

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

February 15, 2024

PERMIT TO INSTALL
194-18A

ISSUED TO
Muskegon Operating Company LLC

LOCATED AT
SE Section 29, T21N, R3W
Houghton Lake, Michigan 48629

IN THE COUNTY OF
Roscommon

STATE REGISTRATION NUMBER
N0924

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

| | |
|---|------------|
| DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: February 8, 2024 | |
| DATE PERMIT TO INSTALL APPROVED: February 15, 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 ₂ e | Carbon Dioxide Equivalent |
| dscf | Dry standard cubic foot |
| dscm | Dry standard cubic meter |
| °F | Degrees Fahrenheit |
| gr | Grains |
| HAP | Hazardous Air Pollutant |
| Hg | Mercury |
| hr | Hour |
| HP | Horsepower |
| H ₂ S | Hydrogen Sulfide |
| kW | Kilowatt |
| lb | Pound |
| m | Meter |
| mg | Milligram |
| mm | Millimeter |
| MM | Million |
| MW | Megawatts |
| NMOC | Non-Methane Organic Compounds |
| NO _x | Oxides of Nitrogen |
| ng | Nanogram |
| PM | Particulate Matter |
| PM10 | Particulate Matter equal to or less than 10 microns in diameter |
| PM2.5 | Particulate Matter equal to or less than 2.5 microns in diameter |
| pph | Pounds per hour |
| ppm | Parts per million |
| ppmv | Parts per million by volume |
| ppmw | Parts per million by weight |
| psia | Pounds per square inch absolute |
| psig | Pounds per square inch gauge |
| scf | Standard cubic feet |
| sec | Seconds |
| SO ₂ | Sulfur Dioxide |
| TAC | Toxic Air Contaminant |
| Temp | Temperature |
| THC | Total Hydrocarbons |
| tpy | Tons per year |
| µg | Microgram |
| µm | Micrometer or Micron |
| VOC | Volatile Organic Compounds |
| yr | Year |

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

| Emission Unit ID | Emission Unit Description (Including Process Equipment & Control Device(s)) | Installation Date / Modification Date | Flexible Group ID |
|-------------------------|--|--|--------------------------|
| EUFLARESYSTEM | Flare system designed to burn sour gas from the heater treater and vapors from various relief vents and blowdowns associated with the oil and brine storage tanks. No gas is processed for sale. | 03-28-1985 | NA |
| EUHEATERTREATER | 467,000 BTU/hour heater treater used to process produced crude oil that burns sour gas in its pilot and main burners. | 03-28-1985, 12-26-2018 | NA |

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

EUFLARESYSTEM EMISSION UNIT CONDITIONS

DESCRIPTION

Flare system designed to burn sour gas from the heater treater and vapors from various relief vents and blowdowns associated with the oil and brine storage tanks. No gas is processed for sale.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Open Flare

I. EMISSION LIMIT(S)

| Pollutant | Limit | Time Period / Operating Scenario | Equipment | Monitoring / Testing Method | Underlying Applicable Requirements |
|--------------------|-----------|-------------------------------------|---------------|-----------------------------------|--|
| 1. SO ₂ | 28.78 pph | Based on 24-hour average | EUFLARESYSTEM | SC VI.3 | R 336.1205(3), R 336.1403(2) |

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only burn natural gas or propane in the flare pilot. **(R 336.1205(3), R 336.1403(2))**
2. The maximum rate of hydrogen sulfide burned in the flare shall not exceed 4,100 scf/day (367.4 lb/day). **(R 336.1205(3), R 336.1403(2))**
3. The permittee shall operate a continuously burning pilot flame at the flare. In the event the pilot flame is extinguished, a control valve located at the inlet to the facility shall automatically commence closure within one second and shall isolate the facility from all wells feeding the facility. Each well feeding the facility shall shut-in before the pressure reaches the safety set-point as identified in Operation and Maintenance Plan. The permittee shall not resume flow into the facility unless the pilot flame is re-ignited and maintained. **(R 336.1403(2), R 336.1403(5)(f))**
4. The permittee shall not operate any wells served by EUFLARESYSTEM unless the flare is installed and operating properly. **(R 336.1403(2))**
5. The permittee shall not operate EUFLARESYSTEM and associated tanks to process any wells unless the permittee has notified the AQD, in advance, of the names and the EGLE Oil, Gas & Mineral Division permit numbers of those wells. **(R 336.1205(3))**
6. The permittee shall not operate the equipment unless a vapor return system is employed in load-out of all brine and crude oil tanks. **(R 336.1403(5)(c))**

7. The permittee shall not operate EUFLARESYSTEM unless a Malfunction Abatement Plan (MAP) as described in Rule 911(2), for EUFLARESYSTEM, has been implemented and maintained. The MAP shall, at a minimum, specify the following:
- A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

8. The permittee shall maintain an AQD approved Operation and Maintenance Plan. The plan shall be reviewed and updated (if necessary) on a yearly basis. Changes to this plan may be made upon approval from the AQD District Supervisor. **(R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

