

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

April 15, 2022
Revised December 6, 2022

PERMIT TO INSTALL
40-22

ISSUED TO
Bridging North America

LOCATED AT
1001 Springwells Court
Detroit, Michigan 48209

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
P1216

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: October 22, 2021	
DATE PERMIT TO INSTALL APPROVED: April 15, 2022	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 ₂ e	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 ₂ S	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 condition 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))	Flexible Group ID
EUCOGEN	1.1 MW Natural Gas-fired Cogeneration internal combustion engine (RICE) equipped with a catalyst to reduce NO _x , CO, VOC and Formaldehyde emissions.	NA
EUBOILER1	5 MMBTU/hr natural gas-fired Boiler #1	FGNATGAS
EUBOILER2	5 MMBTU/hr natural gas-fired Boiler #2	FGNATGAS
EUBOILER3	5 MMBTU/hr natural gas-fired Boiler #3	FGNATGAS
EUBOILER4	5 MMBTU/hr natural gas-fired Boiler #4	FGNATGAS
EUBOILER5	5 MMBTU/hr natural gas-fired Boiler #5	FGNATGAS
EUGEN1	A 2000 kilowatts (kW) 4-stroke Diesel-fueled compression ignition emergency engine #1 with a model year of 2011 or later, and a displacement < 10 liters/cylinder.	FGEMERGENS
EUGEN2	A 2000 kilowatts (kW) 4-stroke Diesel-fueled compression ignition emergency engine #2 with a model year of 2011 or later, and a displacement < 10 liters/cylinder.	FGEMERGENS
EUGEN3	A 2000 kilowatts (kW) 4-stroke Diesel-fueled compression ignition emergency engine #3 with a model year of 2011 or later, and a displacement < 10 liters/cylinder.	FGEMERGENS
EUGEN4	A 2000 kilowatts (kW) 4-stroke Diesel-fueled compression ignition emergency engine #4 with a model year of 2011 or later, and a displacement < 10 liters/cylinder.	FGEMERGENS
EUFIREPUMP	525 HP Diesel Fired Bridge Lands Fire Pump Engine	NA
EUNGGEN	150 kW (240 HP) Natural Gas-Fired Spark Ignition Lean Burn Emergency Generator	NA
EUMAINFURNACE	2.5 MMBTU/hr Natural Gas-Fired Main Building Back-up Gas Fired Furnace	FGNATGAS
EUNIIBOILER	0.75 MMBTU/hr Natural Gas-Fired NII Building Boiler	FGNATGAS
EUMAINHEATERS	Natural Gas-Fired Main Building Radiant Heaters with a maximum combined heat input of 0.31 MMBTU/hr	FGNATGAS
EUCMRH	Natural Gas-Fired Commercial Building Radiant Heaters with a maximum combined heat input of 1.31 MMBTU/hr	FGNATGAS
EUSECRH	Natural Gas-Fired Secondary Canopy Radiant Heaters with a maximum combined heat input of 0.31 MMBTU/hr	FGNATGAS
EUNIIHEATERS	Natural Gas-Fired NII Building Radiant Heaters with a maximum heat input capacity of 1.8 MMBTU/hr	FGNATGAS
EUPBDOAS	0.06 MMBTU/hr Natural Gas-Fired PB Building DOAS	FGNATGAS
EUUSDAHEATER	0.06 MMBTU/hr Natural Gas-Fired USDA Building Radiant Heater	FGNATGAS
EUOUTHEATERS	Natural Gas-Fired Outbound Building Radiant Heaters with a maximum combined heat input of 0.31 MMBTU/hr	FGNATGAS
EUOUTFURNACE	0.33 MMBTU/hr Natural Gas-Fired Outbound Building Back-up Gas Fired Furnace	FGNATGAS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Flexible Group ID
EUNCSHEATERS	Natural Gas-Fired Non-Commercial Secondary Canopy Radiant Heaters with a maximum combined heat input of 1.75 MMBTU/hr	FGNATGAS
EUMNHUMID	Natural Gas-Fired Main Building Gas-Fired Steam Humidifiers with a maximum combined heat input of 4.722 MMBTU/hr	FGNATGAS
EUUSDAHUMID	Natural Gas-Fired USDA Gas-Fired Steam Humidifiers with a maximum combined heat input of 0.427 MMBTU/hr	FGNATGAS
EUDWHEATER	0.7 MMBTU/hr Natural Gas-Fired Domestic Water Heater	FGNATGAS
EUOUTWH	0.199 MMBTU/hr Natural Gas-Fired Outbound Building Domestic Water Heater	FGNATGAS
EUUSDAWH	0.285 MMBTU/hr Natural Gas-Fired USDA Domestic Water Heater	FGNATGAS
EUPBDMWH	0.199 MMBTU/hr Natural Gas-Fired PB Domestic Water Heater	FGNATGAS
EUOUTHUMID	0.244 MMBTU/hr Natural Gas-Fired Outbound Steam Humidifier	FGNATGAS

