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

October 24, 2024

PERMIT TO INSTALL
121-24

ISSUED TO
Brook & Scenic RNG, LLC

LOCATED AT
1510 62nd Street
Fennville, Michigan 49408

IN THE COUNTY OF
Allegan

STATE REGISTRATION NUMBER
P1497

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: **September 23, 2024**	
DATE PERMIT TO INSTALL APPROVED: **October 24, 2024**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

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

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

POLLUTANT / MEASUREMENT ABBREVIATIONS

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

GENERAL CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Flexible Group ID
EUGCU	Gas cleaning and upgrading unit including H_2S removal vessels and water vapor removal, and various membranes to remove excess carbon dioxide. EUGCU is used to upgrade the raw anaerobic biogas collected from the digesters to meet pipeline specifications. Biogas from the digesters is blended prior to entering the primary and secondary H_2S removal system and biogas upgrading equipment. Following the processing in EUGCU, the renewable natural gas that meets pipeline specification will be loaded into trailers for delivery and injected into a nearby pipeline. Any product gas that does not meet RNG specifications may be recycled into EUGCU for further processing or diverted to EUFLARE for flaring.	NA
EUFLARE	One biogas flare used as backup for EUGCU as well as for combustion of renewable natural gas that does not meet pipeline specifications. The flare is capable of burning up to 372 scfm.	NA
EUBOILER	A 3 MMBTU/hr boiler used to provide heat to the manure and maintain temperature within the digesters. The boiler is capable of firing natural gas and/or sweet biogas. Sweet biogas shall be defined in this permit as having been processed at the H_2S removal vessels with a H_2S concentration of less than or equal to 16 ppmv.	NA
EURICE1	A natural gas-fired reciprocating internal combustion engine with a heat input capacity of 4 MMBTU/hr for combined heat and power to the facility. EURICE1 was manufactured before 2006 and is not subject to 40 CFR Part 60 Subpart JJJJ.	FGRICE
EURICE2	A natural gas-fired reciprocating internal combustion engine with a heat input capacity of 4 MMBTU/hr for combined heat and power to the facility. EURICE2 was manufactured before 2006 and is not subject to 40 CFR Part 60 Subpart JJJJ.	FGRICE

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.

EUGCU
EMISSION UNIT CONDITIONS

DESCRIPTION

Gas cleaning and upgrading unit including H_2S removal vessels and water vapor removal, and various membranes to remove excess carbon dioxide. EUGCU is used to upgrade the raw anaerobic biogas collected from the digesters to meet pipeline specifications. Biogas from the digesters is blended prior to entering the primary and secondary H_2S removal system and biogas upgrading equipment. Following the processing in EUGCU, the renewable natural gas that meets pipeline specification will be loaded into trailers for delivery and injected into a nearby pipeline. Any product gas that does not meet RNG specifications may be recycled into EUGCU for further processing or diverted to EUFLARE for flaring.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The hydrogen sulfide (H_2S) concentration of the gas exiting the secondary H_2S removal vessels of EUGCU shall not exceed 16 ppmv, except as described in SC III.3. **(R 336.1225)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. No later than 90 days after permit issuance, the permittee shall submit to the AQD District Supervisor, for review and approval, a preventative maintenance/malfunction abatement plan (PM/MAP) for EUGCU. After approval of the PM/MAP by the AQD District Supervisor, the permittee shall not operate EUGCU 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 at any time the PM/MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the PM/MAP within 45 days after such an event occurs. The permittee shall also amend the PM/MAP within 45 days if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the PM/MAP and any amendments to the PM/MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the PM/MAP or amended PM/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)**

2. No later than 90 days after permit issuance, the permittee shall submit, implement, and maintain a nuisance minimization plan for odors as described in Appendix A, for EUGCU. If at any time the plan fails to address or inadequately addresses odor management, the permittee shall amend the plan within 45 days after such an event occurs. The permittee shall also amend the plan within 45 days if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the plan and any amendments to the plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the plan or amended plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to minimize odors. **(R 336.1901)**

3. If the H_2S concentration of biogas exceeds 16 ppmv, as measured in SC VI.2, the gas shall be routed to EUFLARE. **(R 336.1225)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design flow rate of EUGCU shall not exceed 372 standard cubic feet per minute. **(R 336.1225)**

2 The permittee shall install, calibrate, maintain, and operate in a satisfactory manner, a device to monitor the H_2S content at the outlet of the secondary H_2S removal vessels. Satisfactory operation includes operating and maintaining EUGCU in accordance with an approved PM / MAP for EUGCU, as required in SC III.1. **(R 336.1225)**

