

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

March 5, 2003



**STATE REGISTRATION NUMBER**  
B7189

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. 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>12/2/2002</b>	
DATE PERMIT TO INSTALL APPROVED: <b>3/5/2003</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**NEW SOURCE REVIEW PERMIT TO INSTALL**

**Common Abbreviations / Acronyms Used in this Permit to Install**

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
GACS	Gallon of Applied Coating Solids	H <sub>2</sub> S	Hydrogen Sulfide
GC	General Condition	HP	Horsepower
HAP	Hazardous Air Pollutant	lb	Pound
HVLP	High Volume Low Pressure *	m	Meter
ID	Identification	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NO <sub>x</sub>	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality	PM	Particulate Matter
MIOSHA	Michigan Occupational Safety & Health Administration	PM-10	Particulate Matter less than 10 microns diameter
MSDS	Material Safety Data Sheet	pph	Pound per hour
NESHAP	National Emission Standard for Hazardous Air Pollutants	ppm	Parts per million
NSPS	New Source Performance Standards	ppmv	Parts per million by volume
NSR	New Source Review	ppmw	Parts per million by weight
PS	Performance Specification	psia	Pounds per square inch absolute
PSD	Prevention of Significant Deterioration	psig	Pounds per square inch gauge
PTE	Permanent Total Enclosure	scf	Standard cubic feet
PTI	Permit to Install	sec	Seconds
RACT	Reasonable Available Control Technology	SO <sub>2</sub>	Sulfur Dioxide
SC	Special Condition	THC	Total Hydrocarbons
SCR	Selective Catalytic Reduction	tpy	Tons per year
SRN	State Registration Number	µg	Microgram
TAC	Toxic Air Contaminant	VOC	Volatile Organic Compounds
VE	Visible Emissions	yr	Year

\* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

## GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, altered, 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. **[R336.1201(1)]**
2. If the installation, reconstruction, relocation, or alteration 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 person to whom this permit was issued, or the designated authorized agent, shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, PO Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or alteration of the equipment allowed by this Permit to Install. **[R336.1201(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 R336.1210, 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. **[R336.1201(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. **[R336.1201(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 R336.1219 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 R336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **[R336.1219]**
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. **[R336.1901]**
7. The owner or operator of a source, process, or process equipment shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant in excess of standards for more than one hour, or of any air contaminant in excess of standards for more than two hours, as required in this rule, to the District Supervisor, Air Quality Division. The notice shall be provided no 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 District Supervisor within ten days, with the information required in this rule. **[R336.1912]**
8. Approval of this permit does not exempt the person to whom this permit was issued from complying with any future applicable requirements which may be promulgated under Part 55 of Act 451, PA 1994 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 Act 451, PA 1994, 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 R336.1301, a person 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 R336.1303. **[R336.1301]**
  - 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 R336.1370(2). **[R336.1370]**
13. Except as allowed by Rule 285 (a), (b), and (c), permittee shall not substitute any fuels, coatings, nor raw materials for those described in the application and allowed by this permit, nor make changes to the process or process equipment described in the application, without prior notification to and approval by the Air Quality Division. **[R336.1201(1)]**
14. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. **[R336.2001]**

**SPECIAL CONDITIONS**

**Emission Unit Identification**

<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Stack Identification</b>
EUDIRECTFLARE	60" Dia. x 56' tall shielded flare utilized for direct flaring of produced sour gas when sweetening plant not operating.	SVFLARE
EUSWEETENING	Natural gas sweetening process.	SVREBOIL, SVFLARE
Changes to the equipment described in this table are subject to the requirements of R336.1201, except as allowed by R336.1278 to R336.1290.		

**Flexible Group Identification**

<b>Flexible Group ID</b>	<b>Emission Units Included in Flexible Group</b>	<b>Stack Identification</b>
FGFACILITY	All equipment at the stationary source including equipment covered by other permits, grand-fathered equipment and exempt equipment.	SVFLARE, SVREBOIL

**The following conditions apply to: EUDIRECTFLARE**

**Emission Limits**

	<b>Pollutant</b>	<b>Equipment</b>	<b>Limit</b>	<b>Time Period</b>	<b>Compliance Method</b>	<b>Applicable Requirement</b>
1.1a	SO2	EUDIRECTFLARE	17.5 TPY	12-month rolling time period as determined at the end of each calendar month	SC 1.4, 1.5, 1.6, 1.7	<b>R336.1205(3), 40CFR 52.21 (c) and (d)</b>
1.1b	SO2	EUDIRECTFLARE	4.0 pph	24-hour average	SC 1.4, 1.5, 1.7	<b>40CFR 52.21 (c) and (d)</b>
1.1c	Hydrogen Sulfide	EUDIRECTFLARE	0.11 pph	24-hour average	SC 1.4, 1.5, 1.7	<b>R336.1225</b>

**Material Usage Limits**

1.2 While operating in flare only mode, the permittee shall not direct flare more than 115,000 standard cubic feet per day of sour gas in EUDIRECTFLARE. **[R336.1205(3), R336.1225, 40 CFR 52.21 (c) and (d)]**

**Equipment**

1.3 The permittee shall operate a continuously burning pilot flame at the flare. In the event that the pilot flame is extinguished, shut-in of EUDIRECTFLARE shall commence automatically within one second. In addition, an alarm shall notify the operator of the malfunction and the operator shall reestablish the pilot flame within two hours or begin an orderly shutdown of all wells. Operation of EUDIRECTFLARE shall not be restarted unless the pilot flame is re-ignited and maintained. Pilot fuel shall be only sweet natural gas. **[R336.1403, R336.1901]**