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.

**EUCOGEN
EMISSION UNIT CONDITIONS**

DESCRIPTION

1.1 MW Natural Gas-fired Cogeneration reciprocating internal combustion engine (RICE) equipped with an oxidation catalyst to reduce NO_x, CO, VOC and Formaldehyde emissions.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

The cogen unit will be equipped with an oxidation catalyst to control NO_x, CO, VOC and formaldehyde.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO _x	1.0 g/bhp-hr or 82 ppmvd at 15% O ₂ ^a	Hourly	EUCOGEN	SC V.1, SC V.2	40 CFR 60.4233(e), Table 1 of 40 CFR 60 Subpart JJJJ
2. NO _x	0.5 g/hp-hr	Hourly	EUCOGEN	SC V.1, SC V.2	R 336.1205(1)(a)
3. NO _x	7.4 tpy	12-month rolling time period as determined at the end of each calendar month	EUCOGEN	SC VI.2	R 336.1205(1)(a)
4. CO	2.0 g/bhp-hr or 270 ppmvd at 15% O ₂ ^a	Hourly	EUCOGEN	SC V.1, SC V.2	40 CFR 60.4233(e), Table 1 of 40 CFR 60 Subpart JJJJ
5. CO	1.5 g/hp-hr	Hourly	EUCOGEN	SC V.1, SC V.2	R 336.1205(1)(a)
6. CO	22 tpy	12-month rolling time period as determined at the end of each calendar month	EUCOGEN	SC VI.2	R 336.1205(1)(a)
7. VOC	0.7 g/bhp-hr or 60 ppmvd at 15% O ₂ ^{a,b}	Hourly	EUCOGEN	SC V.1, SC V.2	40 CFR 60.4233(e), Table 1 of 40 CFR 60 Subpart JJJJ, R 336.1702(b)
8. VOC	8.91 pph ^c	Hourly	EUCOGEN	SC V.1	R 336.1702(a)
9. VOC	15.2 tpy ^c	12-month rolling time period as determined at the end of each calendar month	EUCOGEN	SC VI.2	R 336.1205(1)(a), R 336.1702(a)
10. Formaldehyde (CAS No. 50-00-0)	0.2 pph	Hourly	EUCOGEN	SC V.1	R 336.1225(2), R 336.1702(a)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
<p>^a Owners and operators may choose to comply with the emission standards in units of either g/bhp-hr or ppmvd at 15% O₂.</p> <p>^b For the purposes of 40 CFR Part 60 Subpart JJJJ, emissions of formaldehyde should not be included when calculating volatile organic compounds.</p> <p>^c This emission limit is for VOCs and the compliance demonstration must include formaldehyde.</p> <p>g/kW-hr = gram/kilowatt-hour g/bhr-hr = gram/brake horsepower-hour</p>					

II. MATERIAL LIMIT(S)

1. The permittee shall burn only pipeline quality natural gas in EUCOGEN. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 60.4230)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate and maintain EUCOGEN according to the manufacturer’s emission-related written instructions such that it meets the emission limits over the entire life of the engine. **(40 CFR 60.4234, 40 CFR 60.4243(b))**
2. 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 EUCOGEN. 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 90 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)**

