MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION

June 27, 2024

PERMIT TO INSTALL
71-24

ISSUED TO
Lansing Board of Water and Light

LOCATED AT
3725 South Canal Road
Lansing, Michigan 48917

IN THE COUNTY OF
Eaton

STATE REGISTRATION NUMBER
B4001

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **February 7, 2024**	
DATE PERMIT TO INSTALL APPROVED: **June 27, 2024**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H_2S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO_x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO_2	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUENGINE1	A 29,147 brake horsepower (bHP) natural gas-fired reciprocating internal combustion engine (RICE) equipped with selective catalytic reduction (SCR) to reduce NO_x emissions, as well as an oxidation catalyst to reduce CO and VOC emissions.	TBD	FGENGINES
EUENGINE2	A 29,147 brake horsepower (bHP) natural gas-fired reciprocating internal combustion engine (RICE) equipped with selective catalytic reduction (SCR) to reduce NO_x emissions, as well as an oxidation catalyst to reduce CO and VOC emissions.	TBD	FGENGINES
EUENGINE3	A 29,147 brake horsepower (bHP) natural gas-fired reciprocating internal combustion engine (RICE) equipped with selective catalytic reduction (SCR) to reduce NO_x emissions, as well as an oxidation catalyst to reduce CO and VOC emissions.	TBD	FGENGINES
EUENGINE4	A 29,147 brake horsepower (bHP) natural gas-fired reciprocating internal combustion engine (RICE) equipped with selective catalytic reduction (SCR) to reduce NO_x emissions, as well as an oxidation catalyst to reduce CO and VOC emissions.	TBD	FGENGINES
EUENGINE5	A 29,147 brake horsepower (bHP) natural gas-fired reciprocating internal combustion engine (RICE) equipped with selective catalytic reduction (SCR) to reduce NO_x emissions, as well as an oxidation catalyst to reduce CO and VOC emissions.	TBD	FGENGINES
EUENGINE6	A 29,147 brake horsepower (bHP) natural gas-fired reciprocating internal combustion engine (RICE) equipped with selective catalytic reduction (SCR) to reduce NO_x emissions, as well as an oxidation catalyst to reduce CO and VOC emissions.	TBD	FGENGINES
EUEMGEN	A 762 brake horsepower (bHP) (568 brake kilowatt, bkW) diesel-fueled emergency engine with a model year of 2011 or later with an onboard diesel tank.	TBD	NA
EUFIREPUMP	A 500 brake horsepower (bHP) (373 brake kilowatt, bkW) diesel-fueled fire pump for emergency use only with an onboard diesel tank.	TBD	NA

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUDEWPTHEATER	A natural gas-fired gas dew point heater rated at 5 MMBTU/hr for warming the natural gas fuel to prevent moisture from entering equipment.	TBD	FGNATGASHEAT
EUSPACEHEAT	Various natural gas-fired space heaters used to provide comfort heat to the facility. Maximum heat input (aggregate): 10 MMBTU/hr.	TBD	FGNATGASHEAT

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

EUEMGEN
EMISSION UNIT CONDITIONS

DESCRIPTION

A 762 brake horsepower (bHP) (568 brake kilowatt, bkW) diesel-fueled emergency engine with a model year of 2011 or later with an onboard diesel tank.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO_x + NMHC	6.4 g/bkW-hr[A]	Hourly	EUEMGEN	SC V.1, SC VI.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4205(b)
2. CO	3.5 g/bkW-hr[A]	Hourly	EUEMGEN	SC V.1, SC VI.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4205(b)
3. PM	0.20 g/bkW-hr[A]	Hourly	EUEMGEN	SC V.1, SC VI.2	R 336.1205(1)(a) & (b), R 334.1331(1)l, 40 CFR 60.4205(b)
4. PM10	0.3 pph	Hourly	EUEMGEN	SC V.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. PM2.5	0.3 pph	Hourly	EUEMGEN	SC V.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. GHG as CO_2e	205 tpy	12-month rolling period as determined at the end of each month	EUEMGEN	SC VI.4, SC VI.6	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

[A]These emission limits are for certified engines; if testing becomes required to demonstrate compliance, then the tested values must be compared to the Not to Exceed (NTE) requirements determined through 40 CFR 60.4212(c), for the NSPS. Using the NTE limits does not apply to demonstrating compliance with BACT.

