

ENGINEERING EVALUATION
AUTHORITY TO CONSTRUCT

Facility Name: Premium West Construction (Kaya Apartments)
Equipment Type: [34H] California Certified Emergency Engine
Application #: APCD2024-APP-008382
ID#: APCD2024-SITE-04614
Equipment/Facility Address: 2710 3rd Ave.
San Diego, CA 92103
Facility Contact: Steve Stinebaugh (Facility Contact/App Preparer)
(619) 405-0374
s.stinebaugh@premiumwestinc.com

9/26/2024

X Austin Stein

Austin Stein
Jr. Air Pollution Control Engineer
Signed by: AustinC.Stein@sdcounty.ca.gov

Permit Engineer:

X

Nicholas Horres
Senior Air Pollution Control Engineer

Senior Engineer Signature:

1.0 Background

1.1 Type of Application: New application for an emergency natural gas engine

1.2 Permit History: This is the initial application for this equipment.

1.3 Facility Description: This is a residential mid-rise apartment building. This facility does not have any active permits with APCD. No other applications are open at this site.

1.4 Other Background Info: There are no hearing board actions, permit denials, legal settlements, NOV, or nuisance complaints. The site is not a Title V facility.

2.0 Process Description

2.1 Equipment Description.

Emergency Natural Gas Engine Generator

Manufacturer: Kohler;

Model: KG6208THD;

S/N: TBD;

Horsepower (maximum rated): 204;

Model Year: 2023;

Certified with a 3-way (NSCR) catalyst;

Engine Family (EPA): PKHXB06.2HNL;

Driving a 125-kW emergency-use standby generator;

3.5-inch vertical exhaust with flapper type raincap, exhausting 81 ft. above ground.

2.2 Process Description.

This is a natural gas-powered engine to be used in situations of emergency and for limited operations for maintenance and testing purposes for the Premium West Construction (Kaya Apartments) operation.

2.3 Emissions Controls.

This is an EPA certified natural gas engine. It is certified with a 3-way catalyst.

2.4 Attachments.

Generator specification sheet.

3.0 Emissions

3.1 Emissions estimate summary. Estimated emissions from the process are shown below.

Table 1: Estimated PTE for criteria pollutants

Compound	Emission Factor	Hourly Emissions	Daily Emissions	Annual Emissions	
	g/bhp-hr	lbs/hr	lbs/day	tons/year	lbs/yr
NO _x	0.01	0.003	0.08	0.00009	0.17
CO	0.26	0.12	2.82	0.003	6.11
NMHC	0.01	0.003	0.08	0.00009	0.17
PM	N/A	0.03	0.80	0.0009	1.73
SO _x	N/A	0.00	0.02	0.00003	0.05

3.2 Estimated Emissions Assumptions

- Table 1 evaluates the emission unit at 24 hours per day and a total of 52 hours per year, assuming full load operations
- Estimated emissions are calculated for maintenance and testing operations. Emergency use is not counted towards operation limits.
- EPA certified emissions for NO_x, CO, VOC; San Diego APCD Method E19 (Engines, Natural Gas Fired, Rich Burn, with Non-Selective Catalytic Reduction) emission factors for PM, SO_x and toxic air contaminants.
- Expected actual emissions same as PTE.

- Other standard assumptions as stated in calculation sheets

3.3 Emissions Calculations.

Calculations were performed using the attached spreadsheets using standard calculation methods.

3.4 Attachments.

Emission Calculations.

4.0 Applicable Rules

4.1 District Prohibitory Rules

Emergency engines at non-major sources are subject to the following District prohibitory rules: 50, 51, 53, 62 and 69.4.1. The proposed engine is expected to comply with all applicable requirements as shown in the table on the following page with standard permit conditions for this equipment type.

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Table 2: Prohibitory Rule Discussion

Applicable Section	Requirement	Engine Complies?	Explanation	Condition
Rule 50	Visible Emissions not to exceed 20% opacity or Ringelmann 1 for more than 3 minutes in a 60 minute period	Yes	Compliance with this requirement is achieved through the use of an EPA certified engine, and permit conditions will specify this requirement.	C28413
Rule 51	Cannot cause or contribute to a public nuisance	Yes	Due to the intermittent operation of an emergency engine that meets all emission requirements, it is anticipated that this will not cause a public nuisance. Permit conditions will prohibit this engine from causing a public nuisance.	C28414
Rule 53(d)(1)	Emissions of sulfur compounds calculated as SO ₂ on a dry basis shall not exceed 0.05 % by volume on a dry basis.	Yes	Permit conditions will require use of natural gas with a maximum sulfur content of 10 grains per 100 dscf which will ensure compliance with this requirement.	C28587
Rule 53(d)(2)	Emissions of combustion particulates shall not exceed 0.10 grains per dry standard cubic foot (0.23 grams per dry standard cubic meter) of gas which is standardized to 12 percent of carbon dioxide (CO ₂) by volume.	Yes	Particulate emission from this engine is calculated at 0.004 grains per dry scft gas at 12% CO ₂ , therefore complies with this requirement.	NA
Rule 62	Sulfur content of liquid fuel shall not exceed 0.5 % sulfur by weight.	Yes	Permit conditions will require use of natural gas with a maximum sulfur content of 10 grains per 100 dscf which will ensure compliance with this requirement.	C28587
Rule 69.4.1				
69.4.1(d)(1)(ii)(E)	Requires new or replacement emergency standby engines to meet the following emission standards: <u>(Rich-burn engines using gaseous</u>	Yes	This engine is rich burn engine using gaseous fuel. The engine complies with these emission standards with 0.5 ppmv NO _x , 26.3 ppmv CO, 1.3 ppmv VOC at 15% oxygen.	

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	fuel) NOx: 25 ppmv; VOC: 86 ppmv; CO: 540 ppmw			
69.4.1(e)(1)	<p>Requires an owner or operator of an engine without add-on control equipment, except engines specified in Subsections (b)(3) or (b)(4), to monitor the operating parameters recommended by the engine manufacturer and any additional operating parameters identified by the Air Pollution Control Officer. Such operating parameters may include, but are not limited to:</p> <ul style="list-style-type: none"> (i) engine air-to-fuel ratio; (ii) engine inlet manifold temperature and pressure; and (iii) oxygen content of the exhaust gas. 	N/A	This engine has a manufacturer installed 3-way catalyst as the add-on control device, therefore (e)(2) applies instead of (e)(1).	N/A
69.4.1(e)(2)	<p>Requires an owner or operator of an engine with add-on control equipment, except engines specified in Subsections (b)(3) or (b)(4), to install, operate and maintain in calibration, devices that continuously monitor the operational characteristics of the engine and any NOx emission reduction system as determined necessary to ensure compliance by the Air Pollution Control Officer. Such operational characteristics shall include, but are not limited to:</p>	Yes	This engine has manufacturer installed three-way catalyst and is certified with this three-way catalyst as the add-on control device, therefore, the engine is exempt from this requirement as emergency engine per (b)(5).	N/A

