

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

October 13, 2023

**PERMIT TO INSTALL
195-15C**

ISSUED TO
Oakland County Water Resources Commissioner's Office

LOCATED AT
155 North Opdyke Road
Pontiac, Michigan 48342

IN THE COUNTY OF
Oakland

STATE REGISTRATION NUMBER
B1950

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: August 4, 2023	
DATE PERMIT TO INSTALL APPROVED: October 13, 2023	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

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 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
PM ₁₀	Particulate Matter equal to or less than 10 microns in diameter
PM _{2.5}	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
EUBOILER4	A 1.526 MMBtu/Hr natural gas fired boiler	NA
EUBOILER5	A 2200 Btu/Hr natural gas fired boiler	NA
EUBOILER6	A 2.67 MMBtu/hr dual fuel natural gas and process gas boilers used for building heat and the thermal hydrolysis process.	FGBOILER6
EUBOILER7	A 2.67 MMBtu/hr dual fuel natural gas and process gas boilers used for building heat and the thermal hydrolysis process.	FGBOILER6
EUBOILER8	A 2.67 MMBtu/hr dual fuel natural gas and process gas boilers used for building heat and the thermal hydrolysis process.	FGBOILER6
EUCOGEN1	600-kilowatt dual-fuel (biogas and natural gas)-fired cogeneration 4-stroke lean-burn combustion engine. Controlled by catalytic oxidation system.	FGENGINES
EUCOGEN2	600-kilowatt dual-fuel (biogas and natural gas)-fired cogeneration 4-stroke lean-burn combustion engine. Controlled by catalytic oxidation system.	FGENGINES
EUENGINEGEN8	Natural gas fired reciprocating internal combustion engine driving an emergency generator. Fuel usage: 2340 dscf/hr	FGENGINES
EUENGINEGEN9	Natural gas fired reciprocating internal combustion engine driving an emergency generator. Fuel usage: 2340 dscf/hr	FGENGINES
EUENGINEGEN10	A 2012 HP (1500 kilowatts (kW)) diesel-fueled emergency engine with a model year of 2011 or later, and a displacement of 4.32 liters/cylinder.	FGENGINES
EUENGINEGEN11	A 2012 HP (1500 kilowatts (kW)) diesel-fueled emergency engine with a model year of 2011 or later, and a displacement of 4.32 liters/cylinder.	FGENGINES
EUENGINEGEN12	350 KW Natural gas fired reciprocating internal combustion engine driving an emergency generator.	FGENGINES
EUWAUKENG1	Reciprocating internal combustion Waukesha engine providing power to the aeration blowers. Fueled by either natural gas or digester methane. Heat input: 1.824MMBTU/hr	FGENGINES

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Flexible Group ID
EUWUKENG2	Reciprocating internal combustion Waukesha engine providing emergency backup power to the aeration blowers. Fueled by natural gas. Heat input: 1.824MMBTU/hr	FGENGINES
EUFLARE	Flare that burns excess gas from the digesters.	NA

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.

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	All reciprocating internal combustion engines at the facility.	EUCOGEN1 EUCOGEN2 EUENGINEGEN8 EUENGINEGEN9 EUENGINEGEN10 EUENGINEGEN11 EUENGINEGEN12 EUWUKENG1 EUWUKENG2
FGBOILER6	Three (3) 2.67 MMBtu/hr dual fuel natural gas and process gas boilers	EUBOILER6 EUBOILER7 EUBOILER8

**FGENGINES
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

All reciprocating internal combustion engines at the facility.

