MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

February 1, 2008

PERMIT TO INSTALL
No. 120-01D

ISSUED TO
BreitBurn Operating Company, LP

LOCATED AT
NW/4, SE/4, Sect 17, T25N, R4W
Beaver Creek Township, Michigan 49739

IN THE COUNTY OF
Crawford

STATE REGISTRATION NUMBER
N6974

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: **10/29/2007**	
DATE PERMIT TO INSTALL APPROVED: **2/1/2008**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

Common Abbreviations / Acronyms

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
FG	Flexible Group	H_2S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure*	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO_x	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	Reasonably Available Control Technology	SO_2	Sulfur Dioxide
ROP	Renewable Operating Permit	THC	Total Hydrocarbons
SC	Special Condition	tpy	Tons per year
SCR	Selective Catalytic Reduction	µg	Microgram
SRN	State Registration Number	VOC	Volatile Organic Compounds
TAC	Toxic Air Contaminant	yr	Year
TEQ	Toxicity Equivalence Quotient		
VE	Visible Emissions		

* 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, 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 Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909, 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 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 AQD District Supervisor shall be notified, in writing, of a change in ownership or operational control of the stationary source or emission unit(s) authorized by this Permit to Install pursuant to R 336.1219. The notification shall include all of the information required by R 336.1219(1)(a) and (b). In addition, a new owner or operator must submit a written statement pursuant to R 336.1219(1)(c), agreeing to and accepting the terms and conditions of this Permit to Install, and shall notify the AQD District Supervisor of any change in the contact person for this Permit to Install. **(R 336.1219)**

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

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

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

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law nor does it affect any liability for past violations under the Natural Resources and Environmental Protection Act, 1994 PA 451.

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 R 336.1301, 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 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 R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

Emission Unit Identification

Emission Unit ID	Emission Unit Description	Stack Identification
EUENGINE1	Natural gas fired reciprocating engine	SVENGINE1
EUENGINE2	Natural gas fired reciprocating engine	SVENGINE2
EUENGINE3	Natural gas fired reciprocating engine	SVENGINE3
EUENGINE4	Natural gas fired reciprocating engine used as an emergency generator	SVENGINE4
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 336.1290.		

Flexible Group Identification

Flexible Group ID	Emission Units Included in Flexible Group	Stack Identification
FGSWEETENING	All process equipment at the facility used in the sweetening of natural gas	N/A
FGHEATERS	All natural gas fired process heaters and boilers located at the facility; total capacity less than 20 MMBTU/hr	NA
FGFACILITY	All process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.	SVFLARE

The following conditions apply to: EUENGINE4

Process / Operational Limits

1.1 The permittee shall not operate EUENGINE4 for more than 500 hours per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a))**

Recordkeeping / Reporting / Notification

1.2 The permittee shall keep, in a satisfactory manner, a written or electronic log of the monthly hours of operation for EUENGINE4. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a))**

The following conditions apply to: EUENGINE3

Process / Operational Limits

2.1 No later than 60 days after issuance of this permit, the permittee shall submit to the AQD District Supervisor, for review and approval, a malfunction abatement/preventative maintenance plan for EUENGINE3. After approval of the malfunction abatement/preventative maintenance plan by the AQD District Supervisor, the permittee shall not operate EUENGINE3 unless the malfunction abatement/preventative maintenance plan, 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. The plan shall include procedures for maintaining and operating in a satisfactory manner, EUENGINE3, add-on air pollution control device, or monitoring equipment during malfunction events, and a program for corrective action for such events. If the malfunction abatement plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the malfunction abatement plan within 45 days after such an event occurs and submit the revised plan for approval to the AQD District Supervisor. Should the AQD determine the malfunction abatement/preventative maintenance plan to be inadequate, the District Supervisor may request modification of the plan to address those inadequacies. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a), R 336.1911)**

Testing

2.2 Verification of NOx and CO emission rates from EUENGINE3, by testing at owner's expense, in accordance with Department requirements, may be required upon request by the AQD District Supervisor. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205(1)(a) and (3), R 336.2001, R 336.2003, R 336.2004)**