**Monitoring**

1.4 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to continuously monitor and record the volumetric flow rate of sour gas burned in the flare. **[R336.1205(3), R336.1225, 40CFR 52.21 (c) and (d)]**

1.5 At least once each calendar month, the permittee shall determine the hydrogen sulfide concentration of the sour gas using the Draeger stain tube method. At least once each calendar year, the permittee shall determine the hydrogen sulfide concentration of the sour gas using gas chromatography by a certified laboratory. **[R336.1205(3), R336.1225, 40CFR 52.21 (c) and (d)]**

**Recordkeeping/Reporting/Notification**

1.6 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of SO2 emission rates for EUDIRECTFLARE. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(3), R336.1225, R336.1702(a)]**

1.7 On a quarterly basis, the permittee shall submit to the AQD District Supervisor, a report of the following:

- (a) daily mass flow rate of sour gas burned in EUDIRECTFLARE
- (b) daily average pound per hour sulfur dioxide emissions from DIRECTFLARE
- (c) daily average pound per hour hydrogen sulfide emissions from EUDIRECTFLARE

Mass flow rate of hydrogen sulfide and sulfur dioxide emissions shall be calculated from the hydrogen sulfide concentration and sour gas flow rate using a method acceptable to the AQD District Supervisor.

The report shall be in a format acceptable to the AQD District Supervisor, and shall be submitted within 30 days following the end of the quarter in which the data were collected. [R336.1205(3), R336.1225, 40CFR 52.21 (c) and (d)]

**Stack/Vent Restrictions**

	<b>Stack &amp; Vent ID</b>	<b>Maximum Diameter (inches)</b>	<b>Minimum Height Above Ground Level (feet)</b>	<b>Applicable Requirement</b>
1.8	SVFLARE	60	56	<b>R336.1225, 40CFR 52.21 (c) and (d)</b>
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

**The following conditions apply to: EUSWEETENING**

**Emission Limits**

	<b>Pollutant</b>	<b>Equipment</b>	<b>Limit</b>	<b>Time Period</b>	<b>Compliance Method</b>	<b>Applicable Requirement</b>
2.1a	SO2	EUSWEETENING	87.6 TPY	12-month rolling time period as determined at the end of each calendar month	SC 2.6, 2.7, 2.8, 2.9, 2.10	<b>R336.1205(3), 40CFR 52.21 (c) and (d)</b>
2.1b	SO2	EUSWEETENING	20 pph	24-hour average	SC 2.6, 2.7, 2.8, 2.9	<b>40CFR 52.21 (c) and (d)</b>

**Material Usage Limits**

2.2 While operating the gas treating facility, the permittee shall not process more than 570,000 standard cubic feet per day of sour gas in EUSWEETENING. [R336.1205(3), 40 CFR 52.21 (c) and (d)]

**Equipment**

2.3 The permittee shall operate a continuously burning pilot flame at the flare. In the event that the pilot flame is extinguished, shut-in of EUSWEETENING shall commence automatically within one second. In addition, an alarm shall notify the operator of the malfunction and the operator shall reestablish the pilot flame within two hours or begin an orderly shutdown of all wells. Operation of EUSWEETENING shall not be restarted unless the pilot flame is re-ignited and maintained. Pilot fuel shall be only sweet natural gas. [R336.1403, R336.1901]

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

2.5 The permittee shall not operate EUSWEETENING unless all storage tanks and dehydrator vents are routed to the flare. The flare shall be installed, maintained, and operated in a satisfactory manner. [R336.1403]

**Monitoring**

2.6 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to continuously monitor and record the volumetric flow rate of sour gas either entering the plant or burned in the flare. [R336.1205(3), 40CFR 52.21 (c) and (d)]

2.7 At least once each calendar month, the permittee shall determine the hydrogen sulfide concentration of the sour gas using the Draeger stain tube method. At least once each calendar year, the permittee shall determine the hydrogen sulfide concentration of the sour gas using gas chromatography by a certified laboratory. [R336.1205(3), R336.1225, 40CFR 52.21 (c) and (d)]

**Recordkeeping/Reporting/Notification**

2.8 The permittee shall keep, in a satisfactory manner, records of either the mass flow rate of hydrogen sulfide entering the plant. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1205(3), 40CFR 52.21 (c) and (d)]

2.9 On a quarterly basis, the permittee shall submit to the District Supervisor, AQD, a report of the following:  
 (a) daily mass flow rate of sour gas entering EUSWEETENING  
 (b) daily sulfur dioxide emissions from EUSWEETENING

Mass flow rate of hydrogen sulfide and sulfur dioxide emissions shall be calculated from the hydrogen sulfide concentration and sour gas flow rate using a method acceptable to the AQD District Supervisor. The report shall be in a format acceptable to the District Supervisor, AQD, and shall be submitted within 30 days following the end of the quarter in which the data were collected. [40CFR 52.21 (c) and (d)]

2.10 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of SO2 emission rates for EUSWEETENING. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1205(3), R336.1225, R336.1702(a)]

**Stack/Vent Restrictions**

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
2.11a	SVREBOIL	8	120	40CFR 52.21 (c) and (d)
2.11b	SVFLARE	60	56	40CFR 52.21 (c) and (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

**The following conditions apply to: FGFACILITY**

**Emission Limits**

	Pollutant	Equipment	Limit	Time Period	Compliance Method	Applicable Requirement
3.1	SO2	FGFACILITY	89.0 TPY	12-month rolling time period as determined at the end of each calendar month	SC 3.2	R336.1205(3)

**Recordkeeping/Reporting/Notification**

3.2 The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of SO2 emission rates for FGFACILITY. All records shall be kept on file for a period of at least five years and made available to the Department upon request. [R336.1205(3)]