	(i) engine air-to-fuel ratio; (ii) temperature of exhaust gas at the inlet and outlet of the add-on control equipment; (iii) oxygen content of exhaust gas at the inlet and outlet of the add-on control equipment; or (iv) flow rate of NO _x reducing agent added to the engine exhaust gas.			
69.4.1(e)(3)	All engines must be equipped with a non-resettable totalizing fuel or hour meter which shall be replaced in accordance with subsection (g)(7) of this rule.	Yes	Permit conditions will require installation of a non-resettable hour meter and specify the requirements for replacement.	C43938
69.4.1(e)(4)	Requires an owner or operator of a new or replacement non-emergency gaseous-fueled engine rated at 1,000 bhp or greater and permitted to operate more than 2,000 hours per calendar year to install, operate, and maintain a Continuous Emissions Monitoring System (CEMS) for NO _x and CO.	N/A	This is an emergency engine, therefore is not subject to this requirement.	N/A
69.4.1(e)(5)	Rule 69.4.1(e)(5) requires an owner or operator of a non-emergency gaseous-fueled engine, except engines specified in Subsections (b)(3)(ii), (b)(4)(ii) or (e)(4), to have a trained operator use a portable analyzer to take NO _x and CO emission readings.	N/A	This is an emergency engine, therefore is not subject to this requirement.	N/A
69.4.1(f)(1)	Requires an owner or operator of an engine subject to this rule, except engines specified in Subsections (b)(3), (b)(4), (e)(4) or	N/A	This is an emergency engine, therefore is not subject to this requirement per (b)(4)	N/A

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	(e)(5), to conduct periodic inspections of the engine and any add-on control equipment, as applicable, to ensure that the engine and control equipment is operated in compliance with the provisions of this rule. Inspections shall be conducted at least once every 4,000 hours of operation, or every six months, whichever is less.			
69.4.1(f)(2)	The owner or operator must conduct periodic maintenance on the engine, according to engine/control equipment manufacturer's instructions or other written procedure, at least once each calendar year.	Yes	Annual maintenance of engine according to written procedure will be required by permit conditions.	C45281
69.4.1(g)(1)	Specifies engine information that must be maintained on-site.	Yes	Manufacturer and model number, brake horsepower rating, combustion method and fuel type are contained in the permit application. Manual of recommended maintenance will be specified in permit conditions.	C43937
69.4.1(g)(2)	Requires keeping an operating log containing dates and times and purpose of each period of engine operation, cumulative operation of engine for each calendar year and maintenance records including dates maintenance is performed. Engines within 500 feet of schools must record the time of day when the engine is operated for testing and maintenance. Specific records	Yes	Compliance with this provision is expected and this requirement is specified in permit conditions.	C45288

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	for internal, external, and partial external power outages is required.			
69.4.1(g)(3-5)		N/A	This is an emergency engine and exempt from these requirements per 69.4.1(b)(4)	N/A
69.4.1(g)(6)	Requires records of the dates and times when fuel is being combusted and cumulative operating time if claiming a commissioning exemption.	NA	The applicant has claimed a commissioning period is needed but has not claimed a commissioning exemption.	NA
69.4.1(g)(7)	Requires notification to APCD within 10 calendar days of replacing an hour meter.	Yes	Compliance with this provision is expected and this requirement is specified in permit conditions.	C43938
69.4.1(g)(8)	Requires an owner or operator of an engine subject to the requirements of Subsection (e)(5) [portable analyzer requirements] to comply with specified recordkeeping.	N/A	This is an emergency engine, therefore is not subject to this requirement.	N/A
69.4.1(g)(9)	Requires specified records to be maintained on-site for at least three years and made available to the District upon request.	Yes	Compliance with this provision is expected and this requirement is specified in permit conditions.	C43941
69.4.1(g)(10)	Requires all records required by Subsection (g)(8) to be retained in electronic and/or hardcopy format on-site, or off-site in a central location, for at least three years and made available to the District upon request.	N/A	This is an emergency engine, therefore is not subject to this requirement.	N/A

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69.4.1(h)	Specifies test methods for engines subject to testing.	N/A	This emergency engine is not subject to testing per Subsection (b)(4)(i).	N/A
69.4.1(i)(1)	Requires periodic source testing to confirm compliance with applicable emission standards.	NA	This subsection does not apply to certified emergency engines.	NA

ENGINEERING EVALUATION ATTACHMENTS

4.2 New Source Review (NSR) Rule 20.1-20.4

This application is subject to District NSR rules. At the time of filing, this facility is not considered a major stationary source, for each pollutant, as shown in the following table, and is therefore subject to District Rule 20.2. Calculation of emissions and determination of applicable requirements is performed in accordance with District Rule(s) 20.1 through 20.3.

Table 3: Classification of Major/PSD Source and Modification New Source Review (NSR) Requirements

	NO_x	VOC	PM-10	PM-2.5	SO_x	CO	Lead
<i>Major Source Threshold (ton/year)</i>	50	50	100	100	100	100	100
Major Source? (yes/no)	No	No	No	No	No	No	No
<i>Major Modification Threshold (ton/year)</i>	25	25	15	10	40	100	0.6
Major Modification at a Major Source?	No	No	No	No	No	No	No
Contemporaneous Calculations Performed?	No	No	No	No	No	No	No
Federal Major Stationary Source Threshold (ton/year) (Severe non-attainment status)	25	25	100	100	100	100	100
Federal Major Stationary Source?	No	No	No	No	No	No	No
<i>Federal Major Modification Threshold (ton/year) (Severe non-attainment status)</i>	25	25	15	10	40	100	0.6
Federal Major Modification?	No	No	No	No	No	No	No
Contemporaneous Net Calculations Performed	No	No	No	No	No	No	No
<i>PSD Threshold (ton/year)</i>	250	250	250	--	250	250	--
<i>PSD Modification Threshold (ton/year)</i>	40	40	15	--	40	100	0.6
PSD New or Modification?	No	No	No	No	No	No	No

District Rule 20.2 contains requirements for Best Available Control Technology (BACT), Air Quality Impact Assessment (AQIA), Prevention of Significant Deterioration (PSD) and public notification. No requirements of this rule apply; as shown in the table on the following page and sections 20.2(d)(1-2).

Table 4: New Source Review Discussion				
Rule/Requirement	Requirement	Applicability	Discussion	Condition
Applicability	Rule 20.2 applies to non-major stationary sources	Yes	This is a non-major stationary source, so Rule 20.2 applies.	NA
Type of application	New	Yes	NA	NA
Exemptions	No exemptions apply to this equipment	NA	NA	NA
20.2(d)(1) – BACT				
BACT - NO_x	Installation of BACT is required if emissions of NO _x exceed 10 lbs/day	Not triggered, no permit limit	The potential to emit for this pollutant is 0.08 lbs/day, which does not exceed this trigger level, so BACT is not required.	NA
BACT - VOC	Installation of BACT is required if emissions of VOC exceed 10 lbs/day	Not triggered, no permit limit	The potential to emit for this pollutant is 0.08 lbs/day, which does not exceed this trigger level, so BACT is not required.	NA
BACT - PM-10	Installation of BACT is required if emissions of PM-10 exceed 10 lbs/day	Not triggered, no permit limit	The potential to emit for this pollutant is 0.8 lbs/day, which does not exceed this trigger level, so BACT is not required.	NA
BACT - SO_x	Installation of BACT is required if emissions of SO _x exceed 10 lbs/day	Not triggered, no permit limit	The potential to emit for this pollutant is 0.02 lbs/day, which does not exceed this trigger level, so BACT is not required.	NA
20.2(d)(2) – AQIA				
AQIA - NO_x	Required for project emission increases in excess of 25 lbs/hr, 250 lbs/day or 40 ton/yr of NO _x calculated as NO ₂	Not Triggered	The increase in emissions of this air contaminant from this project does not exceed any of these levels, so no AQIA is required.	NA
AQIA - PM-10	Required for project emission increases in excess of 100 lbs/day or 15 ton/yr of PM-10	Not Triggered	The increase in emissions of this air contaminant from this project does not exceed any of these levels, so no AQIA is required.	NA
AQIA - SO_x	Required for project emission increases in excess	Not Triggered	The increase in emissions of this air contaminant from this project does not	NA

