

ENGINEERING EVALUATION AUTHORITY TO CONSTRUCT

Facility Name: Home Depot #1018
Equipment Type: [34H] California Certified Emergency Engine
Application #: APCD2023-APP-008043
ID#: APCD2004-SITE-05333
Equipment/Facility Address: 5755 Mission Ave
Oceanside, CA 92057
Facility Contact: Bryan Chen (Preparer)
Engineer, Arcadis
650-802-0421
Bryan.chen@arcadis.com

 Recoverable Signature

X Victoria Burns

Victoria Burns
Jr. Air Pollution Control Engineer
Signed by: Victoria Burns

Permit Engineer:

3/21/2024

X Nicholas Horres

Nicholas Horres
Senior Air Pollution Control Engineer
Signed by: NHorres

Senior Engineer Signature:

1.0 Background

1.1 Type of Application: New installation of an emergency diesel engine.

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

1.3 Facility Description: This is Home Depot #1018 in North Oceanside. This facility has (2) active 34W registered engines: APC2009-PTO-981615, driving an emergency generator and PTO-981614, driving a fire pump. No other applications are open at this site.

1.4 Other Background Info: There are no hearing board actions, permit denials, legal settlements, or nuisance complaints. The site is not a Title V facility. There is an open NOV, APCD2023-NOV-000647, issued in 08/2023 for failure to maintain a complete monthly operating log for the backup generator under PTO-981615. Specifically, a total of 8 hours from 08/2022 through 08/2023 were missing. Past closed violations include

exceeding the 20-hour operation limit for in-use emergency engines and unspecified records relating to emergency use, both assigned to the engine under PTO-981615.

2.0 Process Description

2.1 Equipment Description.

Emergency Diesel Engine Generator

Manufacturer: AB Volvo Penta;

Model: TAD1371VE;

S/N: TBD;

Horsepower (maximum rated): 388 bhp;

Model Year: 2023;

EPA Certification: Tier 4 Final engine;

Engine Family (EPA): PVPXL12.8CJA;

Equipped with OEM SCR-Urea, OEM Ammonia Slip Catalyst;

Driving a 250-kW generator.

Testing and Maintenance Limit: 47 hours/ calendar year.

2.2 Process Description.

This is a diesel-powered generator to be used in situations of emergency and for limited operations for maintenance and testing purposes for Home Depot #1018. The facility intends to use the engine for 0.5 hours per week for testing and maintenance. This facility has not indicated an initial commissioning period is required.

2.3 Emissions Controls.

This is a Tier 4 Final engine certified diesel engine. It is equipped with the following:

non-aftertreatment: EDI, ECM, CAC, TC, EGR

aftertreatment: SCR-Urea, Ammonia Slip 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	0.16	0.14	3.37	0.00330	6.60
CO	0.07	0.06	1.53	0.00150	3.00
NMHC	0.0149	0.01	0.31	0.00030	0.60
PM	0.0149	0.01	0.31	0.00030	0.60
SO _x	--	0.00396	0.09492	0.00009	0.19

3.2 Estimated Emissions Assumptions

- Table 1 evaluates the emission unit at 24 hours per day and a total of **47** hours per year, assuming full load operation
- Estimated emissions are calculated for maintenance and testing operations. Emergency use is not counted towards operational limits.
- 15 ppmw sulfur fuel
- Emission factors were EPA-certified emission factors/ standard toxics emission factors for diesel engines.
- 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 diesel 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	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 CARB diesel fuel (15 ppm Sulfur by weight), which will ensure compliance with this requirement.	C28412
Rule 62	Sulfur content of liquid fuel shall not exceed 0.5 % sulfur by weight.	Yes	Permit conditions will require use of CARB diesel fuel (15 ppm Sulfur by weight), which will ensure compliance with this requirement.	C28412
Rule 69.4.1				
69.4.1(d)(1)(ii)(E)	Emission standards for NO _x and CO emissions. For a new or replacement certified diesel engine, NO _x emissions shall not exceed: 3.5 g/bhp-hr if 50≤bhp<100; 3.0 g/bhp-hr if 100≤bhp<175; 3.0 g/bhp-hr if 175≤bhp<750; 4.8 g/bhp-hr if bhp≥750. For a new or replacement certified diesel engine, CO emissions shall not exceed: 3.7 g/bhp-hr if 50≤bhp<100; 3.7 g/bhp-hr if	Yes	Use of an EPA certified Tier 3 engine (Tier 2 for engines with a rated power in excess of 750 bhp) ensures that NO _x and CO emissions comply with this requirement. This engine is a Tier 4 Final engine, which has a lower level of emissions than Tier 2 and Tier 3 engines; therefore, it complies with this requirement.	NA