3. The permittee shall keep a maintenance plan for EUCOGEN and shall, to the extent practicable, maintain and operate each unit in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(b)(2)(ii))**
4. The permittee shall not operate EUCOGEN for more than 8,320 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
5. If EUCOGEN is a non-certified engine or a certified engine operating in a non-certified manner, per 40 CFR Part 60 Subpart JJJJ, the permittee shall keep a maintenance plan for EUCOGEN 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 60.4243(b)(2))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUCOGEN with a non-resettable hour meter to track the operating hours. **(R 336.1205(1)(a) & (b), R 336.1225, 40 CFR 60.4237)**
2. The nameplate capacity of EUCOGEN shall not exceed 1.1 MW (1,520 HP), as certified by the equipment manufacturer. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4230)**
3. The permittee shall not operate EUCOGEN unless each respective oxidation catalyst is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for EUCOGEN as required in SC III.2. **(R 336.1205(1)(a) & (b), R 336.1702, R 336.1910)**

V. TESTING/SAMPLING

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

1. Within one year of initial startup, the permittee shall verify NO_x, CO, VOC, and formaldehyde emission rates from EUCOGEN by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of acceptable runs. Testing shall be performed using an approved EPA Method listed below.

Pollutant	Test Method Reference
NO _x	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOCs	40 CFR Part 60, Appendix A, 40 CFR Part 63, Appendix A
Formaldehyde	40 CFR Part 60, Appendix A, 40 CFR Part 63, 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, R 336.1702, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

2. If EUCOGEN is a non-certified engine or a certified engine operating in a non-certified manner, per 40 CFR Part 60 Subpart JJJJ, the permittee must demonstrate compliance as follows:
 - a) Conduct an initial performance test to demonstrate compliance with the emission limits in SC I.1, I.4 and I.7 within 1 year after EUCOGEN begins operating in a noncertified manner.
 - b) The performance tests shall be conducted according to 40 CFR 60.4244.
 - c) Subsequent performance testing shall be completed every 8,760 hours of engine operation or every 3 years, whichever comes first, to demonstrate compliance with the applicable emission limits.

No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of 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), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21 (c)&(d), 40 CFR 60.8, 40 CFR 60.4243, 40 CFR 60.4244, 40 CFR 60.4245, 40 CFR Part 60 Subpart JJJJ)**

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))**

2. The permittee shall calculate and record in a satisfactory manner monthly and 12-month rolling time period NO_x, CO, and VOC mass emission records for EUCOGEN to demonstrate compliance with SC I.3, I.6, and I.9. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (b))**
3. The permittee shall monitor and record in a satisfactory manner monthly and 12-month rolling time period hours of operation of EUCOGEN to demonstrate compliance with SC III.4. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (b))**
4. The permittee shall keep records of the following information for EUCOGEN:
 - a) All notifications submitted to comply with 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification.
 - b) Records of Testing required by SC V.2.
 - c) Maintenance conducted on EUCOGEN.
 - d) Documentation that EUCOGEN meets the emission standards in 40 CFR 60.4233(e). **(40 CFR 60.4243(b)(1), 40 CFR 60.4245(a))**

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 EUCOGEN. **(R 336.1201(7)(a))**
2. The permittee must submit an initial notification within 30 days of commencement of construction as required in 40 CFR 60.7(a)(1), for EUCOGEN 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))**

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. SVCOGEN	16	53.3	R 336.1225, 40 CFR 52.21(c) & (d)

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 EUCOGEN. **(40 CFR Part 60 Subparts A and JJJJ, 40 CFR 63.9590(c))**
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 EUCOGEN. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.9585)**