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	of 25 lbs/hr, 250 lbs/day or 40 ton/yr of SOx calculated as SO2		exceed any of these levels, so no AQIA is required.	
AQIA - CO	Required for project emission increases in excess of 100 lbs/hr, 550 lbs/day or 1000 ton/yr of CO	Not Triggered	The increase in emissions of this air contaminant from this project does not exceed any of these levels, so no AQIA is required.	NA
20.2(d)(3) - PSD	Applicable to source that may have a significant impact on a class I area	NA	Emissions from this engine do not trigger PSD requirements.	NA
20.2(d)(4) - Public Notice	Requires 30 day public notice if an AQIA was required or if increase in VOC emissions from the project exceed 250 lbs/day or 40 ton/year	NA	AQIA was not required and VOC emission increase from this project does not exceed these levels.	NA

20.2(d)(1) – BACT

No BACT limits were triggered by this engine, therefore no BACT analysis is required for this project.

20.2(d)(2) – AQIA

No AQIA limits were triggered by this engine, therefore no AQIA is required for this project.

4.3 Toxic New Source Review – Rule 1200

District Rule 1200 applies to any application that is part of a project which results in an emission increase of toxic air contaminants. The rule limits the increase in acute and chronic health hazard index (HHI) to no more than one from the project and limits the increase in cancer risk from the project to no more than one in one million if the engine is not equipped with Toxics BACT (T-BACT) or no more than ten in one million if the project meets T-BACT requirements. The following table contains an in-depth review of Rule 1200 requirements. If a refined HRA was required, the HRA report is attached.

Table 5: Rule 1200 Applicable Requirements and Discussion

Question	Answer	Discussion
Does the application result in an increase in toxic emissions?	Yes	The application results in an increase in toxic emissions of Diesel Particulate Matter or specific trace heavy metals and organics (as shown in emission calculations section).
Do any special exemptions apply to this equipment?	No	No exemptions apply to this equipment
Are there any other applications that are part of the project?	No	NA
What type of HRA was used?	Refined	Engine did not pass De Minimis and was sent for a refined HRA. See HRA attached.
Is the Project Equipped with T-BACT?	Yes	This engine is equipped with a 3-way catalyst which is considered T-BACT for this equipment.
Cancer Risk increase (per one million)	$0.03 < 10$	Project meets standard of one in ten million.
Chronic HHI	$1.91E-05 \leq 1$	Meets standard of one.
Acute HHI	$0.0075 \leq 1$	Meets standard of one.
Passes Rule 1200?	Yes	Maintenance and testing (non-emergency operation) must be limited by permit conditions to 52 hours per calendar year

Based on this analysis, the proposed engine complies with all applicable requirements of District Rule 1200.

4.4 AB3205

Requirements in the California Health and Safety Code in sections 42301.6 through 42301.9 (a.k.a. "AB3205 requirements") specify that prior to issuing an authority to construct for sources located within 1000 feet of a K-12 school, a 30-day public notification process must be conducted.

This project is located within 1000 feet of a school (Museum School), so public notice is required for this section. A copy of the public notice is attached to the file and when the notice is issued, this evaluation and relevant attachments will be made available on the

District's website for review. If any comments are received, they will be reviewed, considered and responded to prior to taking action on the permit including revising any requirements as necessary in response to comments received.

4.5 State and Federal Regulations.

This engine is subject to federal EPA issued National Emission Standards for Hazardous Air Pollutants (NESHAPs) and New Source Performance Standards (NSPS). This engine is not subject to ATCM.

The NESHAP (subpart ZZZZ) requires that all new emergency engines comply with the rule by complying with the NSPS (subpart IIII). Applicable requirements of the NSPS include purchasing a certified engine, operating it as directed by the manufacturer, and maintaining records to substantiate compliance.

NESHAPs - 40 CFR Part 63 Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines (RICE)

§63.6590(c) requires that an affected source that is a new or reconstructed stationary RICE located at an area source to meet the requirements of 40 CFR part 60 Subpart IIII (NSPS), for compression ignition engines or 40 CFR Part 60 Subpart JJJJ (NSPS) for spark ignition engines. No further requirements apply for such engines under this part.
- This engine is a new RICE located at an area source and must comply with the requirements of 40 CFR Part 60 Subpart JJJJ as shown below. Therefore, it is in compliance with NESHAP requirements.

NSPS - 40 CFR Part 60 Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.

§ 60.4230(a)(3)(iv) states that the provisions of this subpart are applicable to emergency engines that are manufactured on or after January 1, 2009.

- This emergency engine was manufactured in 2023, therefore it is subject to the requirement of this subpart.

§ 60.4233 (e) requires owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) to comply with the emission standards in Table 1 of this subpart. Table 1 requires emergency engines rated greater than 130 HP to meet the emission standards of 2.0 g/bhp-hr of NO_x, 4.0 g/bhp-hr of CO and 1.0 g/bhp-hr for VOC.

- This engine complies with this requirement with emissions of 0.007 g/bhp-hr of NO_x, 0.261 g/bhp-hr of CO, and 0.007 g/bhp-hr of VOC.

§ 60.4236 requires that after January 1, 2011, owners and operators of emergency stationary SI ICE with a maximum power of greater than 19 KW (25 HP) to not install engines that do not meet the applicable emission standard requirements of § 60.4233.

- *This engine meets the emission standards requirements of § 60.4233 as shown above.*

§60.4243(a)(1) requires that operators of a certified SI ICE that maintain the engine and control device according to the manufacturer's emission-related written instructions to keep records of conducted maintenance to demonstrate compliance.

- *Records keeping requirements are included in permit conditions.*

§60.4243(b)(1) requires owners or operators of a stationary SI ICE that must comply with the emission standards of §60.4233 to purchase an engine certified for the same model year and demonstrating compliance according to the methods specified in this subpart.

- *This engine is certified for the same model year for engine family PKHXB06.2HNL .*

§60.4243(d) allows emergency stationary ICE to be operated for the purpose of maintenance checks and readiness testing recommended by federal, State or local government for up to 100 hours per year.

- *Permit conditions will allow for testing and maintenance operation of 52 hours per year.*

§60.4243(g) stated that it is expected that air to fuel ratio controllers be used with the operation of three-way catalyst/non-selective catalytic reduction. The air to fuel ratio controller must be maintained and operated appropriately to ensure proper operation of the engine and control device to minimize emissions at all times.

- *This engine is equipped with an internal electronic air to fuel ratio controller and permit conditions will ensure maintenance and operation compliance.*

§60.4245(a) requires that owners and operators of stationary SI ICE to keep records of all notifications, maintenance, certification, compliance with the emission standard requirements if the engine is not certified.

- *This engine is certified. Compliance with this requirement is verified for the engineering evaluation and is included in permit conditions.*

4.6 Title V.

This is not a Title V facility therefore this requirement does not apply.