Emission Unit: EUCOGEN1, EUCOGEN2, EUENGINEGEN8, EUENGINEGEN9, EUENGINEGEN10, EUENGINEGEN11, EUENGINEGEN12, EUWUKENG1, EUWUKENG2

POLLUTION CONTROL EQUIPMENT

EUCOGEN1 and EUCOGEN2;
 Controlled by catalytic oxidation system

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO _x ^A	1.0 g/hp-hr or 82 ppmvd at 15% O ₂	Hourly	EUCOGEN1, EUCOGEN2	SC V.1, SC V.2 SC VI.6	R 336.1205(1)(a) & (3), 40 CFR 60.4233(e) Table 1 to Subpart JJJJ of Part 60
2. NMHC+ NO _x	6.4 g/KW-hr	Hourly	EUENGINEGEN10 EUENGINEGEN11	SC V.3 SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 60.4202(a)(2) 1039 Appendix I Table 2 40 CFR 60.4205(b)
3. NO _x ^A	2.0 g/hp-hr or 160 ppmvd at 15% O ₂	Hourly	EUENGINEGEN12	SC V.2 SC VI.6	R 336.1205(1)(a) & (3), 40 CFR 60.4233(e) Table 1 to Subpart JJJJ of Part 60
4. CO ^A	2.0 g/hp-hr or 270 ppmvd at 15% O ₂	Hourly	EUCOGEN1, EUCOGEN2	SC V.1, SC V.2 SC VI.6	R 336.205(3), 40 CFR 60.4233(e) Table 1 to Subpart JJJJ of Part 60
5. CO	3.5 g/KW-hr	Hourly	EUENGINEGEN10 EUENGINEGEN11	SC V.3 SC VI.2	R 336.1205(1)(a) & (3), 40 CFR 60.4202(a)(2) 1039 Appendix I Table 2 40 CFR 60.4205(b)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
6. CO ^A	4.0 g/hp-hr or 540 ppmvd at 15% O ₂	Hourly	EUENGINEGEN12	SC V.2 SC VI.6	R 336.1205(1)(a) & (3), 40 CFR 60.4233€ Table 1 to Subpart JJJJ of Part 60
7. PM	0.20 g/KW-hr	Hourly	EUENGINEGEN10 EUENGINEGEN11	SC V.3	R 336.1205(1)(a) & (3), 40 CFR 60.4202(a)(2) 1039 Appendix I Table 2 40 CFR 60.4205(b)
8. VOC ^{A, B}	0.7 g/hp-hr or 60 ppmvd at 15% O ₂	Hourly	EUCOGEN1, EUCOGEN2	SC V.1, SC V.2 SC VI.6	R 336.1205(1)(a) & (3), 40 CFR 60.4233(e) Table 1 to Subpart JJJJ of Part 60
9. VOC ^{A, B}	1.0 g/hp-hr or 86 ppmvd at 15% O ₂	Hourly	EUENGINEGEN12	SC V.2 SC VI.6	R 336.1205(1)(a) & (3), 40 CFR 60.4233€ Table 1 to Subpart JJJJ of Part 60
10. Formaldehyde	0.03 pph ¹	Hourly	EUCOGEN1, EUCOGEN2	SC V.1 SC V.2 SC VI.9	R 336.1225

ppmvd = parts per million by volume at 15 percent oxygen and on a dry gas basis

^A For non-certified engines, the permittee may choose to comply with either g/hp-hr or ppmvd at 15% O₂.

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

II. MATERIAL LIMIT(S)

- The permittee shall burn only diesel fuel in EUENGINEGEN10 and EUENGINE11 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), 40 CFR 60.4207, 40 CFR 1090.305)**
- The maximum H₂S concentration in the biogas combusted in each engine within FGENGINES shall not exceed 10 ppmv. **(R 336.1225, 40 CFR 52.21(c) & (d))**
- The permittee shall burn only pipeline quality natural gas in EUENGINE8, EUENGINE9, and EUENGINE12. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 60.4230)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not operate EUENGINEGEN8, EUENGINEGEN9, EUENGINEGEN10, EUENGINEGEN 11, and EUENGINEGEN12 for more than 500 hours per year, for each engine, 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) or (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

