ENGINEERING EVALUATION
AUTHORITY TO CONSTRUCT

Facility Name:	Netly Fiber Holdings
Equipment Type:	[34H] California Certified Emergency Engine
Application #:	APCD2024-APP-008188
ID#:	APCD2024-SITE-04517
Equipment/Facility Address:	740 Lomas Santa Fe Dr. Solana Beach, CA 92075
Facility Contact:	Nick Cerini (Facility Contact) (760) 522-0511
	Barry Andrews (Application Preparer) (970) 691-7306 bandrews@nes-ehs.com
Permit Engineer:	Revoked certificate X Austin Stein Austin Stein Jr. Air Pollution Control Engineer Signed by: AustinC.Stein@sdcounty.ca.gov
Senior Engineer Signature:	X Nicholas Horres Senior Air Pollution Control Engineer

1.0 Background

1.1 Type of Application: "Existing", unpermitted emergency engine, initial application. For this evaluation, considered a new engine as it was not permitted previously.

1.2 Permit History: This is the initial application for this engine. It is existing, unpermitted. Netly Fiber Holdings acquired the property from another business and with the property they also acquired this installed emergency engine that was not permitted by the SDAPCD.

1.3 Facility Description: This is an office space/business park. 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 Diesel Engine Generator
Manufacturer: FPT Industrial;
Model: F4GE9685A*J;
S/N: 01740136;
Horsepower (maximum rated): 198 BHP;
Model Year: 2019;
EPA Certification Tier: 3;
Engine Family (EPA): KFPXL06.7DGB;
Driving a 100-kW emergency-use standby generator;
5-inch diameter vertical exhaust with flapper raincap, exhausting 8.8 ft. above ground.
Non-Emergency/Maintenance and Testing Limits: 30 hrs./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 the Netly Fiber Holdings operation.

2.3 Emissions Controls.

This is a Tier 3 certified diesel engine. It is not equipped with any add-on controls.

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

	Emission Factor	Hourly Emissions	Daily Emissions	Annual Emissions	
Compound	g/bhp-hr	lbs/hr	lbs/day	tons/year	lbs/yr
NOx	2.70	1.18	28.29	0.018	35.36
CO	0.67	0.29	7.03	0.004	8.79
NMHC	0.12	0.05	1.25	0.001	1.56
PM	0.12	0.05	1.25	0.001	1.56
SOx	NA	0.00212	0.0510	0.00003	0.064

3.2 Estimated Emissions Assumptions

- Table 1 evaluates the emission unit at 30 hours per day and a total of 30 hours per year, assuming full load operations
- Estimated emissions are calculated for maintenance and testing operations. Emergency use is not counted towards operation 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.

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 SO2 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 NOx and CO emissions. For a new or replacement certified diesel engine, NOx 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 NOx and CO emissions comply with this requirement. This engine is a tier 3, therefore it complies with this requirement.	NA

	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 this provision is expected and this requirement is specified in permit conditions.	C45252

	the engine is operated for testing and maintenance. Specific records for internal, external, and partial external power outages is required.			
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

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

	NOx	VOC	PM-10	PM-2.5	SOx	CO	Lead
Major Source Threshold (ton/year)	*50*	*50*	*100*	*100*	*100*	*100*	*100*
Major Source? (yes/no)	***No***	***No***	***No***	***No***	***No***	***No***	***No***
Major Modification Threshold (ton/year)	*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**
Federal Major Modification Threshold (ton/year) (Severe non-attainment status)	*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***
PSD Threshold (ton/year)	*250*	*250*	*250*	*--*	*250*	*250*	*--*
PSD Modification Threshold (ton/year)	*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. 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/Existing Unpermitted	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	**Triggered, see discussion below.**	The potential to emit for this pollutant is 29 lbs/day, which does exceed this trigger level, so BACT is 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 1.3 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 1.3 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 0.05 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
The PTE for NOx for the engine is 29 lbs./day, greater than the 10 lbs./day threshold for BACT. Therefore, a BACT analysis is required.

Alternatives that were considered include natural gas and propane engines and Tier 4f engines including SCR and DPF. Gas-fueled engines are not feasible as backup power for operations that must occur if natural gas lines are damaged in the event of an emergency like an earthquake. An engine of this size would also likely require SCR for emissions control, a method which is not cost effective as described below. The cost-effectiveness evaluation did not take into account the likely short periods of operation of this engine for maintenance. In many maintenance situations, the engine is operated at low loads and for approximately 30 minutes, some of which the SCR catalyst has not reached appropriate temperature for effectively controlling emissions.

