!	
Distance to Nearest Property Line (- +/- 10ft)	80.00	#REF!	

<sup>1</sup> Use "70 °F" or "Ambient" if unknown

<sup>2</sup> if "other" describe:

<sup>3</sup> if "other" describe:

**AERIAL MAP AND FACILITY PLOT PLAN** must be attached and labeled with **Release Point(s) and Building(s)** (includes facility and neighboring buildings within 5x the release height of a point source(s)).

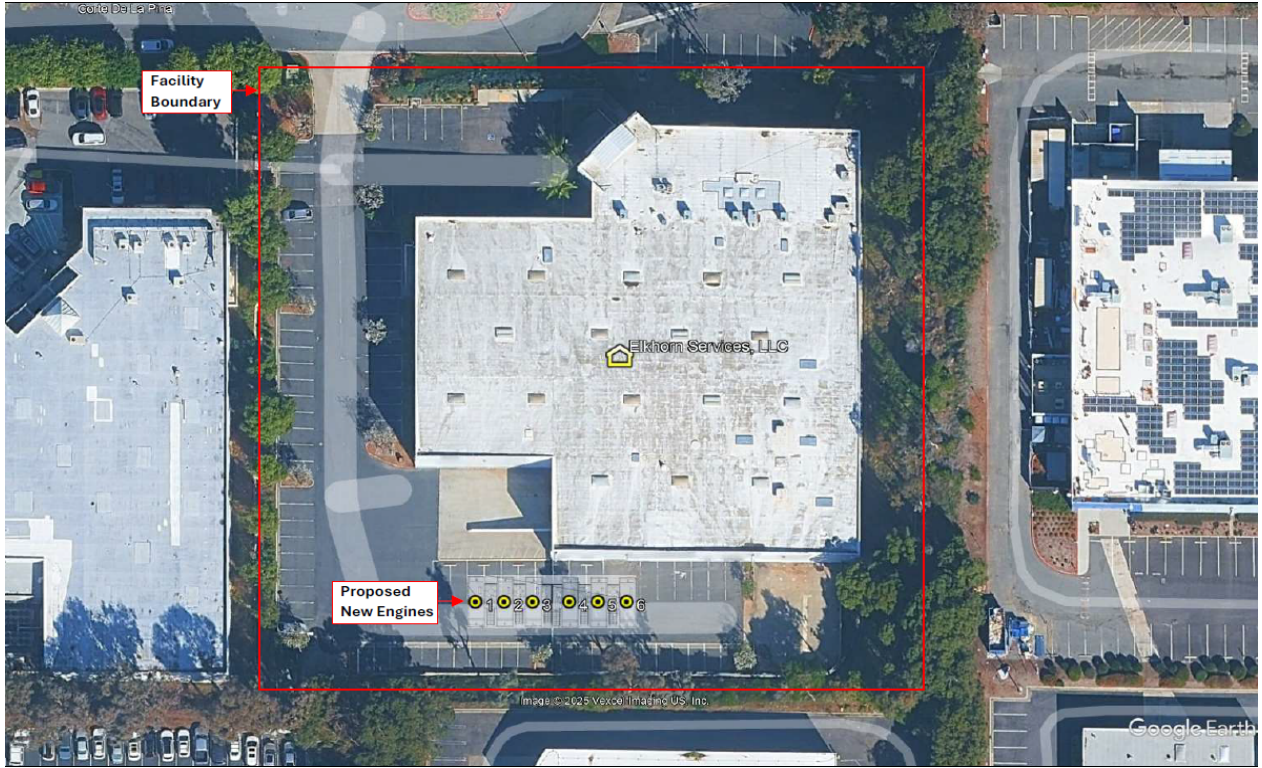
Parameter	Building A	Building B	Building C
Point Source(s)			
Point Source Location			
Building Length (ft) (optional)	220		
Building Width (ft) (optional)	220		
Building Height above ground (ft)	32		

**San Diego APCD Use Only**

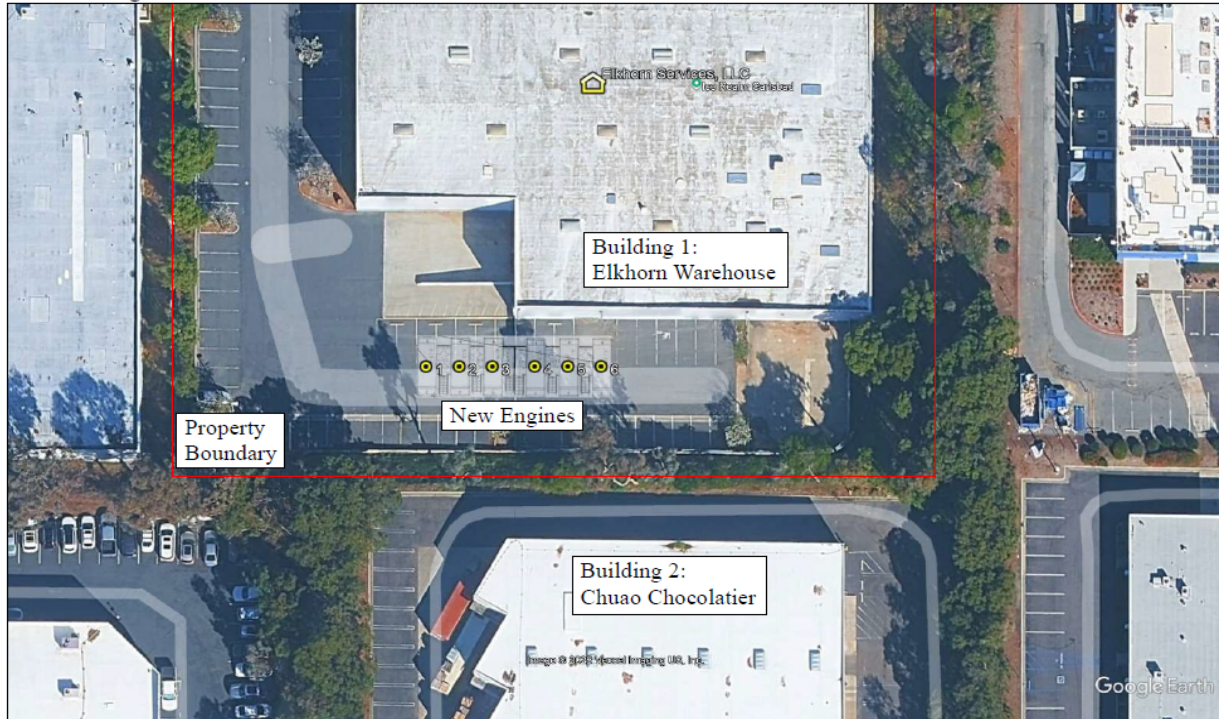
Additional Rule 1200 Submittal Information

Submittal Date:		Site ID:	APCD2025-SITE-04957
Project Engineer:	Hawzhin Muhamed	Appl. Number(s):	APCD2025-APP-008964
Fees Collected:		PTO No. (if existing):	





**Reference Diagram**



**Engine Stack Location Information**

<b>Exhaust Stack Name</b>	<b>Zone</b>	<b>Easting</b>	<b>Northing</b>
Engine 1	11 S	474853.03	3664758.41
Engine 2	11 S	474857.41	3664758.40
Engine 3	11 S	474861.74	3664758.39
Engine 4	11 S	474867.32	3664758.38
Engine 5	11 S	474871.67	3664758.37
Engine 6	11 S	474876.05	3664758.35