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	100≤bhp<175; 2.6 g/bhp-hr if 175≤bhp<750; 2.6 g/bhp-hr if bhp≥750.			
69.4.1(d)(2)	Engines operated on diesel fuel shall use only California Diesel Fuel.	Yes	Permit conditions will require use of CARB diesel fuel (15 ppm Sulfur by weight), which will ensure compliance with this requirement.	C28412
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.	C28419
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.	C43433
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. Documentation of CARB diesel fuel certification and manual of recommended maintenance will be specified in permit conditions.	C45251
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	Yes	Compliance with the applicable provisions is expected and these requirements are specified in permit conditions. Engine is not located within 500 feet of school grounds and is Tier 4, emitting 0.0149 g/bhp-hr PM10; therefore, the near-school recording requirement does not apply as subsection <i>93115.13(f)(6) Alternative Compliance Demonstration</i> specifies that an engine may demonstrate compliance with the 0.01 g/bhp-hr PM emission standard in	C46473

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	the engine is operated for testing and maintenance except for an engine that emits no more than 0.01 g/bhp-hr of diesel particulate matter, or meets the requirements specified in 17 CCR, Section 93115.13(f). Specific records for internal, external, and partial external power outages are required.		93115.6(a)(1) by using a Tier 4 certified CI engine that emits no more than 0.015 g/bhp-hr PM.	
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 not claimed a commissioning period is needed.	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.	C28419
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.	C43432
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

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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 - NOx	Installation of BACT is required if emissions of NOx exceed 10 lbs/day	Not triggered, no permit limit	The potential to emit for this pollutant is 3.4 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 0.3 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 0.3 lbs/day, which does not exceed this trigger level, so BACT is not required.	NA
BACT - SOx	Installation of BACT is required if emissions of SOx exceed 10 lbs/day	Not triggered, no permit limit	The potential to emit for this pollutant is 0.1 lbs/day, which does not exceed this trigger level, so BACT is not required.	NA
20.2(d)(2) – AQIA				
AQIA - NOx	Required for project emission increases in excess of 25 lbs/hr, 250 lbs/day or 40 ton/yr of NOx calculated as NO2	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 - SOx	Required for project emission increases in excess	Not Triggered	The increase in emissions of this air contaminant from this project does not	NA

	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.

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	NA
Cancer Risk increase (per one million)	≤ 1	Project meets standard of one in one million.
Chronic HHI	0.000128	Meets standard of one.
Acute HHI	0.08	Meets standard of one.
Passes Rule 1200?	Yes	Maintenance and testing (non-emergency operation) must be limited by permit conditions to 47 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 (Mission Vista High School: 1306 Melrose Dr, Oceanside, CA 92057), 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 both the State Air Toxic Control Measure for Stationary Engines (Stationary ATCM) and federal EPA issued National Emission Standards for Hazardous Air Pollutants (NESHAPs) and New Source Performance Standards (NSPS).

Applicable requirements of the Stationary ATCM include purchasing an engine certified to EPA standards and meeting specified emission standards of the rule, installing an hour meter, conducting maintenance according to a written plan, restrictions on operating the engine for purposes other than emergency use and limited (50 hours/year) use for maintenance and testing, and maintaining records to substantiate compliance with these requirements. This engine is expected to comply with all these requirements as described in the detailed analysis shown in the table following the discussion of NESHAP/NSPS requirements.

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. These requirements closely mirror the ATCM requirements, except that the NSPS is somewhat less stringent regarding allowable PM emission rate and contains some allowance for other types of operation not allowed by the ATCM. This means the more stringent ATCM requirements apply. A detailed analysis of NESHAP and NSPS requirements is shown in the following table.

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Table 6a: State and Federal Requirement Discussion (Stationary ATCM)

Applicable Section	Requirement	Engine Complies/Expected to Comply?	Explanation	Condition
Stationary ATCM				
93115.3	There are no exemptions that apply to this engine	NA	This engine is not one of the engines exempted from any applicable requirements	NA
93115.4	Definitions. Permit conditions ensure that the engine only operates in a manner allowed for engines designated as "Emergency Standby"	Yes	Permit conditions require that the engine operate only as an emergency engine	C40239
93115.5	Requires the use of CARB diesel as fuel.	Yes	Permit conditions will require use of CARB diesel fuel (15 ppm Sulfur by weight), which will ensure compliance with this requirement.	C28412
93115.6(a)(1)	Prohibits non-emergency operation of an emergency engine between 7:30 AM and 3:30 PM during school days if within 500 feet of school and during all school sponsored activities if located on school grounds. <hr/> (a) New Emergency Standby Diesel-Fueled CI Engine (>50 bhp) Operating Requirements and Emission Standards. (1) At-School and Near-School Provisions. No owner or operator shall operate a new stationary	NA	Engine is Tier 4 and emits 0.0149 g/bhp-hr PM; therefore, this requirement does not apply as subsection <i>93115.13(f)(6) Alternative Compliance Demonstration</i> specifies that an engine may demonstrate compliance with the 0.01 g/bhp-hr PM emission standard in 93115.6(a)(1) by using a Tier 4 certified CI engine that emits no more than 0.015 g/bhp-hr PM.	NA