NOx Analysis:
A tier 4 engine is the lowest emitting BACT option. Cost-effectiveness has previously been evaluated under applications APCD2021-APP-006831, and APCD2021-APP-006981, comparing incremental costs of a tier 2 vs. 4 engine, the results of which are summarized below. Note that this analysis is conservative and does not take into account the likely short periods of operation of this engine for maintenance as noted above which would lower the level of emission reductions achieved.

Project	*Engine Size (bhp)*	*Capital Cost Tier 2*	*Capital Cost Tier 4*	*Annual Cost Tier 2*	*Annual Cost Tier 4*	*Annual Incremental Cost*	*Annual Emission Reduction (lb/yr)*	***Cost Effectiveness***
6831	*2346*	*$329,050*	*$603,826*	*$127,026*	*$200,228*	*$73,202*	*1,112*	***$65.82***
6981	*2937*	*$810,000*	*$1,200,000*	*$131,824*	*$195,294*	*$63,471*	*1,322*	***$48.03***

This analysis shows that a Tier 4f engine, the lowest-emitting category of diesel engines, is not cost-effective. The analysis is based on the assumption that the engine allowed to run up to 50 hours per year for maintenance and testing, the maximum NOx emissions were calculated using the emission standards for a tier 2 and tier 4 engine. Capital costs were provided by the permit applicants which were annualized and added to expected maintenance and operating costs to determine an overall annual cost. While the previous analysis was conducted for larger engines, it is still representative for this application too because the equipment is very similar aside from engine size, and NOx emissions and costs are expected to scale roughly linearly with engine size. Additionally, the cost for an add-on SCR to a tier 2 engine is expected to have a similar cost to the incremental cost of a tier 4 engine, so this analysis also demonstrates that use of an SCR would not be cost effective, in addition to being technologically infeasible because it would not function during most periods of testing and maintenance.

The 198 BHP tier 3 engine proposed under this application would similarly not be cost effective. This is because a tier 3 engine does not have significantly different design than a tier 2 engine, has lower pre-secondary control emissions, and since costs would be expected to scale roughly linearly based on engine power for a smaller engine, any discrepancy would not be sufficient to alter the conclusion that a tier 4 final engine is not cost effective, especially considering that the 90% emission reduction achieved by SCR/Tier 4f engine would not likely be achieved during most testing and maintenance operations. This makes sense as a tier 3 engine has lower NOx emissions than a tier 2 engine, yet requires a similar level of add-on control costs to achieve tier 4 emission levels. For all these reasons, this demonstrates that a tier 4 engine or similar add-on controls including an SCR would not be cost effective.

A tier 3 certified engine is the next lowest emitting option and therefore satisfies BACT requirements for NOx.

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 results attached.
Is the Project Equipped with T-BACT?	No	N/A
Cancer Risk increase (per one million)	≤1	Project meets standard of one in one million at 30 hrs/yr limit of maintenance and testing operation
Chronic HHI	4.40E-04≤1	Meets standard of one.
Acute HHI	0.155≤1	Meets standard of one.
Passes Rule 1200?	Yes	Maintenance and testing (non-emergency operation) must be limited by permit conditions to 30 hours per calendar year

The refined HRA showed that the project did NOT pass rule 1200 for residential cancer risk when operating at 50 hrs/year. Therefore, it was reduced to 30 *hrs/year for maintenance and testing to meet the residential cancer risk standard of 1 in one million or less.*

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 (Skyline Elementary), 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.

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	Yes	Permit conditions specify this requirement.	C28415
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 3 engine, therefore 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 and equipment description specify yearly maintenance and testing operations equal to or less than 50 hours per calendar year.	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
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	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)	For engines equipped with DPFs, allows the use of an engine certified to a PM-10 emission level of no more than 0.15 g/bhp-hr and a verified DPF in lieu of source testing (or other alternative means as listed)	NA	Not equipped with a DPF	NA

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 3 engine, therefore 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

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) with PM emission below this level satisfies this requirement. This is a tier 3 engine, therefore 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 30 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.	C45252
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

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

Conditions APCD2020-CON-001704 with a 30 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:	Netly Fiber Holdings
Facility ID:	APCD2024-SITE-04517
Application:	APCD2024-APP-008188
Project Engineer:	Austin Stein
Modeler:	Bill Reeve
Toxics Risk Analyst:	Peter Ossowski
Date Submitted to Toxics:	7/02/2024
Date Completed by Toxics:	7/24/2024
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)	1.64 in one million
Chronic Noncancer Health Hazard Index (Resident)	= 4.40E-04
Acute Health Hazard Index (*PMI)	= 0.155

*Point of Maximum Impact

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 30 hours a year.