Monitoring

2.3 The permittee shall monitor, in a satisfactory manner, the natural gas usage from EUENGINE3 on a continuous basis. **(R 336.1205(1)(a) and (3))**

Recordkeeping/Reporting/Notification

2.4 The permittee shall maintain a log of all significant maintenance activities conducted and all repairs made to EUENGINE3 and any associated air pollution control device(s). This log shall be kept on file at a location approved by the District Supervisor for a period of at least five years and made available to the Department upon request. If EUENGINE3 is replaced with an equivalent emitting, or less emitting engine, the permittee shall notify the AQD District Supervisor of such change-out and submit acceptable emissions data to show that the alternate engine is equivalent emitting or less emitting. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a), R 336.1911)**

2.5 The permittee shall keep, in a satisfactory manner, monthly fuel use records for EUENGINE3, as required by SC 2.3. All records shall be kept on file at a location approved by the District Supervisor for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a) and (3))**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
2.6	SVENGINE3	16	25	R 336.1225
	The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.			

The following conditions apply to: EUENGINE1 and EUENGINE2

Process / Operational Limits

3.1 No later than 60 days after issuance of this permit, the permittee shall submit to the AQD District Supervisor, for review and approval, a malfunction abatement/preventative maintenance plan for EUENGINE1 and EUENGINE2. After approval of the malfunction abatement/preventative maintenance plan by the AQD District Supervisor, the permittee shall not operate EUENGINE1 or EUENGINE2 unless the malfunction abatement/preventative maintenance plan, 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. The plan shall include procedures for maintaining and operating in a satisfactory manner EUENGINE1 and EUENGINE2, add-on air pollution control device, or monitoring equipment during malfunction events, and a program for corrective action for such events. If the malfunction abatement plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the malfunction abatement plan within 45 days after such an event occurs and submit the revised plan for approval to the AQD District Supervisor. Should the AQD determine the malfunction abatement/preventative maintenance plan to be inadequate, the District Supervisor may request modification of the plan to address those inadequacies. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a), R 336.1910, R 336.1911)**

3.2 The permittee shall not operate EUENGINE1 and EUENGINE2 without each air/fuel ratio controller and 3-way catalyst for more than 200 hours per engine per year consistent with the malfunction abatement/preventative maintenance plan (pursuant to SC 3.1) or after an engine change-out occurs (pursuant to SC 3.6). The hours per year limit is based on a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a))**

Equipment

3.3 The permittee shall not operate EUENGINE1 and EUENGINE2 unless each air/fuel ratio controller and 3-way catalyst is installed, maintained, and operated in a satisfactory manner, except as specified in SC 3.2. Satisfactory operation includes performing the manufacturer's recommended maintenance on the catalytic converter. If the permittee changes-out one or more of these engines with engine(s) that achieve equivalent emission rates, or lower emission rates, without add-on control equipment (pursuant to SC 3.6), this condition does not apply for that engine or engines. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a), R 336.1910)]**

Testing

3.4 Verification of NOx and CO emission rates from EUENGINE1 and EUENGINE2, by testing at owner's expense, in accordance with Department requirements, may be required upon request by the AQD District Supervisor. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205(1)(a) and (3), R 336.2001, R 336.2003, R 336.2004)**

Monitoring

3.5 The permittee shall monitor, in a satisfactory manner, the natural gas usage from EUENGINE1 and EUENGINE2 on a continuous basis. **(R 336.1205(1)(a) and (3))**

Recordkeeping/Reporting/Notification

3.6 The permittee shall maintain a log of all significant maintenance activities conducted and all repairs made to EUENGINE1 and EUENGINE2 and any associated air pollution control device(s). This log shall be kept on file at a location approved by the District Supervisor for a period of at least five years and made available to the Department upon request. If EUENGINE1 or EUENGINE2 is replaced with an equivalent emitting, or less emitting engine, the permittee shall notify the AQD District Supervisor of such change-out and submit acceptable emissions data to show that the alternate engine is equivalent emitting or less emitting. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a), R 336.1911)**

3.7 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month hours that UENGINE1 and EUENGINE2 is operating without the air/fuel ratio controller and 3-way catalyst. All records shall be kept on file at a location approved by the District Supervisor for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a))**

3.8 The permittee shall keep, in a satisfactory manner, monthly fuel use records for EUENGINE1 and EUENGINE2, as required by SC 3.5. All records shall be kept on file at a location approved by the District Supervisor for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a) and (3))**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
3.9a	SVENGINE1	16	20	R 336.1225
3.9b	SVENGINE2	16	25	R 336.1225
	The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.			