**EUNGGEN
 EMISSION UNIT CONDITIONS**

DESCRIPTION

150 kW (240 HP) Natural Gas-Fired Spark Ignition Lean Burn Emergency Generator

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	2.0 g/bhp-hr or 160 ppmvd at 15% O ₂ ^a	Hourly	EUNGGEN	SC V.1, SC V.2, SC VI.2	40 CFR 60.4233(e), Table 1 of 40 CFR 60 Subpart JJJJ
2. CO	4.0 g/bhp-hr or 540 ppmvd at 15% O ₂ ^a	Hourly	EUNGGEN	SC V.1, SC V.2, SC VI.2	40 CFR 60.4233(e), Table 1 of 40 CFR 60 Subpart JJJJ
3. VOC	1.0 g/bhp-hr or 86 ppmvd at 15% O ₂ ^{a,b}	Hourly	EUNGGEN	SC V.1, SC V.2, SC VI.2	40 CFR 60.4233(e), Table 1 of 40 CFR 60 Subpart JJJJ, R 336.1702(b)
4. VOC	0.44 pph ^c	Hourly	EUNGGEN	SC V.1	R 336.1702(a)
5. Formaldehyde (CAS No. 50-00-0)	0.03 pph	Hourly	EUNGGEN	SC V.1	R 336.1225(2), R 336.1702(a)

^a Owners and operators may choose to comply with the emission standards in units of either g/bhp-hr or ppmvd at 15% O₂.

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

^c This emission limit is for VOCs and the compliance demonstration must include formaldehyde.

g/bhr-hr = gram/brake horsepower-hour

II. MATERIAL LIMIT(S)

1. The permittee shall burn only pipeline quality natural gas in EUNGGEN. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 60.4230)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate and maintain for EUNGGEN such that it meets the emission limits in SC I.1, I.2, and I.3 over the entire life of the engine. **(40 CFR 60.4234, 40 CFR 60.4243(b))**
2. 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 EUNGGEN. 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 90 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 336.1911, R 336.1912)**

3. The permittee shall keep a maintenance plan for EUNGGEN and shall, to the extent practicable, maintain and operate in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(b)(2)(ii))**
4. The permittee shall not operate EUNGGEN for more than 200 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. The 200 hours includes the hours for the purpose of necessary maintenance checks and readiness testing as described in SC III.5. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
5. The permittee may operate EUNGGEN 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 60.4243(d)(2))**
7. The permittee must purchase a certified engine, according to procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year, the permittee shall meet the following requirements for EUNGGEN:
 - 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 consistent with the manufacturer's instruction

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 will be considered a non-certified engine. **(40 CFR 60.4243(a) & (b))**

8. The permittee may operate EUNGGEN 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 as provided in SC III.2. Except as provided in 40 CFR 60.4243(d)(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 60.4243(d)(3))**
8. If EUNGGEN is a non-certified engine or a certified engine operating in a non-certified manner, per 40 CFR Part 60 Subpart JJJJ, the permittee shall keep a maintenance plan for EUNGGEN 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 60.4243(b)(2))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUNGGEN with a non-resettable hour meter to track the operating hours. **(R 336.1205(1)(a) & (b), R 336.1225, 40 CFR 60.4237)**
2. The nameplate capacity of EUNGGEN shall not exceed 150 kW (240 hp), as certified by the equipment manufacturer. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4230)**

V. TESTING/SAMPLING

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

1. Upon request of the AQD District Supervisor, the permittee shall verify NO_x, CO, VOC, and formaldehyde emission rates from EUNGGEN by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of acceptable runs. Testing shall be performed using an approved EPA Method listed below.

Pollutant	Test Method Reference
NO _x	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOCs	40 CFR Part 60, Appendix A, 40 CFR Part 63, Appendix A
Formaldehyde	40 CFR Part 60, Appendix A, 40 CFR Part 63, 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, R 336.1702, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

2. If EUNGGEN is a non-certified engine or a certified engine operating in a non-certified manner, per 40 CFR Part 60 Subpart JJJJ, the permittee must demonstrate compliance as follows:
 - a) Conduct an initial performance test to demonstrate compliance with the emission limits in SC I.1, I.2 and I.3 within 1 year after EUNGGEN begins operating in a noncertified manner.
 - b) The performance tests shall be conducted according to 40 CFR 60.4244.
 - c) Subsequent performance testing shall be completed every 8,760 hours of engine operation or every 3 years, whichever comes first, to demonstrate compliance with the applicable emission limits.