	<p>emergency standby diesel-fueled CI engine for non-emergency use, including maintenance and testing, during the following periods:</p> <p>(A) whenever there is a school sponsored activity, if the engine is located on school grounds, and</p> <p>(B) between 7:30 a.m. and 3:30 p.m. on days when school is in session, if the engine is located within 500 feet of school grounds. Section 93115.6(a)(1) does not apply if the engine emits no more than 0.01 g/bhp-hr of diesel PM.</p>			
93115.6(a)(2)	Allows for engine to be started 30 minutes prior to rotating outage	Yes	Permit conditions specify this requirement.	C28560
93115.6(a)(3)(A)(1)(b)	Requires that all engines used for emergency purposes be certified to at least tier 3 standards (tier 2 for engines with a rated power in excess of 750 bhp) and have Diesel PM emissions less than 0.15 g/bhp-hr	Yes	Use of an EPA certified Tier 3 engine (Tier 2 for engines with a rated power in excess of 750 bhp) with PM emission below this level satisfies this requirement. This is a Tier 4 Final engine; therefore, it complies.	NA
93115.6(a)(3)(A)(1)(c)	Restricts maintenance and testing operation to no more than 50 hours per calendar year	Yes	Permit conditions specify this requirement. This engine is limited to 47 hours/year by Rule 1200.	C44986
93115.6(c)	Does not allow emergency standby engines to operate as part of "demand response programs" unless additional requirements are met	Yes	Permit conditions specify this requirement.	C40907

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93115.10(a)-(b)	Requires that specified information is submitted to the District as part of application package	Yes	The submitted application contained all of the required contact/location information, engine data, and emission information.	NA
93115.10(d)	Requires installation of a non-resettable hour meter and for engines with DPFs, a backpressure monitor that alerts the operator when the backpressure limit of the engine is approached	Yes	This engine is not equipped with a DPF. Permit conditions require the installation and use of a non-resettable hour meter.	C28419
93115.10(f)	Specifies that the owner or operator must keep records and prepare a monthly summary of hours of operation and purpose (emergency, maintenance and testing, emission testing, start-up testing, other, demand response) of each period of operation	Yes	Permit conditions require that these records be kept and the summary updated monthly.	C45252
93115.10(f)	Requires records of CARB diesel fuel certification	Yes	Permit conditions require that documentation of the CARB diesel certification for all fuel used be maintained.	C43434
93115.10(f)	States that records must be kept on-site for at least 24 months and off-site for an additional 12 months (total 36 months)	Yes	Compliance with this provision is expected and this requirement is specified in permit conditions.	C43432
93115.13(a)	Allows the use of certification data or other emission test data to demonstrate compliance with emission limits	Yes	The manufacturer's engine rating specific emission data was used to determine compliance and for emission calculations.	NA
93115.13(f)	(f) Alternative Compliance Demonstration: The owner or operator of a new or in-use stationary diesel-fueled CI engine	NA	93115.13(f)(6) is an applicable compliance pathway: this engine demonstrates compliance with the 0.01 g/bhp-hr PM emission standard in 93115.6(a)(1) via 93115.13(f)(6) as it is	NA

	<p>greater than 50 bhp may demonstrate compliance with the 0.01 g/bhp-hr PM emission standard of sections 93115.6 through 93115.9 by:</p> <p>(6) A Tier 4 certified CI engine or a new piece of equipment identified in section (f)(4) that emits no more than 0.015 g/bhp-hr PM.</p>		<p>a Tier 4 certified CI engine that emits no more than 0.015 g/bhp-hr PM (0.0149 g/bhp-hr).</p>	
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Table 6a: State and Federal Requirement Discussion (Stationary ATCM)

Applicable Section	Requirement	Engine Complies/Expected to Comply?	Explanation	Condition
NESHAP ZZZZ				
40 CFR 63.6590(b)-(c)	Requires that new emergency engines comply with the NESHAP by complying with the applicable NSPS	Yes	See NSPS section below.	NA
NSPS IIII				
40 CFR 60.4205	Requires that engines meet emission limits equivalent to tier 3 levels (tier 2 for engines 750 bhp or higher)	Yes	Use of an EPA certified Tier 3 engine (Tier 2 for engines with a rated power in excess of 750 bhp) with PM emission below this level satisfies this requirement. This is a Tier 4 Final engine; therefore, it complies.	NA
40 CFR 60.4207	Sets maximum fuel sulfur limits for fuel equivalent to CARB diesel requirements	Yes	Permit conditions will require use of CARB diesel fuel (15 ppm Sulfur by weight), which will ensure compliance with this requirement.	C28412

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40 CFR 60.4209	Requires installation of a non-resettable hour meter	Yes	Permit conditions require the installation and use of a non-resettable hour meter.	C28419
40 CFR 60.4211(a)	Requires that the engine be operated according to manufacturer's emission related instructions and that no changes are made to emission related settings unless allowed by manufacturer	Yes	Permit conditions specify this requirement.	C43433
40 CFR 60.4211(c)	Requires that the engine be certified under EPA regulations	Yes	Use of an EPA certified Tier 3 engine (Tier 2 for engines with a rated power in excess of 750 bhp). This is a Tier 4 Final engine; therefore, it complies.	NA
40 CFR 60.4211(e)	Restricts operation of emergency engines for non-emergency purposes	Yes	Compliance ensured by permit conditions for ATCM limiting operation for maintenance and testing to no more than 47 hours per calendar year and restricting non-emergency operation for only those uses allowed by the permit (maintenance and testing). ATCM requirements more stringent than NSPS.	C40239, C40907, C44986
40 CFR 60.4214(b)	Requires records of operation to show that engine is operated as an emergency engine	Yes	Compliance is expected and specified in permit conditions.	C46473
40 CFR 60.4214(c)	For engines with DPFs, requires records of corrective actions taken when the high backpressure limit is approached	NA	Engine is not equipped with a DPF.	NA
40 CFR 60.7(f)	Requires that all records be maintained for at least 2 years	Yes	Compliance with this provision is expected and this requirement is specified in permit conditions.	C43432

