# Colorado Department of Public Health and Environment

# OPERATING PERMIT

COLORADO INTERSTATE GAS CO. - FT. MORGAN C.S.

First Issued: March 26, 1997
Renewed: July 1, 2006
Last Revised: August 20, 2009

# AIR POLLUTION CONTROL DIVISION
# COLORADO OPERATING PERMIT

| | | |
|---|---|---|
| FACILITY NAME: | Fort Morgan Compressor Station | OPERATING PERMIT NUMBER |
| FACILITY ID: | 0870003 | **95OPMR010** |
| RENEWED: | July 1, 2006 | |
| EXPIRATION DATE: | July 1, 2011 | |
| MODIFICATIONS: | See Appendix F of Permit | |

Issued in accordance with the provisions of Colorado Air Pollution Prevention and Control Act, 25-7-101 et seq. and applicable rules and regulations.

ISSUED TO:
Colorado Interstate Gas Company
P.O. Box 1087
Colorado Springs, CO 80944

PLANT SITE LOCATION:
17462 Morgan County Road
Fort Morgan, CO
Morgan County

INFORMATION RELIED UPON

| | |
|---|---|
| Operating Permit Renewal Application Received: | January 10, 2006 |
| And Additional Information Received: | October 26, 2004, December 8, 2005, February 13, March 14 and March 16, 2006 |

| | |
|---|---|
| Nature of Business: | Natural Gas Compression and Transmission |
| Primary SIC: | 4922 |

RESPONSIBLE OFFICIAL (PRIMARY)
Name: Richard B. Prouty
Title: Manager, Watkins Area
Phone: (303) 261-4295

FACILITY CONTACT PERSON
Name: David Bieda
Title: Senior Environmental Engineer
Phone: (719) 520-4623

RESPONSIBLE OFFICIAL (SECONDARY)
Name: Matthew J. Mask
Title: Director, Rocky Mountain Division
Phone: (719) 520-4451

SUBMITTAL DEADLINES

| | |
|---|---|
| Semi-Annual Monitoring Periods: | July 1 – December 31, January 1 – June 30 |
| Semi-Annual Monitoring Reports: | Due on February 1, 2007 & August 1, 2007 and subsequent years |
| First Annual Compliance Period: | July 1 – December 31 |
| Subsequent Annual Compliance Periods: | January 1 – December 31 |
| Annual Compliance Certification: | Due on August 1, 2007 and subsequent years |

**Note that the Semi-Annual Monitoring Reports and Annual Compliance Certifications must be received at the Division office by 5:00 p.m. on the due date. Postmarked dates will not be accepted for the purposes of determining the timely receipt of those reports/certifications.**

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## SECTION I - General Activities and Summary

### 1. Permitted Activities

1.1 The Fort Morgan plant can be divided into two separate operations, an Injection or Recovery mode, with each mode of operation independent of the other, and unable to be operated at the same time.

Injection Operation

Gas is delivered to storage facilities at pressures ranging from 550 to 950 psi to achieve volumes ranging from 14 to 150 mmCFD. These pressures and volumes are reached by utilizing one or all of the five existing Engine/Compressor units available for injection purposes. Three of these units are Model 8GTL-825 and two are Model 8GTLB White Superior turbocharged engines. A sixth engine/compressor was added to the facility in 2003. This engine is a Caterpillar Model G3516LE turbocharged engine. These engines burn only natural gas as fuel.

Recovery Operation

In the recovery mode of operation, gas is free flowed from the field due to the high field pressure and delivered to the pipeline at volumes ranging between 90 mmCFD to a maximum of 350 mmCFD.

The gas must be processed to remove saturated reservoir water and condensates upon withdrawal. In the past, this was done using propane refrigeration and ethylene glycol dehydration to achieve pipeline quality. One or two White Superior 6G-825 compressor engines were used for refrigeration purposes. These engines burned only natural gas as fuel. In May of 2007, a triethylene glycol dehydration unit commenced operation and replaced the two ethylene glycol units. Although the propane refrigeration equipment is still on-site it is not being used. The two White Superior 6G-825 engines that were used for refrigeration have been removed and/or rendered inoperable and are no longer addressed in this permit.

Upon startup of the triethylene glycol unit, the still vent and flash tank emissions from this unit were routed to the plant flare. However, after startup, the source opted to install a dedicated flare on the unit. A temporary flare was put in place in March 2008 and it is expected that this flare will be replaced with a permanent dedicated flare by late June of 2008. The reboiler for the new triethylene glycol dehydrator is rated at 6.3 mmBtu/hr, burns natural gas as fuel and is included in Section II of the permit. Although emissions from the triethylene glycol unit are no longer routed to the plant flare, the plant flare is used for waste gas combustion from a liquid/gas separator. When the gas pressure exceeds a certain level in the separator, the gas is sent to the plant flare. Flaring would only occur during withdrawal and only when the pressure in the separator exceeds a certain level. Emissions from the plant flare exceed the APEN de minimis level and therefore, the plant flare is included in Section II of the permit.

The plant is located approximately 5 miles south of Fort Morgan, CO in an area designated as attainment for all criteria pollutants.

There are no affected states within 50 miles of the plant. There are no Federal Class I designated areas within 100 kilometers of the plant.

1.2 Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air pollutants from this facility in accordance with the requirements, limitations, and conditions of this permit.

1.3 This Operating Permit incorporates the applicable requirements contained in the underlying construction permits, and does not affect those applicable requirements, except as modified during review of the application or as modified subsequent to permit issuance using the modification procedures found in Regulation No. 3, Part C. These Part C procedures meet all applicable substantive New Source Review Requirements of Part B. Any revision made using the provisions of Regulation No. 3, Part C shall become new applicable requirements for purposes of this operating permit and shall survive reissuance. This permit incorporates the applicable requirements (except as noted in Section II) from the following construction permits: 93MR297, and P10,302 (E005).

1.4 All conditions in this permit are enforceable by the US Environmental Protection Agency, Colorado Air Pollution Control Division (hereinafter Division) and its agents, and citizens unless otherwise specified. **State-only enforceable conditions are:** Permit Condition Number(s): Section II, Condition 5.5 (NSPS General Provisions) and Section IV, Conditions 3.d, 3.g (last paragraph), 14 and 18 (as noted)

1.5 All information gathered pursuant to the requirements of this permit is subject to the Recordkeeping and Reporting requirements listed under Condition 22 of the General Conditions in Section IV of this permit.

## 2. Alternative Operating Scenarios

2.1 The permittee shall be allowed to make the following changes to its method of operation without applying for a revision of this permit.

No separate operating scenarios have been specified.

## 3. Prevention of Significant Deterioration (PSD)

3.1 This source is considered to be a major stationary source in an attainment area (Potential to Emit > 250 TPY) and is considered major for purposes of Prevention of Significant Deterioration (PSD) regulations. Future modifications to this facility resulting in a significant net emissions increase (see Colorado Regulation No. 3, Part D, Section II.A.26 and 42) for any pollutant as listed in Regulation No. 3, Part D, Section II.A.42 or a modification which is major by itself will result in the application of the PSD review requirements.

3.2 The following Operating Permits are associated with this facility for purposes of determining applicability of Prevention of Significant Deterioration regulations: None

## 4. Accidental Release Prevention Program (112(r))

4.1 Based on the information provided by the applicant, this facility is subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act).

## 5. Compliance Assurance Monitoring (CAM)

5.1 The following emission points at this facility use a control device to achieve compliance with an emission limitation or standard to which they are subject and have pre-control emissions that exceed or are equivalent to the major source threshold. They are therefore subject to the provisions of the CAM program as set forth in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV:

Unit D003 – Triethylene Glycol Dehydrator

See Section II, Condition 4.10 for compliance assurance monitoring requirements.

## 6. Natural Gas Transmission and Storage MACT Requirements

6.1 The owner of operator shall maintain records of the annual facility natural gas throughput each year and upon request, submit such records to the Division. If the facility annual natural gas throughput increases above the maximum natural gas throughput calculated in 40 CFR Part 63, Subpart HHH §§ 63.1270(a)(1) or (a)(2), the maximum natural gas throughput must be recalculated using the higher throughput multiplied by a factor of 1.2 (40 CFR Part 63 Subpart HHH § 63.1270(a)(3), as adopted by reference in Colorado Regulation No. 8, Part E, Section III).

Note that the maximum natural gas throughput rate calculated in accordance with the provisions in § 63.1270(a)(1) was determined to be 54,878 mmSCF/yr (2,634 hrs/yr) of operation in a March 14, 2006 submittal.

6.2 A facility that is determined to be an area source, based on emission estimated using the maximum natural gas throughput calculated as specified in 40 CFR Part 63 Subpart HHH §§ 63.1270(a)(1) or (a)(2), but subsequently increases emissions or potential to emit above the major source levels (without first obtaining and complying with other limitations to keep its potential to emit HAP below major source levels), and becomes a major source, must comply thereafter with all applicable provisions of 40 CFR Part 63 Subpart HHH on the applicable compliance dates specified in 40 CFR Part 63 Subpart HHH § 63.1270(d) (40 CFR Part 63 Subpart HHH § 63.1270(a), as adopted by reference in Colorado Regulation No. 8, Part E, Section III).

## 7. Summary of Emission Units

7.1 The emissions units regulated by this permit are the following:

| Emission Unit Number | AIRS Stack Number | Facility Identifier | Description | Pollution Control Device |
|---|---|---|---|---|
| E003 | 003 | S003/ CG-7 | White Superior Model 8GTL-825, 4 Cycle, Lean Burn 1000 HP Internal Combustion Engine Used for Gas Compression, Serial No. 18684. Natural Gas Fired. | Uncontrolled |
| E004 | 003 | S004/ CG-8 | White Superior Model 8GTL-825, 4 Cycle, Lean Burn 1100 HP Internal Combustion Engine Used for Gas Compression, Serial No. 20003. Natural Gas Fired. | Uncontrolled |
| E005 | 003 | S005/ CG-9 | White Superior Model 8GTL-825, 4 Cycle, Lean Burn 1100 HP Internal Combustion Engine Used for Gas Compression, Serial No. 20624. Natural Gas Fired. | Uncontrolled |
| E006 | 010 | S006/ CG-10 | White Superior Model 8GTLB, 4 Cycle, Lean Burn 1100 HP Internal Combustion Engine Used for Gas Compression, Serial No. 322919. Natural Gas Fired. | Low $NO_X$ Design |
| E007 | 010 | S007/ CG-11 | White Superior Model 8GTLB, 4 Cycle, Lean Burn 1100 HP Internal Combustion Engine Used for Gas Compression, Serial No. 322929. Natural Gas Fired. | Low $NO_X$ Design |
| E008 | 022 | S011/ CG-12 | Caterpillar Model G3516LE, 4-Cycle, Low $NO_X$ Design, 1151 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 4EK03805. Natural Gas Fired. | Low $NO_X$ Design, Oxidation Catalyst |
| D003 | 024 | X-26 | Engineering Technologies, Inc., 500 mmSCF/day, Triethylene Glycol Dehydration Unit with Flash Tank. Model and Serial No. Not Available. | Air-Assisted Flare |
| B001 | 023 | S012 | Maxon Reboiler, Model No. SPL Tube-O-Flame, rated at 6.3 mmBtu/hr, Serial No. Not Available. Natural Gas Fired. | Uncontrolled |
| F001 | 009 | S013 | Plant Flare, Non-assisted | N/A |

## SECTION II - Specific Permit Terms

### 1. Units E003/CG-7, E004/CG-8, E005/CG-9- White Superior ICEs Used for Natural Gas Compression

**Limitations are for all three engines unless otherwise specified**

| Parameter | Permit Condition Number | Limitations | | Compliance Emission Factor | Monitoring | |
|---|---|---|---|---|---|---|
| | | Short Term | Long Term | | Method | Interval |
| $NO_X$ | 1.1 | N/A | 356.9 tons/yr | 4.08 lb/mmBtu | Recordkeeping and Calculation | Monthly |
| CO | | N/A | 48.6 tons/yr | 0.557 lb/mmBtu | | |
| VOC | | N/A | 10.2 tons/yr | 0.118 lb/mmBtu | | |
| Hours of Operation **for each engine** | 1.2 | N/A | 7,008 hrs/yr | N/A | Recordkeeping | Monthly |
| Opacity | 1.3 | Less than or Equal to 20% | | N/A | Fuel Use Restriction | Only Natural Gas is Used as Fuel |
| Oxygen Concentration in Engine Exhaust | 1.4. | N/A | N/A | N/A | Portable Flue Gas Analyzer | Quarterly |
| Natural Gas Consumption | 1.5. | N/A | 184.1 mmSCF/yr | N/A | Fuel Meters | Monthly |
| BTU Content of Natural Gas | 1.6 | N/A | N/A | N/A | ASTM Methods or In-Line Gas Chromatograph | Semi-Annually |

1.1 Combined emissions of Nitrogen Oxides, Carbon Monoxide and Volatile Organic Compounds **from all three engines** shall not exceed the limitations stated above (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the requested emissions on the APEN submitted on March 14, 2006). The emission factors in the table below have been approved by the Division and shall be used to calculate emissions from these engines (EPA's Compilation of Air Pollutant Emission Factors (AP-42), Section 3.2 (dated 7/00), Table 3.2-2, $NO_X$ at 90 – 105 % load and CO at < 90 % load). Monthly emissions shall be calculated **for each engine** by the end of the subsequent month using the above emission factor, the monthly natural gas consumption and the lower heating value of the fuel in the equation below:

$$\text{tons/mo} = \frac{\text{EF (lbs/mmBtu) x fuel use (mmSCF/mo) x lower heating value of fuel (mmBtu/mmSCF)}}{\text{2000 lbs/ton}}$$

Monthly emissions from each engine shall be summed and used in a twelve month rolling total of emissions will be maintained to monitor compliance with the annual emission limitation. Each month, a new twelve month total shall be calculated using the previous twelve months data.