Input Data Provided by Project Engineer:

Type of Source: Diesel IC Engine.
Controls Description: None.

Worst-Case TAC Emissions Increase:

Toxic Air Contaminant	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lb/yr)
DIESEL PARTICULATE	N/A	2.60E+00
ACETALDEHYDE	7.86E-03	3.93E-01
ACROLEIN*	3.40E-04	1.70E-02
ARSENIC COMPOUNDS	1.61E-05	8.03E-04
BENZENE	1.87E-03	9.35E-02
BUTADIENE, 1,3-	2.18E-03	1.09E-01
CADMIUM AND COMPOUNDS	1.51E-05	7.53E-04
CHLOROBENZENE	2.01E-06	1.00E-04
CHROMIUM (HEXAVALENT)	1.00E-06	5.02E-05
COPPER AND COMPOUNDS	4.12E-05	2.06E-03
ETHYL BENZENE	1.09E-04	5.47E-03
FORMALDEHYDE	1.73E-02	8.67E-01
HEXANE-N	2.70E-04	1.35E-02
HYDROCHLORIC ACID	1.87E-03	9.35E-02
LEAD & COMPOUNDS	8.33E-05	4.17E-03
MANGANESE AND COMPOUNDS	3.11E-05	1.56E-03
MERCURY AND COMPOUNDS (INORGANIC)	2.01E-05	1.00E-03
NAPHTHALENE	1.98E-04	9.89E-03
NICKEL AND NICKEL COMPOUNDS	3.92E-05	1.96E-03
POLYCYCLIC AROM. HC (PAH) [Treat as B(a)P for HRA]	3.63E-04	1.82E-02
PROPYLENE	4.69E-03	2.34E-01
SELENIUM AND COMPOUNDS	2.21E-05	1.10E-03
TOLUENE	1.06E-03	5.29E-02
XYLENES	4.26E-04	2.13E-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.

Process Data:

Operation Parameter	Value
Diesel particulate emission factor (g/hp-hr)	0.12
Engine horsepower (bhp)	198
Fuel Consumption (gal/hr)	10.04
Annual hours of operation	50

Release Parameters:

Exhaust Flow Rate, cfm:	885
Exhaust Temperature, °F:	885
Stack Height above ground, ft:	8.8
Stack Diameter, ft:	0.4

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 Del Mar 2010/2012 sigma theta 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.

Since there is a school within a 1 in one million residential cancer risk isopleth, a fraction of time (FAH) was not applied to ages less than 16 years.

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

HARP2 - HRACalc (dated 22118) 7/24/2024 11:38:31 AM - 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: C:\Users\possowsk\Desktop\8188_Netly Fiber Holdings\risk\nofahCancerRisk.csv
Calculating chronic risk
Chronic risk saved to: C:\Users\possowsk\Desktop\8188_Netly Fiber Holdings\risk\nofahNCChronicRisk.csv
Calculating acute risk
Acute risk saved to: C:\Users\possowsk\Desktop\8188_Netly Fiber Holdings\risk\nofahNCAcuteRisk.csv
HRA ran successfully

*HARP - HRACalc v22118 7/24/2024 11:38:31 AM - Cancer Risk - Input File: C:\Users\possowsk\Desktop\8188_Netly Fiber Holdings\risk\nofahHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RISK_SUM	SCENARIO
1	Engine		9901	DieselExhPM	0.0022	1.64E-06	30YrCancerRMP_InhSoilDermMMilk_FAH16to70
						1.64E+00	
					Hours for <1 Risk =	30	

*HARP - HRACalc v22118 7/24/2024 11:38:31 AM - Chronic Risk - Input File: C:\Users\possowsk\Desktop\8188_Netly Fiber Holdings\risk\nofahHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	RESP	SCENARIO
1	Engine		9901	DieselExhPM	0.0022	4.40E-04	NonCancerChronicDerived_InhSoilDermMMilk

*HARP - HRACalc v22118 7/24/2024 11:38:31 AM - Acute Risk - Input File: C:\Users\possowsk\Desktop\8188_Netly Fiber Holdings\risk\nofahHRAInput.hra