5.0 Recommendations

This equipment is expected to comply with all rules and regulations, and therefore it is recommended *(pending completion of the AB3205 noticing and comment process)* that an authority to construct be issued with the following conditions.

6.0 Recommended Conditions

Condition BEC APCD2020-CON-001653 with a 52 hour/year limit for non-emergency/maintenance and testing.

All relevant attachments are uploaded to BCMS under the corresponding application number.

Rule 1200 Health Risk Assessment

Facility Name: Premium West Construction
Facility ID: APCD2024-SITE-04614
Application: APCD2024-APP-008382
Project Engineer: Austin Stein
Modeler: Bill Reeve
Toxics Risk Analyst: Maria Galvez
Date Submitted to Toxics: 09/04/2024
Date Completed by Toxics: 9/25/2024
HRA Tools Used: Lakes-AERMOD (Version 23132)/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:

Maximum Individual Cancer Risk (Resident)	0.03 in one million
Chronic Noncancer Health Hazard Index (Resident)	= 1.91E-05
8-Hour Noncancer Health Hazard Index (Worker)	= NA*
Maximum Acute Health Hazard Index	= 0.0075

*8-Hour Non-Cancer Health Hazard Index is only applicable when calculating worker risk

Input Data Provided by Project Engineer:

Type of Source: Emergency Natural Gas Fired Engine

Controls Description: None.

Worst-Case TAC Emissions Increase:

Toxic Air Contaminant	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lb/yr)
ACETALDEHYDE	4.87E-04	2.53E-02
ACROLEIN	1.68E-05	8.73E-04
BENZENE	2.68E-04	1.40E-02
1,3-Butadiene	1.17E-04	6.11E-03
ETHYL BENZENE	5.03E-06	2.62E-04
FORMALDEHYDE	3.51E-03	1.82E-01
METHANOL	5.20E-04	2.70E-02
METHYLENE CHLORIDE	6.71E-06	3.49E-04
NAPHTHALENE	1.68E-05	8.73E-04
PAHs	1.68E-05	8.73E-04
TOLUENE	1.01E-04	5.24E-03
XYLENES	3.36E-05	1.75E-03

Process Data:

Operation Parameter	Value
Engine horsepower (bhp)	204
Fuel Consumption (scf/hr)	1678
Annual hours of operation	52

Release Parameters:

Exhaust Flow Rate, cfm:	1024
Exhaust Temperature, °F:	1292
Stack Height above ground, ft:	81.0
Stack Diameter, ft:	0.29

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 23132) processed Lindbergh Field 2019/2021 ustar adjusted 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.

*HARP - HRCalc v22118 9/24/2024 12:02:08 PM - Cancer Risk - Input File: D:\8382_Premium West Construction\8382_RAST\resident_HRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBRE	CONC	RISK_SUM	SCENARIO
1	Source1		75070	Acetaldehy	2.10E-05	1.42E-10	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
2	Source1		107028	Acrolein	7.24E-07	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
3	Source1		71432	Benzene	1.16E-05	7.85E-10	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
4	Source1		106990	1,3-Butadi	5.06E-06	2.05E-09	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
5	Source1		100414	Ethyl Benz	2.17E-07	1.28E-12	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
6	Source1		50000	Formaldehy	0.000151	2.15E-09	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
7	Source1		67561	Methanol	2.24E-05	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
8	Source1		75092	Methylene	2.89E-07	6.84E-13	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
9	Source1		91203	Naphthale	7.24E-07	5.88E-11	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
10	Source1		1151	PAHs-w/o	7.24E-07	2.05E-08	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
11	Source1		108883	Toluene	4.34E-06	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
12	Source1		1330207	Xylenes	1.45E-06	0.00E+00	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
						2.56E-08	

*HARP - HRCalc v22118 9/24/2024 12:02:08 PM - Chronic Risk - Input File: D:\8382_Premium West Construction\8382_RAST\resident_HRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBRE	CONC	RESP	SCENARIO
1	Source1		75070	Acetaldehy	2.10E-05	1.50E-07	NonCancerChronicDerived_InhSoilDermMMilk
2	Source1		107028	Acrolein	7.24E-07	2.07E-06	NonCancerChronicDerived_InhSoilDermMMilk
3	Source1		71432	Benzene	1.16E-05	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
4	Source1		106990	1,3-Butadi	5.06E-06	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
5	Source1		100414	Ethyl Benz	2.17E-07	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
6	Source1		50000	Formaldehy	0.000151	1.68E-05	NonCancerChronicDerived_InhSoilDermMMilk
7	Source1		67561	Methanol	2.24E-05	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
8	Source1		75092	Methylene	2.89E-07	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
9	Source1		91203	Naphthale	7.24E-07	8.04E-08	NonCancerChronicDerived_InhSoilDermMMilk
10	Source1		1151	PAHs-w/o	7.24E-07	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
11	Source1		108883	Toluene	4.34E-06	0.00E+00	NonCancerChronicDerived_InhSoilDermMMilk
12	Source1		1330207	Xylenes	1.45E-06	2.07E-09	NonCancerChronicDerived_InhSoilDermMMilk
						1.91E-05	

*HARP - HRCalc v22118 9/24/2024 12:02:08 PM - Acute Risk - Input File: D:\8382_Premium West Construction\8382_RAST\resident_HRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBRE	CONC	EYE	SCENARIO
1	Source1		75070	Acetaldehy	0.0509	1.08E-04	NonCancerAcute
2	Source1		107028	Acrolein	0.00176	7.04E-04	NonCancerAcute
3	Source1		71432	Benzene	0.0281	0.00E+00	NonCancerAcute
4	Source1		106990	1,3-Butadi	0.0123	0.00E+00	NonCancerAcute
5	Source1		100414	Ethyl Benz	0.000527	0.00E+00	NonCancerAcute
6	Source1		50000	Formaldehy	0.367	6.67E-03	NonCancerAcute
7	Source1		67561	Methanol	0.0544	0.00E+00	NonCancerAcute
8	Source1		75092	Methylene	0.000702	0.00E+00	NonCancerAcute
9	Source1		91203	Naphthale	0.00176	0.00E+00	NonCancerAcute
10	Source1		1151	PAHs-w/o	0.00176	0.00E+00	NonCancerAcute
11	Source1		108883	Toluene	0.0105	2.10E-06	NonCancerAcute
12	Source1		1330207	Xylenes	0.00351	1.60E-07	NonCancerAcute
						7.49E-03	

PROJECT TITLE:
APP008382
annual x/q

COMMENTS:



SOURCES:

1

RECEPTORS:

22817

OUTPUT TYPE:

Concentration

MAX:

114 ug/m³

COMPANY NAME:

MODELER:

DATE:

9/25/2024

SCALE:

1:1,179

0  0.03 km

PROJECT NO.:

PROJECT TITLE:
APP008382
 hourly x/q

COMMENTS:



SOURCES:

1

RECEPTORS:

22817

OUTPUT TYPE:

Concentration

MAX:

830 ug/m³

COMPANY NAME:

MODELER:

DATE:

9/25/2024

SCALE:

1:1,388

0 to 0.04 km

PROJECT NO.:

RISK ANALYST ONLY

RISK ANALYST ONLY						
Annual Receptor Type: Resident ▼			Hourly Receptor Type: PMI ▼			
ANNUAL DISPERSION FACTOR (µg/m3)/(g/s): 57.7 Distance (m):			HOURLY DISPERSION FACTOR (µg/m3)/(g/s): 830.4 Distance (m):			
CHEMICAL NAME	Acute Emission Rate lb/hr	Annual Emission Rate lb/yr	Acute Emissions Rate g/s	Annual Emission Rate g/s	Hourly GLC µg/m ³	Annual GLC µg/m ³
ACETALDEHYDE	4.87E-04	2.53E-02	6.13E-05	3.64E-07	5.09E-02	2.10E-05
ACROLEIN	1.68E-05	8.73E-04	2.11E-06	1.26E-08	1.76E-03	7.24E-07
BENZENE	2.68E-04	1.40E-02	3.38E-05	2.01E-07	2.81E-02	1.16E-05
BUTADIENE, 1,3-	1.17E-04	6.11E-03	1.48E-05	8.79E-08	1.23E-02	5.06E-06
ETHYL BENZENE	5.03E-06	2.62E-04	6.34E-07	3.77E-09	5.27E-04	2.17E-07
FORMALDEHYDE	3.51E-03	1.82E-01	4.42E-04	2.62E-06	3.67E-01	1.51E-04
METHANOL	5.20E-04	2.70E-02	6.55E-05	3.89E-07	5.44E-02	2.24E-05
METHYLENE CHLORIDE	6.71E-06	3.49E-04	8.46E-07	5.02E-09	7.02E-04	2.89E-07
NAPHTHALENE	1.68E-05	8.73E-04	2.11E-06	1.26E-08	1.76E-03	7.24E-07
POLYCYCLIC AROM. HC (PAH) [Treat as B(a)P for HRA]	1.68E-05	8.73E-04	2.11E-06	1.26E-08	1.76E-03	7.24E-07
TOLUENE	1.01E-04	5.24E-03	1.27E-05	7.53E-08	1.05E-02	4.34E-06
XYLENES	3.36E-05	1.75E-03	4.23E-06	2.51E-08	3.51E-03	1.45E-06

Facility Name: Premium West Construction
 Application Number: APCD2024-APP-008382
 Site ID Number: APCD2024-SITE-04614
 2710 3rd Ave, San Diego, CA 92103
 Equipment Address: Is there an existing, pre-project engine? (yes/no) No
 APCD Project Engineer: Austin Stein

Make: Kohler
 Model: KG6208THD
 S/N: TBD
 Fuel Type: Natural Gas (NG)
 BHP Rating: 204
 Model Year: 2023
 EPA Certified? Yes
 Engine Family Number: P4XN906.2HNL
 Device Driven: 125 KW standby generator
 Control Equipment: 3-way catalyst

Completion Check List		
Item	Attached and Completed?	
	Yes	No
General Application	Yes	
Emergency Engine Supplemental Form	Yes	
Toxics Form	Yes	
Plot Plans/Site Maps with required locations	Yes	
Engine Manufacturer Specs	Yes	
Engine Emissions Data	Yes	
Engine CARB/EPA Certification	Yes	
Control Equipment Specs (if applicable)		
BACT Analysis (if applicable)		

LEGEND

= Enter information in these cells

= Calculation Field (DO NOT EDIT)

= Highlight Fields (DO NOT EDIT)

= Assumed Constants Field (DO NOT EDIT)

= Calculation Field (important information) (DO NOT EDIT)

Based on Manufacturer Specs (enter only one emission factor type per pollutant)			
NOx: g/BHP-hr:	0.007	0.01 g/KW-hr	ppmvd @ 15% O2
CO: g/BHP-hr:	0.201	0.35 g/KW-hr	ppmvd @ 15% O2
NMHC: g/BHP-hr:	0.007	0.01 g/KW-hr	ppmvd @ 15% O2
PM10: g/BHP-hr:	N/A; calculation will use default value	g/KW-hr	ppmvd @ 15% O2
NOx: g/BHP-hr. + NMHC: g/BHP-hr. = 0.01			

Select Use units if not scf/hr	Converted Fuel Usage			
Fuel Usage: 1678.0 scf/hr	1678.0 scf/hr	24.1 scf/hr [NG]	Assume 16 g/mol for NG, standard conditions (14.7 PSI, 68 degrees Fahrenheit)	16 + 385 = 0.04158 lb/scf
	1.7 MMBtu/hr	1020 btu/scf [NG]		lb/lb-mol NG scf/lb-mol
	69.7 lb/hr	8.8 scf/hr [LPG]	Assume 44 g/mol for LPG, standard conditions (14.7 PSI, 68 degrees Fahrenheit)	44 + 385 = 0.11429 lb/scf
		2572 btu/scf [LPG]		lb/lb-mol LPG scf/lb-mol

Operating Schedule, hrs/day: 24
 Operating Schedule, hrs/yr: 52
 Exhaust Flow Rate, cfm: 1034.00
 Exhaust Temperature, °F: 1292.00
 Stack Height above ground, ft: 81.00
 Stack Diameter, ft: 0.29

Nearest School, ft: 512.00
 Residential Receptor, m: 25.00 30.00 ft
 Occupational Receptor, m: 25.00 30.00 ft
 Acute Receptor, m: 25.00 30.00 ft

If less than 1000 ft from source of emissions to school property line and increase in toxic emissions, AB3205 notice may be required

Consult Toxics? Consult Toxics

Vertical Exhaust? (yes/no): Yes
 If not vertical, describe (e.g. horizontal, 45 degrees, etc.):
 Flapper Valve? Flapper
 Flow Obstructions (yes/no): No
 Point or Volume source? Point
 Single or multiple point/volume sources? Single