1.2 Hours of Operation **for each engine** shall not exceed the above limitation (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the requested hours of operation indicated in the March 14, 2006 revised construction permit application). Hours of operation **for each engine** shall be monitored and recorded monthly and used in a rolling twelve month total to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months data.

1.3 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant which is in excess of 20% opacity (Colorado Regulation No. 1, Section A.II.1). This opacity standard applies to **each engine**. In the absence of credible evidence to the contrary, compliance with the 20% opacity requirement will be presumed since only natural gas is permitted to be used as fuel.

1.4 The oxygen concentration in **each engine** exhaust gas shall be measured and recorded for the engine quarterly using a portable flue gas analyzer to verify that the engines are operating as lean burn engines (exhaust gas oxygen concentration greater than 2%).

1.5 Natural Gas consumption **from all engines combined** shall not exceed the above limitation (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the requested fuel on the APEN submitted on March 14, 2006). On the first working day of each month, facility-wide natural gas consumption shall be recorded using existing fuel meter(s). Allocation of natural gas to each engine will be based on the engine size and hours of operation. The natural gas use shall be measured no more than one (1) hour from the time that run time hours have been recorded. Monthly natural gas consumption from each engine shall be summed and used in a twelve month rolling total to monitor compliance with annual limitations. Each month, a new twelve month total shall be calculated using the previous twelve months data.

1.6 The Btu content of the natural gas used to fuel these engines shall be verified semi-annually using the appropriate ASTM Methods or equivalent, if approved in advance by the Division. In lieu of collecting a sample, the Btu content of the natural gas may be determined using the in-line gas chromatograph to determine the gas composition and the appropriate ASTM Methods or equivalent, if approved in advance by the Division, to calculate the Btu content. The Btu content of the gas shall be calculated for January and July, using the average composition of the gas as determined by the in-line gas chromatograph for those months. The Btu content of the natural gas shall be based on the lower heating value of the fuel.

If sampling is conducted, calculations of monthly emissions shall be made using the heat content derived from the most recent required analysis. If the gas chromatograph data is used, calculations of monthly emissions for January through June shall be made using the January average Btu content and calculations of monthly emissions for July through December shall be made using the July average Btu content.

## 2. Units E006/CG-10, E007/CG-11 - Superior 8GTLB Natural Gas Fired Engines, Low $NO_X$ Design

**Limitations are for both engines unless otherwise specified**

| Parameter | Permit Condition Number | Limitations | | Compliance Emission Factor | Monitoring | |
|---|---|---|---|---|---|---|
| | | Short Term | Long Term | | Method | Interval |
| $NO_X$ | 2.1 | N/A | 34.0 tons/yr | 0.62 lbs/mmBTU | Recordkeeping and Calculation | Monthly |
| CO | | N/A | 51.0 tons/yr | 0.93 lbs/mmBTU | Portable Flue Gas Analyzer | Quarterly |
| VOC | | N/A | 13.0 tons/yr | 0.23 lbs/mmBTU | | |
| Natural Gas Consumption | 2.2 | N/A | 110 mmSCF per year | N/A | Fuel Meters | Monthly |
| Hours of Operation **for each engine** | 2.3 | N/A | 7,008 hrs/yr | N/A | Recordkeeping | Monthly |
| BTU Content of Natural Gas | 2.4 | N/A | N/A | N/A | ASTM Methods or In-Line Gas Chromatograph | Semi-Annually |
| Opacity | 2.5 | Less Than or Equal to 20% | | N/A | Fuel Restriction | Only Natural Gas is Used as Fuel |

2.1 Combined emissions of Nitrogen Oxides, Carbon Monoxide and Volatile Organic Compounds **from both engines** shall not exceed the limitations stated above (Colorado Construction Permit 93MR297, as modified under the provisions of Section I, Condition 1.3). Compliance with the emission limitations shall be monitored as follows:

2.1.1 Except as provided below, the emission factors listed above (manufacturer's emission factors, converted to lbs/mmBtu based on an engine heat rate of 7,090 Btu/hp-hr, as indicated in the technical review document for the original operating permit) have been approved by the Division and shall be used to calculate emissions from these engines.

Monthly emissions shall be calculated **for each engine** by the end of the subsequent month using the above emission factor, the monthly natural gas consumption and the lower heating value of the fuel in the equation below:

$$\text{tons/mo} = \frac{\text{EF (lbs/mmBtu) x fuel use (mmSCF/mo) x lower heating value of fuel (mmBtu/mmSCF)}}{\text{2000 lbs/ton}}$$

Monthly emissions from each engine shall be summed and a twelve month rolling total of emissions will be maintained to monitor compliance with the annual emission

limitation. Each month, a new twelve month total shall be calculated using the previous twelve months data.

If the results of the portable analyzer testing conducted under the provisions of Condition 2.1.2 show that either the $NO_X$ or CO emission rates/factors are greater than the emission rates/factors listed above, and in the absence of subsequent testing results to the contrary (as approved by the Division), the permittee shall apply for a modification to this permit to reflect, at a minimum, the higher emission rates/factors within 60 days of the completion of the test**.**

2.1.2 Portable Monitoring shall be conducted quarterly in accordance with the requirements in Condition 6.

2.2 Natural Gas consumption **from both engines** shall not exceed the limitations listed above (Colorado Construction Permit 93MR297, as provided for under the provisions of Section I, Condition 1.3). On the first working day of each month, facility-wide natural gas consumption shall be recorded using existing fuel meter(s). Allocation of natural gas to each engine will be based on the engine size and hours of operation. The natural gas use shall be measured no more than one (1) hour from the time that run time hours have been recorded. Monthly natural gas consumption from each engine shall be summed and used in a twelve month rolling total to monitor compliance with annual limitations. Each month, a new twelve month total shall be calculated using the previous twelve months data.

2.3 Hours of operation for each engine shall be recorded monthly. Hours of operation **for each engine** shall not exceed 7,008 annually based on a twelve month rolling total (Construction Permit 93MR297).

2.4 The Btu content of the natural gas used to fuel these engines shall be verified semi-annually using the appropriate ASTM Methods or equivalent, if approved in advance by the Division. In lieu of collecting a sample, the Btu content of the natural gas may be determined using the in-line gas chromatograph to determine the gas composition and the appropriate ASTM Methods or equivalent, if approved in advance by the Division, to calculate the Btu content. The Btu content of the gas shall be calculated for January and July, using the average composition of the gas as determined by the in-line gas chromatograph for those months. The Btu content of the natural gas shall be based on the lower heating value of the fuel.

If sampling is conducted, calculations of monthly emissions shall be made using the heat content derived from the most recent required analysis. If the gas chromatograph data is used, calculations of monthly emissions for January through June shall be made using the January average Btu content and calculations of monthly emissions for July through December shall be made using the July average Btu content.

2.5 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant which is in excess of 20% opacity (Colorado Regulation No. 1, Section A.II.1). This opacity standard applies to **each engine**. In the absence of credible evidence to the contrary,

compliance with the 20% opacity requirement will be presumed since only natural gas is permitted to be used as fuel.

2.6 These engines shall be operated and maintained in accordance with manufacturer's recommendations and good engineering practices at all times, including periods of start-up, shutdown, and malfunction.

## 3. Units E008/CG-12 – Caterpillar G3516LE Natural Gas Fired Engine, Low $NO_X$ Design & Oxidation Catalyst

| Parameter | Permit Condition Number | Limitations | | Compliance Emission Factor | Monitoring | |
|---|---|---|---|---|---|---|
| | | Short Term | Long Term | | Method | Interval |
| $NO_X$ | 3.1 | N/A | 22.2 tons/yr | 0.59 lbs/mmBTU | Recordkeeping and Calculation | Monthly |
| CO | | N/A | 26.7 tons/yr | 0.71 lbs/mmBTU | Portable Flue Gas Analyzer | Quarterly |
| VOC | | N/A | 7.4 tons/yr | 0.21 lbs/mmBTU | | |
| Natural Gas Consumption | 3.2 | N/A | 83.1 mmSCF per year | N/A | Fuel Meters | Monthly |
| BTU Content of Natural Gas | 3.3 | N/A | N/A | N/A | ASTM Methods or In-Line Gas Chromatograph | Semi-Annually |
| RICE MACT Requirements | 3.4. | Emission Limitation: Reduce CO Emissions by 93%<br>Operating Limitations: 1.) Maintain catalyst so that the pressure drop does not change by more than 2" of $H_2O$ at 100% load plus or minus 10% from pressure drop measured during the initial performance test. **AND** 2.) Maintain the RICE so that the inlet temperature to the catalyst is greater than or equal to 450 º F and less than or equal to 1350 º F. | | N/A | See Condition 3.4. | |
| MACT General Provisions | 3.5. | N/A | N/A | N/A | See Condition 3.5. | |
| Opacity | 3.6 | Less Than or Equal to 20% | | N/A | Fuel Restriction | Only Natural Gas is Used as Fuel |
| Formaldehyde Emissions | 3.7. | N/A | 0.75 tons/yr | $1.89 \times 10^{-2}$ lb/mmBtu | Recordkeeping and Calculation | Monthly |

3.1 Nitrogen Oxides, Carbon Monoxide and Volatile Organic Compounds emissions shall not exceed the limitations stated above (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Section II.A.6 and Part C, Section X, based on the requested emissions identified in the APEN filed by the source on January 23, 2004). Compliance with the emission limitations shall be monitored as follows:

3.1.1 Except as provided for below, the emission factors listed above (manufacturer's emission factors plus 33% for $NO_X$ and CO and 40% for VOC, converted to lbs/mmBtu based on an engine heat rate of 7,414 Btu/hp-hr as indicated in the May 13, 2003 application) have been approved by the Division and shall be used to calculate emissions from this engine.

Monthly emissions shall be calculated by the end of the subsequent month using the above emission factor, the monthly natural gas consumption and the lower heating value of the fuel in the equation below:

$$\text{tons/mo} = \frac{\text{EF (lbs/mmBtu) x fuel use (mmSCF/mo) x lower heating value of fuel (mmBtu/mmSCF)}}{\text{2000 lbs/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual emission limitation. Each month, a new twelve month total shall be calculated using the previous twelve months data.

If the results of the portable analyzer testing conducted under the provisions of Condition 3.1.2 show that either the $NO_X$ or CO emission rates/factors are greater than the emission rates/factors listed above, and in the absence of subsequent testing results to the contrary (as approved by the Division), the permittee shall apply for a modification to this permit to reflect, at a minimum, the higher emission rates/factors within 60 days of the completion of the test**.**

3.1.2 Portable Monitoring shall be conducted quarterly in accordance with the requirements in Condition 6.

3.2 Natural Gas consumption from this engine shall not exceed the limitations listed above (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Section II.A.6 and Part C, Section X, based on the requested heat input, converted to mmSCF based on a fuel heat content of ~ 950 BTU/SCF, identified in the APEN filed by the source on May 13, 2003). On the first working day of each month, facility-wide natural gas use shall be recorded using existing fuel meter(s). Allocation of natural gas use to this engine will be based on the engine size and hours of operation. The natural gas use shall be measured no more than one (1) hour from the time that run time hours have been recorded. Monthly natural gas consumption shall be used in a twelve month rolling total to monitor compliance with the annual limitation. Each month, a new twelve month total shall be calculated using the previous twelve months data.

3.3 The Btu content of the natural gas used to fuel these engines shall be verified semi-annually using the appropriate ASTM Methods or equivalent, if approved in advance by the Division. In lieu of collecting a sample, the Btu content of the natural gas may be determined using the in-line gas chromatograph to determine the gas composition and the appropriate ASTM Methods or equivalent, if approved in advance by the Division, to calculate the Btu content. The Btu content of the gas shall be calculated for January and July, using the average composition of the gas as determined by the in-line gas chromatograph for those months. The Btu content of the natural gas shall be based on the lower heating value of the fuel.