2. The permittee may operate EUENGINEGEN8, EUENGINEGEN9, and EUENGINEGEN12 for no more than 100 hours per calendar year, for each engine, 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))**
3. The permittee may operate EUENGINEGEN8, EUENGINEGEN9, and EUENGINEGEN12 up to 50 hours per calendar year, for each engine, 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 60.4243(d)(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 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 60.4243(d)(3))**
4. The permittee may operate EUENGINEGEN10 and EUENGINE11 for no more than 100 hours per calendar year, for each engine, 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))**
5. The permittee may operate EUENGINEGEN10 and EUENGINE11 up to 50 hours per calendar year, for each engine, 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))**
6. No later than 60 days after the initial startup of EUCOGEN1, EUCOGEN2, EUENGINEGEN10, EUENGINE11, and EUENGINEGEN12, the permittee shall submit to the AQD District Supervisor, for review and approval, a preventative maintenance / malfunction abatement plan (PM / MAP) for FGENGINES. After approval of the PM / MAP by the AQD District Supervisor, the permittee shall not operate FGENGINES unless the PM / MAP, or an alternate plan approved by the AQD District Supervisor, is implemented, and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. At a minimum, the plan shall include:
 - a) Identification of the equipment and, if applicable, air-cleaning device and the supervisory personnel responsible for overseeing the inspection, maintenance, and repair.
 - b) Description of the items or conditions to be inspected and frequency of the inspections or repairs.
 - c) Identification of the equipment and, if applicable, air-cleaning device, operating parameters that shall be monitored to detect a malfunction or failure, the normal operating range of these parameters and a description of the method of monitoring or surveillance procedures.
 - d) Identification of the major replacement parts that shall be maintained in inventory for quick replacement.

- e) 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 the plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the plan within 45 days after such an event occurs and submit the revised plan for approval to the AQD District Supervisor. Should the AQD determine the PM / MAP to be inadequate, the AQD District Supervisor may request modification of the plan to address those inadequacies. **(R 336.1205, R 336.1225, R 336.1702(a), R 336.1910, R 336.1911, R 336.1912, 40 CFR 52.21(c) & (d), 40 CFR 60.4243(b)(2))**

7. The permittee shall keep a maintenance plan for EUCOGEN1, EUCOGEN2, and EUENGINEGEN12 and shall, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(b)(2))**
8. The permittee shall operate and maintain EUCOGEN1, EUCOGEN2, EUENGINEGEN10, EUENGINEGEN11, and EUENGINEGEN12 such that it meets the emission limits in SC I.1 through SC I.9 over the entire life of the engine. **(40 CFR 60.4205, 40 CFR 60.4206, 40 CFR 60.4234, 40 CFR 60.4243(b))**
9. If the permittee purchased 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 EUCOGEN1 and EUCOGEN2, and EUENGINEGEN12: **(40 CFR 60.4243)**
- a) Operate and maintain the certified engine and control device according to the manufacturer's emission related written instructions,
 - b) May only adjust engine settings according to and consistent with the manufacturer's emission-related written instructions,
 - c) Meet the requirements as specified in 40 CFR 1068 Subparts A through D.

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.

10. 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 EUENGINEGEN10 and EUENGINEGEN11: **(40 CFR 60.4211(a))**
- a) Operate and maintain the certified engine and control device according to the manufacturer's emission related written instructions,
 - b) May only adjust engine settings according to and consistent with the manufacturer's emission-related written instructions,
 - c) Meet the requirements as specified in 40 CFR 1068 as they apply to the engine.

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.