No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of 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), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21 (c)&(d), 40 CFR 60.8, 40 CFR 60.4243, 40 CFR 60.4244, 40 CFR 60.4245, 40 CFR Part 60 Subpart JJJJ)**

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))**
2. If EUNGGEN is operated in a certified manner, the permittee shall keep, in a satisfactory manner, the following records:

- a) Documentation indicating that each engine has been maintained according to manufacturer written instructions, is certified to meet the emission standards, and other information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable.

The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4233(e), 40 CFR 60.4243(b))**

- 3. If EUNGGEN is non-certified or operated in a non-certified manner, the permittee shall keep, in a satisfactory manner, the following records:
 - a) Testing for each engine, as required in SC V.2;
 - b) Maintenance activities for each engine, as required by SC III.7.

The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4233(e), 40 CFR 60.4243(b))**

- 4. The permittee shall keep records of notifications submitted for the completion of construction and start-up of EUNGGEN. **(40 CFR 60.4245(a))**
- 5. The permittee shall monitor and record the hours of operation of EUNGGEN during emergencies and non-emergencies, on a monthly, 12-month rolling, and calendar year basis, in a manner acceptable to the District Supervisor, Air Quality Division. The permittee shall record the time of operation of EUNGGEN and the reason it was in operation during that time. **(R 336.1205(1)(a) & (b), 40 CFR 60.4243)**

VII. REPORTING

- 1. The permittee shall submit the following notifications if EUNGGEN is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4243(d)(3)(i) the permittee must submit and annual report including the following:
 - a) The company name and address where the engine is located;
 - b) Date of the report and beginning and ending dates of the reporting period;
 - c) Engine site rating and model year;
 - d) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place;
 - e) Hours spent for operation for the purposes specified in §60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine; **(40 CFR 60.4245(e), 40 CFR Part 60 Subparts A & JJJJ)**
- 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 EUNGGEN. **(R 336.1201(7)(a))**
- 3. The permittee shall submit a notification specifying whether EUNGGEN 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. **(R 336.1201(3))**

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. SVNGGEN	6	12.0	R 336.1225, 40 CFR 52.21(c) & (d)

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 EUNGGEN. **(40 CFR Part 60 Subparts A and JJJJ, 40 CFR 63.9590(c))**
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 EUNGGEN. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.9585)**

**EUFIREPUMP
 EMISSION UNIT CONDITIONS**

DESCRIPTION

525 HP Diesel fueled Bridge Lands Fire Pump Engine

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. PM	0.20 g/kW-hr or 0.15 g/hp-hr	Hourly ^A	EUFIREPUMP	SC V.1 SC VI.2	40 CFR 60.4205, Table 4 of 40 CFR Part 60, Subpart IIII, 40 CFR 1039, 40 CFR 1042
2. CO	3.5 g/kW-hr or 2.6 g/hp-hr	Hourly ^A	EUFIREPUMP	SC V.1 SC VI.2	40 CFR 60.4205, Table 4 of 40 CFR Part 60, Subpart IIII, 40 CFR 1039 40 CFR 1042
3. NMHC + NO _x	4.0 g/kW-hr or 3.0 g/hp-hr	Hourly ^A	EUFIREPUMP	SC V.1 SC VI.2	40 CFR 60.4205, Table 4 of 40 CFR Part 60, Subpart IIII, 40 CFR 1039 40 CFR 1042

g/kW-hr = gram/kilowatt-hour

g/hr-hr = gram/horsepower-hour

^AThese 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).