If sampling is conducted, calculations of monthly emissions shall be made using the heat content derived from the most recent required analysis. If the gas chromatograph data is used, calculations of monthly emissions for January through June shall be made using the January average Btu content and calculations of monthly emissions for July through December shall be made using the July average Btu content.

3.4 This engine is subject to the requirements in 40 CFR Part 63 Subpart ZZZZ, "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines", as adopted by reference in Colorado Regulation No. 8, Part E, Section III, including but not limited to the following:

3.4.1 General Requirements:

3.4.1.1 This unit must be in compliance with the emission limitations and operating limitations in Conditions 3.4.2 and 3.4.3 at all times, except during periods of startup, shutdown and malfunction (40 CFR Part 63 Subpart ZZZZ § 63.6605(a))

3.4.1.2 This unit, including air pollution control and monitoring equipment, shall be operated and maintained in a manner consistent with good air pollution control practices for minimizing emissions at all time, including during startup, shutdown and malfunction (40 CFR Part 63 Subpart ZZZZ § 63.6605(b)).

3.4.2 Emission Limitations: Carbon Monoxide (CO) emissions from this engine must be reduced by 93 percent or more (40 CFR Part 63 Subpart ZZZZ § 63.6600(b), Table 2a, item 2).

3.4.3 Operating Limitations: This unit is subject to the following operating limitations (40 CFR Part 63 Subpart ZZZZ § 63.6600(b), Table 2b, item1):

3.4.3.1 The catalyst must be maintained so that the pressure drop across the catalyst does not change my more than two inches of water at 100 percent load plus or minus ten percent from the pressure drop across the catalyst that was measured during the initial performance test; and

3.4.3.2 The temperature of the stationary RICE exhaust shall be maintained so

that the catalyst inlet temperature is greater than or equal to 450 º F and less than or equal to 1350 º F.

3.4.4 Initial Testing and Compliance Requirements: An initial performance test shall be conducted within 180 days of the compliance date to measure the $O_2$ and CO at the inlet and outlet of the control device using a portable CO and $O_2$ analyzer in accordance with the requirements in ASTM D6522-00 (incorporated by reference, see § 63.14). The CO concentration must be at 15% $O_2$ on a dry basis. Measurements to determine $O_2$ must be made at the same time as the measurements for CO concentration (40 CFR Part 63 Subpart ZZZZ § 63.6610(a), Table 4, item 1).

3.4.5 Subsequent Performance Test Requirements: Subsequent performance tests shall be conducted semi-annually. After compliance has been demonstrated for two consecutive tests, the frequency of semi-annual tests may be reduced to annually. If the results of any subsequent annual performance test indicates the stationary RICE is not in compliance with the CO emission limitations, or you deviate from any of your operating limitations, you must resume semi-annual performance tests (40 CFR Part 63 Subpart ZZZZ § 63.6615, Table 3, item 1).

3.4.6 Performance Tests and Other Procedures: Each of the performance tests conducted under Conditions 3.4.4 and 3.4.5 are subject to the following requirements:

3.4.6.1 Each performance test must be conducted according to the requirements in § 63.7(e)(1) and under the conditions specified in Condition 3.4.4. The test must be conducted at any load condition plus or minus 10 percent of 100 percent load (40 CFR Part 63 Subpart ZZZZ § 63.6620(b)).

3.4.6.2 You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 63.7(e)(1) (40 CFR Part 63 Subpart ZZZZ § 63.6620(c)).

3.4.6.3 You must conduct three separate test runs for each performance test required in Conditions 3.4.4 and 3.4.5 as specified in § 63.7(e)(3). Each test run must last at least 1 hour (40 CFR Part 63 Subpart ZZZZ § 63.6620(d)).

3.4.6.4 You must use the equation below to determine compliance with the percent reduction requirements (40 CFR Part 63 Subpart ZZZZ § 63.6620(e)(1)).

$$\frac{C_i - C_o}{C_i} \times 100 = R$$

Where:
$C_i$ = concentration of CO at the control device inlet
$C_o$ = concentration of CO at the control device outlet, and
R = percent reduction of CO emissions.

3.4.6.5 You must normalize the carbon monoxide (CO) concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent of carbon dioxide ($CO_2$). If pollutant concentrations are to be corrected to 15 percent oxygen and $CO_2$ concentration is measured in lieu of oxygen concentration, a $CO_2$ correction factor is needed. Calculate the $CO_2$ correction factor in accordance with the requirements in §§ 63.6620(e)(2)(i) and (ii)) (40 CFR Part 63 Subpart ZZZZ § 63.6620(e)(2)).

3.4.6.6 The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accuracy in percentage of true value must be provided (40 CFR Part 63 Subpart ZZZZ § 63.6620(i))

3.4.7 Monitoring, Installation, Operation and Maintenance Requirements: You must install, maintain and operate a continuous parametric monitoring system (CPMS) to continuously monitor the catalyst inlet temperature in accordance with the requirements in § 63.8 (40 CFR Part 63 Subpart ZZZZ § 63.6625(b), Table 5, item 1)

3.4.8 Demonstrate Initial Compliance with Emissions and Operating Limitations: Initial compliance shall be demonstrated as follows:

3.4.8.1 The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction and a CPMS to continuously monitor catalyst inlet temperature has been installed in accordance with the requirements in Condition 3.4.7 (40 CFR Part 63 Subpart ZZZZ § 63.6630(a), Table 5, items 1.i and ii).

3.4.8.2 You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test (40 CFR Part 63 Subpart ZZZZ § 63.6630(b), Table 5, item 1.iii)

3.4.8.3 You must submit the Notification of Compliance status containing the results of the initial compliance demonstration according to the requirements in Condition 3.4.11.4 (40 CFR Part 63 Subpart ZZZZ § 63.6630(c))

3.4.9 Monitoring and Collecting Data for Continuous Compliance: Data must be monitored and collected in accordance with the following (40 CFR Part 63 Subpart ZZZZ § 63.6635(a)):

3.4.9.1 Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously at all times that the stationary RICE is operating (40 CFR Part 63 Subpart ZZZZ § 63.6635(b)).

3.4.9.2 You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must however, use all the valid data collected during all other periods (40 CFR Part 63 Subpart ZZZZ § 63.6635(c)).

3.4.10 Demonstrating Continuous Compliance with the Emission and Operating Limitations: Continuous compliance with the emission and operating limitations shall be determined as follows:

3.4.10.1 You must demonstrate continuous compliance with each emission and operating limitation in Conditions 3.4.2 and 3.4.3 as follows:

a. Conducting subsequent performance tests as specified in Condition 3.4.5 and demonstrating the required CO reduction (40 CFR Part 63 Subpart ZZZZ § 63.6640(a), Table 6, item 1.i).

b. Collecting the catalyst inlet temperature data according to Condition 3.4.7 and reducing these data to 4-hour rolling averages and maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature (40 CFR Part 63 Subpart ZZZZ §§ 63.6640(a), Table 6, items 1.ii thru iv).

c. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the initial performance test (40 CFR Part 63 Subpart ZZZZ § 63.6640(a), Table 6, item 1.v).

3.4.10.2 You must report each instance in which you did not meet each emission limitation or operating limitation in Conditions 3.4.2 and 3.4.3. These instances are deviations from the emission and operating limitations in Conditions 3.4.2 and 3.4.3. These deviations must be reported according to the requirements in Conditions 3.4.12.3 and 3.4.12.4. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance

test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE (40 CFR Part 63 Subpart ZZZZ § 63.6640(b)).

3.4.10.3 Consistent with §§ 63.6(e) and 63.7(e)(1), deviations from the emission or operating limitations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Division's satisfaction that you were operating in accordance with § 63.6(e)(1). For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR § 94.11(a) (40 CFR Part 63 Subpart ZZZZ § 63.6640(d)).

3.4.10.4 You must also report each instance in which you did not meet the requirements in Condition 3.5 (40 CFR Part 63 Subpart ZZZZ § 63.6640(e)).

3.4.11 <u>What Notifications to Submit and When:</u>

3.4.11.1 You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4), and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified (40 CFR Part 63 Subpart ZZZZ § 63.6645(a)).

3.4.11.2 As specified in § 63.9(b)(2), if you start up your stationary RICE before the effective date of 40 CFR Part 63 Subpart ZZZZ, you must submit an Initial Notification not later than December 13, 2004 (40 CFR Part 63 Subpart ZZZZ § 63.6645(b)).

3.4.11.3 If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in § 63.7(b)(1) (40 CFR Part 63 Subpart ZZZZ § 63.6645(e)).

3.4.11.4 If you are required to conduct a performance test or other initial compliance demonstration as specified in Conditions 3.4.4 and 3.4.8, you must submit the Notification of Compliance Status before the close of the business on the 30$^{th}$ day following the completion of the initial compliance demonstration

3.4.12 <u>What Reports to Submit and When:</u>

Compliance Reports

3.4.12.1 Unless the Division has approved a different schedule for submission of reports under § 63.10(a), you must submit Compliance Reports in accordance with the following requirements:

a. The first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in § 63.6595 (40 CFR Part 63 Subpart ZZZZ § 63.6650(b)(1)).

b. The first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595 (40 CFR Part 63 Subpart ZZZZ § 63.6650(b)(2)).

c. Each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31 (40 CFR Part 63 Subpart ZZZZ § 63.6650(b)(3)).

d. Each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period (40 CFR Part 63 Subpart ZZZZ § 63.6650(b)(4)).

e. For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section (40 CFR Part 63 Subpart ZZZZ § 63.6650(b)(5)).

3.4.12.2 The Compliance Reports must include the information in §§ 63.6650(c)(1) thru (6) (40 CFR Part 63 Subpart ZZZZ § 63.6650(c)).

3.4.12.3 For each deviation from any emission or operating limitation that occurs for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart you must include information in §§ 63.6650(c)(1) thru (4) and (e)(1) thru (12) (40 CFR Part 63 Subpart ZZZZ § 63.6650(e)).

3.4.12.4 Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Condition 3.4.12 along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required

information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority (40 CFR Part 63 Subpart ZZZZ § 63.6650(f)).

Startup, Shutdown and Malfunction Report

3.4.12.5 A startup, shutdown and malfunction report shall be submitted if actions addressing the startup, shutdown and malfunction were inconsistent with your startup, shutdown and malfunction plan during the reporting period. Such reporting shall contain the following:

a. Actions taken for the event shall be reported by fax or telephone within 2 working days after starting the actions inconsistent with the plan (40 CFR Part 63 Subpart ZZZZ §§ 63.6650(a) and (b), Table 7, item 2.a); and

b. The information specified in § 63.10(d)(5)(ii) shall be submitted by letter within 7 working days after the end of the event unless you have alternative arrangements with the Division (40 CFR Part 63 Subpart ZZZZ §§ 63.6650(a) and (b), Table 7, item 2.b).

3.4.13 <u>What Records to Keep:</u>

3.4.13.1 A copy of each notification and report that you submitted to comply with this Condition 3.4, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv) (40 CFR Part 63 Subpart ZZZZ § 63.6655(a)(1)).

3.4.13.2 The records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction (40 CFR Part 63 Subpart ZZZZ § 63.6655(a)(2)).

3.4.13.3 Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii) (40 CFR Part 63 Subpart ZZZZ § 63.6655(a)(3)).

3.4.13.4 For each CPMS you must keep the following requirements (40 CFR Part 63 Subpart ZZZZ §§ 63.6655(b)(1) thru (3)):

a. Records described in § 63.10(b)(2)(vi) through (xi).

b. Previous (i.e., superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

c. Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in § 63.8(f)(6)(i), if applicable.

3.4.13.5 You must keep the records required in Condition 3.4.10.1 to show continuous compliance with each emission or operating limitation that applies to you (40 CFR Part 63 Subpart ZZZZ § 63.6655(d)).

3.4.14 Form and Length of Recordkeeping:

3.4.14.1 Your records must be in a form suitable and readily available for expeditious review according to § 63.10(b)(1) (40 CFR Part 63 Subpart ZZZZ § 63.6660(a)).

3.4.14.2 As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record (40 CFR Part 63 Subpart ZZZZ § 63.6660(b)).

3.4.14.3 You must keep each record readily accessible in hard copy or electronic form on-site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You can keep the records off-site for the remaining 3 years (40 CFR Part 63 Subpart ZZZZ § 63.6660(c)).