The following conditions apply to: FGHEATERS

Recordkeeping/Reporting/Notification

4.1 The permittee shall keep, in a satisfactory manner, a written or electronic log of the monthly natural gas usage for FGHEATERS. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a) and (3))**

The following conditions apply to: FGSWEETENING

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirement
5.1a	SO_2	FGSWEETENING	88.1 tpy	12-month rolling time period as determined at the end of each calendar month	SC 5.11 and Appendix B under "Flaring"	R 336.1205 (1)(a) and (3), 40 CFR 52.21(c) and (d)
5.1b	SO_2	FGSWEETENING	6076 lb/day	Daily average	SC 5.12 and Appendix B under "Flaring"	40 CFR 52.21(c) and (d)

Process/Operational Limits

5.2 The permittee shall not operate FGSWEETENING unless the hydrogen sulfide (H_2S) removed from the wellhead gas is controlled by one of the following: **(R 336.1225, R 336.1403(4))**

- Reinjected back into the ground – normal conditions
- Burned in SVFLARE – only during a facility startup, shutdown, malfunction, maintenance, or emergency

5.3 The permittee shall automatically begin a safe and orderly shutdown of all process inflow streams to FGSWEETENING if the H2S concentration is more than 100 ppmv, in any building enclosing any portion of FGSWEETENING. The H2S concentration shall be determined using a system that monitors H2S on a continuous basis. Full operation of FGSWEETENING may be resumed only after successful corrective measures have been applied. **(R 336.1403(5)(e))**

5.4 The permittee shall not operate FGSWEETENING unless a Preventative Maintenance and Malfunction Abatement Plan approved by the AQD District Supervisor, is implemented and maintained. If the malfunction abatement plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the malfunction abatement plan within 45 days after such an event occurs. The revised plan shall include procedures for maintaining and operating in a satisfactory manner, FGSWEETENING, add-on air pollution control device, or monitoring equipment during malfunction events, and a program for corrective action for such events. **(R 336.1225, R 336.1901, R 336.1910, R 336.1911)**

Equipment

5.5 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. **(R 336.1403(5)(b))**

Monitoring

5.6 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the H2S concentration, on a continuous basis, in any building enclosing any portion of

FGSWEETENING. The monitoring system shall provide a visual alarm when the H2S concentration is more than 50 ppmv. **(R 336.1403(5)(d))**

5.7 The permittee shall measure, in a satisfactory manner, the H2S concentration of gas burned in SVFLARE whenever SVFLARE is burning acid gas or Detroit River Zone (DRZ) gas. Satisfactory measuring includes using a length of stain tube (i.e. Draeger Tube) device or equivalent method. **(R 336.1225, R 336.1403(5)(a), R 336.1901, 40 CFR 52.21(c) and (d))**

5.8 Within 30 days of issuance of this permit, the permittee shall perform a gas analysis of the natural gas that is not DRZ gas or acid gas for H2S concentration using a length of stain tube (i.e. Draeger Tube), or equivalent method. Thereafter, an analysis of the natural gas shall be performed each calendar month. After six consecutive months of analyses where the H2S concentration does not exceed 0.50 mole percent, analysis of the natural gas may be performed once per calendar quarter. After four consecutive calendar quarters where the H2S concentration does not exceed 0.50 mole percent, analysis of the natural gas may be performed once per calendar year. If a gas analysis shows that the concentration of H2S exceeds 0.50 mole percent, but is less than 0.70 mole percent, the frequency of analysis shall resume to once per month until the H2S concentration drops to 0.50 mole percent, or below, for six consecutive months at which time the frequency of gas analysis may be reduced to once per calendar quarter and once per calendar year as described above. A value of 0.50 mole percent shall be used for calculating SO2 emissions from the natural gas being flared that is not DRZ gas or acid gas, unless a higher H2S concentration is detected in any subsequent natural gas analysis.

