

Rule 1200 Health Risk Assessment

Facility Name: VA San Diego Healthcare
Facility ID: APCD1978-SITE-01521
Application: APCD2026-APP-009105
Project Engineer: Austin Stein
Modeler: Bill Reeve
Toxics Risk Analyst: Andrew Bernabe
Date Completed by Toxics: 7/21/2026
HRA Tools Used: Lakes-AERMOD (Version 22112)/HARP (v22118)

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

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

Estimated Risk Levels:

School Risk = 0.004 in one million at St. Rose of Lima School.

School risk = 0.001 in one million at Sweetwater Union High School.

The proposed application is for a stationary diesel emergency engine. The ARB Air Toxics Control Measure (ATCM) limits non-emergency operations to 50 hours per year.

Input Data Provided by Project Engineer:

Type of Source: Emergency Diesel IC Engine.

Controls Description: None.

Worst-Case TAC Emissions Increase:

Toxic Air Contaminant	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lb/yr)
DIESEL PARTICULATE	n/a	6.08E-02
ACETALDEHYDE	3.13E-03	1.56E-01
ACROLEIN	1.35E-04	6.77E-03
ARSENIC COMPOUNDS	6.39E-06	3.20E-04
BENZENE	7.44E-04	3.72E-02
BUTADIENE, 1,3-	8.67E-04	4.34E-02
CADMIUM AND COMPOUNDS	5.99E-06	3.00E-04
CHLOROBENZENE	7.99E-07	4.00E-05
CHROMIUM (HEXAVALENT)	4.00E-07	2.00E-05
COPPER AND COMPOUNDS	1.64E-05	8.19E-04
ETHYL BENZENE	4.36E-05	2.18E-03
FORMALDEHYDE	6.90E-03	3.45E-01
HEXANE-N	1.07E-04	5.37E-03
HYDROCHLORIC ACID	7.44E-04	3.72E-02
LEAD & COMPOUNDS	3.32E-05	1.66E-03
MANGANESE AND COMPOUNDS	1.24E-05	6.19E-04
MERCURY AND COMPOUNDS	7.99E-06	4.00E-04
NAPHTHALENE	7.87E-05	3.94E-03
NICKEL AND NICKEL COMPOUNDS	1.56E-05	7.79E-04
POLYCYCLIC AROM. HC (PAH) [Treat as B(a)P for HRA]	1.45E-04	7.23E-03
PROPYLENE	1.87E-03	9.33E-02
SELENIUM AND COMPOUNDS	8.79E-06	4.40E-04
TOLUENE	4.21E-04	2.11E-02
XYLENES	1.69E-04	8.47E-03

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.

Process Data:

Operation Parameter	Value
Fuel Consumption (gal/hr):	4.00
Diesel Particulate Emission Factor (g/hp-hr):	0.00746
Brake Horsepower (hp):	74
Annual Hours of Operation (hrs):	50

Release Parameters:

Height of release above ground (ft)	10.0
Stack Diameter (or length x width) (ft)	0.25
Exhaust Gas Temperature (°F)	900
Exhaust Gas Flow (ACFM)	230

Discussion

The HRA was conducted in accordance with EPA and OEHHA guidance and District standard procedures. A point source was modeled with refined air dispersion modeling using EPA's AERMOD model, AERMET (Version 22112) processed Chula Vista 2018/2020 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.

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.