II. MATERIAL LIMIT(S)

1. The permittee shall burn only diesel fuel in EUEMGEN with a maximum sulfur content of 15 ppm (0.0015 percent) by weight and a minimum Cetane index of 40 or a maximum aromatic content of 35 volume percent. **(R 336.1205(1)(a) & (b), 40 CFR 60.4207, 40 CFR 1090.305)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUEMGEN for more than one hour per day, except during emergency conditions, commissioning activity, and required stack testing, and not more than 500 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. The 500 hours includes the hours for the purpose of necessary maintenance checks and readiness testing as described in SC III.2. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(j))**

2. The permittee may operate EUEMGEN for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per calendar year. EUEMGEN may operate up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing. Except as provided in 40 CFR 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or demand response, or to generate income for the permittee to supply non-emergency power as part of a financial arrangement with another entity. **(40 CFR 60.4211(f))**

3. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60 Subpart IIII, for the same model year and maximum engine power, the permittee shall meet the following requirements for EUEMGEN:
   a) Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions.
   b) Change only those emission-related settings that are permitted by the manufacturer.
   c) Meet the requirements as specified in 40 CFR Parts 1068, as they apply to EUEMGEN.

   If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine may be considered a non-certified engine. **(R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4211)**

4. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for EUEMGEN and shall, to the extent practicable, maintain and operate engine in a manner consistent with good air pollution control practice for minimizing emissions. **(R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4211(g))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUEMGEN with non-resettable hours meters to track the operating hours. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 60.4209)**

2. The nameplate capacity of EUEMGEN shall not exceed 762 bHP (568 bkW). **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. If EUEMGEN is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:
   a) Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.
   b) If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212.

c) Conduct subsequent performance testing every 8,760 hours of engine operation or every 3 years thereafter, whichever comes first, to demonstrate compliance with the applicable emission standards.

No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4211(g)(3), 40 CFR 60.4212)**

2. Upon request from the AQD District Supervisor, the permittee shall verify PM10 and PM2.5 emission rates from EUEMGEN, by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of three acceptable test runs per the applicable method requirements. Testing shall be performed using an approved EPA Method listed:

Pollutant	Test Method Reference
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

2. The permittee shall keep, in a satisfactory manner, the following records for EUEMGEN:
   a) For a certified engine, the permittee shall keep records of the manufacturer certification documentation.
   b) For an uncertified engine, the permittee shall keep records of testing required in SC V.1. If EUEMGEN is or becomes uncertified, then the permittee must also keep records of a maintenance plan and maintenance activities.

   The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4211)**

3. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EUEMGEN:
   a) For a certified engine, the permittee shall keep records of the manufacturer's emission-related written instructions, and records demonstrating that the engine has been maintained according to those instructions, as specified in SC III.3.
   b) For an uncertified engine, the permittee shall keep records of a maintenance plan, as required by SC III.4, and maintenance activities.

   The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211)**

4. The permittee shall monitor and record, the total hours of operation for EUEMGEN on a daily, monthly, and 12-month rolling time period basis, and the hours of operation during emergency and non-emergency service that are recorded through the non-resettable hour meter for EUEMGEN, on a calendar year basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation of EUEMGEN, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4211, 40 CFR 60.4214)**

5. The permittee shall keep, in a satisfactory manner, diesel fuel supplier certification records or fuel sample test data, for diesel fuel used in EUEMGEN, demonstrating that the fuel sulfur content meets the requirement of 40 CFR 1090.305. The certification or test data shall include the name of the oil supplier or laboratory, and the sulfur content of the diesel fuel and either the Cetane index or aromatic content. **(R 336.1205(1)(a) & (b), 40 CFR 60.4207(b), 40 CFR 1090.305)**

6. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO_2e mass emissions for EUEMGEN. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed according to Appendix A or an alternate method approved by the District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

VII. REPORTING

1. The permittee shall submit a notification specifying whether EUEMGEN will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of the engine and within 30 days of switching the manner of operation. **(40 CFR Part 60, Subpart IIII)**

2. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUEMGEN. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVEMGEN	10	15	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart A and Subpart IIII, as they apply to EUEMGEN. **(40 CFR Part 60, Subparts A and IIII)**

2. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, as they apply to EUEMGEN. **(40 CFR Part 63, Subparts A and ZZZZ, 40 CFR 63.6590)**

EUFIREPUMP
EMISSION UNIT CONDITIONS

DESCRIPTION

A 500 brake horsepower (bHP) (373 brake kilowatt, bkW) diesel-fueled fire pump for emergency use only with an onboard fuel oil (diesel) tank.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO_x + NMHC	4.0 g/bkW-hr[A]	Hourly	EUFIREPUMP	SC V.1, SC VI.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4205, Table 4 of 40 CFR Part 60, Subpart IIII
2. CO	3.5 g/bkW-hr[A]	Hourly	EUFIREPUMP	SC V.1, SC VI.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4205, Table 4 of 40 CFR Part 60, Subpart IIII
3. PM	0.20 g/bkW-hr[A]	Hourly	EUFIREPUMP	SC V.1, SC VI.2	R 336.1205(1)(a) & (b), R 336.1331(1)(c), 40 CFR 60.4205, Table 4 of 40 CFR Part 60, Subpart IIII
4. PM10	1.1 pph	Hourly	EUFIREPUMP	SC V.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. PM2.5	1.1 pph	Hourly	EUFIREPUMP	SC V.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. GHG as CO_2e	27 tpy	12 month rolling time period as determined at the end of each month	EUFIREPUMP	SC VI.4, SC VI.6	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

[A]These emission limits are for certified engines; if testing becomes required to demonstrate compliance, then the tested values must be compared to the Not to Exceed (NTE) requirements determined through 40 CFR 60.4212(c), for the NSPS. Using the NTE limits does not apply to demonstrating compliance with BACT.

II. MATERIAL LIMIT(S)

1. The permittee shall burn only diesel fuel in EUFIREPUMP with a maximum sulfur content of 15 ppm (0.0015 percent) by weight and a minimum Cetane index of 40 or a maximum aromatic content of 35 volume percent. **(R 336.1205(1)(a) & (b), 40 CFR 60.4207, 40 CFR 1090.305)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate each engine in EUFIREPUMP for more than one hour per day, except for emergency conditions, commissioning activity, and required stack testing, and not more than 100 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. The 100 hours includes the hours for the purpose of necessary maintenance checks and readiness testing as described in SC III.2. **(R 336.1205(1)(a) & (b)), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(j))**

2. The permittee may operate EUFIREPUMP for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per calendar year. **(40 CFR 60.4211(f)(2))**

3. The permittee may operate EUFIREPUMP up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted as part of the 100 hours per calendar year provided for maintenance and testing as provided in 40 CFR 60.4211(f)(2). Except as provided in 40 CFR 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. **(40 CFR 60.4211(f)(3))**

4. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60, Subpart IIII, for the same model year, the permittee shall meet the following requirements for EUFIREPUMP:
   a) Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,
   b) Change only those emission-related settings that are permitted by the manufacturer, and
   c) Meet the requirements as specified in 40 CFR 1068, as they apply to the engine.

   If you do not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine. **(40 CFR 60.4211(a) & (c))**

5. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for EUFIREPUMP and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4211(g)(2))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUFIREPUMP with non-resettable hours meters to track the operating hours. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 60.4209)**

2. The nameplate capacity of EUFIREPUMP shall not exceed 500 bHP (373 bkW). **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. If EUFIREPUMP is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:
   a) Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.
   b) If a performance test is required, the performance tests shall be conducted according to need to pick one or use both of the following requirements depending on the engine cylinder size 40 CFR 60.4212.