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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. 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

Conditions APCD2023-CON-002046 with C28643 replaced with C44986 for the **47** hour/year limit for non-emergency/maintenance and testing.

ENGINEERING EVALUATION ATTACHMENTS

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

Rule 1200 Health Risk Assessment

Facility Name: Home Depot #1018
Facility ID: APCD2004-SITE-05333
Application: APCD2023-APP-008043
Project Engineer: Victoria Burns
Modeler: Bill Reeve
Toxics Risk Analyst: Stephen Amberg
Date Submitted to Toxics: 2/21/2024
Date Completed by Toxics: 2/26/2024
HRA Tools Used: Lakes-AERMOD (Version 23132)/HARP2 (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)	1.06 in one million
Chronic Noncancer Health Hazard Index (Resident)	= 1.28E-04
8-Hour Noncancer Health Hazard Index (Worker)	= NA*
Acute Health Hazard Index	= 0.0839

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

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.

The estimated cancer risk for the application exceeds Rule 1200 limits of 1 in one million (not equipped with T-BACT) at 50 hours, therefore the project is within Rule 1200 thresholds contingent on Routine Maintenance and Testing limited to 47 hours a year

Rule 1200 Health Risk Assessment Report

Home Depot #1018, 05333
 Application Number 008043

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Input Data Provided by Project Engineer:

Type of Source: One Diesel IC Engine
 Controls Description: SCR

Worst-Case TAC Emissions Increase:

Each engine:

Toxic Air Contaminant	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lb/yr)
DIESEL PARTICULATE	N/A	6.38E-01
ACETALDEHYDE	1.46E-02	7.32E-01
ACROLEIN	6.34E-04	3.17E-02
ARSENIC COMPOUNDS	2.99E-05	1.50E-03
BENZENE	3.48E-03	1.74E-01
BUTADIENE, 1,3-	4.06E-03	2.03E-01
CADMIUM AND COMPOUNDS	2.81E-05	1.40E-03
CHLOROBENZENE	3.74E-06	1.87E-04
CHROMIUM (HEXAVALENT)	1.87E-06	9.35E-05
COPPER AND COMPOUNDS	7.67E-05	3.83E-03
ETHYL BENZENE	2.04E-04	1.02E-02
FORMALDEHYDE	3.23E-02	1.61E+00
HEXANE-N	5.03E-04	2.52E-02
HYDROCHLORIC ACID	3.48E-03	1.74E-01
LEAD & COMPOUNDS	1.55E-04	7.76E-03
MANGANESE AND COMPOUNDS	5.80E-05	2.90E-03
MERCURY AND COMPOUNDS	3.74E-05	1.87E-03
NAPHTHALENE	3.68E-04	1.84E-02
NICKEL AND NICKEL COMPOUNDS	7.29E-05	3.65E-03
POLYCYCLIC AROM. HC (PAH) [Treat as B(a)P for HRA]	6.77E-04	3.38E-02
PROPYLENE	8.73E-03	4.37E-01
SELENIUM AND COMPOUNDS	4.11E-05	2.06E-03
TOLUENE	1.97E-03	9.85E-02
AMMONIA	3.69E-02	1.84E+00
XYLENES	7.93E-04	3.96E-02

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. Ammonia is from the SCR system and is included in both annual and hourly risk calculations.

Process Data:

Operation Parameter	Value
Diesel particulate emission factor (g/hp-hr)	0.01492
Engine horsepower (bhp)	388
Fuel Consumption (gal/hr)	18.7
Annual hours of operation	50

Release Parameters:

Stack Height (ft)	12
Stack Diameter (ft)	0.42
Temperature deg F	725
Exhaust Flow Rate (acfm)	1872

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 Camp Pendleton 2019/2021 sigma theta updated meteorology data, AERMAP terrain processing, and rural 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 - HRACalc v22118 2/26/2024 3:39:44 PM - **Cancer Risk**

INDEX	GRP1	GRP2	POLID	POLABBRE\CONC	RISK_SUM	SCENARIO
1	Engine		9901	DieselExhP 0.000598	1.06E-06	30YrCancerRMP_InhSo

*HARP - HRACalc v22118 2/26/2024 3:39:44 PM - **Chronic Risk**

INDEX	GRP1	GRP2	POLID	POLABBRE\CONC	RESP	SCENARIO
1	Engine		9901	DieselExhP 0.000598	1.20E-04	NonCancerChronicDeri
24	Engine		7664417	NH3 0.00173	8.65E-06	NonCancerChronicDeri
					1.28E-04	