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 operate and maintain according to the manufacturer's emission-related written instructions such that it meets the emission limits over the EUFIREPUMP entire life of the engine. **(40 CFR 60.4206)**
2. The permittee shall not operate EUFIREPUMP for more than 200 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. The 200 hours includes the hours for the

purpose of necessary maintenance checks and readiness testing as described in SC III.3. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

3. 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))**
4. 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))**
5. 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))**

6. 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)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUFIREPUMP with a non-resettable hours meter to track the operating hours. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), 40 CFR 60.4209)**
2. The nameplate capacity of EUFIREPUMP shall not exceed 525 HP, as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(c) & (d))**

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 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. **(40 CFR 60.4211(g)(3), 40 CFR 60.4212)**

2. Upon request from the AQD District Supervisor, the permittee shall verify PM, CO, and NMHC + NO_x 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
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
CO	40 CFR Part 60, Appendix A
NMHC + NO _x	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, R 336.2001, R 336.2003, R 336.2004)**

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), 40 CFR 52.21(c) & (d))**
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.5.
 - b) For an uncertified engine: The permittee shall keep records of a maintenance plan, as required by SC III.6, 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 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 engine in 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 engine in EUFIREPUMP, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(R 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 EUFIREUMP, 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)**

VII. REPORTING

1. The permittee shall submit a notification specifying whether each engine in 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 III)**
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	6	12.0	R 336.1225, 40 CFR 52.21(c) & (d)

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, Subparts A and IIII, as they apply to engine in EUFIREPUMP. **(40 CFR Part 60, Subparts A & IIII, 40 CFR 63.6590(c))**
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 EUFIREPUMP. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.9585)**

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
FGEMERGENS	Four diesel-fired emergency generators (2 MW each) from model year of 2011 or later, and a displacement value of <10 liters/cylinder.	EUGEN1 EUGEN2 EUGEN3 EUGEN4
FGNATGAS	All miscellaneous small natural gas-fired equipment and natural gas fired boilers.	EUBOILER1 EUBOILER2 EUBOILER3 EUBOILER4 EUBOILER5 EUMAINFURNACE EUNIBOILER EUMAINHEATERS EUCMRH EUSECRH EUNIIHEATERS EUPBDOAS EUUSDAHEATER EUOUTHEATERS EUOUTFURNACE EUNCSCHEATERS EUMNHUMID EUUSDAHUMID EUDWHEATER EUOUTWH EUUSDAWH EUPBDMWH EUOUTHUMID

**FGEMERGENS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Four diesel-fired emergency generators (2 MW each) from model year of 2011 or later, and a displacement value of <10 liters/cylinder.

Emission Unit: EUGEN1, EUGEN2, EUGEN3, EUGEN4

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. CO	3.5 g/kW-hr	Hourly ^A	Each engine in FGEMERGENS	SC V.1 SC VI.2	40 CFR 60.4202, Table 1 of 40 CFR Part 60, Subpart IIII, 40 CFR 1039 40 CFR 1042
2. CO	0.26 g/hp-hr	Hourly	Each engine in FGEMERGENS	SC V.1 SC VI.2	R 336.1205(1)(a)
3. PM	0.20 g/kW-hr	Hourly ^A	Each engine in FGEMERGENS	SC V.1 SC VI.2	40 CFR 60.4202, Table 1 of 40 CFR Part 60, Subpart IIII, 40 CFR 1039 40 CFR 1042
4. PM	0.03 g/hp-hr	Hourly	Each engine in FGEMERGENS	SC V.1 SC VI.2	R 336.1205(1)(a)
5. NMHC + NO _x	6.4 g/kW-hr	Hourly ^A	Each engine in FGEMERGENS	SC V.1 SC VI.2	40 CFR 60.4202, Table 1 of 40 CFR Part 60, Subpart IIII, 40 CFR 1039 40 CFR 1042
6. HC	0.09 g/hp-hr	Hourly	Each engine in FGEMERGENS	SC V.1 SC VI.2	R 336.1205(1)(a)
7. NO _x	5.3 g/hp-hr	Hourly	Each engine in FGEMERGENS	SC V.1 SC VI.2	R 336.1205(1)(a)
8. NO _x	30.33 tpy	12-month rolling time period as determined at the end of each calendar month	FGEMERGENS	SC VII.6	R 336.1205(1)(a) & (b)
9. VOC (limit includes formaldehyde)	0.52 pph	Hourly	Each engine in FGEMERGENS	SC V.2	R 336.1205, R 336.1702(a)
10. Formaldehyde	0.0005 pph	Hourly	Each engine in FGEMERGENS	SC V.2	R 336.1225(2), R 336.1702(a)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
g/kW-hr = grams per kilowatt-hour ^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).					