   No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4211(g)(2), 40 CFR 60.4212)**

2. Upon request from the AQD District Supervisor, the permittee shall verify PM10 and PM2.5 emission rates from EUFIREPUMP, by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of three acceptable test runs per the applicable method requirements. Testing shall be performed using an approved EPA Method listed:

Pollutant	Test Method Reference
PM10 / PM2.5	40 CFR Part 51, Appendix M

   An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

2. The permittee shall keep, in a satisfactory manner, the following records for EUFIREPUMP:
   a) For a certified engine, the permittee shall keep records of the manufacturer certification documentation.
   b) For an uncertified engine, the permittee shall keep records of testing required in SC V.1.
   The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211)**

3. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EUFIREPUMP:
   a) For a certified engine, the permittee shall keep records of the manufacturer's emission-related written instructions, and records demonstrating that the engine has been maintained according to those instructions, as specified in SC III.4.
   b) For an uncertified engine, the permittee shall keep records of a maintenance plan, as required by SC III.5, and maintenance activities.
   The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211)**

4. The permittee shall monitor and record, the total hours of operation for EUFIREPUMP on a daily, monthly, and 12-month rolling time period basis, and the hours of operation during emergency and non-emergency service that are recorded through the non-resettable hour meter for EUFIREPUMP, on a calendar year basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation of EUFIREPUMP, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(336.1205(1)(a) & (b), 40 CFR 60.4211, 40 CFR 60.4214)**

5. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in EUFIREPUMP, demonstrating that the fuel meets the requirement of 40 CFR 1090.305. The certification or test data shall include the name of the oil supplier or laboratory, the sulfur content, and cetane index or aromatic content of the fuel oil. **(R 336.1205(1)(a) & (b), 40 CFR 60.4207(b), 40 CFR 1090.305)**

6. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO_2e mass emissions for EUFIREPUMP. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed according to Appendix A or an alternate method approved by the District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

VII. REPORTING

1. The permittee shall submit a notification specifying whether EUFIREPUMP will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of the engine and within 30 days of switching the manner of operation. **(40 CFR Part 60, Subpart IIII)**

2. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUFIREPUMP. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVFIREPUMP	7	15	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart A and Subpart IIII, as they apply to EUFIREPUMP. **(40 CFR Part 60, Subparts A and IIII)**

2. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, as they apply to EUFIREPUMP. **(40 CFR Part 63, Subparts A and ZZZZ, 40 CFR 63.6590)**

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGENGINES	Six (6) natural gas-fired reciprocating internal combustion engines (RICE).	EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6
FGNATGASHEAT	One (1) natural gas-fired dew point heater and miscellaneous natural gas-fired space heating equipment.	EUDEWPTHEATER, EUSPACEHEAT

FGENGINES
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Six (6) natural gas-fired reciprocating internal combustion engines (RICE).

Emission Unit: EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6

POLLUTION CONTROL EQUIPMENT

Selective catalytic reduction (SCR) to control NO_x emissions and an oxidation catalyst to control CO and VOC emissions. The SCR system includes a 23,000-gallon urea storage tank.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO_x	0.5 g/bHP-hr[A,B]	Hourly, except during startup and shutdown	Each engine in FGENGINES	SC V.1	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
2. NO_x	49.7 pph[B]	Operating hour during startup or shutdown	Each engine in FGENGINES	SC VI.11	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
3. NO_x	1.0 g/bHP-hr, or 82 ppmvd at 15% O_2[C]	Hourly	Each engine in FGENGINES	SC V.2	40 CFR 60.4233(e), Table 1 to 40 CFR 60 Subpart JJJJ
4. CO	0.3 g/bHP-hr[A,B]	Hourly, except during startup and shutdown	Each engine in FGENGINES	SC V.1	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810
5. CO	36.9 pph[B]	Operating hour during startup or shutdown	Each engine in FGENGINES	SC VI.11	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. CO	2.0 g/bHP-hr, or 270 ppmvd at 15%O_2[C]	Hourly	Each engine in FGENGINES	SC V.2	40 CFR 60.4233(e), Table 1 to 40 CFR 60 Subpart JJJJ
7. VOC (including formaldehyde)	20 pph[A,B]	Hourly	Each engine in FGENGINES	SC V.1	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2810
8. VOC	0.7 g/bHP-hr, or 60 ppmvd at 15% O_2[C,D]	Hourly	Each engine in FGENGINES	SC V.2	40 CFR 60.4233(e), Table 1 to 40 CFR 60 Subpart JJJJ
9. PM	2 pph[A,B]	Hourly	Each engine in FGENGINES	SC V.1	R 336.1205(1)(a) & (b), R 336.2810
10. PM10	4 pph[A,B]	Hourly	Each engine in FGENGINES	SC V.1	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
11. PM2.5	4 pph[A,B]	Hourly	Each engine in FGENGINES	SC V.1	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
12. CO_2e	90,268 tpy	12-month rolling time period as determined at the end of each calendar month	Each engine in FGENGINES	SC VI.3, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)
13. Formaldehyde	14 ppmvd at 15% O_2[1]	Hourly, except during startup and shutdown	Each engine in FGENGINES	SC V.3	R 336.1225(2)
14. CO or Formaldehyde	93 percent or more reduction in CO emissions or Formaldehyde concentration of ≤ 14 ppmvd at 15% O_2[E]	Hourly, except during periods of startup	Each engine in FGENGINES	SC V.4	40 CFR 63.6600(b), Table 2a to 40 CFR 63 Subpart ZZZZ