3.5 This engine is subject to the requirements in 40 CFR Part 63 Subpart A "General Provisions", as adopted by reference in Colorado Regulation No. 8, Part E, Section I as specified in 40 CFR Part 63 Subpart ZZZZ § 63.6665. These requirements include, but are not limited to the following:

3.5.1 Prohibited activities and circumvention in § 63.4.

3.5.2 Operation and maintenance requirements in § 63.6(e)(1).

3.5.3 Startup, shutdown and malfunction plan requirements in § 63.6(e)(3).

3.5.4 Performance test requirements in § 63.7.

3.5.5 Monitoring requirements in § 63.8.

3.5.6 Notification requirements in § 63.9.

3.5.7 Recordkeeping requirements in § 63.10.

3.6 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant which is in excess of 20% opacity (Colorado Regulation No. 1, Section A.II.1). In the absence of credible evidence to the contrary, compliance with the 20% opacity requirement will be presumed since only natural gas is permitted to be used as fuel.

3.7 Formaldehyde emissions from this engine shall not exceed the above limitations (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the requested emissions on the APEN submitted on April 20, 2007).

The emission factor listed above (from November 16, 2006 performance test) has been approved by the Division and shall be used to calculate emissions from this engine. Monthly emissions from the engine shall be calculated by the end of the subsequent month using the above emission factor, the monthly natural gas consumption and the lower heating value of the fuel, as specified in Condition 3.3, in the following equation:

$$\text{tons/month} = \frac{[\text{EF (lbs/MMBtu)}] \times [\text{Fuel Use (MMscf/month)}] \times [\text{Heat Content of Fuel (MMBtu/MMscf)}]}{2000 \text{ lbs/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual emission limitation. Each month, a new twelve month total shall be calculated using the previous twelve months data.

3.8 This engine and associated oxidation catalyst shall be operated and maintained in accordance with manufacturer's recommendations and good engineering practices at all times, including periods of start-up, shutdown, and malfunction.

## 4. Unit D003 - Dehy and Flare – Engineering Technologies Inc, Triethylene Glycol Dehydrator and Flare

| Parameter | Permit Condition Number | Limitations | | Compliance Emission Factor | Monitoring | |
|---|---|---|---|---|---|---|
| | | Short Term | Long Term | | Method | Interval |
| $NO_X$ | 4.1. | 0.40 tons/mo | 4.73 tons/yr | 0.068 lb/mmBtu | Recordkeeping and Calculation | Monthly |
| CO | | 2.2 tons/mo | 25.7 tons/yr | 0.37 lb/mmBtu | | |
| VOC | 4.2. | 3.5 tons/mo | 40.9 tons/yr | See Condition 4.2. | Parametric | Daily |
| Extended Gas Analysis | | N/A | | N/A | ASTM Methods | Annually |
| Hours of Operation | 4.3. | N/A | N/A | N/A | Recordkeeping | Monthly |
| Natural Gas Processed by the Glycol Dehydrator | 4.4. | 15,500 mmSCF/mo | 182,500 mmSCF/yr | N/A | Flow Meter | Monthly |
| Gas Consumed by the Flare | 4.5. | 21.53 mmSCF/mo | 253.6 mmSCF/yr | N/A | See Condition 4.5. | |
| Compliance Certification | 4.6. | Certify Compliance within 180 Days of Startup | | N/A | Certification | Within 180 Days |
| Dehydrator Regenerator (Still) Vent and Flash Tank Requirements | 4.7. | Emissions Routed to Flare that Achieves 95% Reduction in VOC Emissions | | N/A | See Condition 4.7. | |

| Parameter | Permit Condition Number | Limitations Short Term | Limitations Long Term | Compliance Emission Factor | Monitoring Method | Monitoring Interval |
|---|---|---|---|---|---|---|
| Flare Requirements | 4.8. | Visible Emissions/Opacity Requirements | | N/A | Visible Emissions Observations | Monthly |
| | | A Flame Shall be Present at all times that the Flare is Operated | | N/A | Temperature Sensor or Flame Detection Device with Alarm | Continuously |
| | | Flare Specifications – Btu Content of Gas and Velocity | | N/A | Performance Test | Within 180 Days |
| | | Flare Shall be Operating at all Times that the Dehydrator is Operated | | N/A | Certification | Annually |
| Flare Performance Test | 4.9. | Visible Emissions, Btu Content and Velocity | | N/A | See Condition 4.9. | Within 180 Days |
| Compliance Assurance Monitoring Requirements | 4.10. | N/A | | N/A | See Condition 4.10. | |

4.1 $NO_X$ and CO emissions from the flare shall not exceed the limitation stated above (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the requested emissions on the APEN submitted on November 27, 2006). Monthly emissions of $NO_X$ and CO shall be calculated by the end of the subsequent month using the above emission factors (from AP-42 Section 13.5 (dated 9/91), Table 13.5-1) and the monthly quantity of fuel consumed by the flare (as required by Condition 5.5) in the following equation:

$$\text{Tons/mo} = \frac{[\text{EF (lb/mmBtu) x Gas Consumed by the Flare (mmSCF/mo) x 552.1 mmBtu/mmSCF}]}{\text{2000 lbs/ton}}$$

Compliance with the monthly emission limits shall be monitored by comparing the calculated monthly emissions with the monthly emission limitations. Compliance with the monthly emission limits must be monitored for one year following startup. After the first year of operation the monthly limitations are no longer applicable.

Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month, a new twelve month total shall be calculated using the previous twelve months data.

4.2 VOC emissions from the flare shall not exceed the limitation stated above (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the requested emissions on the APEN submitted on November 27, 2006). Compliance with the VOC emission limitations shall be monitored as follows:

4.2.1 The inlet (wet) gas temperature, glycol recirculation rate, and stripping gas rate shall be measured and recorded daily. The average value for each of these parameters shall be determined for any month during which a daily recorded parameter fails the stipulated passing criteria compared to the values listed in the table below. The circumstances surrounding any day on which the required information fails to be recorded shall be described in a log to be maintained on site. Data from the last day for which data exists will be substituted for the missing values for purposes of calculating the monthly average. No data substitution is necessary for days on which the unit did not operate.

| Parameter | Value | Units | Criteria | Frequency |
|---|---|---|---|---|
| Inlet Gas Temperature | 80 | EF | At or Above | Daily |
| Glycol Recirculation Rate | 62.7 | gpm | At or Below | Daily |
| Stripping Gas Rate | 165 | scfm | At or Below | Daily |
| Benzene | 40 | ppm | At or Below | Annually |
| Toluene | 80 | ppm | At or Below | Annually |
| Ethyl Benzene | 20 | ppm | At or Below | Annually |
| Xylene | 20 | ppm | At or Below | Annually |

4.2.2 Samples of inlet gas shall be collected and analyzed (extended gas analysis) to determine $C_1$ to $C_6$, n-hexane, benzene, toluene, ethyl benzene and total xylene (BTEX) composition once per calendar year. If any of the analyses indicates the BTEX constituents exceed the listed values, frequency of extended gas analyses will increase to twice per recovery period (analyses shall be taken not less than one month apart). Frequency will remain twice per recovery period until analyses indicates the BTEX constituents meet the comparison criteria for two consecutive tests, at which time required frequency will return to annual.

4.2.3 If any monthly average of a parameter recorded daily (as required by Condition 4.2.1) or a concentration for a BTEX constituent does not meet the comparison criteria, the GRI GlyCalc (version 4.0 or higher) model shall be used to determine the monthly VOC emission rate, unless the unit has been operated for 240 hours or less. Inputs into the model shall be the monthly average value for the parameters, the BTEX concentrations from the latest extended gas analysis, and the following assumed values:

| | |
|---|---|
| Dry Gas Water Content: | 5 lbs $H_2O$/mmSCF |
| Inlet (Wet) Gas Pressure | 1000 psig |
| Flash Tank Temperature: | 180 degrees Fahrenheit |
| Flash Tank Pressure: | 60 psig |
| Flare Control Efficiency: | 95% |
| Natural Gas Throughput: | 500 mmSCF/day |

GLYCalc model runs shall be conducted for the month(s) in which the monthly average value of a GLYCalc parameter recorded daily was exceeded and for every month in which any BTEX constituent exceeds the values listed in Condition 4.2.1, beginning with the month in which the gas sample was taken which indicates the exceedance and ending in the month in which a gas sample is taken that indicates no exceedance. GlyCalc model runs shall be completed by the end of the subsequent month. GLYCalc runs are not required for months in which the unit operates 240 hours or less.

4.2.4 For months in which a GLYCalc run is not triggered and there are no uncontrolled emissions from the dehydrator due to flare downtime, compliance with the monthly VOC emission limitations shall be presumed in the absence of evidence to the contrary. For months in which a GLYCalc run is triggered, compliance with the monthly emission limitation shall be monitored by comparing monthly emissions predicted by the GLYCalc run (as required by Condition 4.2.3) with the monthly emission limitation. For months in which there are uncontrolled emissions from the dehydrator due to flare downtime, monthly VOC emissions shall be the number of hours the unit operated with the flare multiplied by the VOC emission rate specified in Condition 4.2.5 (no GLYCalc run required) or the VOC emission rate predicted by the required GLYCalc run plus estimated uncontrolled emissions for the month as required by Condition 4.8.2. Compliance with the monthly emission limitation must be monitored for one year following startup. After the first year of operation the monthly limitations are no longer applicable.

4.2.5 A rolling twelve month total of VOC emissions shall be maintained to monitor compliance with the annual VOC limit. For any twelve month period for which no GLYCalc runs were triggered and there were no uncontrolled emissions from the dehydrator due to flare downtime, the twelve month rolling total of VOC emissions may be assumed to be equal to the annual VOC limit. The calculation of the twelve month rolling total of VOC emissions shall be performed for any month a GLYCalc run is triggered or when there are uncontrolled emissions from the dehydrator due to flare downtime. If a GLYCalc run is required for any reason for a given month, the pounds per hour of emissions predicted by the model shall be multiplied by the number of hours the unit ran for that month to determine monthly VOC emissions. The monthly VOC emissions used in the rolling twelve month total for months that do not trigger a GLYCalc run shall be the number of hours the unit operated in the month multiplied by an hourly VOC emission rate of 9.34 lbs/hr (from GLYCalc run submitted on November 27, 2006, includes 95% control efficiency). For months in which there are uncontrolled emissions from the dehydrator due to flare downtime, monthly VOC emissions shall be the number of hours the unit operated with the flare multiplied by the VOC emission rate of 9.34 lbs/hr or the VOC emission rate predicted by the required GLYCalc run plus estimated uncontrolled emissions for the month as required by Condition 4.8.2. If the twelve month rolling total of VOC emissions exceeds the annual VOC limit, VOC emissions for the previous months

must be calculated with GLYCalc using the parameters described in Condition 4.2.3 until the rolling twelve month total is in compliance with the annual VOC limitation.

4.3 Hours of operation shall be monitored and recorded monthly and maintained to be made available to the Division upon request. The hours of operation shall be used to calculate the monthly emissions in any month that a GLYCalc run is required as specified in Condition 4.2.5.

4.4 The quantity of natural gas processed by the dehydration unit shall not exceed the limitation listed above (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the requested gas processing rate indicated on the APEN submitted on November 27, 2006). The gas processed through the dehydration unit shall be monitored using a flow meter and recorded monthly in a log that is available to the Division upon request.

Compliance with the monthly natural gas processing limit shall be monitored by comparing the recorded monthly quantity of natural gas processed with the monthly limitation. Compliance with the monthly natural gas processing limit must be monitored for one year following startup. After the first year of operation the monthly limitation is no longer applicable.

Monthly quantities of natural gas processed shall be used in a twelve month rolling total to monitor compliance with annual limitation. Each month, a new twelve month total shall be calculated using the previous twelve months data.

4.5 The quantity of gas consumed by the flare (dehydrator flash tank and still vent gases) shall not exceed the limitations listed above (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the GLYCalc run submitted on November 27, 2006). Compliance with the consumption limit shall be monitored as follows:

4.5.1 For the months that do not trigger a GLYCalc run, the quantity of dehydrator flash tank and still vent gases consumed by the flare shall be determined using hours of operation and the hourly gas production rates shown in the table below in the following equation:

Gas consumed (mmSCF/mo) = hours of operation x gas production rate (mmSCF/hr)

| | Gas Production Rate (mmSCF/hr) | Emission Factor Source |
|---|---|---|
| Regenerator (Still) Vent | $2.49 \times 10^{-2}$ | From the GLYCalc run included in the November 27, 2006 submittal. |
| Flash Tank | $3.85 \times 10^{-3}$ | |
| | | |
| Total | $2.875 \times 10^{-2}$ | |

4.5.2 For months that do trigger a GLYCalc run, the quantity of dehydrator flash tank and still vent gases consumed by the flare shall be determined using hours of operation in the above equation and the hourly gas production rates for the flash tank and regenerator (still) vent determined by the GLYCalc run required by Condition 4.2.3.