If the H2S concentration equals or exceeds 0.70 mole percent H2S, the monitoring of the natural gas using a length of stain tube shall be done monthly until the concentration of H2S drops to 0.50 mole percent, when the frequency may be reduced to calendar quarterly, and annually as provided above. The actual concentration of H2S as determined for the natural gas that is greater than 0.50 mole percent shall be used for calculating SO2 emissions from the flare for the natural gas being flared that is not DRZ gas or acid gas. **(R 336.1225, R 336.1403(5)(a), R 336.1901, 40 CFR 52.21(c) and (d))**

Recordkeeping/Reporting/Notification

5.9 All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the 30th day of the calendar month (the last day for February), for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(1)(a) and (3))**

5.10 For each occurrence that SVFLARE is used for burning these gases, the permittee shall keep, in a satisfactory manner, records of the H2S concentration of acid gas and DRZ gas burned in SVFLARE, as required by SC 5.7, and records of the length of stain tube, or equivalent, for natural gas burned in SVFLARE that is not DRZ gas or acid gas as required in SC 5.8. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1225, R 336.1403(5)(a), R 336.1901, 40 CFR 52.21(c) and (d))**

5.11 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month SO2 calculation records for FGSWEETENING, as required by SC 5.1a. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a) and (3), 40 CFR 52.21(c) and (d))**

5.12 The permittee shall keep, in a satisfactory manner, daily average SO2 calculation records for FGSWEETENING, as required by SC 5.1b. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(40 CFR 52.21(c) and (d))**

The following conditions apply to: FGFACILITY

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirement
6.1a	NOx	FGFACILITY	89 tpy	12-month rolling time period as determined at the end of each calendar month	SC 6.8 and Appendix A	R 336.1205 (1)(a) and (3)
6.1b	CO	FGFACILITY	89 tpy	12-month rolling time period as determined at the end of each calendar month	SC 6.8 and Appendix A	R 336.1205 (1)(a) and (3)
6.1c	SO2	FGFACILITY	89 tpy	12-month rolling time period as determined at the end of each calendar month	SC 6.9 and Appendix B	R 336.1205 (1)(a) and (3)

Material Usage Limits

6.2 The amount of gas to SVFLARE shall not exceed 100 million standard cubic feet per 12-month rolling time period. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1901)**

6.3 Except for SVFLARE, the permittee shall only burn sweet natural gas in FGFACILITY. **(R 336.1205(1)(a) and (3))**

Process/Operational Limits

6.4 The permittee shall not operate SVFLARE unless a flame is present as determined by a thermocouple or an equivalent device. **(R 336.1205(1(a) and (3), R 336.1225, R 336.1901)**

6.5 During periods of emergency, malfunction, maintenance, or facility startups/shutdowns, the permittee may burn sour gas in SVFLARE provided that the SVFLARE is equipped with a flame out alarm and electronic stop system to prevent blow down to SVFLARE during any malfunction when SVFLARE does not have a pilot flame present. **(R 336.1225, R 336.1403(2), R 336.1901, 40 CFR 52.21(c) and (d))**

6.6 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 KKK, as they apply to FG-FACILITY. **(40 CFR Part 60 Subparts A & KKK)**

Recordkeeping / Reporting / Notification

6.7 All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the 30th day of the calendar month (the last day for

February), for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(1)(a) and (3))**

6.8 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month NO_x and CO emission calculation records for FGFACILITY, as required by SC 6.1a, 6.1b and Appendix A. All records shall be kept on file at a location approved by the District Supervisor for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a) and (3))**

6.9 The permittee shall keep, in a satisfactory manner, monthly and previous 12-month SO2 emission calculation records for FGFACILITY, as required by SC 6.1c and Appendix B. All records shall be kept on file at a location approved by the District Supervisor for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a) and (3))**

6.10 The permittee shall calculate and record, in a satisfactory manner, the volumetric flow rate of gas burned in SVFLARE on a daily basis. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1403(5)(a), R 336.1901, 40 CFR 52.21(c) and (d))**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
6.11	SVFLARE	6	50	R 336.1225, 40 CFR 52.21 (c) & (d)
	The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.			