INDEX	GRP1	GRP2	POLID	POLABBREV	CONC	EYE	SCENARIO
1	Engine		9901	DieselExhPM	0	0.00E+00	NonCancerAcute
2	Engine		75070	Acetaldehyde	2.6	5.53E-03	NonCancerAcute
3	Engine		107028	Acrolein	0.113	4.52E-02	NonCancerAcute
4	Engine		7440382	Arsenic	0.00531	0.00E+00	NonCancerAcute
5	Engine		71432	Benzene	0.619	0.00E+00	NonCancerAcute
6	Engine		106990	1,3-Butadiene	0.721	0.00E+00	NonCancerAcute
7	Engine		7440439	Cadmium	0.00498	0.00E+00	NonCancerAcute
8	Engine		108907	Chlorobenzn	0.000664	0.00E+00	NonCancerAcute
9	Engine		18540299	Cr(VI)	0.000332	0.00E+00	NonCancerAcute
10	Engine		7440508	Copper	0.0136	0.00E+00	NonCancerAcute
11	Engine		100414	Ethyl Benzene	0.0362	0.00E+00	NonCancerAcute
12	Engine		50000	Formaldehyde	5.73	1.04E-01	NonCancerAcute
13	Engine		110543	Hexane	0.0893	0.00E+00	NonCancerAcute
14	Engine		7647010	HCl	0.619	2.95E-04	NonCancerAcute
15	Engine		7439921	Lead	0.0276	0.00E+00	NonCancerAcute
16	Engine		7439965	Manganese	0.0103	0.00E+00	NonCancerAcute
17	Engine		7439976	Mercury	0.00664	0.00E+00	NonCancerAcute
18	Engine		91203	Naphthalene	0.0654	0.00E+00	NonCancerAcute
19	Engine		7440020	Nickel	0.013	0.00E+00	NonCancerAcute
20	Engine		1151	PAHs-w/o	0.12	0.00E+00	NonCancerAcute
21	Engine		115071	Propylene	1.55	0.00E+00	NonCancerAcute
22	Engine		7782492	Selenium	0.00731	0.00E+00	NonCancerAcute
23	Engine		108883	Toluene	0.35	7.00E-05	NonCancerAcute
24	Engine		1330207	Xylenes	0.141	6.41E-06	NonCancerAcute
						1.55E-01	

FACILITY NAME: Netly Fiber Holdings

Fuel Consumption (gal/hr):	10.04
Diesel Particulate Emission Factor (g/hp-hr):	0.11936
Brake Horsepower (hp):	198
Annual Hours of Operation (hrs):	50
FACILITY ID:	APCD2024-SITE-04517
APPLICATION NO.:	APCD2024-APP-008188
ENGINEER:	**Austin Stein**