Monthly quantities of gas consumed by the flare from the glycol dehydrator flash tank and still vent shall be summed together.

Compliance with the monthly limitation shall be monitored by comparing the total monthly quantity of gas consumed by the flare with the monthly limitation. Compliance with the monthly flare gas consumption limit must be monitored for one year following startup. After the first year of operation the monthly limitation is no longer applicable.

Monthly quantities of gas consumed by the flare shall be used in a twelve month rolling total to monitor compliance with annual limitation. Each month, a new twelve month total shall be calculated using the previous twelve months data.

4.6 Within one hundred eighty (180) calendar days after commencement of operation, the permittee shall certify compliance with the conditions in this Section II.4 of this permit (Colorado Regulation No. 3, Part B, Section III.G.2). Submittal of the first required semi-annual monitoring report (Appendix B), after startup of this unit shall serve as the self-certification that the newly installed glycol dehydrator can comply with the conditions in this Section II.4 of this permit.

4.7 Emissions from the dehydrator regenerator (still) vent and flash tank vent shall be routed through a closed vent system to the flare prior to being emitted. The flare shall be capable of reducing VOC and HAP emissions by 95% or greater. In the absence of credible evidence to the contrary, compliance with the 95% reduction requirement shall be presumed provided the requirements in Conditions 4.8, 4.9 and 4.10 are met.

4.8 The flare is subject to the following requirements:

4.8.1 The flare is subject to the following visible emission requirements:

4.8.1.1 Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3 Part B, Section III.E and Part C, Sections I.A.7 and III.B.7).

An initial compliance test to monitor compliance with the visible emission requirement shall be conducted as required by Condition 4.9.

Compliance with the visible emission requirements thereafter, shall be monitored by conducting a visible emission observation monthly when the

flare is operating. Monthly observations shall last a minimum of five minutes. If no visible emissions are present during this observation, in the absence of credible evidence to the contrary, the flare will be considered in compliance with the above visible emissions requirement. If visible emissions are present during the monthly reading, a two (2) hour observation shall be conducted in accordance with Method 22 to determine if the flare is in compliance with the above visible emissions requirement. If visible emissions are present for five minutes or less (total) during the two-hour observation, then the flare shall be deemed in compliance. If visible emissions are present for more than five minutes (total) during the two-hour observation, then the flare shall be deemed out of compliance with the above visible emissions requirement. Subject to the provisions of C.R.S. § 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the visible emission requirement shall be considered to exist from the time a Method 22 reading is taken that shows the flare is out of compliance (as defined above) until a Method 22 reading is taken that shows the flare is in compliance (as defined above).

4.8.1.2 No owner or operator of a smokeless flare or other flare for the combustion of waste gases shall allow or cause emissions into the atmosphere of any air pollutant which is in excess of 30% opacity for a period or periods aggregating more than six minutes in any sixty consecutive minutes (Colorado Regulation No. 1, Section II.A.5). In the absence of credible evidence to the contrary, compliance with this opacity requirement shall be presumed provided the requirements in Condition 4.8.1.1 are met.

4.8.2 Flares shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3 Part B, Section III.E and Part C, Sections I.A.7 and III.B.7). The device shall be equipped with an alarm to indicate no ignition of the pilot flame. Records of the times and duration of all periods of pilot flame outages, and estimated emissions shall be maintained and made available to the Division upon request. Estimated emissions shall be used as specified in Conditions 4.2.4 and 4.2.5 to monitor compliance with the VOC emission limitation in Condition 4.2.

4.8.3 The flare is subject to the following specifications:

4.8.3.1 Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted. The net heating value of the gas being combusted shall be determined by the methods specified in Condition 4.9.2 (as

provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3 Part B, Section III.E and Part C, Sections I.A.7 and III.B.7). A performance test shall be conducted in accordance with the requirements in Condition 4.9 to verify that the net heating value of the gas consumed by the flare meets the requirements.

4.8.3.2 Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, $V_{max}$, as specified in 40 CFR Part 63 Subpart A § 63.11(b)(8) (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3 Part B, Section III.E and Part C, Sections I.A.7 and III.B.7). A performance test shall be conducted in accordance with the requirements in Condition 4.9 to determine that the exit velocity of the flare is less than $V_{max}$.

4.8.4 The flare shall be operated at all times when emissions may be vented to them (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3 Part B, Section III.E and Part C, Sections I.A.7 and III.B.7).

4.8.5 Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3 Part B, Section III.E and Part C, Sections I.A.7 and III.B.7).

4.9 Performance tests shall be conducted within 180 days of initial startup to verify that the flare meets the visibility, heat content and velocity specifications in 40 CFR Part 63 Subpart A § 63.11(b), as follows:

Note that the performance test requirements apply (applied) to the initial facility flare, the temporary dedicated flare and the permanent dedicated flare.

4.9.1 EPA Test Method 22 shall be used to determine the compliance of the flare with the visible emission requirement in Condition 4.8.1.1 of this permit. The observation period is 2 hours and shall be conducted according to EPA Method 22 (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3 Part B, Section III.E and Part C, Sections I.A.7 and III.B.7).

4.9.2 The net heating value of the gas shall be determined in accordance with the requirements of 40 CFR Part 63 Subpart A § 63.11(b)(6)(ii).

4.9.3 The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60 of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip (as provided for under the provisions of Section I, Condition 1.3 and

Colorado Regulation No. 3 Part B, Section III.E and Part C, Sections I.A.7 and III.B.7).

A performance testing protocol shall be submitted for Division approval at least thirty (30) calendar days prior to any performance of the test. No performance test shall be performed without prior written approval by the Division. The Division reserves the right to witness the test. The required number of copies of the compliance test results shall be submitted to the Division within thirty (30) calendar days of the completion of the test.

4.10 The Compliance Assurance Monitoring (CAM) requirements in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV, apply to the glycol dehydrator with respect to the VOC limitations identified in Condition 4.2 as follows:

4.10.1 The permittee shall follow the CAM Plan provided in Appendix G of this permit. Excursions, for purposes of reporting are any time the thermal device indicates there is no flame present or no flame sensed and no audible detection of a spark for more than 22 seconds. Excursions shall be reported as required by Section IV, Conditions 21 and 22.d of this permit.

4.10.2 Operation of Approved Monitoring

4.10.2.1 At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment (40 CFR Part 64 § 64.7(b), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.2.2 Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of these CAM requirements, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions (40 CFR Part 64 § 64.7(c), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.2.3 Response to excursions or exceedances

a. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable (40 CFR Part 64 § 64.7(d)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

b. Determination of whether the owner of operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process (40 CFR Part 64 § 64.7(d)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.2.4 After approval of the monitoring required under the CAM requirements, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the Division and, if necessary submit a proposed modification for this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters (40 CFR Part 64 § 64.7(e), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.3 Quality Improvement Plan (QIP) Requirements

4.10.3.1 Based on the results of a determination made under the provisions of Condition 4.10.2.3.b, the Division may require the owner or operator to

develop and implement a QIP (40 CFR Part 64 § 64.8(a), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.3.2 The owner or operator shall maintain a written QIP, if required, and have it available for inspection (40 CFR Part 64 § 64.8(b)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.3.3 The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:

a. Improved preventative maintenance practices (40 CFR Part 64 § 64.8(b)(2)(i), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

b. Process operation changes (40 CFR Part 64 § 64.8(b)(2)(ii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

c. Appropriate improvements to control methods (40 CFR Part 64 § 64.8(b)(2)(iii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

d. Other steps appropriate to correct control performance (40 CFR Part 64 § 64.8(b)(2)(iv), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

e. More frequent or improved monitoring (only in conjunction with one or more steps under Conditions 4.10.3.3.a through d above) (40 CFR Part 64 § 64.8(b)(2)(v), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.3.4 If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the Division if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined (40 CFR Part 64 § 64.8(c), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.3.5 Following implementation of a QIP, upon any subsequent determination pursuant to Condition 4.10.2.3.b, the Division or the U.S. EPA may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:

a. Failed to address the cause of the control device performance problems (40 CFR Part 64 § 64.8(d)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV); or

b. Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions (40 CFR Part 64 § 64.8(d)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.3.6 Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the federal clean air act (40 CFR Part 64 § 64.8(e), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.4 Reporting and Recordkeeping Requirements

4.10.4.1 Reporting Requirements: The reports required by Section IV, Condition 22.d, shall contain the information specified in Appendix B of the permit and the following information, as applicable:

a. Summary information on the number, duration and cause (including unknown cause, if applicable), for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable) ((40 CFR Part 64 § 64.9(a)(2)(ii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV); and

b. The owner or operator shall submit, if necessary, a description of the actions taken to implement a QIP during the reporting period as specified in Condition 4.10.3 of this permit. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring (40 CFR Part 64 § 64.9(a)(2)(iii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.4.2 General Recordkeeping Requirements: In addition to the recordkeeping requirements in Section IV, Condition 22.a through c.

a. The owner or operator shall maintain records of any written QIP required pursuant to Condition 4.10.3 and any activities undertaken to implement a QIP, and any supporting information required to be maintained under these CAM requirements (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions) (40 CFR Part 64 § 64.9(b)(1),

as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

b. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements (40 CFR Part 64 § 64.9(b)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.5 Savings Provisions

4.10.5.1 Nothing in these CAM requirements shall excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the federal clean air act. These CAM requirements shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purposes of determining the monitoring to be imposed under separate authority under the federal clean air act, including monitoring in permits issued pursuant to title I of the federal clean air act. The purpose of the CAM requirements is to require, as part of the issuance of this Title V operating permit, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of CAM (40 CFR Part 64 § 64.10(a)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.5.2 Nothing in these CAM requirements shall restrict or abrogate the authority of the U.S. EPA or the Division to impose additional or more stringent monitoring, recordkeeping, testing or reporting requirements on any owner or operator of a source under any provision of the federal clean air act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable (40 CFR Part 64 § 64.10(a)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

4.10.5.3 Nothing in these CAM requirements shall restrict or abrogate the authority of the U.S. EPA or the Division to take any enforcement action under the federal clean air act for any violation of an applicable requirement or of any person to take action under section 304 of the federal clean air act (40 CFR Part 64 § 64.10(a)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

## 5. Unit B001 – Maxon Reboiler, 6.3 mmBtu/hr

| Parameter | Permit Condition Number | Limitations | | Compliance Emission Factor | Monitoring | |
|---|---|---|---|---|---|---|
| | | Short Term | Long Term | | Method | Interval |
| $NO_X$ | 5.1. | N/A | 2.8 tons/yr | 0.101 lbs/mmBtu | Recordkeeping and Calculation | Monthly |
| CO | | N/A | 4.6 tons/yr | 0.166 lbs/mmBtu | | |
| Natural Gas Consumption | 5.2. | N/A | 58.1 mmSCF/yr | N/A | Recordkeeping and Calculation | Monthly |
| Particulate Matter (PM) | 5.3. | 0.310 lbs/mmBtu | | N/A | Fuel Restriction | Only Natural Gas is Burned as Fuel |
| Btu Content of Natural Gas | 5.4. | N/A | N/A | N/A | ASTM Methods or In-Line Gas Chromatograph | Semi-Annually |
| NSPS General Provisions - **State-Only** | 5.5. | N/A | N/A | N/A | As Required by NSPS General Provisions | Subject to NSPS General Provisions |
| Opacity | 5.6. | Not to Exceed 20% | | N/A | Fuel Restriction | Only Natural Gas is Burned as Fuel |

5.1 Emissions of Nitrogen Oxides ($NO_X$) and Carbon Monoxide (CO) shall not exceed the above limitations (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the requested emissions on the APEN submitted on February 13, 2006). Monthly emissions shall be calculated by the end of the subsequent month using the above emission factors (from EPA's Compilation of Emission Factors (AP-42), dated March 1998, Section 1.4), the monthly natural gas consumption and the lower heating value of the fuel in the following equation:

$$\text{tons/mo} = \frac{[\text{ EF (lbs/mmBtu) x monthly fuel usage (mmSCF/mo) x lower heating value of fuel (mmBtu/mmSCF]}}{\text{2000 lbs/ton}}$$

A twelve month rolling total of emissions will be maintained to monitor compliance with the annual emission limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

5.2 Natural Gas consumption for this reboiler shall not exceed the limitation stated above (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7, based on the requested emissions on the APEN submitted on February 13, 2006). Monthly natural gas consumption shall be determined using the monthly hours of operation, the maximum heat input rate (6.3 mmBtu/hr) of the unit and the lower

heating value of the fuel as determined by Condition 5.5. Monthly natural gas consumption shall be used in a twelve month rolling total to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous months data.

5.3 Particulate Matter (PM) emissions shall not exceed the limitation above (Colorado Regulation No. 1, Section II.A.1.b). In the absence of credible evidence to the contrary, compliance with the particulate matter limitations is presumed since only natural gas is used as fuel in the heater.