3. No later than 90 days after permit issuance, the permittee shall submit to the AQD District Supervisor, for review and approval, Best Management Practices Plan (BMPP) for the use of ferric chloride (or ferrous chloride) and/or oxygen injection to reduce the H_2S concentration in the digester. The BMPP plan, at a minimum, should include the following:
   a) A detailed plan for when ferric chloride or ferrous chloride should be added into the digester, including parameters that will be monitored, the amount and what frequency the ferric chloride will be added.
   b) A detailed plan explaining how the ferric chloride or ferrous chloride will reduce the H_2S concentration in the digester.
   c) The normal operating range of the H_2S concentration in the digester

   If at any time the BMPP fails to address or inadequately addresses the addition of ferric chloride into the digester, the permittee shall amend the BMPP within 45 days after such an event occurs. The permittee shall also amend the BMPP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the BMPP and any amendments to the BMPP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the BMPP or amended BMPP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures and/or operational changes to achieve compliance with all applicable emission limits and permit conditions. **(R 336.1205)**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep, in a satisfactory manner, all records related to, or as required by, the PM/MAP. **(R 336.1911, R 336.1912)**

2. The permittee shall keep, in a satisfactory manner, daily (once per operating day) records of the H_2S concentration of the gas exiting the secondary H_2S removal vessels. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225)**

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. SVGCU	6	20	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

EUFLARE
EMISSION UNIT CONDITIONS

DESCRIPTION

One biogas flare used as backup for EUGCU as well as for combustion of renewable natural gas that does not meet pipeline specifications. The flare is capable of burning up to 372 scfm.

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. SO_2	39.9 tpy	12-month rolling time period as determined at the end of each calendar month	EUFLARE	SC VI.6	40 CFR 52.21(c) & (d)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. H_2S concentration of biogas[A]	10,000 ppmv	Operating day average	EUFLARE	SC VI.3	R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d)
2. H_2S to EUFLARE	42,450 lb/year	12-month rolling time period as determined at the end of each calendar month	EUFLARE	SC VI.4	40 CFR 52.21(c) & (d)

[A] "Biogas" is defined as gas sent to the flare from either the digester or EUGCU.

3. Except for natural gas or propane in the pilot, the permittee shall burn only biogas in EUFLARE. **(R 336.1225, 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. No later than 90 days after permit issuance, the permittee shall submit to the AQD District Supervisor, for review and approval, a preventative maintenance / malfunction abatement plan (PM / MAP) for EUFLARE. After approval of the PM / MAP by the AQD District Supervisor, the permittee shall not operate EUFLARE 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 at any time the PM/MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the PM/MAP within 45 days after such an event occurs. The permittee shall also amend the PM/MAP within 45 days if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the PM / MAP and any amendments to the PM/MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the PM/MAP or amended PM/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 336.1224, R 336.1225, R 336.1910, R 336.1911, R 336.1912)**

2. No later than 90 days after permit issuance, the permittee shall submit, implement, and maintain a nuisance minimization plan for odors as described in Appendix A, for EUFLARE. If at any time the plan fails to address or inadequately addresses odor management, the permittee shall amend the plan within 45 days after such an event occurs. The permittee shall also amend the plan within 45 days if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the plan and any amendments to the plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the plan or amended plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to minimize odors. **(R 336.1901)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design flow rate of EUFLARE shall not exceed 372 standard cubic feet per minute. **(R 336.1225, 40 CFR 52.21 (c) & (d))**

2. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner, a device to monitor and record the volume of biogas burned in EUFLARE on a monthly basis. **(R 336.1205, CFR 52.21(c) & (d))**

3. Within 90 days of permit issuance, the permittee shall install, calibrate, maintain, and operate in a satisfactory manner, a device to monitor and record the H_2S content of biogas sent to EUFLARE on a daily (once per operating day) basis. **(R 336.1224, R 336.1225, 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 complete all required calculations in a format acceptable to the AQD District Supervisor by the end 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, in a satisfactory manner, all records related to, or as required by, the PM/MAP. **(R 336.1910, R 336.1911, R 336.1912)**

3. The permittee shall keep, in a satisfactory manner, daily records of the H_2S content of the digester biogas routed to EUFLARE, for each day that the flare is operated. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d))**

4. The permittee shall calculate and keep, in a satisfactory manner, records of the total amount of H_2S sent to EUFLARE on a monthly and 12-month rolling time period. Calculations shall be performed using data collected through the devices required in SC IV.2 and SC IV.3 and as described in Appendix B. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d))**

5. The permittee shall keep, in a satisfactory manner, records of the total volume (in MMscf) of biogas routed to EUFLARE, on a monthly and 12-month rolling time period. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d))**

6. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total SO_2 mass emissions for EUFLARE. Calculations shall be performed using data collected through the devices required in SC IV.2 and SC IV.3 and as described in Appendix B. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 52.21(c) & (d))**

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. SVFLARE	NA	18.5	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

