

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

November 8, 2021

**PERMIT TO INSTALL  
68-20A**

**ISSUED TO  
Brightmark Castor RNG, LLC**

**LOCATED AT  
18080 80<sup>th</sup> Avenue  
Coopersville, Michigan 49404**

**IN THE COUNTY OF  
Ottawa**

**STATE REGISTRATION NUMBER  
P1125**

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: <b>November 3, 2021</b>	
DATE PERMIT TO INSTALL APPROVED: <b>November 8, 2021</b>	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 <sub>2e</sub>	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 <sub>2</sub> S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO <sub>x</sub>	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 <sub>2</sub>	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.

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Flexible Group ID</b>
EUGCU1	Desulfurization using a THIOPAQ® system	FGGCU
EUGCU2	Carbon dioxide removal using a membrane system	FGGCU
EUBOILER1	A 10.5 MMBtu/hr natural gas-fired boiler	FGBOILERS
EUBOILER2	A 10.5 MMBtu/hr natural gas-fired boiler	FGBOILERS
EUDRYER	A 6-wet ton/hr dryer with a heat input of 12 MMBtu/hr controlled with a two-stage cyclone, which is an inherent part of the drying and solids collection process	NA
EUFLARE1	A 1,500 scfm flare that burns off-spec gas from FGGCU	FGFLARES
EUFLARE2	A 1,500 scfm flare that burns excess digester gas	FGFLARES
EUENGINE1	A 581 HP (434 kW) natural gas-fueled engine manufactured after 2019.	FGENGINES
EUENGINE2	A 581 HP (434 kW) natural gas-fueled engine manufactured after 2019.	FGENGINES
EUENGINE3	A 581 HP (434 kW) natural gas-fueled engine manufactured after 2019.	FGENGINES
EUENGINE4	A 581 HP (434 kW) natural gas-fueled engine manufactured after 2019.	FGENGINES
EUENGINE5	A 581 HP (434 kW) natural gas-fueled engine manufactured after 2019.	FGENGINES
EUENGINE6	A 581 HP (434 kW) natural gas-fueled engine manufactured after 2019.	FGENGINES
EUENGINE7	A 581 HP (434 kW) natural gas-fueled engine manufactured after 2019.	FGENGINES
EUENGINE8	A 581 HP (434 kW) natural gas-fueled engine manufactured after 2019.	FGENGINES

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.

**EUDRYER  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

A 6-wet ton/hr dryer with a heat input of 12 MMBtu/hr controlled with a two-stage cyclone, which is an inherent part of the drying and solids collection process.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.10 lbs per 1000 lbs of exhaust gases <sup>a</sup>	Hourly	EUDRYER	SC V.1	R 336.1331(1)(a)
2. PM	1.53 pph	Hourly	EUDRYER	SC V.1	R 336.1205
3. PM10	1.53 pph	Hourly	EUDRYER	SC V.1	R 336.1205, 40 CFR 52.21(c)&(d)
4. PM2.5	1.53 pph	Hourly	EUDRYER	SC V.1	R 336.1205, 40 CFR 52.21(c)&(d)

<sup>a</sup> Calculated on a wet gas basis

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Digestate	1,200 dry ton/month	Monthly	EUDRYER	SC VI.2	R 336.1205 R 336.1331, 40 CFR 52.21 (c)&(d)

2. The permittee shall burn only pipeline quality natural gas in EUDRYER. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), 40 CFR 52.21(c) & (d))**

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. No later than 90 days after the completion of installation of the equipment, the permittee shall submit to the AQD District Supervisor, for review and approval, a preventative maintenance/malfunction abatement plan (PM/MAP) for EUDRYER. After approval of the PM/MAP by the AQD District Supervisor, the permittee shall not operate EUDRYER 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 336.1205, R 336.1224, R 336.1225, R 336.1910, R 336.1911, R 336.1912)**

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

- 1. The maximum design heat input capacity for the burners of EUDRYER shall not exceed 12.0 MMBtu per hour. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
- 2. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor the amount of digestate processed through EUDRYER on a daily basis. **(R 336.1205, R 336.1301, R 336.1331, 40 CFR 52.21(c) & (d))**
- 3. The permittee shall not operate EUDRYER unless the afterburner is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining the equipment in accordance with the MAP required in SC III.1. **(R 336.1331, R 336.1910)**