*HARP - HRACalc v22118 2/26/2024 3:39:44 PM - **Acute Risk**

INDEX	GRP1	GRP2	POLID	POLABBRE\CONC	EYE	SCENARIO
1	Engine		9901	DieselExhP	0	0.00E+00 NonCancerAcute
2	Engine		75070	Acetaldehy	1.94	4.13E-03 NonCancerAcute
3	Engine		107028	Acrolein	0	0.00E+00 NonCancerAcute
4	Engine		7440382	Arsenic	0.00397	0.00E+00 NonCancerAcute
5	Engine		71432	Benzene	0.463	0.00E+00 NonCancerAcute
6	Engine		106990	1,3-Butadie	0.539	0.00E+00 NonCancerAcute
7	Engine		7440439	Cadmium	0.00373	0.00E+00 NonCancerAcute
8	Engine		108907	Chlorobenz	0.000497	0.00E+00 NonCancerAcute
9	Engine		18540299	Cr(VI)	0.000248	0.00E+00 NonCancerAcute
10	Engine		7440508	Copper	0.0102	0.00E+00 NonCancerAcute
11	Engine		100414	Ethyl Benz	0.0271	0.00E+00 NonCancerAcute
12	Engine		50000	Formaldeh	4.29	7.80E-02 NonCancerAcute
13	Engine		110543	Hexane	0.0668	0.00E+00 NonCancerAcute
14	Engine		7647010	HCl	0.463	2.20E-04 NonCancerAcute
15	Engine		7439921	Lead	0.0206	0.00E+00 NonCancerAcute
16	Engine		7439965	Manganese	0.0077	0.00E+00 NonCancerAcute
17	Engine		7439976	Mercury	0.00497	0.00E+00 NonCancerAcute
18	Engine		91203	Naphthaler	0.0489	0.00E+00 NonCancerAcute
19	Engine		7440020	Nickel	0.00969	0.00E+00 NonCancerAcute
20	Engine		1151	PAHs-w/o	0.0899	0.00E+00 NonCancerAcute
21	Engine		115071	Propylene	1.16	0.00E+00 NonCancerAcute
22	Engine		7782492	Selenium	0.00546	0.00E+00 NonCancerAcute
23	Engine		108883	Toluene	0.262	5.24E-05 NonCancerAcute
24	Engine		7664417	NH3	4.9	1.53E-03 NonCancerAcute
25	Engine		1330207	Xylenes	0.105	4.77E-06 NonCancerAcute
					8.39E-02	

Home Depot APP-008043
Hourly x/q



COMMENTS:

SOURCES:

1

RECEPTORS:

17850

OUTPUT TYPE:

Concentration

SCALE:

1:2,011

0 0.05 km

MAX:

1054 ug/m³

PROJECT NO.:

Home Depot APP-008043
Annual x/q



COMMENTS:

SOURCES:

1

RECEPTORS:

17850

OUTPUT TYPE:

Concentration

MAX:

65.2 ug/m^3

SCALE:

1:1,709

0 0.05 km

PROJECT NO.:

Facility Name: Home Depot #1018
Application Number: APCD2023-APP-008043
Site ID Number: APCD2004-SITE-05333
Equipment Address: 5755 Mission Ave, Oceanside, CA 92057

Contact Name:
Contact Title:
Contact Affiliation: Home Depot #1018
Contact Number:
Contact E-Mail:
Project Engineer:

Make: Volvo Penta
Model: TAD1371VE
S/N: TBD
Fuel Type: diesel
BHP Rating: 388
Model Year: 2023
Tier Level: 4
Engine Family Number: PVPXL12.8CJA
Device Driven: 250 kW generator

EPA/ CARB EFs:
NOx, g/BHP-hr: 0.16 0.22 g/kW-hr
CO, g/BHP-hr: 0.07 0.1 g/kW-hr
NMHC, g/BHP-hr: 0.01 0.02 g/kW-hr
PM10, g/BHP-hr: 0.01 0.02 g/kW-hr
NH3 Slip from SCR (yes/no) yes 10 ppm (default 10 ppm if

Fuel Usage, gal/hr: 18.7
Operating Schedule, hrs/day: 24
Operating Schedule, hrs/yr: 50

Exhaust Flow Rate, cfm: 1872
Exhaust Temperature, °F: 725
Stack Height above ground, ft: 12
Stack Diameter, ft: 0.42

Nearest School, ft: 975
Residential Receptor, m: 137.16 450 ft houses to t
Occupational Receptor, m: 30.48 100 ft retirement I
Acute Receptor, m: 30.48 100 ft retirement I
Distance to Property Line (ft): 30 /bench outs
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:	Home Depot #1018			
Equipment Location:	5755 Mission Ave, Oceanside, CA 92057			
Project Description:	Emergency Diesel Engine			
Control Equipment:	None			
Operating Schedule:	Hours per Day:	1	Weeks per Year:	50
	Days per Week:	1	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)	12.0		
Stack Diameter (or length x width) (ft)	0.42		
Exhaust Gas Temperature (°F) ¹	725		
Exhaust Gas Flow (ACFM)	1872		
Direction of Flow ²	vertical		
Flow Obstruction ³	no		
Distance to Nearest Property Line (+/- 10ft)	100.00		