11. 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 and records of conducted maintenance for EUCOGEN1, EUCOGEN2, and EUENGINEGEN12 and shall, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(b)(2))**
12. 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 and records of conducted maintenance and must, to the extent practicable, maintain and operate EUENGINEGEN10 and EUENGINEGEN11 in a manner consistent with good air pollution control practice for minimizing emissions. **(40CFR60.4211(g)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUCOGEN1 and EUCOGEN2 unless the associated 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 EUCOGEN1 and EUCOGEN2 as required in SC III.6. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d), 40 CFR Part 60 Subpart JJJJ)**
2. The permittee shall equip and maintain EUENGINEGEN10, EUENGINEGEN11 and EUENGINEGEN12 with non-resettable hours meters to track the operating hours. **(R 336.1205(1)(a) & (3) R 336.1225, 40 CFR 60.4209, 40 CFR 60.4237(b))**
3. The nameplate capacity of each engine in FGENGINES shall not exceed its rated amount, as certified by the equipment manufacturer listed below. **(R 336.1205(1)(a) & (3), 40 CFR 60.4230, 40 CFR 60.4202, 40 CFR 60.4205):**

Emission Unit	Rating
1. EUCOGEN1	600 KW
2. EUCOGEN2	600 KW
3. EUENGINEGEN8	175 KW
4. EUENGINEGEN9	175 KW
5. EUENGINE10	1500 KW
6. EUENGINE11	1500 KW
7. EUENGINE12	350 KW

V. TESTING/SAMPLING

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

1. Within 180 days after commencement of initial startup of EUCOGEN1 and EUCOGEN2, the permittee shall verify NO_x, CO, VOC, and formaldehyde emission limits while burning biogas, in SC I.1, I.4, I.8, and I.10. 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 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 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**
2. If EUCOGEN1, EUCOGEN2, and EUENGINEGEN12 are a non-certified engine and control device 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 applicable emission standards in 40 CFR 60.4233(e), within 60 days after achieving the maximum production rate at which the engines will be operated, but no later than 180 days after initial startup.
 - b) If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4244.
 - c) Conduct subsequent performance testing every 8,760 hours of engine operation or every 3 years, whichever comes first.

If a performance test is required, 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. (40 CFR 60.8, 40 CFR 60.4243, 40 CFR 60.4244, 40 CFR 60.4245, 40 CFR Part 60 Subpart JJJJ)

3. If EUENGINEGEN10 and EUENGINEGEN11 are 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, or the engines are purchased non-certified, 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 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)**

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) & (3), R 336.1225, 40 CFR 52.21(c) & (d), 40 CFR Part 60, Subpart III)**
2. The permittee shall keep, in a satisfactory manner, the following records for EUENGINEGEN10 and EUENGINEGEN11:
 - 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.3.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 EUENGINEGEN10 and EUENGINEGEN11:
 - 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.10.
 - b. For each uncertified engine: The permittee shall keep records of a maintenance plan, as required by SC III.12 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 keep, in a satisfactory manner, all records related to, or as required by, the MAP as specified in SC III.6. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.1911, R 336.1912, 40 CFR 52.21(c) & (d))**
5. The permittee shall continuously monitor and record, in a satisfactory manner, the inlet temperature and the pressure drop across the catalytic oxidation systems for EUCOGEN1 and EUCOGEN2. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1901)**
6. The permittee shall keep, in a satisfactory manner, the following records for each engine in EUCOGEN1 and EUCOGEN2, and EUENGINEGEN12:

- a) All notifications submitted to comply with this subpart and all documentation supporting any notification.
- b) Maintenance conducted on the engine.
- c) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 1048, 1054, and 1060, as applicable.
- d) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner, documentation that the engine meets the emission standards.
 - i. Testing for each engine, as required in SC V.2.
 - ii. Maintenance activities for each engine, as required by SC III.6.