EUBOILER
EMISSION UNIT CONDITIONS

DESCRIPTION

A 3 MMBTU/hr boiler used to provide heat to the manure and maintain temperature within the digesters. The boiler is capable of firing natural gas and/or sweet biogas. Sweet biogas shall be defined in this permit as having been processed at the H_2S removal vessels with a H_2S concentration of less than or equal to 16 ppmv.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall only burn natural gas or sweet biogas that has been processed at the H_2S removal vessels with a H_2S concentration of less than or equal to 16 ppmv (following the secondary H2S removal vessels), as confirmed by EUGCU Special Conditions IV.2 and VI.2. **(R 336.1225)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum heat input capacity of EUBOILER shall not exceed 3 MMBTU/hr. **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBOILER*	12	7	R 336.1225, 40 CFR 52.21(c) & (d)

*This stack discharges horizontally

IX. OTHER REQUIREMENT(S)

NA

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
FGRICE	Two (2) natural gas-fired reciprocating internal combustion engines each with heat input capacities of 4 MMBTU/hr for combined heat and power to the facility. The engines were manufactured before 2006 and are not subject to 40 CFR Part 60 Subpart JJJJ.	EURICE1, EURICE2

FGRICE
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Two (2) natural gas-fired reciprocating internal combustion engines each with heat input capacities of 4 MMBTU/hr for combined heat and power to the facility. The engines were manufactured before 2006 and are not subject to 40 CFR Part 60 Subpart JJJJ.

Emission Unit: EURICE1, EURICE2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Formaldehyde (CAS No. 50-00-0)	0.42 pph	Hourly	FGRICE	SC V.1	R 336.1225(2)[1]

II. MATERIAL LIMIT(S)

1. The permittee shall combust only natural gas in FGRICE. **(R 336.1225)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum heat input capacity of each of the emission units in FGRICE shall not exceed 4 MMBTU/hr. **(R 336.1225, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

1. Upon request of the AQD District Supervisor, the permittee shall verify formaldehyde emission rates from each unit in FGRICE by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA method such as:
   a) 40 CFR Part 60, Appendix A
   b) 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.[1] **(R 336.1225(2))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall maintain a log of all maintenance activities. The permittee shall keep this log on file at a location approved by the AQD District Supervisor and make it available to the Department upon request. **(R 336.1225, R 336.1702(a), R 336.1911, 40 CFR 52.21(c) & (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged 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. SVRICE1	8	27	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVRICE2	8	27	R 336.1225, 40 CFR 52.21(c) & (d)

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. **(40 CFR Part 63, Subparts A and ZZZZ)**

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

APPENDIX A
Nuisance Minimization Plan: Odors (EUGCU and EUFLARE)

I. Introduction

Purpose, description of each potential source of odors, permit number, background information, etc.

II. Potential Sources of Odorous Emissions and Related Equipment

Listing of equipment at source that could generate potential odors. Identify process and/or equipment, control equipment (if applicable), and any other information necessary to aid in addressing a complaint if received.

III. Maintenance Schedule

Description of maintenance schedule for equipment, procedures, etc.

IV. Best Management Practices/Housekeeping Measures

Identify best management practices and housekeeping measures the source will use to aid in the minimization of odorous emissions. Explain how odors will be minimized during all startups, shutdowns, and malfunctions. The plan shall incorporate procedures recommended by the equipment manufacturer(s), as well as incorporating standard industry practices.

V. Odor Incident Notification/Investigation/Response

Describe procedures that shall be taken to address odor complaints. Identify the individual(s) at the facility who will be responsible for initiating the response procedures upon the receipt of an odor complaint notification from the AQD, a neighbor, or other source. The response should include taking records that include the date and time of the complaint, meteorological data for the timeframe specified in the complaint, identification of the equipment/process that is most likely to be the source of the complaint, steps taken to identify any maintenance or corrective action necessary for the equipment involved, and other measures utilized by the permittee to address the complaint.

APPENDIX B
Procedures for Calculating Emissions and Material Usage (EUFLARE)

The permittee shall demonstrate compliance with the SO_2 emission limit and H_2S material limit in this permit by monitoring biogas flow rates and biogas H_2S concentration.

$$H_2S\ Monthly\ \left(\frac{lb\ H_2S}{month}\right) = \left(A\ H_2S\ ppmv * B\frac{MMscf\ Biogas}{month} * \frac{34.08\ lb\ H_2S}{385.3\ scf\ H_2S}\right)$$

$$SO_2\ Monthly\ \left(\frac{ton\ SO_2}{month}\right) = \left(A\ H_2S\ ppmv * B\frac{MMscf\ Biogas}{month}\right) * \frac{64.06\ lb\ SO2}{lb-mol} * \frac{lb-mol}{385.3\ scf} * \frac{ton}{2{,}000\ lb}$$

Where:
A = Maximum measured H_2S concentration (ppmv) of biogas routed to EUFLARE during the calendar month (as measured at least once per operating day)
B = Total volume of biogas routed to EUFLARE during the calendar month

Alternative calculation methodology may be used upon approval of the AQD District Supervisor.