¹ Use "70 °F" or "Ambient" if unknown

² if "other" describe: _____

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)	1	1	
Point Source Location	S of building	N of building	
Building Length (ft) (optional)			
Building Width (ft) (optional)			
Building Height above ground (ft)	30	~30	

San Diego APCD Use Only

Additional Rule 1200 Submittal Information

Submittal Date:	2/20/2024	Site ID:	APCD2004-SITE-05333
Project Engineer:	Victoria Burns	Appl. Number(s):	APCD2023-APP-008043
Fees Collected:	\$2,884.00	PTO No. (if existing):	NA

FACILITY NAME: Home Depot #1018																	
Fuel Consumption (gal/hr): 18.70 Diesel Particulate Emission Factor (g/hp-hr): 0.01492 Brake Horsepower (hp): 388 Annual Hours of Operation (hrs): 50	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr style="background-color: yellow;"> <th colspan="2" style="text-align: center;">RISK ANALYST ONLY</th> </tr> <tr> <th colspan="2" style="text-align: center;">DISPERSION MODELING DATA</th> </tr> <tr> <td style="text-align: right;">Annual Receptor Type:</td> <td>Resident ▼</td> </tr> <tr> <td style="text-align: right;">ANNUAL DISPERSION FACTOR (µg/m3)/(g/s):</td> <td style="text-align: right;">65.2</td> </tr> <tr> <td style="text-align: right;">Distance (m):</td> <td></td> </tr> <tr> <td style="text-align: right;">Hourly Receptor Type:</td> <td>PMI ▼</td> </tr> <tr> <td style="text-align: right;">HOURLY DISPERSION FACTOR (µg/m3)/(g/s):</td> <td style="text-align: right;">1054.1</td> </tr> <tr> <td style="text-align: right;">Distance (m):</td> <td></td> </tr> </table>	RISK ANALYST ONLY		DISPERSION MODELING DATA		Annual Receptor Type:	Resident ▼	ANNUAL DISPERSION FACTOR (µg/m3)/(g/s):	65.2	Distance (m):		Hourly Receptor Type:	PMI ▼	HOURLY DISPERSION FACTOR (µg/m3)/(g/s):	1054.1	Distance (m):	
RISK ANALYST ONLY																	
DISPERSION MODELING DATA																	
Annual Receptor Type:	Resident ▼																
ANNUAL DISPERSION FACTOR (µg/m3)/(g/s):	65.2																
Distance (m):																	
Hourly Receptor Type:	PMI ▼																
HOURLY DISPERSION FACTOR (µg/m3)/(g/s):	1054.1																
Distance (m):																	
FACILITY ID: APCD2004-SITE-05333																	
APPLICATION NO.: APCD2023-APP-008043																	
ENGINEER:																	

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 ³	Annual GLC µg/m ³
DIESEL PARTICULATE			6.38E-01		9.17E-06		5.98E-04
ACETALDEHYDE	7.83E-01	1.46E-02	7.32E-01	1.84E-03		1.94E+00	
ACROLEIN*	3.39E-02	6.34E-04	3.17E-02	7.99E-05			
ARSENIC COMPOUNDS	1.60E-03	2.99E-05	1.50E-03	3.77E-06		3.97E-03	
BENZENE	1.86E-01	3.48E-03	1.74E-01	4.39E-04		4.63E-01	
BUTADIENE, 1,3-	2.17E-01	4.06E-03	2.03E-01	5.11E-04		0.5389514	
CADIUM AND COMPOUNDS	1.50E-03	2.81E-05	1.40E-03	3.53E-06		3.73E-03	
CHLOROBENZENE	2.00E-04	3.74E-06	1.87E-04	4.71E-07		4.97E-04	
CHROMIUM (HEXAVALENT)	1.00E-04	1.87E-06	9.35E-05	2.36E-07		2.48E-04	
COPPER AND COMPOUNDS	4.10E-03	7.67E-05	3.83E-03	9.66E-06		1.02E-02	
ETHYL BENZENE	1.09E-02	2.04E-04	1.02E-02	2.57E-05		2.71E-02	
FORMALDEHYDE	1.73E+00	3.23E-02	1.61E+00	4.07E-03		4.29E+00	
HEXANE-N	2.69E-02	5.03E-04	2.52E-02	6.34E-05		6.68E-02	
HYDROCHLORIC ACID	1.86E-01	3.48E-03	1.74E-01	4.39E-04		4.63E-01	
LEAD & COMPOUNDS	8.30E-03	1.55E-04	7.76E-03	1.96E-05		2.06E-02	
MANGANESE AND COMPOUNDS	3.10E-03	5.80E-05	2.90E-03	7.30E-06		7.70E-03	
MERCURY AND COMPOUNDS (INORGANIC)	2.00E-03	3.74E-05	1.87E-03	4.71E-06		4.97E-03	
NAPHTHALENE	1.97E-02	3.68E-04	1.84E-02	4.64E-05		4.89E-02	
NICKEL AND NICKEL COMPOUNDS	3.90E-03	7.29E-05	3.65E-03	9.19E-06		9.69E-03	
POLYCYCLIC AROM. HC (PAH) [Treat as B(a)P for	3.62E-02	6.77E-04	3.38E-02	8.53E-05		8.99E-02	
PROPYLENE	4.67E-01	8.73E-03	4.37E-01	1.10E-03		1.16E+00	
SELENIUM AND COMPOUNDS	2.20E-03	4.11E-05	2.06E-03	5.18E-06		5.46E-03	
TOLUENE	1.05E-01	1.97E-03	9.85E-02	2.48E-04		2.62E-01	
AMMONIA (only if SCR)	1.97E+00	3.69E-02	1.84E+00	4.65E-03	2.65E-05	4.90E+00	1.73E-03
XYLENES	4.24E-02	7.93E-04	3.96E-02	9.99E-05		1.05E-01	