[A] Does not include startup and shutdown.

[B] Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the engine load below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the engine is terminated. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the plan required in SC III.2.

[C] Owners and operators may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15% O_2.

[D] For the purposes of 40 CFR Part 60 Subpart JJJJ, emissions of formaldehyde should not be included when calculating volatile organic compounds.

[E] This limit applies at 100% load (plus or minus 10% load) during all periods of operation, except for periods of startup. (40 CFR Part 63 Subpart ZZZZ, Table 2a, 40 CFR 63.6605(a))

II. MATERIAL LIMIT(S)

1. The permittee shall burn only natural gas in each engine in FGENGINES. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Within 180 days after trial operation, the permittee shall submit, implement, and maintain a malfunction abatement plan (MAP) as described in Rule 911(2) for FGENGINES. The MAP shall, at a minimum, specify the following:
   a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 90 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911)**

2. Within 180 days after trial operation, the permittee shall submit a plan, to the AQD District Supervisor for approval, that describes how emissions will be minimized during startups and shutdowns. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices, and shall describe the demonstrated percent of design capacity, or demonstrated steady state level. Unless notified by the District Supervisor within 30 business days after plan submittal, the plan shall be deemed approved. **(R 336.1702(a), R 336.1910, R 336.1912, R 336.2803, R 336.2804, R 336.2810)**

3. The permittee shall keep a maintenance plan for the engines in FGENGINES and to the extent practicable, maintain and operate the unit(s) in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(b)(2))**

4. At all times, the permittee must operate and maintain each engine in FGENGINES, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. **(40 CFR 63.6605(b))**

5. The permittee must meet the following operating limitations, except during periods of startup:
   a) Maintain the oxidation catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and
   b) Maintain the temperature of your stationary engine exhaust so that the oxidation catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F or as established pursuant to a petition for a different temperature range granted in accordance with 40 CFR 63.8(f).

   (R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 63.6600(b), Table 2b of 40 CFR Part 63 Subpart ZZZZ)

6. The permittee shall prepare a site-specific monitoring plan that addresses oxidation catalyst parameter monitoring system design, data collection, and the quality assurance and quality control elements outlined below, and in 40 CFR 63.6625(b)(1)(i) through (v) and in §63.8(d).
   a) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;
   b) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;
   c) Equipment performance evaluations, system accuracy audits, or other audit procedures;
   d) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3);
   e) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

   "Monitoring System" refers to Continuous Monitoring Systems (CMS) for the oxidation catalyst, which includes Continuous Parameter Monitoring Systems (CPMS). As specified in §63.8(f)(4), the permittee may request approval of alternative monitoring system quality assurance and quality control procedures. **(40 CFR 63.6625(b))**

7. If a CPMS is installed at the oxidation catalyst, the permittee shall conduct a performance evaluation of each CPMS in accordance with their site-specific monitoring plan. The permittee shall conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in their site-specific monitoring plan at least annually. **(40 CFR 63.6625(b)(5) & (6))**

8. The permittee shall minimize the engines' time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standard applicable to all times other than startup applies. **(40 CFR 63.6625(h))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The nameplate capacity of each engine in FGENGINES shall not exceed 29,147 bHP. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 228.2810, 40 CFR 52.21(j))**

2. The permittee shall not operate each engine in FGENGINES unless each respective SCR and oxidation catalyst are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for each unit in FGENGINES as required in SC III.1. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**