II. MATERIAL LIMIT(S)

1. The permittee shall burn only diesel fuel in each engine in FGEMERGENS 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 FGEMERGENS for more than 200 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. The 200 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), 40 CFR 52.21(c) & (d))**
2. The permittee may operate each engine in FGEMERGENS 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 each engine in FGEMERGENS 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 each engine in FGEMERGENS:
 - 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 each engine in FGEMERGENS 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)(3))**
6. The permittee shall not operate more than 3 engines in FGEMERGENS at one time. **(R 336.1205(1)(a) & (b), R 336.1225, R336.1702(1)(a), 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each engine in FGEMERGENS with non-resettable hour meter to track the operating hours. **(R 336.1205(1)(a) & (b), R 336.1225, 40 CFR 60.4209)**
2. The maximum rated power output of each engine in FGEMERGENS shall not exceed 2000 kW (2560 bhp), as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), 40 CFR 60.4202, 40 CFR 60.4205, 40 CFR 1039, 40 CFR 1042)**

V. TESTING/SAMPLING

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

1. If each engine in FGEMERGENS 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 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 (less than 30 liters).
 - 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. **(40 CFR 60.4211(g)(3), 40 CFR 60.4212)**

2. Upon request of the AQD District Supervisor, the permittee shall verify VOC and formaldehyde pph emission rates from each engine in FGEMERGENS by testing at owner's expense, in accordance with Department requirements. The permittee shall verify emission rates once every five years thereafter. Upon approval of the AQD District Supervisor, subsequent testing may be conducted upon a representative engine in FGEMERGENS. However, the permittee shall not test the same representative unit in subsequent tests unless approved or requested by the AQD District Supervisor. Testing shall be performed using an approved EPA Method listed below.

Pollutant	Test Method Reference
VOCs	40 CFR Part 60, Appendix A, 40 CFR Part 63, Appendix A
Formaldehyde	40 CFR Part 60, Appendix A, 40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. Any test method(s) used must properly account for VOC emissions, which at a minimum, must include the following air contaminants: propane, butane, pentane, hexane, ethene, propene, butene, formaldehyde, acetaldehyde, acrolein, propanol, acetylene, methanol, benzene, 1-butene, ethylene, and propylene. 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 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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 336.1225, 40 CFR 52.21 (c) & (d), 40 CFR Part 60, Subpart IIII)**

2. The permittee shall keep, in a satisfactory manner, the following records for each engine in FGEMERGENS:
 - a) For each certified engine: The permittee shall keep records of the manufacturer certification documentation.
 - b) For each 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 each engine in FGEMERGENS:
 - a) For each 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 each 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 engine in FGEMERGENS on a 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 engine in FGEMERGENS, 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 engine in FGEMERGENS, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(R 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 FGEMERGENS, 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 record in a satisfactory manner monthly and 12-month rolling time period NO_x mass emission records for FGEMERGENS to demonstrate compliance with SC I.9. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1)(a) & (b))**
7. The permittee shall monitor and record, a log of the startup and shutdown for each engine in FGEMERGENS on a monthly time period basis, in a manner acceptable to the AQD District Supervisor. **(R 336.1205(1)(a) & (b))**

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 FGEMERGENS. **(R 336.1201(7)(a))**
2. The permittee shall submit a notification specifying whether each engine in FGEMERGENS 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)**

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. SVGEN1	16	13.8	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVGEN2	16	13.8	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVGEN3	16	13.8	R 336.1225, 40 CFR 52.21(c) & (d)
4. SVGEN4	16	13.8	R 336.1225, 40 CFR 52.21(c) & (d)

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, Subparts A and IIII, as they apply to engine in FGEMERGENS. **(40 CFR Part 60, Subparts A & IIII, 40 CFR 63.6590(c))**
2. The permittee shall comply with the 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 engine in FGEMERGENS. **(40 CFR Part 63, Subparts A & ZZZZ, 40 CFR 63.6585)**

FGNATGAS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

All miscellaneous small natural gas-fired equipment and natural gas fired boilers.