RISK ANALYST ONLY

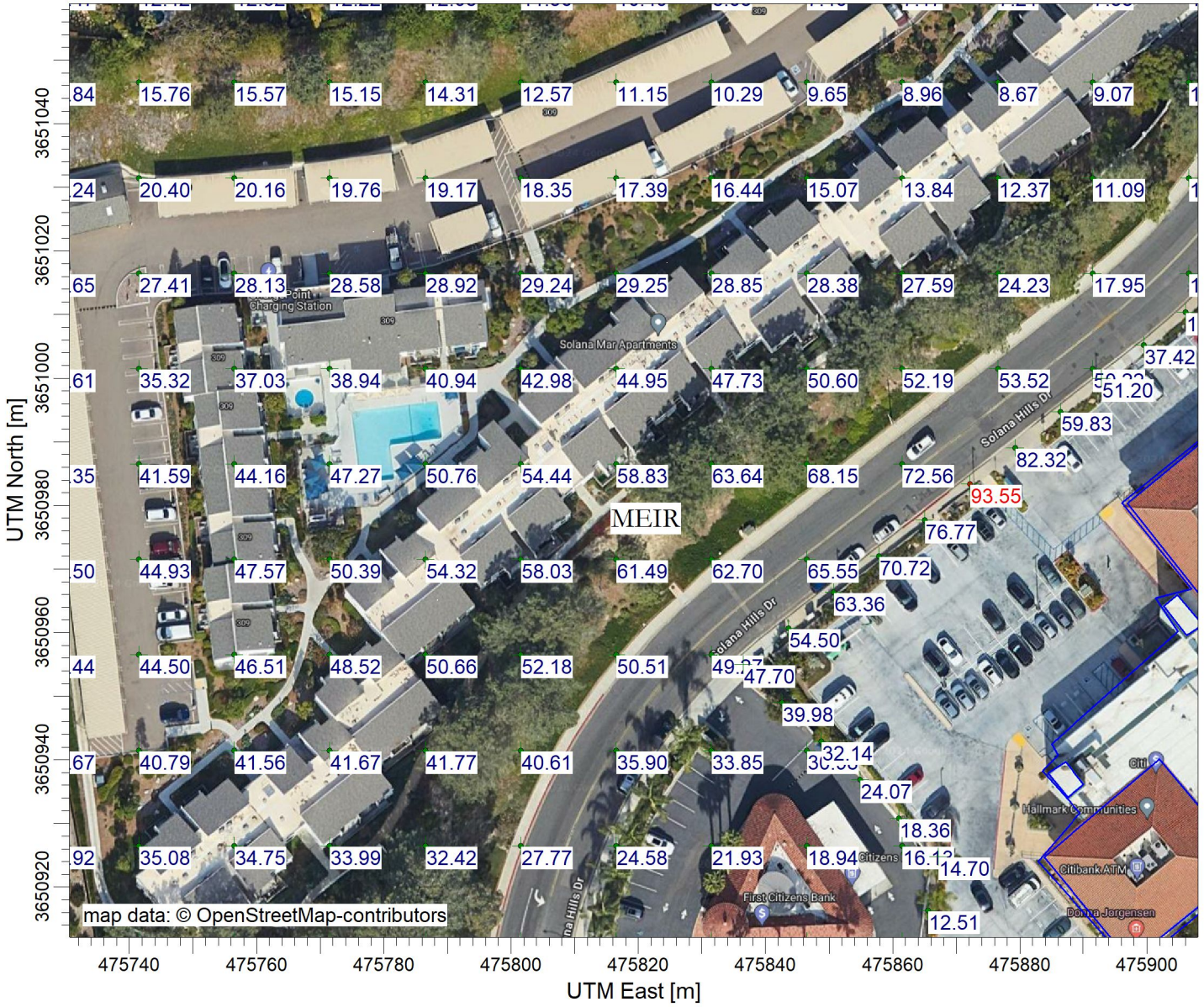
DISPERSION MODELING DATA

Annual Receptor Type:	Resident
ANNUAL DISPERSION FACTOR (µg/m3)/(g/s):	**58.8**
Distance (m):	
Hourly Receptor Type:	PMI
HOURLY DISPERSION FACTOR (µg/m3)/(g/s):	**2625.2**
Distance (m):	

CHEMICAL NAME	Emission Factor lb/1000 gal	Acute Emission Rate lb/hr	Annual Emission Rate lb/yr	Acute Emissions Rate g/s	Annual Emission Rate g/s	Hourly GLC µg/m^3	Annual GLC µg/m^3
DIESEL PARTICULATE			2.60E+00		3.74E-05		2.20E-03
ACETALDEHYDE	7.83E-01	7.86E-03	3.93E-01	9.91E-04		2.60E+00	
ACROLEIN*	3.39E-02	3.40E-04	1.70E-02	4.29E-05		1.13E-01	
ARSENIC COMPOUNDS	1.60E-03	1.61E-05	8.03E-04	2.02E-06		5.31E-03	
BENZENE	1.86E-01	1.87E-03	9.35E-02	2.36E-04		6.19E-01	
BUTADIENE, 1,3-	2.17E-01	2.18E-03	1.09E-01	2.75E-04		0.7206536	
CADMIUM AND COMPOUNDS	1.50E-03	1.51E-05	7.53E-04	1.90E-06		4.98E-03	
CHLOROBENZENE	2.00E-04	2.01E-06	1.00E-04	2.53E-07		6.64E-04	
CHROMIUM (HEXAVALENT)	1.00E-04	1.00E-06	5.02E-05	1.27E-07		3.32E-04	
COPPER AND COMPOUNDS	4.10E-03	4.12E-05	2.06E-03	5.19E-06		1.36E-02	
ETHYL BENZENE	1.09E-02	1.09E-04	5.47E-03	1.38E-05		3.62E-02	
FORMALDEHYDE	1.73E+00	1.73E-02	8.67E-01	2.18E-03		5.73E+00	
HEXANE-N	2.69E-02	2.70E-04	1.35E-02	3.40E-05		8.93E-02	
HYDROCHLORIC ACID	1.86E-01	1.87E-03	9.35E-02	2.36E-04		6.19E-01	
LEAD & COMPOUNDS	8.30E-03	8.33E-05	4.17E-03	1.05E-05		2.76E-02	
MANGANESE AND COMPOUNDS	3.10E-03	3.11E-05	1.56E-03	3.92E-06		1.03E-02	
MERCURY AND COMPOUNDS (INORGANIC)	2.00E-03	2.01E-05	1.00E-03	2.53E-06		6.64E-03	
NAPHTHALENE	1.97E-02	1.98E-04	9.89E-03	2.49E-05		6.54E-02	
NICKEL AND NICKEL COMPOUNDS	3.90E-03	3.92E-05	1.96E-03	4.93E-06		1.30E-02	
POLYCYCLIC AROM. HC (PAH) [Treat as B(a)P for	3.62E-02	3.63E-04	1.82E-02	4.58E-05		1.20E-01	
PROPYLENE	4.67E-01	4.69E-03	2.34E-01	5.91E-04		1.55E+00	
SELENIUM AND COMPOUNDS	2.20E-03	2.21E-05	1.10E-03	2.78E-06		7.31E-03	
TOLUENE	1.05E-01	1.06E-03	5.29E-02	1.33E-04		3.50E-01	
XYLENES	4.24E-02	4.26E-04	2.13E-02	5.36E-05		1.41E-01	