**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, the permittee shall verify PM, PM10, and PM2.5 emission rates from EUDRYER by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

<b>Pollutant</b>	<b>Test Method Reference</b>
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1902, 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 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, R 336.1301, 40 CFR 52.21(c) & (d))**

2. The permittee shall keep, in a satisfactory manner, monthly records of the tons of digestate dried in EUDRYER. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205, 40 CFR 52.21(c) & (d))**

**VII. REPORTING**

1. Within 10 days after completion of the initial startup of EUDRYER, 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 initial startup is considered to occur not later than commencement of trial operation of EUDRYER. **(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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVDRYER*	6	31	40 CFR 52.21(c) & (d)

\*Equipped with a rain cap.

**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.

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FGGCU	A gas cleaning and upgrading unit for initial processing of all digester gas.	EUGCU1, EUGCU2
FGFLARES	Two (2) digester gas flares used as back up for the FGGCU. The flares combined are capable of burning up to 1,500 scfm giving a heat input capacity of 58.5 MMBtu/hr when using the estimated higher heating value of the digester gas of 650 Btu/scf.	EUFLARE1, EUFLARE2
FGBOILERS	Two (2) 10.5 MMBtu/hr natural gas-fired boilers	EUBOILER1, EUBOILER2
FGENGINES	Eight (8) Natural Gas-Fired RICE	EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6, EUENGINE7, EUENGINE8
FGTEMPPOWER	Operation of Brightmark Caster RNG, LLC during the period of temporary power supply. The period of temporary power supply will take place between the date of issuance of this permit to install and the date that completes the period of temporary power supply is when EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6, EUENGINE7, EUENGINE8 are permanently removed from service.	EUGCU1, EUGCU2, EUBOLER1, EUBOILER2, EUDRYER, EUFLARE1, EUFLARE2, EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6, EUENGINE7, EUENGINE8

<b>FGGCU FLEXIBLE GROUP CONDITIONS</b>
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**DESCRIPTION**

A gas cleaning and upgrading unit for initial processing of all digester gas.

**Emission Unit:** EUGCU1, EUGCU2

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

NA

**II. MATERIAL LIMIT(S)**

1. The hydrogen sulfide (H<sub>2</sub>S) concentration of the vent gas exiting EUGCU1 shall not exceed 1 ppmv. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))**
2. The hydrogen sulfide (H<sub>2</sub>S) concentration of the vent gas exiting EUGCU2 shall not exceed 10 ppmv. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))**

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. No later than 90 days after the completion of installation of the equipment, the permittee shall submit to the AQD District Supervisor, for review and approval, a preventative maintenance/malfunction abatement plan (PM/MAP) for FGGCU. After approval of the PM/MAP by the AQD District Supervisor, the permittee shall not operate FGGCU 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 336.1205, R 336.1224, R 336.1225, R 336.1910, R 336.1911, R 336.1912)**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner, a device to monitor the H<sub>2</sub>S content at the inlet to the membrane system of EUGCU2. Satisfactory manner includes operating and maintaining EUGCU2 in accordance with an approved PM / MAP for FGGCU, as required in SC III.1. **(R 336.1205, R 336.1224, R 336.1225, R 336.1901)**
2. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner, a device to monitor and record the redox potential from the bioreactor in EUGCU1 on a continuous basis. **(R 336.1205, R 336.1224, R 336.1225)**

#### **V. TESTING/SAMPLING**

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

1. During the first 90 days of operation, the permittee shall take a sample three times a week of the vent gas stream from each EUGCU1 and EUGCU2 to determine the hydrogen sulfide concentration of the vent gas by using a method approved by the AQD District Supervisor.<sup>1</sup> **(R 336.1224, R 336.1225)**
2. After the first 90 days of operation, the permittee shall take a weekly sample of the vent gas stream from each EUGCU1 and EUGCU2 to determine the hydrogen sulfide (H<sub>2</sub>S) concentration of the vent gas by using a method approved by the AQD District Supervisor. The permittee shall perform 6 months of consecutive weekly readings of the concentration of hydrogen sulfide in the vent gas. After successful completion of the 6 consecutive months of weekly readings, the permittee may request an alternative monitoring schedule. Any request for an alternative monitoring schedule shall be submitted to the AQD District Supervisor for approval. The requested monitoring frequency shall be no less than monthly.<sup>1</sup> **(R 336.1224, R 336.1225)**