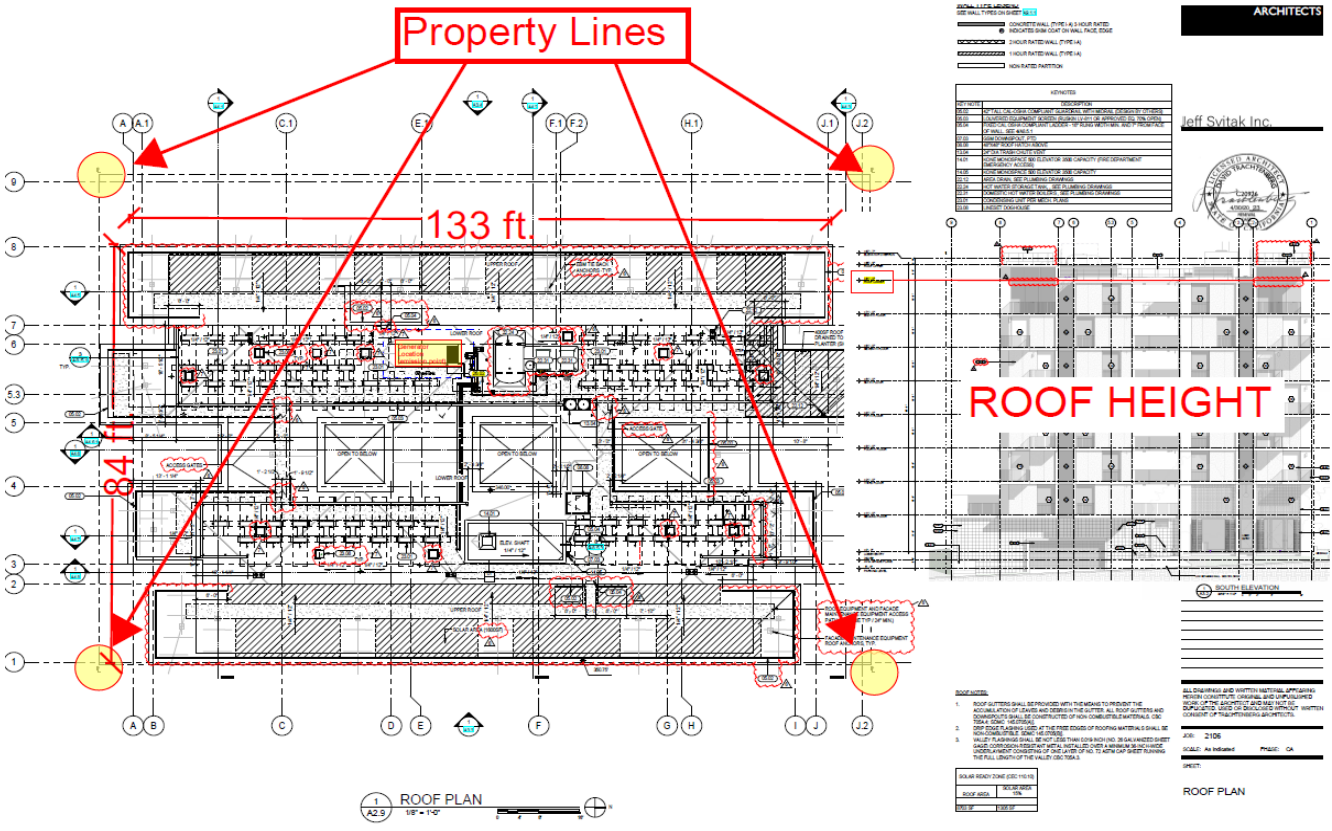
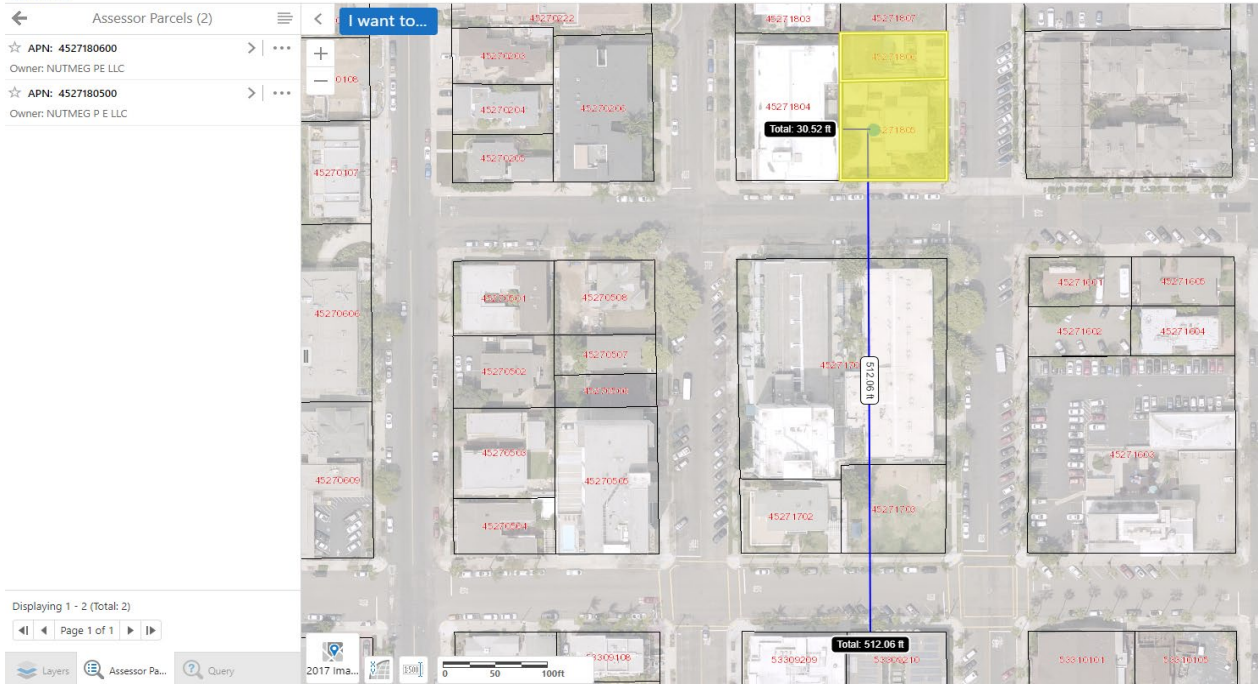
Emission Standards (Emergency NG):	
25-41K130	NP2130
NSPS Part 60 Subpart JJJJ NMHC + NOx (g/kW-hr): 10 CO (g/kW-hr): 387	NSPS Part 60 Subpart JJJJ NOx (g/kW-hr): 2.0 CO (g/kW-hr): 4.0 VOC (g/kW-hr): 1.0
Stationary Part I NMHC + NOx (g/kW-hr): 2.7 CO (g/kW-hr): 4.4	Stationary Part I NMHC + NOx (g/kW-hr): 2.7 CO (g/kW-hr): 4.4

69.4.1 (E) New or Replacement (Emergency) Standby Engines			
Engine Type	Concentration of NOx ¹	Concentration of VOC ²	Concentration of CO ³
Rich-burn engines using gaseous fuel	25 ppmv	86 ppmv	540 ppmv
Lean-burn engines using gaseous fuel	2.0 g/bhp-hr or 160 ppmv	1.0 g/bhp-hr or 86 ppmv	4.0 g/bhp-hr or 540 ppmv

Engine type and fuel	Maximum engine power	Manufacturer date	Emission standards			
			g/BHP-hr	ppmvd at 15% O2	NOx	VOC
Non-Emergency 50 Natural Gas and Non-Emergency 51 Lean Burn LPG	500-3HP-1300	3/1/2008	2.6	4.4	1.6	150
Non-Emergency 51 Lean Burn Natural Gas and LPG	500-3HP-1300	3/1/2008	2.6	4.4	1.6	150
Non-Emergency 51 Natural Gas and Non-Emergency 51 Lean Burn 270 (except Lean Burn 500-3HP-1300)	3HP-500	3/1/2008	1.6	2.6	0.8	270
Lean-Burn Diapater Gas (except lean burn 500-3HP-1300)	3HP-500	3/1/2008	1.6	2.6	0.8	270
Lean-Burn Diapater Gas (Lean Burn)	500-3HP-1300	3/1/2008	2.6	4.4	1.6	150
Emergency	25-3HP-130	3/1/2009	N/A	N/A	N/A	N/A
	3HP-130		2.6	4.4	1.6	150

Updated 4/16/2024

INSERT PHOTO(S) OF PLOT MAP SHOWING GENERATOR LOCATION AND PROPERTY BOUNDARY



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

(ALL REQUESTED INFORMATION IS IMPORTANT - PLEASE ENSURE ORANGE CELLS ARE FILLED, IF KNOWN)

Facility Name:	Premium West Construction		
Equipment Location:	2710 3rd Ave, San Diego, CA 92103		
Project Description:	Natural Gas (NG) Engine		
Control Equipment:	3-way catalyst		
Operating Schedule:	Hours per Day:		Weeks per Year:
	Days per Week:		Days per Year:

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 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)	81.00		
Stack Diameter (or length x width) (ft)	0.29		
Exhaust Gas Temperature (°F) ¹	1292.000		
Exhaust Gas Flow (ACFM)	1024.000		
Direction of Flow ²	vertical		
Flow Obstruction ³	No		
Distance to Nearest Property Line (+/- 10ft)	30.00		

¹ Use "70 °F" or "Ambient" if unknown

² if "other" describe: 0

³ 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)			
Building Width (ft) (optional)	See attached plot plan pdf		
Building Height above ground (ft)			

San Diego APCD Use Only

Additional Rule 1200 Submittal Information

Submittal Date:		Site ID:	APCD2024-SITE-04614
Project Engineer:	Austin Stein	Appl. Number(s):	APCD2024-APP-008382
Fees Collected:		PTO No. (if existing):	

Toxic Screening

Instruction Click below link to open the "Rule 1200" sharepoint folder. Find the most recent generic toxics excel sheet and download a copy. Paste as text only the below cells (purple highlighted) into the "Data" page of the "Rule 1200 generic toxics" excel workbook. Follow instructions of de minimis sheet.
[Rule 1200](#)

Applicant: Premium West Construction
 Application : APCD2024-APP-008382
 Fuel consumption(Proposed Engine): 1678.00 scf/hour Fuel Type (Proposed): Natural Gas (NG)
 Fuel consumption (Existing Engine): 0.00 scf/hour Fuel Type (Existing) 0

(HRA is performed based on natural gas emissions since natural gas toxic emission factors are used as surrogates for propane toxic emission factors).

FOR LPG: Natural Gas EFs were changed to Propane by correcting for the assumed heating value of NG (1020 btu/scf) and standard value for propane (2572 btu/scf)

Operating hours (Proposed Engine): 52 hours/year
 Operating hours (Existing Engine): 52 hours/year

Control Efficiency: 3-way catalyst required Emission factors reflect the control efficiency
 Dispersion Adjustment Factors: Hourly: 1 Annual: 1

TAC	NG -	LPG -	Toxic Emissions	
	Emission Factor (*) (lbs/million scf)	Emission Factor (*) (scf)	lbs/hour	lbs/year
75070 ACETALDEHYDE	2.90E-01	7.31E-01	4.87E-04	2.53E-02
107028 ACROLEIN	1.00E-02	2.52E-02	1.68E-05	8.73E-04
71432 BENZENE	1.60E-01	4.03E-01	2.68E-04	1.40E-02
106990 1,3-Butadiene	7.00E-02	1.77E-01	1.17E-04	6.11E-03
100414 ETHYL BENZENE	3.00E-03	7.56E-03	5.03E-06	2.62E-04
50000 FORMALDEHYDE	2.09E+00	5.27E+00	3.51E-03	1.82E-01
67561 METHANOL	3.10E-01	7.82E-01	5.20E-04	2.70E-02
75092 METHYLENE CHLORIDE	4.00E-03	1.01E-02	6.71E-06	3.49E-04
91203 NAPHTHALENE	1.00E-02	2.52E-02	1.68E-05	8.73E-04
1151 PAHs	1.00E-02	2.52E-02	1.68E-05	8.73E-04
108883 TOLUENE	6.00E-02	1.51E-01	1.01E-04	5.24E-03
133020 XYLENES	2.00E-02	5.04E-02	3.36E-05	1.75E-03

CAS	Compound	Emission Increase	
		lbs/hr	lbs/yr
75070	ACETALDE	4.87E-04	2.53E-02
107028	ACROLEIN	1.68E-05	8.73E-04
71432	BENZENE	2.68E-04	1.40E-02
106990	1,3-Butadier	1.17E-04	6.11E-03
100414	ETHYL BEN	5.03E-06	2.62E-04
50000	FORMALDE	3.51E-03	1.82E-01
67561	METHANOL	5.20E-04	2.70E-02
75092	METHYLEN	6.71E-06	3.49E-04
91203	NAPHTHAL	1.68E-05	8.73E-04
1151	PAHs	1.68E-05	8.73E-04
108883	TOLUENE	1.01E-04	5.24E-03
133020	XYLENES	3.36E-05	1.75E-03

* (Date:04/27/2022) San Diego APCD Emission Factor - Method E19 - Engines, Natural Gas Fired, 4 Stroke, Rich Burn, with Non-Selective Catalytic Reduction

HARP2 - HRACalc (dated 22118) 9/24/2024 12:02:08 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully

RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 30

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0
2<16 Years Bin: 14
16<30 Years Bin: 14
16 to 70 Years Bin: 0

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: True
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

INHALATION

Daily breathing rate: RMP

Worker Adjustment Factors

Worker adjustment factors enabled: NO

Fraction at time at home

3rd Trimester to 16 years: OFF

16 years to 70 years: ON

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 saved to: D:\8382_Premium West

Construction\8382_RAST\resident_CancerRisk.csv

Calculating chronic risk

Chronic risk saved to: D:\8382_Premium West

Construction\8382_RAST\resident_NCChronicRisk.csv

Calculating acute risk

Acute risk saved to: D:\8382_Premium West

Construction\8382_RAST\resident_NCAcuteRisk.csv

HRA ran successfully

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BLDG EXISTS	URBAN SOURCE	CAP/ HOR	EMIS RATE SCALAR VARY BY
STCK1	0	0.10000E+01	484778.1	3621782.1	81.3	24.69	973.15	78.75	0.09	YES	YES	NO	

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** MODEL SETUP OPTIONS SUMMARY ***

** Model Options Selected:

- * Model Uses Regulatory DEFAULT Options
- * Model Is Setup For Calculation of Average CONCentration Values.
- * NO GAS DEPOSITION Data Provided.
- * NO PARTICLE DEPOSITION Data Provided.
- * Model Uses NO DRY DEPLETION. DDPLETE = F
- * Model Uses NO WET DEPLETION. WETDPLT = F
- * Stack-tip Downwash.
- * Model Accounts for ELEVated Terrain Effects.
- * Use Calms Processing Routine.
- * Use Missing Data Processing Routine.
- * No Exponential Decay.
- * Model Uses URBAN Dispersion Algorithm for the SBL for 1 Source(s),
 for Total of 1 Urban Area(s):
 Urban Population = 1381000.0 ; 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: 1 Source(s); 1 Source Group(s); and 22817 Receptor(s)

with: 1 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: 22112

**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

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 9.00 ; 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 = 6.1 MB of RAM.