*** AERMOD - VERSION 23132 *** *** C:\Modeling Projects\8043_Home_Depot\8043_Home_Depot.isc *** 02/24/24
 *** AERMET - VERSION 22112 *** *** 11:15:05
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*** MODELOPTs: RegDEFAULT CONC ELEV RURAL SigA Data

*** 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	475233.4	3678984.5	44.9	3.66	658.15	68.64	0.13	YES	NO	NO	

*** AERMOD - VERSION 23132 *** *** C:\Modeling Projects\8043_Home_Depot\8043_Home_Depot.isc *** 02/24/24
 *** AERMET - VERSION 22112 *** *** 11:15:05
 PAGE 1

*** MODELOPTs: RegDEFAULT CONC ELEV RURAL SigA Data

*** 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 RURAL Dispersion Only.
- * 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 1 Short Term Average(s) of: 1-HR
and Calculates PERIOD Averages

**This Run Includes: 1 Source(s); 1 Source Group(s); and 17850 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) = 16.00 ; 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 = 5.5 MB of RAM.

Surface format: FREE

Profile format: FREE

Surface station no.: 3177

Name: UNKNOWN

Year: 2019

Upper air station no.: 3190

Name: UNKNOWN

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	-15.3	0.134	-9.000	-9.000	-999.	118.	14.3	0.03	0.36	1.00	3.17	66.	10.0	280.5	10.0			
19	01	01	1	02	-9.7	0.094	-9.000	-9.000	-999.	69.	7.7	0.03	0.36	1.00	2.77	58.	10.0	279.9	10.0			
19	01	01	1	03	-10.9	0.099	-9.000	-9.000	-999.	75.	8.1	0.03	0.36	1.00	2.95	69.	10.0	279.8	10.0			
19	01	01	1	04	-11.4	0.101	-9.000	-9.000	-999.	78.	8.3	0.03	0.36	1.00	3.00	50.	10.0	280.1	10.0			
19	01	01	1	05	-22.9	0.202	-9.000	-9.000	-999.	217.	32.3	0.03	0.36	1.00	3.76	22.	10.0	280.9	10.0			
19	01	01	1	06	-17.7	0.156	-9.000	-9.000	-999.	148.	19.2	0.03	0.36	1.00	3.31	48.	10.0	280.8	10.0			
19	01	01	1	07	-32.5	0.286	-9.000	-9.000	-999.	368.	65.3	0.03	0.36	1.00	4.78	21.	10.0	281.5	10.0			
19	01	01	1	08	-34.8	0.456	-9.000	-9.000	-999.	738.	246.7	0.03	0.36	0.48	6.97	35.	10.0	283.2	10.0			
19	01	01	1	09	17.8	0.438	0.358	0.005	94.	697.	-430.4	0.03	0.36	0.26	6.39	39.	10.0	284.0	10.0			
19	01	01	1	10	44.6	0.397	0.625	0.005	198.	601.	-126.9	0.03	0.36	0.19	5.63	30.	10.0	285.2	10.0			
19	01	01	1	11	63.2	0.373	0.779	0.005	272.	548.	-74.6	0.03	0.36	0.17	5.19	30.	10.0	286.5	10.0			
19	01	01	1	12	72.1	0.403	1.118	0.005	703.	614.	-82.3	0.03	0.36	0.16	5.63	33.	10.0	287.4	10.0			
19	01	01	1	13	71.1	0.307	1.170	0.005	816.	413.	-36.8	0.03	0.36	0.16	4.11	41.	10.0	288.0	10.0			
19	01	01	1	14	60.1	0.313	1.133	0.005	876.	421.	-46.3	0.03	0.36	0.17	4.25	31.	10.0	288.4	10.0			
19	01	01	1	15	39.7	0.250	1.000	0.005	914.	302.	-35.9	0.03	0.36	0.20	3.35	54.	10.0	288.8	10.0			
19	01	01	1	16	11.5	0.188	0.664	0.005	924.	197.	-52.6	0.03	0.36	0.30	2.59	67.	10.0	288.5	10.0			
19	01	01	1	17	-3.1	0.054	-9.000	-9.000	-999.	53.	4.8	0.03	0.36	0.57	1.61	54.	10.0	287.9	10.0			
19	01	01	1	18	-1.8	0.041	-9.000	-9.000	-999.	20.	3.4	0.03	0.36	1.00	1.21	44.	10.0	286.3	10.0			
19	01	01	1	19	-7.6	0.083	-9.000	-9.000	-999.	58.	6.9	0.03	0.36	1.00	2.46	5.	10.0	284.3	10.0			
19	01	01	1	20	-19.9	0.176	-9.000	-9.000	-999.	178.	25.0	0.03	0.36	1.00	3.49	35.	10.0	283.4	10.0			
19	01	01	1	21	-24.2	0.214	-9.000	-9.000	-999.	237.	36.6	0.03	0.36	1.00	3.89	55.	10.0	282.9	10.0			
19	01	01	1	22	-28.4	0.249	-9.000	-9.000	-999.	299.	49.7	0.03	0.36	1.00	4.34	71.	10.0	281.9	10.0			
19	01	01	1	23	-28.1	0.245	-9.000	-9.000	-999.	291.	47.6	0.03	0.36	1.00	4.29	72.	10.0	279.8	10.0			
19	01	01	1	24	-28.6	0.249	-9.000	-9.000	-999.	298.	49.1	0.03	0.36	1.00	4.34	64.	10.0	279.5	10.0			