#### **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 336.1205, R 336.1224, R 336.1225, R 336.1910, R 336.1911, R 336.1912)**
2. The permittee shall keep, in a satisfactory manner, records of the H<sub>2</sub>S concentration in the vent gas exiting EUGCU1 and EUGCU2. 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 336.1901, 40 CFR 52.21(c) & (d))**
3. The permittee shall keep, in a satisfactory manner, the records of the redox potential from the bioreactor in EUGCU1. The manufacturer's recommended operating range for the redox potential shall be documented in the PM/MAP. **(R 336.1205, R 336.1224, 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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVGCU1	16	30	40 CFR 52.21(c) & (d)
2. SVGCU2	6	30	40 CFR 52.21(c) & (d)

#### **IX. OTHER REQUIREMENT(S)**

NA

**FGFLARES  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Two digester gas flares used as backup for the FGGCU. The flares combined are capable of burning up to 1,500 scfm, giving a heat input capacity of 58.5 MMBtu/hr when using the estimated higher heating value of the digester gas of 650 Btu/scf.

**Emission Unit:** EUFLARE1, EUFLARE2

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. SO <sub>2</sub>	39.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFLARE	SC V.1, SC VI.5	R 336.1205, 40 CFR 52.21(c) & (d)

**II. MATERIAL LIMIT(S)**

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Biogas	127.8 MMscf/yr	12-month rolling time period as determined at the end of each calendar month	FGFLARE	SC VI.5	R 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d)
2. H <sub>2</sub> S concentration of the biogas	3,500 ppmv	Calendar month average	EUFLARE	SC VI.3, SC VI.4	R 336.1205, 40 CFR 52.21(c) & (d)

3. The permittee shall burn only natural gas or gas produced by the anaerobic digester (digester biogas) in FGFLARE. **(R 336.1205, R 336.1225, 40 CFR 52.21(c) & (d))**
4. The H<sub>2</sub>S concentration of the digester biogas combusted in EUFLARE shall not exceed 5,500 ppmv. **(R 336.1224, R 336.1225, 40 CFR 52.21(c) and (d))**
5. The volumetric feed rate for FGFLARES shall not exceed a maximum of 1,500 standard cubic feet per minute. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21)**

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. No later than 90 days after the completion of installation of the equipment, the permittee shall submit to the AQD District Supervisor, for review and approval, a preventative maintenance / malfunction abatement plan (PM / MAP) for FGGCU. After approval of the PM / MAP by the AQD District Supervisor, the permittee shall not operate FGGCU 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 336.1205, 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 FGFLARE. 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 permittee shall install, calibrate, maintain, and operate in a satisfactory manner, a device to monitor and record the volumetric flow rate of digester gas burned in FGFLARE, on a continuous basis. **(R 336.1205, R 336.1224, R 336.1225, R 336.1901, 40 CFR 52.21(c) & (d))**
2. After the first 90 days of operation, the permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the H<sub>2</sub>S concentration in the biogas exiting EUGCU1 (for EUFLARE1 emissions monitoring), and the H<sub>2</sub>S concentration in the vent gas entering EUGCU1 (for EUFLARE2 emissions monitoring). The permittee shall monitor and record the concentrations at each location at a minimum of once per day. **(R 336.1205, R 336.1224, R 336.1225, R 336.1901, 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. During the first 90 days of operation, the permittee shall verify the hydrogen sulfide or total reduced sulfur (TRS) content of the digester gas burned in FGFLARE three times a week by gas sampling using Drager tubes (or similar). **(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 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, 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 336.1205, 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))**