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

**Detailed Error/Message File: 8382_Premium.err
**File for Summary of Results: 8382_Premium.sum

▲ *** AERMOD - VERSION 23132 *** C:\Users\breeve\OneDrive - County of San Diego\HDrive\Modeling Proje ***
*** AERMET - VERSION 22112 ***

09/23/24
12:06:15
PAGE 2

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1	1 1 1 1 1			

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

▲ *** AERMOD - VERSION 23132 *** C:\Users\breeve\OneDrive - County of San Diego\HDrive\Modeling Proje ***
*** AERMET - VERSION 22112 ***

09/23/24
12:06:15
PAGE 3

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

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

Surface file: ..\..\..\Meteorology Documents\AERMET Files\AERMET 22112 PROJECTS\SAN\Lindbergh_ Met Version: 22112
 Profile file: ..\..\..\Meteorology Documents\AERMET Files\AERMET 22112 PROJECTS\SAN\Lindbergh_
 Surface format: FREE
 Profile format: FREE
 Surface station no.: 23188 Upper air station no.: 3190
 Name: SAN_DIEGO/LINDBERGH_FIELD 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	-3.8	0.078	-9.000	-9.000	-999.	53.	11.4	0.02	0.83	1.00	1.40	356.	10.0	282.5	2.0			
19	01	01	1	02	-4.6	0.086	-9.000	-9.000	-999.	61.	12.4	0.02	0.83	1.00	1.55	336.	10.0	281.4	2.0			
19	01	01	1	03	-9.4	0.123	-9.000	-9.000	-999.	104.	18.0	0.02	0.83	1.00	2.18	357.	10.0	281.4	2.0			
19	01	01	1	04	-13.9	0.151	-9.000	-9.000	-999.	141.	25.2	0.02	0.83	1.00	2.64	26.	10.0	281.4	2.0			
19	01	01	1	05	-13.7	0.150	-9.000	-9.000	-999.	139.	24.7	0.01	0.83	1.00	2.64	31.	10.0	280.9	2.0			
19	01	01	1	06	-15.6	0.160	-9.000	-9.000	-999.	154.	28.2	0.01	0.83	1.00	2.81	40.	10.0	282.0	2.0			
19	01	01	1	07	-20.6	0.202	-9.000	-9.000	-999.	219.	45.1	0.02	0.83	1.00	3.47	26.	10.0	280.3	2.0			
19	01	01	1	08	-11.1	0.200	-9.000	-9.000	-999.	215.	65.8	0.02	0.83	0.49	3.39	18.	10.0	281.4	2.0			
19	01	01	1	09	36.3	0.219	0.541	0.005	158.	245.	-26.2	0.02	0.83	0.29	3.15	24.	10.0	284.2	2.0			
19	01	01	1	10	80.5	0.251	0.835	0.005	262.	302.	-17.9	0.02	0.83	0.22	3.52	28.	10.0	285.9	2.0			
19	01	01	1	11	110.8	0.250	1.329	0.005	771.	300.	-12.8	0.02	0.83	0.20	3.41	26.	10.0	287.0	2.0			
19	01	01	1	12	125.5	0.288	1.459	0.005	899.	371.	-17.3	0.01	0.83	0.19	4.07	45.	10.0	288.8	2.0			
19	01	01	1	13	118.6	0.434	1.485	0.005	1004.	687.	-62.6	0.01	0.83	0.19	6.63	39.	10.0	288.8	2.0			
19	01	01	1	14	100.0	0.500	1.440	0.005	1085.	848.	-113.5	0.01	0.83	0.20	7.81	34.	10.0	288.8	2.0			
19	01	01	1	15	65.6	0.423	1.270	0.005	1134.	665.	-104.6	0.02	0.83	0.23	6.52	28.	10.0	288.8	2.0			
19	01	01	1	16	18.3	0.364	0.833	0.005	1147.	529.	-238.7	0.01	0.83	0.32	5.79	41.	10.0	288.1	2.0			
19	01	01	1	17	-24.7	0.277	-9.000	-9.000	-999.	355.	84.7	0.01	0.83	0.59	4.73	30.	10.0	286.4	2.0			
19	01	01	1	18	-12.2	0.141	-9.000	-9.000	-999.	141.	22.0	0.01	0.83	1.00	2.50	57.	10.0	285.9	2.0			
19	01	01	1	19	-18.0	0.179	-9.000	-9.000	-999.	182.	35.3	0.01	0.83	1.00	3.12	58.	10.0	284.8	2.0			
19	01	01	1	20	-24.4	0.243	-9.000	-9.000	-999.	287.	64.8	0.01	0.83	1.00	4.17	48.	10.0	284.2	2.0			
19	01	01	1	21	-19.0	0.188	-9.000	-9.000	-999.	197.	39.0	0.02	0.83	1.00	3.24	61.	10.0	283.8	2.0			
19	01	01	1	22	-27.5	0.272	-9.000	-9.000	-999.	341.	81.5	0.02	0.83	1.00	4.61	61.	10.0	283.1	2.0			
19	01	01	1	23	-27.4	0.272	-9.000	-9.000	-999.	341.	81.6	0.02	0.83	1.00	4.61	68.	10.0	283.8	2.0			
19	01	01	1	24	-23.9	0.237	-9.000	-9.000	-999.	277.	61.6	0.02	0.83	1.00	4.03	71.	10.0	283.1	2.0			

First hour of profile data

YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
19 01 01 01 10.0 1 356. 1.40 282.6 99.0 -99.00 -99.00

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

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*** AERMET - VERSION 22112 *** ***

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*** 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
ALL	1ST HIGHEST VALUE IS	113.52421 AT (484798.13, 3621773.97, 80.90, 80.90, 0.00)	DC	
	2ND HIGHEST VALUE IS	103.67893 AT (484798.42, 3621764.42, 80.61, 80.61, 0.00)	DC	
	3RD HIGHEST VALUE IS	98.13386 AT (484802.00, 3621778.00, 80.92, 80.92, 0.00)	DC	
	4TH HIGHEST VALUE IS	90.18740 AT (484797.84, 3621783.53, 81.10, 81.10, 0.00)	DC	
	5TH HIGHEST VALUE IS	88.88693 AT (484789.82, 3621764.24, 80.47, 81.63, 0.00)	DC	
	6TH HIGHEST VALUE IS	85.76873 AT (484802.00, 3621758.00, 80.50, 80.50, 0.00)	DC	
	7TH HIGHEST VALUE IS	79.08471 AT (484822.00, 3621758.00, 80.83, 80.83, 0.00)	DC	
	8TH HIGHEST VALUE IS	65.89449 AT (484781.23, 3621764.06, 80.17, 81.63, 0.00)	DC	
	9TH HIGHEST VALUE IS	58.37183 AT (484797.55, 3621793.08, 81.18, 81.18, 0.00)	DC	
	10TH HIGHEST VALUE IS	57.65345 AT (484822.00, 3621778.00, 81.35, 81.35, 0.00)	DC	

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

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*** AERMET - VERSION 22112 *** ***

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

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

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL HIGH 1ST HIGH VALUE IS	830.37207	ON 19010710: AT (484797.26, 3621802.64, 81.24, 81.24,	0.00)	DC

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

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*** AERMET - VERSION 22112 *** ***

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 683 Informational Message(s)

A Total of 26304 Hours Were Processed

A Total of 249 Calm Hours Identified

A Total of 433 Missing Hours Identified (1.65 Percent)

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

***** WARNING MESSAGES *****

SO W320	38	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
ME W186	101	MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used	0.50
ME W187	101	MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET	

Galvez, Maria

From: Stein, Austin C
Sent: Wednesday, September 4, 2024 10:57 AM
To: Reeve, Bill; Nguyen, Tony
Cc: Swaney, Jim; Canter, Adam; Horres, Nicholas
Subject: 8382_Premium West Construction - HRA Request
Attachments: APP008382_Calculations.xlsm; APP008382_De Minimis.xlsm

Hello,

Here is an HRA request.

The engine is located on top of the proposed apartment building. Apartment building dimensions show in plot plans.

Please have the modeler post the results in [8382_Premium West Construction](#)

Thank you so much,



San Diego County
**Air Pollution
Control District**

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