- All emergency relief valves, and storage tanks shall vent to a flare, incinerator, vapor recovery unit, or equivalent control device. **(R 336.1403(5)(c))**
- The permittee shall equip and maintain EUFLARESYSTEM with a device to monitor the volumetric flow rate of gas going to the flare on a continuous basis. **(R 336.1403(5)(a))**

V. TESTING/SAMPLING

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

- The permittee shall conduct non-certified visible emissions observations from the flare daily, when the process is operating. Document time and direction from stack of visible emissions observation. If visible emissions are present, the following information must be recorded: **(R 336.1201(3))**
 - Color of emissions.
 - The cause of the emissions.
 - Duration of the emission incident.
 - Corrective actions taken.
- The permittee shall determine the representative hydrogen sulfide concentration of the gas burned in the flare at least once per calendar month, using colorimetric detector tubes or the equivalent. This determination shall take into account, in a manner acceptable to the AQD, a pumping schedule that produces from different combinations of wells on different days, unless the permittee can demonstrate to the satisfaction of the AQD that variation in hydrogen sulfide content between the different groups of wells is not significant. If the permittee complies with EUHEATERTREATER SC V. 1. this special condition is considered satisfied. **(R 336.1403(5)(a))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall record the volume of gas burned in the flare during each calendar day. **(R 336.1403(5)(a))**
2. The permittee shall calculate and record, for each calendar day, the mass flow rate of hydrogen sulfide to the flare based on the representative hydrogen sulfide concentration of the gas going to the flare, determined as required by SC V.2, and the volume of gas burned in the flare, determined as required by SC VI.1. Calculation methods must be acceptable to the AQD District Supervisor. **(R 336.1403(5)(a))**
3. The permittee shall calculate and record, for each calendar day, the sulfur dioxide emissions from the flare. Sulfur dioxide emissions shall be calculated based on the mass flow rate of hydrogen sulfide going to the flare, calculated as required by SCVI.2. The permittee shall use the calculation methods in Appendix A. **(R 336.1201(3), R 336.1403(4))**
4. The permittee shall complete all required records in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(3), R 336.1403)**

See Appendices A

VII. REPORTING

1. Monthly reporting of the daily volumetric flow rate of sour gas, the daily mass flow rate of hydrogen sulfide based on the monthly representative hydrogen sulfide concentration and the daily volumetric flow rate of sour gas, and the daily sulfur dioxide emissions from the facility, in a format acceptable to the AQD District Supervisor. This data shall be submitted to the AQD District Supervisor, within 30 days following the end of the month in which the data were collected. **(R 336.1403(5)(a))**

VIII. STACK/VENT RESTRICTION(S)

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

| Stack & Vent ID | Maximum Exhaust Diameter / Dimensions (inches) | Minimum Height Above Ground (feet) | Underlying Applicable Requirements |
|----------------------------|---|---|---|
| 1. SVFLARESTACK | 4 | 50 | R 336.1225, 40 CFR 52.21(c) & (d) |

IX. OTHER REQUIREMENT(S)

1. The permittee shall install and maintain fencing, warning signs, and/or other measures as necessary to prevent unauthorized individuals from entering the plant property. **(R336.1403(5)(b))**

Footnotes:

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

**EUHEATERTREATER
EMISSION UNIT CONDITIONS**

DESCRIPTION

467,000 BTU/hour heater treater used to process produced crude oil that burns sour gas in its pilot and main burners.

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 | 3.93 pph | Based on 24-hour average | EUHEATERTREATER | SC VI.3 | R 336.1205(3) |

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only burn natural gas or propane in the heat treater pilot and main burner. **(R 336.1205(3), R 336.1403(2))**
2. The maximum rate of hydrogen sulfide burned in the heater treater shall not exceed 560 scf/day (50.2 lb./day). **(R 336.1205(3), R 336.1403(2))**
3. The permittee shall operate a continuously burning pilot flame in EUHEATERTREATER when burning sour gas. In the event that the pilot flame is extinguished, shut down (or diversion to the EUFLARESYSTEM flare) of all gas fueling EUHEATERTREATER shall commence automatically within one second. The permittee shall not resume operation of EUHEATERTREATER unless the pilot flame is re-ignited and maintained. **(R 336.1224, R 336.1225, R 336.1403, R 336.1901, R 336.1910)**
4. The permittee shall not operate EUHEATERTREATER unless a malfunction abatement plan (MAP) as described in Rule 911(2), for EUHEATERTREATER, has been implemented and maintained. The MAP shall, at a minimum, specify the following:
 - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1331, R 336.911, R 336.1702(a))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUHEATERTREATER unless the flare in EUFLARESYSTEM is installed, maintained, and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1403, R 336.1901, R 336.1910)**
2. The permittee shall equip and maintain EUHEATERTREATER with a device to monitor and record the volumetric flow rate of gas going to the pilot and main burners on a continuous basis when burning sour gas. **(R 336.1224, R 336.1225, R 336.1403, R 336.1901, R 336.1910)**