3. During the first 90 days of operation, the permittee shall keep, in a satisfactory manner, records three times a week of the H<sub>2</sub>S content of the biogas routed to FGFLARE. 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, 40 CFR 52.21(c) & (d))**
4. After the first 90 days of operation, the permittee shall keep, in a satisfactory manner, daily records of the H<sub>2</sub>S content of the biogas routed to FGFLARE. 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, 40 CFR 52.21(c) & (d))**
5. The permittee shall keep, in a satisfactory manner, continuous records of the total volume (MMscf) biogas burned in FGFLARES on a monthly and 12-month rolling time period. Continuous shall be defined in this permit a sat least one reading every 15 minutes. 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, 40 CFR 52.21(c) & (d))**
6. The permittee shall keep, in a satisfactory manner acceptable to the AQD District Supervisor, a log of monthly and 12-month rolling total hours of operation for EUFLARE2. The daily hours may be used to calculate the total volume (MMscf) biogas burned in EUFLARE2 in lieu of a gas flow rate monitoring device. The maximum capacity (1,500 scfm) shall be used when calculation the total volume (MMscf) of biogas. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21)**
7. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total SO<sub>2</sub> mass emissions for FGFLARES. Calculations shall be performed using data collected through the devices required in SC IV.1 and SC IV.2. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205, 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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVFLARE1	10	38	40 CFR 52.21(c) & (d)
2. SVFLARE2	18	26.5	40 CFR 52.21(c) & (d)

## **IX. OTHER REQUIREMENT(S)**

NA



## **FGBOILERS EMISSION UNIT CONDITIONS**

### **DESCRIPTION**

Two (2) 10.5 MMBtu/hr natural gas-fired boilers.

**Emission Unit:** EUBOILER1, EUBOILER2

### **POLLUTION CONTROL EQUIPMENT**

Low NOx Burners

#### **I. EMISSION LIMIT(S)**

NA

#### **II. MATERIAL LIMITS**

1. The permittee shall burn only pipeline quality natural gas in FGBOILERS. **(R 336.1205, R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 63.11195(e))**

#### **III. PROCESS/OPERATIONAL RESTRICTIONS**

1. No later than 45 days after the completion of installation of the equipment, the permittee shall submit to the AQD District Supervisor, for review and approval, a preventative maintenance/malfunction abatement plan (PM/MAP) for FGBOILERS. After approval of the PM/MAP by the AQD District Supervisor, the permittee shall not operate FGBOILERS 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 336.1205, R 336.1224, R 336.1225, R 336.1910, R 336.1911, R 336.1912)**

#### **IV. DESIGN/EQUIPMENT PARAMETERS**

1. The combined maximum design heat input capacity for FGBOILERS shall not exceed 21 MMBtu per hour on a fuel heat input basis. **(R 336.1205, 40 CFR Part 60 Subpart Dc)**

2. The permittee shall install, calibrate, maintain, and operate, in a satisfactory manner, a device to monitor and record the fuel usage rate for FGBOILERS on a continuous basis. **(R 336.1205, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.48c(g))**
3. The permittee shall not operate FGBOILERS unless the low NO<sub>x</sub> burners are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining the equipment in accordance with the MAP required in SC III.1. **(R 336.1205, R 336.1910)**

#### **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 last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1331, 40 CFR 52.21(c) & (d))**
2. The permittee shall keep monthly natural gas usage records, in a format acceptable to the AQD District Supervisor, indicating the amount of natural gas used, in cubic feet, on a calendar month basis, and a 12-month rolling time period basis. The records must indicate the total amount of natural gas used in FGBOILERS. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, 40 CFR 52.21(c) & (d)), 40 CFR 60.48c(g))**
3. The permittee shall maintain records of information necessary for all required notifications and reports for each boiler within FGBOILERS, as well as information necessary to demonstrate compliance with the emission limits of this permit, including the following:
  - a) Monitoring data.
  - b) Verification of heat input capacity required to show compliance with SC IV.1.
  - c) Identification, type, and the amounts of fuel combusted in each boiler within FGBOILERS on a calendar month basis.
  - d) All records required by 40 CFR 60.7, 60.48c.
  - e) All calculations necessary to show compliance with the limits contained in this permit.