Note that the numeric PM standard was determined using the design heat input for the boiler (6.3 mmBtu/hr) in the following equation:

$PE = 0.5 \times (FI)^{-0.26,}$ where: PE = particulate standard in lbs/mmBtu
FI = fuel input in mmBtu/hr

5.4 The Btu content of the natural gas used to fuel this reboiler shall be verified semi-annually using the appropriate ASTM Methods or equivalent, if approved in advance by the Division. In lieu of collecting a sample, the Btu content of the natural gas may be determined using the in-line gas chromatograph to determine the gas composition and the appropriate ASTM Methods or equivalent, if approved in advance by the Division, to calculate the Btu content. The Btu content of the gas shall be calculated for January and July, using the average composition of the gas as determined by the in-line gas chromatograph for those months. The Btu content of the natural gas shall be based on the lower heating value of the fuel.

If sampling is conducted, calculations of monthly emissions and determination of natural gas consumption shall be made using the heat content derived from the most recent required analysis. If the gas chromatograph data is used, calculations of monthly emissions and determination of natural gas consumption for January through June shall be made using the January average Btu content and calculations of monthly emissions and determination of natural gas consumption for July through December shall be made using the July average Btu content.

5.5 **State-Only Requirement:** The reboiler is subject to the requirements in 40 CFR Part 60, Subpart A – General Provisions, as adopted by reference in Colorado Regulation No. 6, Part B, Section I. Specifically, the reboiler is subject to the following requirements:

5.5.1 No article, machine, equipment or process shall be used to conceal an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gasses discharged to the atmosphere. (40 CFR Part 60 Subpart A, § 60.12, as adopted by reference in Colorado Regulation No. 6, Part B, Section I.A)

5.5.2 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether

acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source (40 CFR Subpart A § 60.11(d), as adopted by reference in Colorado Regulation No. 6, Part B, Section I.A).

5.5.3 Records shall be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the source; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative (40 CFR Part 60 Subpart A § 60.7(b), as adopted by reference in Colorado Regulation No. 6, Parts A, Subparts A and B, Section I.A).

5.6 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant which is in excess of 20% opacity (Colorado Regulation No. 1, Section A.II.1). In the absence of credible evidence to the contrary, compliance with the 20% opacity requirement will be presumed since natural gas is used as fuel.

**6. Portable Monitoring (6/1/06 version)**

Emission measurements of nitrogen oxides ($NO_X$) and carbon monoxide (CO) shall be conducted quarterly using a portable flue gas analyzer. At least one calendar month shall separate the quarterly tests**.** Note that if the engine is operated for less than 100 hrs in any quarterly period, then the portable monitoring requirements do not apply.

All portable analyzer testing required by this permit shall be conducted using the Division's Portable Analyzer Monitoring Protocol (ver March 2006 or newer) as found on the Division's website at: http://www.cdphe.state.co.us/ap/down/portanalyzeproto.pdf

Results of the portable analyzer tests shall be used to monitor the compliance status of this unit. For comparison with an annual or short term emission limit, the results of the tests shall be converted to a lb/hr basis and multiplied by the allowable operating hours in the month or year (whichever applies) in order to monitor compliance. If a source is not limited in its hours of operation the test results will be multiplied by the maximum number of hours in the month or year (8760), whichever applies.

If the portable analyzer results indicate compliance with both the $NO_X$ and CO emission limitations, in the absence of credible evidence to the contrary, the source may certify that the engine is in compliance with both the $NO_X$ and CO emission limitations for the relevant time period.

Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, if the portable analyzer results fail to demonstrate compliance with either the $NO_X$ or CO emission limitations, the engine will be considered to be out of compliance from the date of the portable analyzer test until a portable analyzer test indicates compliance with both the $NO_X$ and CO emission limitations or until the engine is taken offline.

For comparison with the emission rates/factors, the emission rates/factors determined by the portable analyzer tests and approved by the Division shall be converted to the same units as the emission rates/factors in the permit. If the portable analyzer tests shows that either the $NO_X$ or CO emission rates/factors are greater than the relevant ones set forth in the permit, and in the absence of subsequent testing results to the contrary (as approved by the Division), the permittee shall apply for a modification to this permit to reflect, at a minimum, the higher emission rate/factor within 60 days of the completion of the test.

Results of all tests conducted shall be kept on site and made available to the Division upon request**.**

## 7. Insignificant Activities

The permittee shall maintain records of any new fuel burning insignificant activities added to the facility that were not identified in the hazardous air pollutant (HAP) analysis conducted in association with the renewal permit issued on July 1, 2006 and calculate formaldehyde emissions from these emission units. If formaldehyde emissions from such activities exceed 1 ton/yr of formaldehyde, the facility will be considered a major source for HAPS, unless federally enforceable HAP emission reductions are taken prior to the addition of such equipment. All records and calculations shall be made available to the Division upon request.

## 8. Unit F001 – Plant Flare, Non-Assisted

| Parameter | Permit Condition Number | Limitations | | Compliance Emission Factor | Monitoring | |
|---|---|---|---|---|---|---|
| | | Short Term | Long Term | | Method | Interval |
| $NO_X$ | 8.1. | N/A | N/A | 0.068 lb/mmBtu | Recordkeeping and Calculation | Annually |
| CO | | N/A | N/A | 0.37 lb/mmBtu | | |
| VOC | | N/A | N/A | 0.063 lb/mmBtu | | |
| Natural Gas Consumed by Flare | 8.2. | N/A | N/A | N/A | Recordkeeping | Annually |
| Opacity | 8.3. | Not to Exceed 20% | | N/A | Visible Emission Observation | Annually |

8.1 Annual emissions of $NO_X$, CO and VOC emissions shall be determined annually for the purpose of APEN reporting and payment of annual fees, using the above emission factors (from AP-42, Section 13.5 (dated 9.91), Table 13.5-1, VOC emission factor is 45% of hydrocarbon emission factor per Table 13.5-2 (55% of hydrocarbons are methane)) and the quantity and heat content of natural gas consumed in the following equation:

$$\text{Tons/yr} = \frac{[\text{EF (lb/mmBtu) x natural gas consumed (mmSCF/yr) x heat content of natural gas (mmBtu/mmSCF)}]}{\text{2000 lb/ton}}$$

The heat content of the fuel shall be the average of the two semi-annual Btu determinations (required by Section II, Conditions 1.6, 2.4 and 3.3) made over the annual period.

8.2 The quantity of natural gas consumed by the flare (both pilot and waste gas) shall be monitored and recorded annually for use in calculating annual emissions as required by Condition 9.1. Quantities of natural gas combusted shall be monitored using a fuel meter and any other necessary records.

8.3 No owner or operator of a smokeless flare or other flare for the combustion of waste gases shall allow or cause emissions into the atmosphere of any air pollutant which is in excess of 30% opacity for a period or periods aggregating more than six minutes in any sixty consecutive minutes (Colorado Regulation No. 1, Section II.A.5). Compliance with the opacity requirement shall be monitored by conducting a visible emission observation annually when the flare is combusting waste gas. The annual observation shall last a minimum of five minutes. If no visible emissions are present during this observation, in the absence of credible evidence to the contrary, the flare will be considered in compliance with the above opacity requirement. If visible emissions are noted during the observation then an EPA Reference Method 9 opacity observation shall be performed to determine compliance with the opacity standard. The EPA Reference Method 9 opacity observations shall be performed by an observer with current and valid Method 9 certification. Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

## SECTION III - Permit Shield

Regulation No. 3, 5 CCR 1001-5, Part C, §§ I.A.4, V.D., & XIII.B and § 25-7-114.4(3)(a), C.R.S.

### 1. Specific Non-Applicable Requirements

Based on the information available to the Division and supplied by the applicant, the following parameters and requirements have been specifically identified as non-applicable to the facility to which this permit has been issued. This shield does not protect the source from any violations that occurred prior to or at the time of permit issuance. In addition, this shield does not protect the source from any violations that occur as a result of any modification or reconstruction on which construction commenced prior to permit issuance.

| Emission Unit Description and Number | Applicable Requirement | Justification |
|---|---|---|
| All | Regulation No. 1, Section III-Particulate Emissions | Emission Units do not fall under the regulated categories for Particulate Emissions (i.e not Fuel Burning Equipment as defined in Common Provisions) |
| All | Regulation No. 1, Section IV-Continuous Emission Monitoring Requirements for New or Existing Sources | No sources fall under the source categories required to install, calibrate, certify or maintain continuous emission monitoring systems for opacity and/or sulfur dioxide and/or carbon monoxide |
| All | Regulation No. 3, Part D, Section V - Non-Attainment Areas | Facility is not located in a non-attainment area for any pollutant |
| All | Regulation No. 3, Part D, Section XIII - Federal Class I Areas | Emission units do not impact Class I areas (>100 kilometers away) |
| All | Regulation No. 3, Part D, Section XIV – Visibility | Emission units do not impact Class I areas (>100 kilometers away) |
| All | Regulation No. 6, Part A-Federal New Source Performance Standards, Subpart A - General Provisions | Emission units are not affected facilities |
| All | Regulation No. 6, Part A-Federal New Source Performance Standards, Subpart K, Ka, Kb - Storage Vessels for Petroleum Liquids | No emission units commenced construction after June 11, 1973 that met the applicability provisions of the standards |
| All | Regulation No. 6, Part A-Federal New Source Performance Standards, Subpart KKK-Equipment Leaks of VOC from Onshore Natural Gas Processing Plants | No emission units commenced construction after January 20, 1984 that met the applicability provisions of the standards |
| All | Regulation No. 6, Part A-Federal New Source Performance Standards, Subpart LLL - $SO_2$ Emissions from Onshore Natural Gas Processing Plants | There are no sweetening units at this site |
| All | Regulation No. 8, Part A, NESHAPs, 40 CFR Part 61, Subpart J - Equipment Leaks of Benzene | Emissions are less than 10 weight percent benzene |

| Emission Unit Description and Number | Applicable Requirement | Justification |
|---|---|---|
| All | Regulation No. 8, Part A, NESHAPs, 40CFR Part 61, Subpart V - Equipment Leaks (VHAP) | Emissions are less than 10 weight percent volatile hazardous air pollutants. |

## 2. General Conditions

Compliance with this Operating Permit shall be deemed compliance with all applicable requirements specifically identified in the permit and other requirements specifically identified in the permit as not applicable to the source. This permit shield shall not alter or affect the following:

2.1 The provisions of §§ 25-7-112 and 25-7-113, C.R.S., or § 303 of the federal act, concerning enforcement in cases of emergency;

2.2 The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

2.3 The applicable requirements of the federal Acid Rain Program, consistent with § 408(a) of the federal act;

2.4 The ability of the Air Pollution Control Division to obtain information from a source pursuant to § 25-7-111(2)(I), C.R.S., or the ability of the Administrator to obtain information pursuant to § 114 of the federal act;

2.5 The ability of the Air Pollution Control Division to reopen the Operating Permit for cause pursuant to Regulation No. 3, Part C, § XIII.

2.6 Sources are not shielded from terms and conditions that become applicable to the source subsequent to permit issuance.

## 3. Streamlined Conditions

The following applicable requirements have been subsumed within this operating permit using the pertinent streamlining procedures approved by the U.S. EPA. For purposes of the permit shield, compliance with the listed permit conditions will also serve as a compliance demonstration for purposes of the associated subsumed requirements.

| Permit Condition | Streamlined (Subsumed) Requirements |
|---|---|
| Section II, Condition 5.3 | Regulation No. 6, Part B, Section II.C.2 [particulate matter limit] **– State-only requirement** |
| Section II, Condition 5.6 | Regulation No. 6, part B, Section II.C.3 [opacity standard] **– State-only requirement** |

## SECTION IV - General Permit Conditions

**1. Administrative Changes**

Regulation No. 3, 5 CCR 1001-5, Part A, § III.

The permittee shall submit an application for an administrative permit amendment to the Division for those permit changes that are described in Regulation No. 3, Part A, § I.B.1. The permittee may immediately make the change upon submission of the application to the Division.

**2. Certification Requirements**

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.9., V.C.16.a.& e. and V.C.17.

a. Any application, report, document and compliance certification submitted to the Air Pollution Control Division pursuant to Regulation No. 3 or the Operating Permit shall contain a certification by a responsible official of the truth, accuracy and completeness of such form, report or certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

b. All compliance certifications for terms and conditions in the Operating Permit shall be submitted to the Air Pollution Control Division at least annually unless a more frequent period is specified in the applicable requirement or by the Division in the Operating Permit.

c. Compliance certifications shall contain:

(i) the identification of each permit term and condition that is the basis of the certification;

(ii) the compliance status of the source;

(iii) whether compliance was continuous or intermittent;

(iv) method(s) used for determining the compliance status of the source, currently and over the reporting period; and

(v) such other facts as the Air Pollution Control Division may require to determine the compliance status of the source.

d. All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

e. If the permittee is required to develop and register a risk management plan pursuant to § 112(r) of the federal act, the permittee shall certify its compliance with that requirement; the Operating Permit shall not incorporate the contents of the risk management plan as a permit term or condition.