V. TESTING/SAMPLING

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

1. The permittee shall determine the representative hydrogen sulfide concentration of the gas burned in the heater treater pilot and main burner at least once per calendar month, using colorimetric detector tubes or the equivalent. This determination shall take into account, in a manner acceptable to the AQD, a pumping schedule that produces from different combinations of wells on different days, unless the permittee can demonstrate to the satisfaction of the AQD that variation in hydrogen sulfide content between the different groups of wells is not significant. If the permittee complies with EUFLARESYSTEM SCV. 2. this special condition is considered satisfied. **(R 336.1403(5)(a))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall record the volume of gas combusted in the heater treater's pilot and main burners during each calendar day. **(R 336.1403(5)(a))**
2. The permittee shall calculate and record, for each calendar day, the mass flow rate of hydrogen sulfide to the heater treater based on the representative hydrogen sulfide concentration of the gas going to the flare, determined as required by SC V.2, and the volume of gas burned in the flare, determined as required by SC VI.1. Calculation methods must be acceptable to the AQD District Supervisor. **(R 336.1403(5)(a))**
3. The permittee shall calculate and record, for each calendar day, the sulfur dioxide emissions from the heater treater. Sulfur dioxide emissions shall be calculated based on the mass flow rate of hydrogen sulfide going to the heater treater, calculated as required by SC VI.2. The permittee shall use the calculation methods in Appendix A. **(R 336.1403(4))**
4. The permittee shall complete all required records in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(3))**

See Appendix A

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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

| Stack & Vent ID | Maximum Exhaust Diameter / Dimensions (inches) | Minimum Height Above Ground (feet) | Underlying Applicable Requirements |
|----------------------------|---|---|---|
| 1. SVHEATERTREATER | 8 | 40 | R 336.1225, 40 CFR 52.21(c) & (d) |

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

FGFACILITY CONDITIONS

DESCRIPTION

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

POLLUTION CONTROL EQUIPMENT

Open Flare

I. EMISSION LIMIT(S)

| Pollutant | Limit | Time Period / Operating Scenario | Equipment | Monitoring / Testing Method | Underlying Applicable Requirements |
|--------------------|--------------|---|------------------|------------------------------------|---|
| 1. SO ₂ | 88.9 tpy | 12-month rolling time period as determined at the end of each calendar month. | FGFACILITY | SC VI.2, VI.3, VI.4 and Appendix A | R 336.1205(1)(a) & (3) |

II. MATERIAL LIMIT(S)

1. The amount of sour natural gas processed by FGFACILITY shall not exceed 21.1 million cubic feet per year (MMSCF) based on a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (3))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not process wells other than those wells specified in the AQD permit process without prior notification to the AQD, in advance, of the names and the EGLE Oil, Gas & Mineral Division permit numbers of those wells. **(R 336.1205)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th 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))**
2. On a continuous basis, the permittee shall determine and record the volumetric flow rate of sour gas entering the plant. **(R 336.1205(1)(a) & (3))**
3. Once a month, the permittee shall determine and record the hydrogen sulfide concentration of the sour gas entering the plant using colorimetric detector tubes or their equivalent. **(R 336.1205(1)(a) & (3))**

4. The permittee shall keep, in a satisfactory manner, hourly, monthly and 12-month rolling time period SO₂ emission calculation records for FGFACILITY, as required by SC I.1, and Appendix A. The permittee shall keep all records on file at a location approved by the AQD District Supervisor and make them available to the Department upon request. **(R 336.1205(1)(a) & (3))**
5. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of sour natural gas entering FGFACILITY. The permittee shall keep all records on file at a location approved by the AQD District Supervisor and make them available to the Department upon request. **(R 336.1205(1)(a) & (3))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

APPENDIX A

Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in EUFLARESYSTEM and EUHEATERTREATER.

Calculation for SO₂ Emissions

The following calculations for SO₂ emissions shall utilize the actual gas usage and the sulfur concentration from the most recent test sample.

$$H_2S \text{ emissions } \left(\frac{scf}{day} \right) = C \times V$$

Where:

C = H₂S concentration going to the flare expressed as $\frac{ppm_v H_2S}{10^6 ppm_v \text{ natural gas}}$ (based on the most recent test sample)

V = inlet gas volume expressed as MMSCFD

$$H_2S \text{ emissions } \left(\frac{lb}{day} \right) = H_2S \text{ emissions } \left(\frac{scf}{day} \right) \times \frac{1 \text{ lb} \cdot \text{mol}}{379.4 \text{ ft}^3} \times \frac{34 \text{ lb } H_2S}{1 \text{ lb} \cdot \text{mol } H_2S}$$

$$SO_2 \text{ emissions } \left(\frac{lb}{hour} \right) = H_2S \text{ emissions } \left(\frac{lb}{day} \right) \times \frac{1.88 \text{ lb } SO_2}{1 \text{ lb } H_2S} \times \frac{1 \text{ day}}{24 \text{ hours}}$$

Emission limits at the time of permitting were based on the following variables:

EUFLARESYSTEM

Gas volume = 0.0820 MMSCFD
Concentration = 50,000 ppm H₂S

EUHEATERTREATER

Gas volume = 0.9112 MMSCFD
Concentration = 50,000 ppm H₂S