All of the above information shall be stored in a format acceptable to the Air Quality Division and shall be consistent with the requirements of 40 CFR 60.7(f). **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1912, 40 CFR 60.7(f))**

#### **VII. REPORTING**

1. The permittee shall provide written notification of the date construction commences and actual startup of each boiler within FGBOILERS, in accordance with 40 CFR 60.7 and 60.48c. The notification shall include the design heat input, an identification of the fuels to be combusted and the annual capacity factor for each boiler within FGBOILERS. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7, 40 CFR 60.48c)**
2. Within 10 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 boiler within FGBOILERS. **(R 336.1201(7)(a))**

**VIII. STACK/VENT RESTRICTIONS**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVBOILER1	12	25	40 CFR 52.21(c)&(d)
2. SVBOILER2	12	25	40 CFR 52.21(c)&(d)

**IX. OTHER REQUIREMENTS**

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc, as they apply to each boiler within FGBOILERS. **(40 CFR Part 60 Subparts A & Dc)**

**FGENGINES  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Eight (8) Natural Gas-Fired RICE

**Emission Unit:** EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6, EUENGINE7, EUENGINE8

**POLLUTION CONTROL EQUIPMENT**

Each engine is equipped with a 3-way catalyst controlling NOx, CO, and VOC

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. NOx	1.0 g/bhp-hr or 82 ppmvd at 15% O <sub>2</sub> <sup>a</sup>	Hourly	FGENGINES	SC V.1, SC VI.3	R 336.1205, 40 CFR 52.21(c) & (d), 40 CFR 60.4233(e), Table 1 of 40 CFR 60 Subpart JJJJ
2. CO	2.0 g/bhp-hr or 270 ppmvd at 15% O <sub>2</sub> <sup>a</sup>	Hourly	FGENGINES	SC V.1, SC VI.3	R 336.1205, 40 CFR 52.21(c) & (d), 40 CFR 60.4233(e), Table 1 of 40 CFR 60 Subpart JJJJ
3. VOC	0.7 g/bhp-hr or 60 ppmvd at 15% O <sub>2</sub> <sup>a, b</sup>	Hourly	FGENGINES	SC V.1, SC VI.3	R 336.1205, 40 CFR 52.21(c) & (d), 40 CFR 60.4233(e), Table 1 of 40 CFR 60 Subpart JJJJ
4. PM2.5	2.8 tpy	12-month rolling time period as determined at the end of each calendar month	FGENGINES	SC VI.2	40 CFR 52.21(c) & (d)

<sup>a</sup> Owners and operators may choose to comply with the emission standards in units of either g/bhp-hr or ppmvd at 15% O<sub>2</sub>.

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

**II. MATERIAL LIMIT(S)**

1. The permittee shall only burn natural gas in each engine within FGENGINES. **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. The combine natural gas usage shall not exceed 283.8 million cubic feet (MMcf) for FGENGINES per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall operate and maintain each unit in FGENGINES 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)**
2. The permittee shall only operate six engines within FGENGINES at any given time. **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

3. 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 each engine of FGENGINES:
  - 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))**

4. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for the engine 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)(ii))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The nameplate capacity of each engine in FGENGINES shall not exceed 581 HP (434 kW), as certified by the equipment manufacturer. **(R 336.1225, R 336.1702(a), 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 volumetric flow rate of natural gas usage in FGENGINES, on a continuous basis. **(R 336.1205, R 336.1224, R 336.1225, R 336.1901, 40 CFR 52.21(c) & (d))**
3. The permittee shall not operate each engine within FGENGINES unless each respective three-way catalyst is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with the manufacturer. **(R 336.1205(1)(a) & (3), 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. If any engine within FGENGINES 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 applicable emission limits in SC I.1 – I.3 within 1 year after the engine 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 30th 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, R 336.1702(a), 40 CFR 52.21(c) & (d))**

2. The permittee shall calculate and record in a satisfactory manner monthly and 12-month rolling time period PM2.5 emission records for FGENGINES. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(40 CFR 52.21(c) & (d))**
3. The permittee shall keep, in a satisfactory manner, the following records for each engine within FGENGINES:
  - a) If operated in a certified manner: The permittee shall keep records of the documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable.
  - b) If operated in a non-certified manner: 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. **(R 336.1205(1)(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4233(e), 40 CFR 60.4243, 40 CFR 60.4245(a))**

4. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for each engine within FGENGINES:
  - a) If operated in a certified manner: The permittee shall keep the manufacturer's emission-related written instructions and records demonstrating that each engine within FGENGINES has been maintained according to them, as specified in SC III.4.
  - b) If operated in a non-certified manner: 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 60.4243, 40 CFR 60.4245(a), 40 CFR Part 60 Subpart JJJJ)**