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	66.	3.17	280.6	11.0	-99.00	0.60

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

*** AERMOD - VERSION 23132 *** C:\Modeling Projects\8043_Home_Depot\8043_Home_Depot.isc
*** AERMET - VERSION 22112 ***

*** 02/24/24
*** 11:15:05
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*** MODELOPTs: RegDEFAULT CONC ELEV RURAL SigA Data

*** 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	65.16963 AT (475187.50, 3678952.50,	40.70, 40.70, 0.00)	DC
	2ND HIGHEST VALUE IS	63.77761 AT (475172.50, 3678952.50,	39.81, 40.82, 0.00)	DC
	3RD HIGHEST VALUE IS	53.36861 AT (475172.50, 3678937.50,	35.45, 45.31, 0.00)	DC
	4TH HIGHEST VALUE IS	53.04437 AT (475157.50, 3678952.50,	38.23, 45.26, 0.00)	DC
	5TH HIGHEST VALUE IS	51.97670 AT (475187.50, 3678937.50,	37.94, 45.22, 0.00)	DC
	6TH HIGHEST VALUE IS	49.90321 AT (475221.89, 3678982.33,	44.10, 45.22, 0.00)	DC
	7TH HIGHEST VALUE IS	48.61691 AT (475157.50, 3678967.50,	40.39, 40.39, 0.00)	DC
	8TH HIGHEST VALUE IS	48.60781 AT (475230.53, 3678977.86,	44.16, 44.16, 0.00)	DC
	9TH HIGHEST VALUE IS	48.12944 AT (475172.50, 3678967.50,	40.57, 45.11, 0.00)	DC
	10TH HIGHEST VALUE IS	45.93702 AT (475157.50, 3678937.50,	34.79, 45.31, 0.00)	DC

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

*** AERMOD - VERSION 23132 *** C:\Modeling Projects\8043_Home_Depot\8043_Home_Depot.isc
*** AERMET - VERSION 22112 ***

*** 02/24/24
*** 11:15:05
PAGE 5

*** MODELOPTs: RegDEFAULT CONC ELEV RURAL SigA Data

*** 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 1054.09083 ON 21091124: AT (475232.50, 3679147.50, 43.97, 44.62, 0.00) DC

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

*** AERMOD - VERSION 23132 *** C:\Modeling Projects\8043_Home_Depot\8043_Home_Depot.isc *** 02/24/24
*** AERMET - VERSION 22112 *** *** 11:15:05
PAGE 6

*** MODELOPTs: RegDEFAULT CONC ELEV RURAL SigA Data

*** 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 456 Informational Message(s)

A Total of 26304 Hours Were Processed

A Total of 64 Calm Hours Identified

A Total of 392 Missing Hours Identified (1.49 Percent)

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

***** WARNING MESSAGES *****
SO W320 37 PPARM: Input Parameter May Be Out-of-Range for Parameter VS

MX W403

99

PFLCNV: Turbulence data is being used w/o ADJ_U* option

SigA Data

HARP2 - HRACalc (dated 22118) 2/26/2024 3:39:44 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

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: ON

16 years to 70 years: ON

School Risk = (7.87 ug/m3 / 65.17 ug/m3) * 1.06 resident cancer risk = 0.128

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:\1200\8043_Home Depot

#1018\RAST\Resident_FAH_CancerRisk.csv

Calculating chronic risk

Chronic risk saved to: D:\1200\8043_Home Depot

#1018\RAST\Resident_FAH_NCChronicRisk.csv

Calculating acute risk

Acute risk saved to: D:\1200\8043_Home Depot



#1018\RAST\Resident_FAH_NCAcuteRisk.csv

HRA ran successfully

Site Map

THD #1018 Oceanside, CA

Legend

-  Fenceline
-  Generator Location