Emission Unit: EUBOILER1, EUBOILER2, EUBOILER3, EUBOILER4, EUBOILER5, EUMAINFURNACE, EUNIIBOILER, EUMAINHEATERS, EUCMRH, EUSECRH, EUNIIHEATERS, EUPBDOAS, EUUSDAHEATER, EUOUTHEATERS, EUOUTFURNACE, EUNCSCHHEATERS, EUMNHUMID, EUUSDAHUMID, EUDWHEATER, EUOUTWH, EUUSDAWH, EUPBDMWH, EUOUTHUMID

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall only burn natural gas in each unit in FGNATGAS. **(R 336.1702, 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate more than four of the following emission units at one time: EUBOILER1, EUBOILER2, EUBOILER3, EUBOILER4, EUBOILER5. **(R336.1205(1)(a) & (b), R 336.1702, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The combined maximum design heat input capacity of FGNATGAS shall not exceed 41.27 MMBTU/hr on a fuel heat input basis. **(40 CFR 52.21(c) & (d))**

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 monitor and record, a log of the startup and shutdown for EUBOILER1, EUBOILER2, EUBOILER3, EUBOILER4, and EUBOILER5 on a monthly time period basis, in a manner acceptable to the AQD District Supervisor. **(R 336.1205(1)(a) & (b))**

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 unit in FGNATGAS. **(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. SVBOILER1 ^D	14	43.4	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVBOILER2 ^D	14	43.4	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVBOILER3 ^D	14	43.4	R 336.1225, 40 CFR 52.21(c) & (d)
4. SVBOILER4 ^D	14	43.4	R 336.1225, 40 CFR 52.21(c) & (d)
5. SVBOILER5 ^D	14	43.4	R 336.1225, 40 CFR 52.21(c) & (d)
6. SVMAINFURN	18	42.8	R 336.1225, 40 CFR 52.21(c) & (d)
7. SVNIIBLR ^E	6	9.5	R 336.1225, 40 CFR 52.21(c) & (d)
8. SVMAINHEATERS (3 stacks) ^E	4	14.5	R 336.1225, 40 CFR 52.21(c) & (d)
9. SVCMRH (13 stacks) ^{D, E}	4	13.7	R 336.1225, 40 CFR 52.21(c) & (d)
10. SVSECRH (3 stacks) ^D	4	21.5	R 336.1225, 40 CFR 52.21(c) & (d)
11. SVNIIHEATERS ^D	4	37	R 336.1225, 40 CFR 52.21(c) & (d)
12. SVPBDOAS	3	20	R 336.1225, 40 CFR 52.21(c) & (d)
13. SVUSDAHEATER	NA	NA	R 336.1225, 40 CFR 52.21(c) & (d)
14. SVOUHEATERS (3 stacks) ^{D, F}	4	10	R 336.1225, 40 CFR 52.21(c) & (d)
15. SVOUTFURNACE ^E	6	40.8	R 336.1225, 40 CFR 52.21(c) & (d)
16. SVNCSHEATERS (14 stacks) ^D	6	10	R 336.1225, 40 CFR 52.21(c) & (d)
17. SVMNHUMID (14 stacks) ^F	4	40.8	R 336.1225, 40 CFR 52.21(c) & (d)
18. SVUSDAHUMID (2 stacks) ^D	6	27	R 336.1225, 40 CFR 52.21(c) & (d)
19. SVDWHEATER ^F	6	41.4	R 336.1225, 40 CFR 52.21(c) & (d)
20. SVOUWH ^F	4	43.8	R 336.1225, 40 CFR 52.21(c) & (d)
21. SVUSDAWH ^F	6	27	R 336.1225, 40 CFR 52.21(c) & (d)
22. SVPBDMWH ^F	6	20	R 336.1225, 40 CFR 52.21(c) & (d)
23. SVOUTHUMID ^F	4	43.8	R 336.1225, 40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
D Stacks have a cap E Stacks are horizontal F Stacks are a gooseneck exhaust			

IX. OTHER REQUIREMENT(S)

NA