PROJECT TITLE:

C:\Users\breeve\OneDrive - County of San Diego\HDrive\Modeling Proje



COMMENTS:

SOURCES:

1

RECEPTORS:

17984

Concentration

93.6 ug/m^3

COMPANY NAME:

SDAPCD

MODELER:

PO

DATE:

7/24/2024

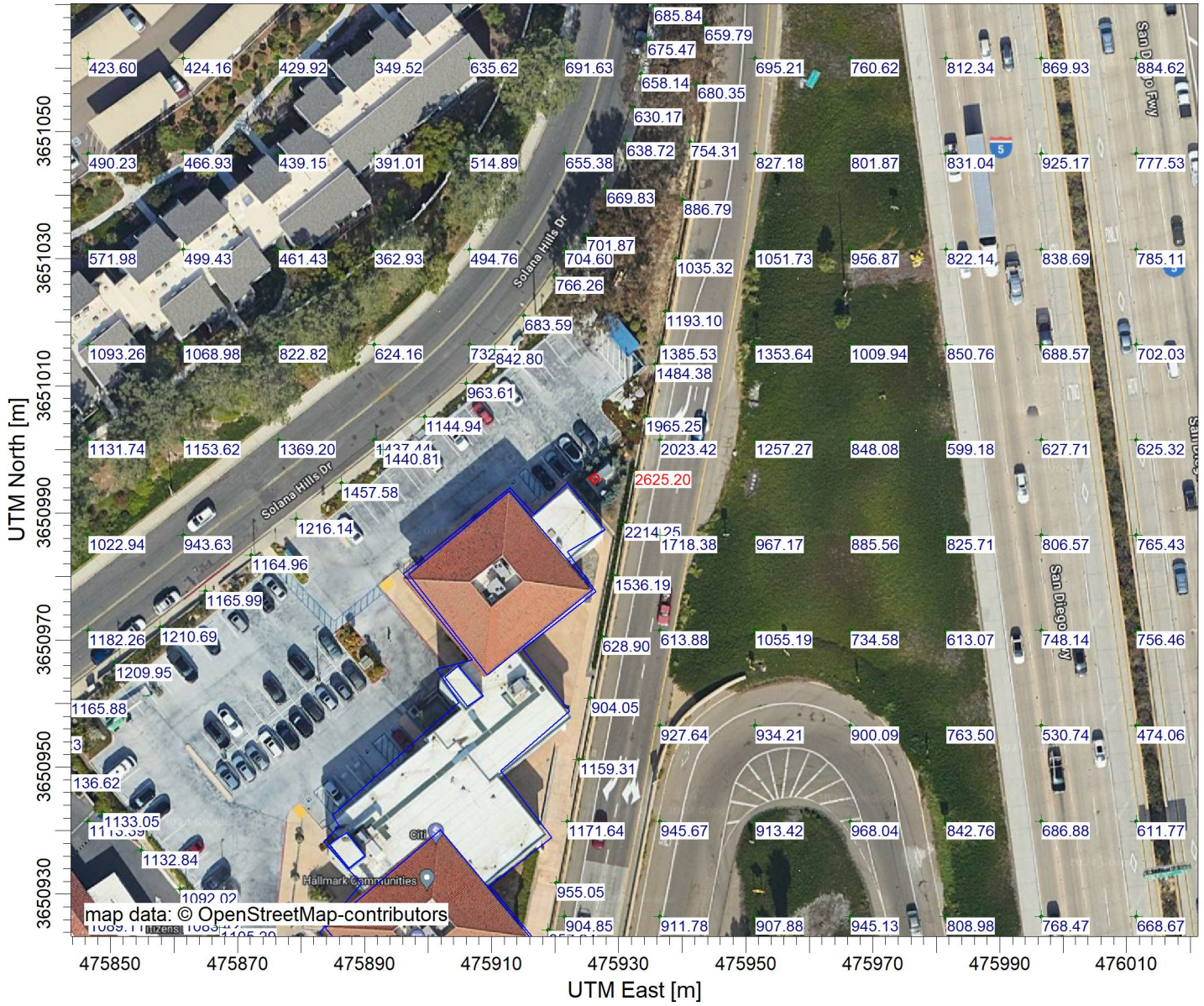
SCALE: 1:1,000

0 0.03 km

PROJECT NO.:

PROJECT TITLE:

C:\Users\breeve\OneDrive - County of San Diego\HDrive\Modeling Proje



COMMENTS:

SOURCES:

1

RECEPTORS:

17984

Concentration

2625 ug/m^3

COMPANY NAME:

SDAPCD

MODELER:

PO

DATE:

7/24/2024

SCALE: 1:1,000

0 0.03 km

PROJECT NO.:

*** MODELOPTs: RegDFAULT CONC ELEV URBAN SigA Data

*** MODEL SETUP OPTIONS SUMMARY ***

*** 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	475926.2	3650995.4	41.3	2.68	747.04	32.45	0.13	YES	YES	NO	

*** AERMOD - VERSION 23132 *** *** C:\Users\breeve\OneDrive - County of San Diego\HDrive\Modeling Proje *** 07/23/24
*** AERMET - VERSION 22112 *** *** *** 09:24:16
PAGE 3

*** MODELOPTs: RegDFAULT CONC ELEV URBAN SigA Data

** 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 = 189946.0 ; Urban Roughness Length = 1.000 m
* Urban Roughness Length of 1.0 Meter Used.
* CCVR_Sub - Meteorological data includes CCVR 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   17984 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) =    39.00 ;  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.
```

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

 **Detailed Error/Message File:   8188_Netly.err
 **File for Summary of Results:   8188_Netly.sum
↑ *** AERMOD - VERSION 23132  ***   *** C:\Users\breeve\OneDrive - County of San Diego\HDrive\Modeling Proje ***        07/23/24
 *** AERMET - VERSION  22112 ***   ***                                                                       ***        09:24:16
                                                                                                                        PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  SigA Data

                                             *** 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 ***        07/23/24
 *** AERMET - VERSION  22112 ***   ***                                                                       ***        09:24:16
                                                                                                                        PAGE   3
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  SigA Data

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

Surface file: ..\..\AERMET\AERMET 22112 data\DMR 2010_2012_sigma_v22112.SFC Met Version: 22112
Profile file: ..\..\AERMET\AERMET 22112 data\DMR 2010_2012_sigma_v22112.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 3177 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2010 Year: 2010

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
10	01	01	1	01	-2.6	0.050	-9.000	-9.000	-999.	27.	4.3	0.04	0.32	1.00	1.34	57.	10.0	284.2	2.0
10	01	01	1	02	-2.6	0.050	-9.000	-9.000	-999.	27.	4.3	0.04	0.32	1.00	1.34	59.	10.0	283.8	2.0
10	01	01	1	03	-4.5	0.066	-9.000	-9.000	-999.	40.	5.6	0.04	0.32	1.00	1.78	72.	10.0	283.1	2.0
10	01	01	1	04	-1.1	0.033	-9.000	-9.000	-999.	14.	2.8	0.04	0.32	1.00	0.89	52.	10.0	283.1	2.0
10	01	01	1	05	-0.3	0.016	-9.000	-9.000	-999.	5.	1.4	0.04	0.32	1.00	0.44	60.	10.0	283.1	2.0
10	01	01	1	06	-2.6	0.049	-9.000	-9.000	-999.	26.	4.2	0.04	0.32	1.00	1.34	77.	10.0	283.1	2.0
10	01	01	1	07	-4.5	0.066	-9.000	-9.000	-999.	40.	5.6	0.04	0.32	1.00	1.78	80.	10.0	282.0	2.0
10	01	01	1	08	-5.7	0.082	-9.000	-9.000	-999.	57.	8.8	0.04	0.32	0.47	2.23	89.	10.0	283.8	2.0
10	01	01	1	09	17.6	0.041	0.281	0.016	46.	20.	-1.0	0.01	0.32	0.26	0.44	301.	10.0	287.5	2.0
10	01	01	1	10	42.3	0.127	0.475	0.010	91.	108.	-4.4	0.03	0.32	0.19	1.34	356.	10.0	289.2	2.0
10	01	01	1	11	59.7	0.075	0.671	0.009	182.	50.	-1.0	0.01	0.32	0.17	0.89	318.	10.0	292.0	2.0
10	01	01	1	12	67.5	0.101	0.839	0.008	315.	77.	-1.4	0.01	0.32	0.16	1.34	321.	10.0	291.4	2.0
10	01	01	1	13	66.3	0.124	0.907	0.008	405.	105.	-2.6	0.01	0.32	0.16	1.78	320.	10.0	290.9	2.0
10	01	01	1	14	55.8	0.123	0.898	0.008	466.	103.	-3.0	0.01	0.32	0.17	1.78	309.	10.0	289.8	2.0
10	01	01	1	15	37.0	0.119	0.804	0.008	504.	98.	-4.1	0.01	0.32	0.20	1.78	321.	10.0	290.3	2.0
10	01	01	1	16	11.0	0.113	0.540	0.008	514.	91.	-11.7	0.03	0.32	0.29	1.34	341.	10.0	289.8	2.0
10	01	01	1	17	-1.0	0.031	-9.000	-9.000	-999.	20.	2.8	0.03	0.32	0.57	0.89	340.	10.0	288.8	2.0
10	01	01	1	18	-0.2	0.015	-9.000	-9.000	-999.	5.	1.3	0.03	0.32	1.00	0.44	341.	10.0	287.5	2.0
10	01	01	1	19	-2.3	0.049	-9.000	-9.000	-999.	26.	4.5	0.04	0.32	1.00	1.34	18.	10.0	287.0	2.0
10	01	01	1	20	-2.5	0.050	-9.000	-9.000	-999.	27.	4.3	0.04	0.32	1.00	1.34	38.	10.0	287.0	2.0
10	01	01	1	21	-1.1	0.033	-9.000	-9.000	-999.	14.	2.8	0.04	0.32	1.00	0.89	63.	10.0	285.9	2.0
10	01	01	1	22	-1.1	0.033	-9.000	-9.000	-999.	14.	2.8	0.04	0.32	1.00	0.89	65.	10.0	285.3	2.0
10	01	01	1	23	-1.1	0.033	-9.000	-9.000	-999.	14.	2.8	0.04	0.32	1.00	0.89	56.	10.0	285.3	2.0
10	01	01	1	24	-1.1	0.033	-9.000	-9.000	-999.	14.	2.8	0.04	0.32	1.00	0.89	51.	10.0	285.3	2.0

First hour of profile data