3. The permittee shall install, operate, and maintain each CPMS at the oxidation catalyst in continuous operation according to the requirements in Table 5 of 40 CFR Part 63 Subpart ZZZZ item 2 and according to the requirements in 40 CFR 63.6625(b). **(40 CFR 63.6625(b)(2))**

4. The permittee shall ensure that the CPMS records oxidation catalyst temperature data at least once every 15 minutes. For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger. **(40 CFR 63.6625(b)(3) & (4))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 60 days after achieving the maximum production rate, but no later than 180 days after commencement of initial startup, the permittee shall verify NO_x, CO, VOC, PM, PM10, and PM2.5 emission rates from each engine in FGENGINES, by testing at the owner's expense, in accordance with Department requirements. The permittee shall complete the testing once every five years, thereafter, unless an alternate testing schedule is approved by the AQD District Supervisor. Subsequent testing can be conducted on a representative number of engines upon approval by AQD. The hourly emission rates shall be determined by the average of three acceptable test runs per the applicable method requirements. Testing shall be performed using an approved EPA Method listed:

Pollutant	Test Method Reference
NO_x	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
PM	40 CFR Part 60, Appendix A
PM10 / PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall conduct an initial performance test for each engine in FGENGINES within one year after startup to demonstrate compliance with the NO_x, CO, and VOC emission limits in 40 CFR 60.4233(e) (SC I.3, I.6, and I.8). The permittee shall conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance. The performance tests shall be conducted according to 40 CFR 60.4244, and the hourly emission rates shall be determined by the average of the acceptable three test runs. No less than 30 days prior to testing, a complete test plan shall be submitted to

the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(40 CFR 60.4243(b)(2), 40 CFR 60.4244)**

3. Within 60 days after achieving the maximum production rate, but no later than 180 days after commencement of initial startup, the permittee shall verify formaldehyde emission rates from each engine in FGENGINES, by testing at the owner's expense, in accordance with Department requirements. The permittee shall complete the testing once every five years, thereafter, unless an alternate testing schedule is approved by the AQD District Supervisor. Subsequent testing can be conducted on a representative number of engines upon approval by AQD. The hourly emission rates shall be determined by the average of three acceptable test runs per the applicable method requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 63, Appendix A or 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1225, R 336.2001, R 336.2003, R 336.2004)**

4. The permittee shall conduct an initial performance test to demonstrate compliance with either the CO or formaldehyde emission limit in SC I.12 and start operation of the CPMS within 180 days after initial startup, for each engine in FGENGINES. During the initial performance test, the permittee must establish each operating limitation in Table 2b of 40 CFR 63 Subpart ZZZZ that applies. The permittee shall perform subsequent performance tests for each engine in FGENGINES on a semiannual basis. The permittee may reduce the frequency of subsequent performance tests to annually after compliance has been demonstrated for two consecutive tests. The permittee shall resume semiannual performance tests if the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or if the permittee has deviated from any of their operating limitations.

   The permittee shall conduct each performance test according to the requirements specified in 40 CFR 63.6620 and 40 CFR Part 63, Subpart ZZZZ Table 4, and the hourly emission rate shall be determined by the average of the acceptable three test runs. The permittee is not required to start up the engine solely to conduct the performance test. If the engine is non-operational, the permittee shall conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load. The permittee shall submit a Notification to the AQD District Supervisor of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1). **(40 CFR 63.6610(a), 40 CFR 63.6615, 40 CFR 63.6620, 40 CFR 63.6630(b), 40 CFR 63.6645(g), Table 3 of 40 CFR 63 Subpart ZZZZ)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

2. The permittee shall keep, in a satisfactory manner maintenance records documenting that each unit in FGENGINES meets the applicable emission limitations contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60, Subpart JJJJ. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4245)**

3. The permittee shall keep, in a satisfactory manner, records of the amount of natural gas fuel combusted in each unit in FGENGINES on a monthly basis. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

4. The permittee shall keep records of the following information for each unit in FGENGINES:
   a) All notifications submitted to comply with 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification.
   b) Maintenance conducted on each unit in FGENGINES.