**3. Common Provisions**

Common Provisions Regulation, 5 CCR 1001-2 §§ II.A., II.B., II.C., II,.E., II.F., II.I, and II.J

a. To Control Emissions Leaving Colorado

When emissions generated from sources in Colorado cross the State boundary line, such emissions shall not cause the air quality standards of the receiving State to be exceeded, provided reciprocal action is taken by the receiving State.

b. Emission Monitoring Requirements

The Division may require owners or operators of stationary air pollution sources to install, maintain, and use instrumentation to monitor and record emission data as a basis for periodic reports to the Division.

c. Performance Testing

The owner or operator of any air pollution source shall, upon request of the Division, conduct performance test(s) and furnish the Division a written report of the results of such test(s) in order to determine compliance with applicable emission control regulations.

Performance test(s) shall be conducted and the data reduced in accordance with the applicable reference test methods unless the Division:

(i) specifies or approves, in specific cases, the use of a test method with minor changes in methodology;

(ii) approves the use of an equivalent method;

(iii) approves the use of an alternative method the results of which the Division has determined to be adequate for indicating where a specific source is in compliance; or

(iv) waives the requirement for performance test(s) because the owner or operator of a source has demonstrated by other means to the Division's satisfaction that the affected facility is in compliance with the standard. Nothing in this paragraph shall be construed to abrogate the Commission's or Division's authority to require testing under the Colorado Revised Statutes, Title 25, Article 7, and pursuant to regulations promulgated by the Commission.

Compliance test(s) shall be conducted under such conditions as the Division shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Division such records as may be necessary to determine the conditions of the performance test(s). Operations during period of startup, shutdown, and malfunction shall not constitute representative conditions of performance test(s) unless otherwise specified in the applicable standard.

The owner or operator of an affected facility shall provide the Division thirty days prior notice of the performance test to afford the Division the opportunity to have an observer present. The Division may waive the thirty day notice requirement provided that arrangements satisfactory to the Division are made for earlier testing.

The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for test methods applicable to such facility;

(ii) Safe sampling platform(s);

(iii) Safe access to sampling platform(s); and

(iv) Utilities for sampling and testing equipment.

Each performance test shall consist of at least three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of results of at least three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other

circumstances beyond the owner or operator's control, compliance may, upon the Division's approval, be determined using the arithmetic mean of the results of the two other runs.

Nothing in this section shall abrogate the Division's authority to conduct its own performance test(s) if so warranted.

d. Affirmative Defense Provision for Excess Emissions during Malfunctions

Note that until such time as the U.S. EPA approves this provision into the Colorado State Implementation Plan (SIP), it shall be enforceable only by the State.

An affirmative defense to a claim of violation under these regulations is provided to owners and operators for civil penalty actions for excess emissions during periods of malfunction. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of evidence that:

(i) The excess emissions were caused by a sudden, unavoidable breakdown of equipment, or a sudden, unavoidable failure of a process to operate in the normal or usual manner, beyond the reasonable control of the owner or operator;

(ii) The excess emissions did not stem from any activity or event that could have reasonably been foreseen and avoided, or planned for, and could not have been avoided by better operation and maintenance practices;

(iii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded;

(iv) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

(v) All reasonably possible steps were taken to minimize the impact of the excess emissions on ambient air quality;

(vi) All emissions monitoring systems were kept in operation (if at all possible);

(vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence;

(viii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

(ix) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This section is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement; and

(x) During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in the Commissions' Regulations that could be attributed to the emitting source.

The owner or operator of the facility experiencing excess emissions during a malfunction shall notify the division verbally as soon as possible, but no later than noon of the Division's next working day, and shall submit written notification following the initial occurrence of the excess emissions by the end of the source's next reporting period. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to failures to meet federally promulgated performance standards or emission limits, including, but not limited to, new source performance standards and national emission standards

for hazardous air pollutants. The affirmative defense provision does not apply to state implementation plan (sip) limits or permit limits that have been set taking into account potential emissions during malfunctions, including, but not necessarily limited to, certain limits with 30-day or longer averaging times, limits that indicate they apply during malfunctions, and limits that indicate they apply at all times or without exception.

e. Circumvention Clause

A person shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of air pollutants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of this regulation. No person shall circumvent this regulation by using more openings than is considered normal practice by the industry or activity in question.

f. Compliance Certifications

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in the Colorado State Implementation Plan, nothing in the Colorado State Implementation Plan shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. Evidence that has the effect of making any relevant standard or permit term more stringent shall not be credible for proving a violation of the standard or permit term.

When compliance or non-compliance is demonstrated by a test or procedure provided by permit or other applicable requirement, the owner or operator shall be presumed to be in compliance or non-compliance unless other relevant credible evidence overcomes that presumption.

g. Affirmative Defense Provision for Excess Emissions During Startup and Shutdown

An affirmative defense is provided to owners and operators for civil penalty actions for excess emissions during periods of startup and shutdown. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of the evidence that:

(i) The periods of excess emissions that occurred during startup and shutdown were short and infrequent and could not have been prevented through careful planning and design;

(ii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance;

(iii) If the excess emissions were caused by a bypass (an intentional diversion of control equipment), then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(iv) The frequency and duration of operation in startup and shutdown periods were minimized to the maximum extent practicable;

(v) All possible steps were taken to minimize the impact of excess emissions on ambient air quality;

(vi) All emissions monitoring systems were kept in operation (if at all possible);

(vii) The owner or operator’s actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence; and,

(viii) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This subparagraph is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement.

The owner or operator of the facility experiencing excess emissions during startup and shutdown shall notify the Division verbally as soon as possible, but no later than two (2) hours after the start of the next working day, and shall submit written quarterly notification following the initial occurrence of the excess emissions. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to State Implementation Plan provisions or other requirements that derive from new source performance standards or national emissions standards for hazardous air pollutants, or any other federally enforceable performance standard or emission limit with an averaging time greater than twenty-four hours. In addition, an affirmative defense cannot be used by a single source or small group of sources where the excess emissions have the potential to cause an exceedance of the ambient air quality standards or Prevention of Significant Deterioration (PSD) increments.

In making any determination whether a source established an affirmative defense, the Division shall consider the information within the notification required above and any other information the Division deems necessary, which may include, but is not limited to, physical inspection of the facility and review of documentation pertaining to the maintenance and operation of process and air pollution control equipment.

**4. Compliance Requirements**

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.C.9., V.C.11. & 16.d. and § 25-7-122.1(2), C.R.S.

a. The permittee must comply with all conditions of the Operating Permit. Any permit noncompliance relating to federally-enforceable terms or conditions constitutes a violation of the federal act, as well as the state act and Regulation No. 3. Any permit noncompliance relating to state-only terms or conditions constitutes a violation of the state act and Regulation No. 3, shall be enforceable pursuant to state law, and shall not be enforceable by citizens under § 304 of the federal act. Any such violation of the federal act, the state act or regulations implementing either statute is grounds for enforcement action, for permit termination, revocation and reissuance or modification or for denial of a permit renewal application.

b. It shall not be a defense for a permittee in an enforcement action or a consideration in favor of a permittee in a permit termination, revocation or modification action or action denying a permit renewal application that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

c. The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of any request by the permittee for a permit modification, revocation and reissuance, or termination, or any notification of planned changes or anticipated noncompliance does not stay any permit condition, except as provided in §§ X. and XI. of Regulation No. 3, Part C.

d. The permittee shall furnish to the Air Pollution Control Division, within a reasonable time as specified by the Division, any information that the Division may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Division copies of records required to be kept by the permittee, including information claimed to be confidential. Any information subject to a claim of confidentiality shall be specifically identified and submitted separately from information not subject to the claim.

e. Any schedule for compliance for applicable requirements with which the source is not in compliance at the time of permit issuance shall be supplemental, and shall not sanction noncompliance with, the applicable requirements on which it is based.

f. For any compliance schedule for applicable requirements with which the source is not in compliance at the time of permit issuance, the permittee shall submit, at least every 6 months unless a more frequent period is specified in the applicable requirement or by the Air Pollution Control Division, progress reports which contain the following:

(i) dates for achieving the activities, milestones, or compliance required in the schedule for compliance, and dates when such activities, milestones, or compliance were achieved; and

(ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

g. The permittee shall not knowingly falsify, tamper with, or render inaccurate any monitoring device or method required to be maintained or followed under the terms and conditions of the Operating Permit.

**5. Emergency Provisions**

Regulation No. 3, 5 CCR 1001-5, Part C, § VII

An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed the technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. "Emergency" does not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. An emergency constitutes an affirmative defense to an enforcement action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. an emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. the permitted facility was at the time being properly operated;

c. during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. the permittee submitted oral notice of the emergency to the Air Pollution Control Division no later than noon of the next working day following the emergency, and followed by written notice within one month of the time when emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

This emergency provision is in addition to any emergency or malfunction provision contained in any applicable requirement.

**6. Emission Standards for Asbestos**

Regulation No. 8, 5 CCR 1001-10, Part B

The permittee shall not conduct any asbestos abatement activities except in accordance with the provisions of Regulation No. 8, Part B, “emission standards for asbestos.”

**7. Emissions Trading, Marketable Permits, Economic Incentives**

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.13.

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are specifically provided for in the permit.

**8. Fee Payment**

C.R.S. §§ 25-7-114.1(6) and 25-7-114.7

a. The permittee shall pay an annual emissions fee in accordance with the provisions of C.R.S. § 25-7-114.7. A 1% per month late payment fee shall be assessed against any invoice amounts not paid in full on the 91st day after the date of invoice, unless a permittee has filed a timely protest to the invoice amount.

b. The permittee shall pay a permit processing fee in accordance with the provisions of C.R.S. § 25-7-114.7. If the Division estimates that processing of the permit will take more than 30 hours, it will notify the permittee of its estimate of what the actual charges may be prior to commencing any work exceeding the 30 hour limit.

c. The permittee shall pay an APEN fee in accordance with the provisions of C.R.S. § 25-7-114.1(6) for each APEN or revised APEN filed.

**9. Fugitive Particulate Emissions**

Regulation No. 1, 5 CCR 1001-3, § III.D.1.

The permittee shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere, in accordance with the provisions of Regulation No. 1, § III.D.1.

**10. Inspection and Entry**

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.16.b.

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Air Pollution Control Division, or any authorized representative, to perform the following:

a. enter upon the permittee's premises where an Operating Permit source is located, or emissions-related activity is conducted, or where records must be kept under the terms of the permit;

b. have access to, and copy, at reasonable times, any records that must be kept under the conditions of the permit;

c. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the Operating Permit;

d. sample or monitor at reasonable times, for the purposes of assuring compliance with the Operating Permit or applicable requirements, any substances or parameters.

**11. Minor Permit Modifications**

Regulation No. 3, 5 CCR 1001-5, Part C, §§ X. & XI.

The permittee shall submit an application for a minor permit modification before making the change requested in the application. The permit shield shall not extend to minor permit modifications.

**12. New Source Review**

Regulation No. 3, 5 CCR 1001-5, Part B

The permittee shall not commence construction or modification of a source required to be reviewed under the New Source Review provisions of Regulation No. 3, Part B, without first receiving a construction permit.

**13. No Property Rights Conveyed**

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.11.d.

This permit does not convey any property rights of any sort, or any exclusive privilege.

**14. Odor**

Regulation No. 2, 5 CCR 1001-4, Part A

As a matter of state law only, the permittee shall comply with the provisions of Regulation No. 2 concerning odorous emissions.

**15. Off-Permit Changes to the Source**

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.B.

The permittee shall record any off-permit change to the source that causes the emissions of a regulated pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from the change, including any other data necessary to show compliance with applicable ambient air quality standards. The permittee shall provide contemporaneous notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit . The permit shield shall not apply to any off-permit change.

**16. Opacity**

Regulation No. 1, 5 CCR 1001-3, §§ I., II.

The permittee shall comply with the opacity emissions limitation set forth in Regulation No. 1, §§ I.-II.

**17. Open Burning**

Regulation No. 9, 5 CCR 1001-11

The permittee shall obtain a permit from the Division for any regulated open burning activities in accordance with provisions of Regulation No. 9.

**18. Ozone Depleting Compounds**

Regulation No. 15, 5 CCR 1001-17

The permittee shall comply with the provisions of Regulation No. 15 concerning emissions of ozone depleting compounds. Section I., II.C., II.D., III., IV., and V. of Regulation No. 15 shall be enforced as a matter of state law only.