The permittee shall keep all records on file and make them available to the Department upon request.
(40 CFR 60.4245(a))

7. The permittee shall monitor and record, the total hours of operation for EUENGINEGEN10, EUENGINE11, and EUENGINE12 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 EUENGINEGEN10, EUENGINE11, and EUENGINE12, 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 EUENGINEGEN10, EUENGINE11, and EUENGINE12, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(R 336.1205(1)(a) & (3), 40 CFR 60.4211, 40 CFR 60.4214, 40 CFR 60.4245(b))**
8. 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 EUENGINEGEN10 and EUENGINE11, 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) & (3), 40 CFR 60.4207(b), 40 CFR 1090.305)**
9. The permittee shall conduct and keep records, in a satisfactory manner, the gas sampling and analysis for the H₂S concentration of the biogas used in EUCOGEN1 and EUCOGEN2, demonstrating that the fuel meets the requirement of SC II 2, on a quarterly basis. After 12 months of sampling, if the quarterly sampling results show compliance with the limit in SC II.2, the permittee may reduce sampling and analysis frequency to once per semiannually. After 12 monthly of sampling, if semi-annual sampling and analysis show compliance with the limit in SC II.2, the permittee may reduce sampling and analysis to once per year. If any of the results show exceedance of the limit, the sampling frequency reverts back to quarterly. **(R 336.1205, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**

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 EUCOGEN1, EUCOGEN2, EUENGINEGEN12, EUENGINEGEN10 and EUENGINE11. **(R 336.1201(7)(a))**
2. The permittee shall submit a notification specifying whether each engine included in EUCOGEN1, EUCOGEN2, EUENGINEGEN12, EUENGINEGEN10 and EUENGINE11 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, 40 CFR 60 Subpart JJJJ)**

3. If any engine in FGENGINES that is subject to part JJJJ has not been certified by an engine manufacturer to meet the emission standards in 40 CFR 60.4231, the permittee shall submit an initial notification as required in 40 CFR 60.7(a)(1). The notification must include the following information:
 - a) The date construction of the engine commenced.
 - b) Name and address of the owner or operator.
 - c) The address of the affected source.
 - d) The engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement.
 - e) The emission control equipment.
 - f) Fuel used in the engine.

The notification must be postmarked no later than 30 days after construction commenced for each engine.
(40 CFR 60.7(a)(1), 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. SVCOGEN1	12	35	40 CFR 52.21 (c) & (d)
2. SVCOGEN2	12	35	40 CFR 52.21 (c) & (d)
3. SVENGINE8*	8	6	40 CFR 52.21 (c) & (d)
4. SVENGINE9*	8	6	40 CFR 52.21 (c) & (d)
5. SVENGINE10	12	20	40 CFR 52.21 (c) & (d)
6. SVENGINE11	12	20	40 CFR 52.21 (c) & (d)
7. SVENGINE12*	3.5	5	40 CFR 52.21 (c) & (d)
8. SVWAUKENG1*	8	23	40 CFR 52.21 (c) & (d)
9. SV2WAUKENG*	8	21	40 CFR 52.21 (c) & (d)

*Stack is obstructed by cowl rain cap

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, for Stationary Reciprocating Internal Combustion Engines by the initial compliance date. **(40 CFR 63.6595, 40 CFR Part 63, Subparts A and ZZZZ)**
2. The permittee shall comply with all applicable provisions of the federal Standards of Performance for New Stationary Sources, as specified in 40 CFR Part 60 Subpart A and Subpart JJJJ for Stationary Reciprocating Internal Combustion Engines, as they apply to each engine in FGENGINES. **(40 CFR Part 60 Subparts A & JJJJ)**
3. The permittee shall comply with all applicable provisions of the federal Standards of Performance for New Stationary Sources, as specified in 40 CFR Part 60 Subpart A and Subpart IIII for Stationary Reciprocating Internal Combustion Engines, as they apply to each engine in FGENGINES. **(40 CFR Part 60 Subparts A & IIII)**

Footnotes:

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

FGBOILER6 FLEXIBLE GROUP CONDITIONS
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DESCRIPTION

Three (3) 2.67 MMBtu/hr dual fuel (natural gas and process gas) boilers.