c) If a unit(s) in FGENGINES is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2), documentation that each unit in FGENGINES meets the emission standards in 40 CFR 60.4233(e). **(40 CFR 60.4243(b)(1), 40 CFR 60.4245(a))**

5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO_2e mass emissions for each unit in FGENGINES, as required by SC I.12. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed according to Appendix A or an alternate method approved by the District Supervisor. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(j))**

6. The permittee shall continuously (at least once every 15 minutes) monitor the oxidation catalyst inlet temperature at all times that the engine is operating except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. This monitoring data shall be kept on file at the facility and made available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810, 40 CFR 63.6635, 40 CFR 63.6660, Table 6 of 40 CFR 63 Subpart ZZZZ)**

7. The permittee shall continuously (at least once every 15 minutes) monitor operating parameters of the SCR in accordance with an approved MAP as required by SC III.1, at all times that the engine is operating except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. This monitoring data shall be kept on file at the facility and made available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810)**

8. The permittee shall keep the following records:
   a) A copy of each notification and report submitted to comply with 40 CFR 63 Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status submitted, according to the requirement in §63.10(b)(2)(xiv).
   b) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or of the air pollution control and monitoring equipment.
   c) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).
   d) Records of all required maintenance performed on the air pollution control and monitoring equipment.
   e) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

   These records shall be kept on file at the facility and made available to the Department upon request. **(40 CFR 63.6655(a) & 63.6660)**

9. The permittee shall keep the following records:
   a) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or of the air pollution control and monitoring equipment.
   b) Records of performance tests and performance evaluations as required in SC V.1 and V.3.
   c) Records of all required maintenance performed on the air pollution control and monitoring equipment.
   d) Records of actions taken during periods of malfunction to minimize emissions in accordance with SC III.1, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

   These records shall be kept on file at the facility and made available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**

10. The permittee shall maintain the following records for each CPMS on file at the facility and make available to the Department upon request:
    a) Records described in §63.10(b)(2)(vi) through (xi);
    b) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3);

c) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable;
d) Oxidation catalyst inlet temperature data reduced to 4-hour rolling averages;
e) Pressure drop across the oxidation catalyst measured monthly; and
f) SCR operating parameters in accordance with an approved MAP as required by SC III.1.

(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810, 40 CFR 63.6655, 40 CFR 63.6660, Table 6 of 40 CFR 63 Subpart ZZZZ)

11. The permittee shall maintain records of the duration of all dates and times of startup and shutdown events for FGENGINES. The records shall be stored on file in a format acceptable to the AQD District Supervisor. **(R 336.1205(1)(a) & (b), R 336.1910, R 336.2803, R 336.2804, R 336.2810)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of each engine in FGENGINES. **(R 336.1201(7)(a))**

2. The permittee must submit an initial notification to the AQD District Supervisor within 30 days of commencement of construction as required in 40 CFR 60.7(a)(1), for each unit in FGENGINES that has not been certified by an engine manufacturer to meet the emission standards in 40 CFR 60.4231. The notification must include the following information:
   a) Name and address of the owner or operator;
   b) The address of the affected source;
   c) The engine make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
   d) The engine emission control equipment; and
   e) Fuel used in the engine.

   (40 CFR 60.4245(c))

3. The permittee shall submit an initial notification of compliance status to the AQD District Supervisor. The permittee shall submit the Notification of Compliance Status for demonstrating initial compliance, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2). The permittee shall include the following information in each notification of compliance status report:
   a) The engine model number,
   b) The engine manufacturer,
   c) The year of purchase,
   d) The manufacturer's site-rated brake horsepower,
   e) The ambient temperature, pressure, and humidity during the performance test,
   f) The calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. All assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

   (40 CFR 63.6620(i), 40 CFR 63.6630, 40 CFR 63.6645(h), Table 5 of 40 CFR 63 Subpart ZZZZ)

4. The permittee shall report each instance in which they did not meet each emission limitation in SC I.12 or operating limitation in SC III.5 to the AQD District Supervisor. These instances are deviations from the emission and operating limitations in 40 CFR Part 63 Subpart ZZZZ. These deviations must be reported according to the requirements in 40 CFR §63.6650. The permittee shall also conduct a performance test to demonstrate that they are meeting the required emission limitation applicable to their stationary RICE if the oxidation catalyst is changed. The permittee shall also reestablish the values of the operating parameters during the initial performance test. For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. **(R 336.1910, 40 CFR 63.6640(b) & (d))**