```
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 10 01 01 01   10.0 1   57.    1.34  -999.0   99.0  -99.00  -99.00

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

```
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  SigA Data

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


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

                                                                                                        NETWORK
GROUP ID                        AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL       1ST HIGHEST VALUE IS      93.55418 AT (  475872.12,  3650983.36,    40.46,    91.42,    0.00)  DC
          2ND HIGHEST VALUE IS      82.31731 AT (  475879.24,  3650989.03,    41.08,    91.10,    0.00)  DC
          3RD HIGHEST VALUE IS      76.76559 AT (  475864.99,  3650977.69,    40.19,    91.42,    0.00)  DC
          4TH HIGHEST VALUE IS      72.56404 AT (  475861.50,  3650986.50,    40.34,    91.42,    0.00)  DC
          5TH HIGHEST VALUE IS      70.72055 AT (  475857.86,  3650972.03,    39.79,    91.42,    0.00)  DC
          6TH HIGHEST VALUE IS      68.14808 AT (  475846.50,  3650986.50,    41.70,    91.38,    0.00)  DC
          7TH HIGHEST VALUE IS      65.55179 AT (  475846.50,  3650971.50,    39.34,    91.52,    0.00)  DC
          8TH HIGHEST VALUE IS      64.92810 AT (  475929.20,  3650980.17,    40.80,    90.03,    0.00)  DC
          9TH HIGHEST VALUE IS      63.63590 AT (  475831.50,  3650986.50,    45.14,    89.86,    0.00)  DC
         10TH HIGHEST VALUE IS      63.35913 AT (  475850.73,  3650966.36,    39.78,    91.38,    0.00)  DC


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

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  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	2625.20111	ON 11091012: AT (475932.47, 3650996.80, 41.56, 90.80, 0.00)	DC	

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

*** MODELOPTs: RegDFAULT CONC ELEV URBAN SigA Data

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

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

A Total of   0 Fatal Error Message(s)
A Total of   9 Warning Message(s)
A Total of   15042 Informational Message(s)

A Total of   26304 Hours Were Processed

A Total of   1791 Calm Hours Identified

A Total of   505 Missing Hours Identified (1.92 Percent)

******** FATAL ERROR MESSAGES ********

```
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
MX W403     102       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       1       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       2       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       3       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       4       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       5       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       6       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       7       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       8       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
```