Emission Unit: EUBOILER6, EUBOILER7, EUBOILER8

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall burn only natural gas or process gas in FGBOILER6. **(R 336.1224, R 336.1225)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum heat input capacity of each boiler in FGBOILER6 shall not exceed a 2.67 million BTU per hour on a fuel heat input basis. **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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. **(40 CFR 52.21 (c) & (d))**
2. The permittee shall keep natural gas usage records, in a format acceptable to the AQD District Supervisor, indicating the amount of natural gas combusted on a monthly and 12-month rolling time period, in million cubic feet per year for FGBOILER6. 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), R 336.1702(a))**
3. The permittee shall keep process gas usage records, in a format acceptable to the AQD District Supervisor, indicating the amount of process gas combusted on a monthly and 12-month rolling time period, in million cubic feet per year for FGBOILER6. 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), R 336.1702(a))**

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. SVBOILER6*	11.5	42	40 CFR 52.21 (c) & (d)
2. SVBOILER7*	11.5	42	40 CFR 52.21 (c) & (d)
3. SVBOILER8*	11.5	42	40 CFR 52.21 (c) & (d)

*Stack is obstructed by cowl rain cap

IX. OTHER REQUIREMENT(S)

NA

FGFACILITY CONDITIONS

DESCRIPTION

The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment, and exempt equipment.

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NOx	89 tpy	12-month rolling time period as determined at the end of each calendar month.	FGFACILITY	SC VI.3 and Appendix A	R 336.1205(3)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

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 complete all required calculations in a format acceptable to the AQD District Supervisor and make them available 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(3))**
2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of operating time for all fuel burning emission units, except the flare. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3))**
3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period NOx emission calculation records for FGFACILITY, as required by SC I.1 and Appendix A. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3))**

4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the volumetric flow rate of gas burned in the flare. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

APPENDIX A

Emission Unit	Max Heat input capacity or max fuel use capacity	NOx Emission Factor
EUBOILER4	1.526 MMBTU/hr	100 lb/MM standard cubic foot of natural gas
EUBOILER5	2200 BTU/hr	100 lb/MM standard cubic foot of natural gas
EUBOILER6	3348 cubic foot of natural gas and process gas per hour	100 lb/MM standard cubic foot of natural gas and process gas
EUBOILER7	3348 cubic foot of natural gas and process gas per hour	100 lb/MM standard cubic foot of natural gas and process gas
EUBOILER8	3348 cubic foot of natural gas and process gas per hour	100 lb/MM standard cubic foot of natural gas and process gas
EUENGINEGEN8	2340 cubic foot of natural gas per hour	4.08 lb/MMBTU
EUENGINEGEN9	2340 cubic foot of natural gas per hour	4.08 lb/MMBTU
EUENGINEGEN10	14.03 MMBTU/hr	5.32 g/hp-hr
EUENGINEGEN11	14.03 MMBTU/hr	5.32 g/hp-hr
EUENGINEGEN12	4.41 MMBTU/hr	2 g/hp-hr
EUWUKENG1	1.824 MMBTU/hr	4.08 lb/MMBTU
EUWUKENG2	1.824 MMBTU/hr	4.08 lb/MMBTU
EUFLARE	NA	40 lb/MM standard cubic foot of digester gas
EUCOGEN1	5.70 MMBTU/hr	1 g/hp-hr
EUCOGEN2	5.70 MMBTU/hr	1 g/hp-hr

For boilers:
 (operating hours/month)(max heat input/heat content of fuel)(NOx emission factor)(Ton/2,000lb) = Ton/month

For engines driving generators:
 (operating hours/month)(max fuel input)(heat content of fuel)(NOx emission factor)(Ton/2,000lb) = Ton/month

For the two Waukesha engines:
 (operating hours/month)(max heat input)(NOx emission factor)(Ton/2,000lb) = Ton/month

For the flare:
 (cubic feet of digester gas/month)(NOx emission factor)(Ton/2,000lb) = Ton/month