5. The permittee shall keep, in a satisfactory manner, records of the natural gas usage rate in million cubic feet (MMscf) 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 336.1205, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**
6. The permittee shall keep, in a satisfactory manner, manufacturer information regarding each engine in FGENGINES, including the size and emissions profile, on file and make it available to the Department upon request. **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
7. The permittee shall keep, in a satisfactory manner acceptable to the AQD District Supervisor, a log of the start and stop of each engine in FGENGINES hours of operation, for determining compliance with SC III.2. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1702(a), 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 each engine within FGENGINES. **(R 336.1201(7)(a))**
2. The permittee shall submit a notification specifying whether each engine within FGENGINES 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 JJJJ)**
3. If any engine within FGENGINES 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 engine emission control equipment; and
- f) Fuel used in the engine.

The notification must be postmarked no later than 30 days after construction commenced for the 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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVENGINE1	5	26.5	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SVENGINE2	5	26.5	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SVENGINE3	5	26.5	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SVENGINE4	5	26.5	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SVENGINE5	5	26.5	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SVENGINE6	5	26.5	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SVENGINE7	5	26.5	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SVENGINE8	5	26.5	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 each engine within FGENGINES. **(40 CFR Part 60 Subparts A & JJJJ)**
2. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, as they apply to each engine within FGENGINES. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**

**FGTEMPPOWER  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Operation of Brightmark Caster RNG, LLC during the period of temporary power supply. The period of temporary power supply will take place between the date of issuance of this permit to install and the date that completes the period of temporary power supply is when EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6, EUENGINE7, EUENGINE8 are permanently removed from service.

**Emission Unit:** EUGCU1, EUGCU2, EUBOILER1, EUBOILER2, EUDRYER, EUFLARE1, EUFLARE2, EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6, EUENGINE7, EUENGINE8

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. SO <sub>2</sub>	25.5 tpy <sup>A</sup>	12-month rolling time period as determined at the end of each calendar month	FGTEMPPOWER	SC VI.4	40 CFR 52.21(c) & (d)
2. PM <sub>2.5</sub>	9.9 tpy <sup>A</sup>	12-month rolling time period as determined at the end of each calendar month	FGTEMPPOWER	SC VI.4	40 CFR 52.21(c) & (d)

<sup>A</sup> This limit will remain in effect until the period of temporary power supply is complete. The period of temporary power supply is complete once EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6, EUENGINE7, and EUENGINE8 are permanently removed from service.

**II. MATERIAL LIMIT(S)**

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Biogas	86.11 MMscf/yr	12-month rolling time period as determined at the end of each calendar month	EUFLARE1, EUFLARE2	SC VI.2	R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d)
2. Digestate	891 dry ton/month	Monthly	EUDRYER	SC VI.3	R 336.1331, 40 CFR 52.21(c) & (d)

**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 by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**
2. The permittee shall keep, in a satisfactory manner, records of the total combine volume (MMscf) biogas burned in EUFLARE1 and EUFLARE2 on a monthly and 12-month rolling basis during the period of temporary power supply. The permittee shall keep all records on file and make them available to the Department upon request. **(, R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**
3. The permittee shall keep, in a satisfactory manner, monthly records of the tons of digestate dried in EUDRYER during the period of temporary power supply. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 52.21(c) & (d))**
4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling basis during the period of temporary power supply total SO<sub>2</sub> mass and PM<sub>2.5</sub> emissions for FGTEMPPOWER. SO<sub>2</sub> mass emission calculations shall be performed using data collected through the devices required in FGFLARES SC IV.1 and SC IV.2. 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**

1. Within 30 days after completion of the period of temporary power supply, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. The period of temporary power supply is complete once EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6, EUENGINE7, and EUENGINE8 are permanently removed from service. **(R 336.1201(7)(a))**

## **VIII. STACK/VENT RESTRICTION(S)**

NA

## **IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with the requirements of FGTEMPPOWER until the period of temporary power supply for FGTEMPPOWER is complete. The commissioning period is complete once EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6, EUENGINE7, and EUENGINE8, are permanently removed from service. Upon completion of the period of temporary power supply, the conditions of FGTEMPPOWER are null and void. **(R 336.1201)**

## **APPENDIX A**

### **Nuisance Minimization Plan: Odors**

#### **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.