5. The permittee shall report to the AQD District Supervisor each instance in which they did not meet an applicable general provision as listed in Table 8 to 40 CFR Part 63 Subpart ZZZZ. **(40 CFR 63.6640(e))**

6. The permittee shall submit all applicable notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) to the AQD District Supervisor. **(40 CFR 63.6645(a))**

7. The permittee shall submit semiannual Compliance reports with the information in 40 CFR 63.6650(c) & (e) to the AQD District Supervisor. The first report must cover the period beginning on the startup date and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the startup date. The first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the startup date. Each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. The permittee may submit the first and subsequent Compliance reports according to the dates established by AQD for submitting the semiannual reports required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A) of the Title V program. **(40 CFR 63.6650(b), Table 7 of 40 CFR 63 Subpart ZZZZ)**

8. The permittee shall report to the AQD District Supervisor all deviations as defined in 40 CFR 63 Subpart ZZZZ in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A) of the Title V program. If the permittee submits a Compliance report pursuant to 40 CFR 63 Subpart ZZZZ along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in 40 CFR 63 Subpart ZZZZ, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority. **(40 CFR 63.6650(f))**

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVENGINE1	72	80	R 336.1225, R 336.2803, R 336.2804
2. SVENGINE2	72	80	R 336.1225, R 336.2803, R 336.2804
3. SVENGINE3	72	80	R 336.1225, R 336.2803, R 336.2804
4. SVENGINE4	72	80	R 336.1225, R 336.2803, R 336.2804
5. SVENGINE5	72	80	R 336.1225, R 336.2803, R 336.2804
6. SVENGINE6	72	80	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart A and Subpart JJJJ, as they apply to each engine in FGENGINES. **(40 CFR Part 60 Subparts A and JJJJ)**

2. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and ZZZZ, as they apply to each engine in FGENGINES. **(40 CFR Part 63 Subparts A and ZZZZ)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FGNATGASHEAT
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

One (1) natural gas-fired dew point heater and miscellaneous natural gas-fired space heating equipment.

Emission Unit: EUDEWPTHEATER, EUSPACEHEAT

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall burn only natural gas in each unit of FGNATGASHEAT. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j)))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for EUDEWPTHEATER shall not exceed 5 MMBTU per hour on a fuel heat input basis. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

2. The maximum design heat input capacity (aggregate) for EUSPACEHEAT shall not exceed 10 MMBTU per hour on a fuel heat input basis. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall keep manufacturer documentation showing the maximum heat input for EUDEWPTHEATER and each space heater contained in EUSPACEHEAT. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 228.2810, 40 CFR 52.21(j))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVDEWPTHEATER	12	15	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

NA

APPENDIX A: CO_2e Emission Calculations

CO_2e emissions (tons/month) = [(Fuel Usage (MMscf/month) x Higher Heating Value (MMBtu/MMscf)) x (CO_2 EF (lb/MMBtu) x CO_2 GWP + CH_4 EF (lb/MMBtu) x CH_4 GWP + N_2O EF (lb/MMBtu) x N_2O GWP)] x 1/2000 (ton/lb)

Where:
Fuel Usage (MMscf/month) = monthly fuel usage data from fuel flow meter or based on hours of operation
Higher Heating Value (MMBtu/MMscf) = standard value in AP-42 for natural gas, supplier data, or fuel sampling data if available
CO_2 EF (lb/MMbtu) = emission factor from the equipment manufacturer, U.S. EPA AP-42, or from the GHG Mandatory Reporting Rule (MRR) (40 CFR Part 98), including CEMS data if applicable
CH_4 EF (lb/MMbtu) = emission factor from the equipment manufacturer, U.S. EPA AP-42, or from the GHG Mandatory Reporting Rule (MRR) (40 CFR Part 98)
N_2O EF (lb/MMbtu) = emission factor from the equipment manufacturer, U.S. EPA AP-42, or from the GHG Mandatory Reporting Rule (MRR) (40 CFR Part 98)
CO_2 GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)
CH_4 GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)
N_2O GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)