APPENDIX A
Procedures for Calculating Facility NOx and CO Emissions

Compliance with the NOx and CO emission limits will be demonstrated by keeping track of all fuel usage for all equipment using such fuel at this facility and multiplying that fuel usage by an equipment specific emission factor. The emission factors are typically expressed as a mass weight of pollutant per unit of fuel.

The permittee shall only use emission factors from equipment vendor guarantees or from source specific testing (stack testing) for EU-ENGINE1, EU-ENGINE2, EU-ENGINE3, and EU-ENGINE4. For all other fuel burning equipment the permittee shall use emission factors contained in the most recent AP-42 (Compilation of Air Pollutant Emission Factors) or the most recent FIRE (Factor Information Retrieval) database if vendor or stack data is not available. If other emission source values are used, the permittee shall obtain the approval of the district supervisor before using the emission factors to calculate emissions.

The permittee shall document the source and date of origin of the emission factors used in the calculations.

APPENDIX B
Procedures for Calculating SO2 Emissions

Compliance with the SO2 emission limit from the facility will be demonstrated as follows:

Combustion equipment:
The permittee shall keep track of all fuel usage for all equipment using such fuel at this facility and multiply that fuel usage by an equipment specific emission factor. The emission factors are typically expressed as a mass weight of pollutant per unit of fuel. The permittee shall document the source and date of origin of the emission factors used in the calculations.

Flaring:
The permittee shall use the following calculation to determine compliance with SO2 limits from the flare (SC 5.1a and 5.1b). The calculation shall be used for each gas stream (acid gas, DRZ natural gas, and natural gas that is not DRZ or acid gas), and the results for each gas stream shall be added together to obtain total SO2 emissions:

$$\frac{\text{PPM(V) H2S}}{\text{1,000,000 PPM(V) Total}} \times \frac{\text{MCF Gas Produced}}{\text{Day}} \times \frac{\text{1,000 CuFt}}{\text{MCF}} = \frac{\text{CuFt H2S}}{\text{Day}}$$

$$\frac{\text{CuFt H2S}}{\text{Day}} \times \frac{\text{1 Lb Mol}}{\text{379.4 Cu Ft}} \times \frac{\text{34 Lb H2S}}{\text{Lb Mol H2S}} = \frac{\text{Lb H2S}}{\text{Day}}$$

$$\frac{\text{Lb H2S}}{\text{Day}} \times \frac{\text{1 Day}}{\text{24 Hr}} = \frac{\text{Lb H2S}}{\text{Hr}}$$

$$\frac{\text{Lb H2S}}{\text{Hr}} \times \frac{\text{1.88 Lb SO2}}{\text{Lb H2S}} = \frac{\text{Lb SO2}}{\text{Hr}}$$

$$\frac{\text{Lb SO2}}{\text{Hr}} \times \frac{\text{24 Hr}}{\text{1 Day}} = \frac{\text{Lb SO2}}{\text{day}}$$

$$\frac{\text{Lb SO2}}{\text{Day}} \times \frac{\text{365 Day}}{\text{Year}} \times \frac{\text{Ton}}{\text{2000Lb}} = \frac{\text{Ton SO2}}{\text{Year}}$$

PPM(V) H2S is the daily average from SC 5.10

MCF gas produced per day is from SC 6.10

$\frac{\text{379.4 Cu Ft}}{\text{Lb Mol}}$ is equal to the volume of 1 mole of any gas at 60 degrees Fahrenheit and one atmosphere (where one atmosphere is 14.7 pounds per square inch).

34 represents the molecular weight of H2S.

1.88 represents $\frac{\text{Molecular weight SO2}}{\text{Molecular weight H2S}}$

The permittee shall calculate SO2 emissions for FG-FACILITY pursuant to SC 6.1c, by adding the total monthly SO2 emissions from the combustion equipment to the total monthly SO2 emissions from the flaring.