**19. Permit Expiration and Renewal**

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.6., IV.C., V.C.2.

a. The permit term shall be five (5) years. The permit shall expire at the end of its term. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted.

b. Applications for renewal shall be submitted at least twelve months, but not more than 18 months, prior to the expiration of the Operating Permit. An application for permit renewal may address only those portions of the permit that require revision, supplementing, or deletion, incorporating the remaining permit terms by reference from the previous permit. A copy of any materials incorporated by reference must be included with the application.

**20. Portable Sources**

Regulation No. 3, 5 CCR 1001-5, Part C, § II.D.

Portable Source permittees shall notify the Air Pollution Control Division at least 10 days in advance of each change in location.

**21. Prompt Deviation Reporting**

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.7.b.

The permittee shall promptly report any deviation from permit requirements, including those attributable to malfunction conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken.

"Prompt" is defined as follows:

a. Any definition of "prompt" or a specific timeframe for reporting deviations provided in an underlying applicable requirement as identified in this permit; or

b. Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations will be submitted based on the following schedule:

(i) For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in the applicable regulation) that continue for more than an hour in excess of permit requirements, the report shall be made within 24 hours of the occurrence;

(ii) For emissions of any regulated air pollutant, excluding a hazardous air pollutant or a toxic air pollutant that continue for more than two hours in excess of permit requirements, the report shall be made within 48 hours; and

(iii) For all other deviations from permit requirements, the report shall be submitted every six (6) months, except as otherwise specified by the Division in the permit in accordance with paragraph 22.d. below.

c. If any of the conditions in paragraphs b.i or b.ii above are met, the source shall notify the Division by telephone (303-692-3155) or facsimile (303-782-0278) based on the timetables listed above. *[Explanatory note: Notification by telephone or facsimile must specify that this notification is a deviation report for an Operating Permit.]* A written notice, certified consistent with General Condition 2.a. above (Certification Requirements), shall be submitted within 10 working days of the occurrence. All deviations reported under this section shall also be identified in the 6-month report required above.

"Prompt reporting" does not constitute an exception to the requirements of "Emergency Provisions" for the purpose of avoiding enforcement actions.

**22. Record Keeping and Reporting Requirements**

Regulation No. 3, 5 CCR 1001-5, Part A, § II.; Part C, §§ V.C.6., V.C.7.

a. Unless otherwise provided in the source specific conditions of this Operating Permit, the permittee shall maintain compliance monitoring records that include the following information:

(i) date, place as defined in the Operating Permit, and time of sampling or measurements;

(ii) date(s) on which analyses were performed;

(iii) the company or entity that performed the analysis;

(iv) the analytical techniques or methods used;

(v) the results of such analysis; and

(vi) the operating conditions at the time of sampling or measurement.

b. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application. Support information, for this purpose, includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Operating Permit. With prior approval of the Air Pollution Control Division, the permittee may maintain any of the above records in a computerized form.

c. Permittees must retain records of all required monitoring data and support information for the most recent twelve (12) month period, as well as compliance certifications for the past five (5) years on-site at all times. A permittee shall make available for the Air Pollution Control Division's review all other records of required monitoring data and support information required to be retained by the permittee upon 48 hours advance notice by the Division.

d. The permittee shall submit to the Air Pollution Control Division all reports of any required monitoring at least every six (6) months, unless an applicable requirement, the compliance assurance monitoring rule, or the Division requires submission on a more frequent basis. All instances of deviations from any permit requirements must be clearly identified in such reports.

e. The permittee shall file an Air Pollutant Emissions Notice ("APEN") prior to constructing, modifying, or altering any facility, process, activity which constitutes a stationary source from which air pollutants are or are to be emitted, unless such source is exempt from the APEN filing requirements of Regulation No. 3, Part A, § II.D. A revised APEN shall be filed annually whenever a significant change in emissions, as defined in Regulation No. 3, Part A, § II.C.2., occurs; whenever there is a change in owner or operator of any facility, process, or activity; whenever new control equipment is installed; whenever a different type of control equipment replaces an existing type of control equipment; whenever a permit limitation must be modified; or before the APEN expires. An APEN is valid for a period of five years. The five-year period recommences when a revised APEN is received by the Air Pollution Control Division. Revised APENs shall be submitted no later than 30 days before the five-year term expires. Permittees submitting revised APENs to inform the Division of a change in actual emission rates must do so by April 30 of the following year. Where a permit revision is required, the revised APEN must be filed along with a request for permit revision. APENs for changes in control equipment must be submitted before the change occurs. Annual fees are based on the most recent APEN on file with the Division.

**23. Reopenings for Cause**

Regulation No. 3, 5 CCR 1001-5, Part C, § XIII.

a. The Air Pollution Control Division shall reopen, revise, and reissue Operating Permits; permit reopenings and reissuance shall be processed using the procedures set forth in Regulation No. 3, Part C, § III., except that proceedings to reopen and reissue permits affect only those parts of the permit for which cause to reopen exists.

b. The Division shall reopen a permit whenever additional applicable requirements become applicable to a major source with a remaining permit term of three or more years, unless the effective date of the requirements is later than the date on which the permit expires, or unless a general permit is obtained to address the new requirements; whenever additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program; whenever the Division determines the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or whenever the Division determines that the permit must be revised or revoked to assure compliance with an applicable requirement.

c. The Division shall provide 30 days' advance notice to the permittee of its intent to reopen the permit, except that a shorter notice may be provided in the case of an emergency.

d. The permit shield shall extend to those parts of the permit that have been changed pursuant to the reopening and reissuance procedure.

**24. Section 502(b)(10) Changes**

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.A.

The permittee shall provide a minimum 7-day advance notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit. The permittee shall attach a copy of each such notice given to its Operating Permit.

**25. Severability Clause**

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.10.

In the event of a challenge to any portion of the permit, all emissions limits, specific and general conditions, monitoring, record keeping and reporting requirements of the permit, except those being challenged, remain valid and enforceable.

**26. Significant Permit Modifications**

Regulation No. 3, 5 CCR 1001-5, Part C, § III.B.2.

The permittee shall not make a significant modification required to be reviewed under Regulation No. 3, Part B ("Construction Permit" requirements) without first receiving a construction permit. The permittee shall submit a complete Operating Permit application or application for an Operating Permit revision for any new or modified source within twelve months of commencing operation, to the address listed in Item 1 in Appendix D of this permit. If the permittee chooses to use the "Combined Construction/Operating Permit" application procedures of Regulation No. 3, Part C, then the Operating Permit must be received prior to commencing construction of the new or modified source.

**27. Special Provisions Concerning the Acid Rain Program**

Regulation No. 3, 5 CCR 1001-5, Part C, §§ V.C.1.b. & 8

a. Where an applicable requirement of the federal act is more stringent than an applicable requirement of regulations promulgated under Title IV of the federal act, 40 Code of Federal Regulations (CFR) Part 72, both provisions shall be incorporated into the permit and shall be federally enforceable.

b. Emissions exceeding any allowances that the source lawfully holds under Title IV of the federal act or the regulations promulgated thereunder, 40 CFR Part 72, are expressly prohibited.

**28. Transfer or Assignment of Ownership**

Regulation No. 3, 5 CCR 1001-5, Part C, § II.C.

No transfer or assignment of ownership of the Operating Permit source will be effective unless the prospective owner or operator applies to the Air Pollution Control Division on Division-supplied Administrative Permit Amendment forms, for reissuance of the existing Operating Permit. No administrative permit shall be complete until a written agreement containing a specific date for transfer of permit, responsibility, coverage, and liability between the permittee and the prospective owner or operator has been submitted to the Division.

**29. Volatile Organic Compounds**

Regulation No. 7, 5 CCR 1001-9, §§ III & V.

a. For sources located in an ozone non-attainment area or the Denver Metro Attainment Maintenance Area, all storage tank gauging devices, anti-rotation devices, accesses, seals, hatches, roof drainage systems, support structures, and pressure relief valves shall be maintained and operated to prevent detectable vapor loss except when opened, actuated, or used for necessary and proper activities (e.g. maintenance). Such opening, actuation, or use shall be limited so as to minimize vapor loss.

Detectable vapor loss shall be determined visually, by touch, by presence of odor, or using a portable hydrocarbon analyzer. When an analyzer is used, detectable vapor loss means a VOC concentration exceeding 10,000 ppm. Testing shall be conducted as in Regulation No. 7, Section VIII.C.3.

Except when otherwise provided by Regulation No. 7, all volatile organic compounds, excluding petroleum liquids, transferred to any tank, container, or vehicle compartment with a capacity exceeding 212 liters (56 gallons), shall be transferred using submerged or bottom filling equipment. For top loading, the fill tube shall reach within six inches of the bottom of the tank compartment. For bottom-fill operations, the inlet shall be flush with the tank bottom.

b. The permittee shall not dispose of volatile organic compounds by evaporation or spillage unless Reasonably Available Control Technology (RACT) is utilized.

c. No owner or operator of a bulk gasoline terminal, bulk gasoline plant, or gasoline dispensing facility as defined in Colorado Regulation No. 7, Section VI, shall permit gasoline to be intentionally spilled, discarded in sewers, stored in open containers, or disposed of in any other manner that would result in evaporation.

**30. Wood Stoves and Wood burning Appliances**

Regulation No. 4, 5 CCR 1001-6

The permittee shall comply with the provisions of Regulation No. 4 concerning the advertisement, sale, installation, and use of wood stoves and wood burning appliances.

# OPERATING PERMIT APPENDICES

A - INSPECTION INFORMATION
B - MONITORING AND PERMIT DEVIATION REPORT
C - COMPLIANCE CERTIFICATION REPORT
D - NOTIFICATION ADDRESSES
E - PERMIT ACRONYMS
F - PERMIT MODIFICATIONS
G - COMPLIANCE ASSURANCE MONITORING PLAN

*DISCLAIMER:

None of the information found in these Appendices shall be considered to be State or Federally enforceable, except as otherwise provided in the permit, and is presented to assist the source, permitting authority, inspectors, and citizens.

# APPENDIX A - Inspection Information

**Directions to Plant:**

From I-76 East, take the first Fort Morgan exit for Highway 34. Follow Highway 34 east to West Street. Follow south to Morgan County Rd. N. Follow S. approximately five miles to RD 18. Plant is just down this road, visible at intersection.

**Safety Equipment Required:**

Hard Hat
Safety Shoes
Ear Protection
Eye Protection with Side Shields
Flame Retardant Clothing ("Nomex®")

**Facility Plot Plan:**

Figure 1 shows the plot plan as submitted on December 30, 1994 with the source's Title V Operating Permit Application.

**List of Insignificant Activities:**

The following list of insignificant activities was provided by the source to assist in the understanding of the facility layout. Since there is no requirement to update such a list, activities may have changed since the last filing.

Insignificant activities and/or sources of emissions as submitted in the application are as follows:

Heater Separator Wells 2,4,8,9,11,25,26,28,30,32
Emergency Generator (500 hp, operates less than 250 hrs/yr)
Parts Cleaning Unit
Venting of Gas prior to Engine Overhaul
Fugitive VOC Emissions from Equipment Leaks
<u>Storage Tanks</u>
Gas Oil Condensate-8820 gal.
Engine Lube Oil-1380 gal.
Dirty Oil-1500 gal.
Ambitrol-5000 gal.
Waste Oil-1500 gal.
Diesel Fuel-300 gal.
Methanol-1000 gal.
North and South Gasoline-1000 gal. Each

# APPENDIX B

## Reporting Requirements and Definitions

with codes ver 2/20/07

Please note that, pursuant to 113(c)(2) of the federal Clean Air Act, any person who knowingly:

(A) makes any false material statement, representation, or certification in, or omits material information from, or knowingly alters, conceals, or fails to file or maintain any notice, application, record, report, plan, or other document required pursuant to the Act to be either filed or maintained (whether with respect to the requirements imposed by the Administrator or by a State);

(B) fails to notify or report as required under the Act; or

(C) falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required to be maintained or followed under the Act shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than 2 years, or both. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

The permittee must comply with all conditions of this operating permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

---

The Part 70 Operating Permit program requires three types of reports to be filed for all permits.
All required reports must be certified by a responsible official.

**Report #1: Monitoring Deviation Report** (due at least every six months)

*For purposes of this operating permit, the Division is requiring that the monitoring reports are due every six months unless otherwise noted in the permit.* All instances of deviations from permit monitoring requirements must be clearly identified in such reports.

For purposes of this operating permit, monitoring means any condition determined by observation, by data from any monitoring protocol, or by any other monitoring which is required by the permit as well as the recordkeeping associated with that monitoring. This would include, for example, fuel use or process rate monitoring, fuel analyses, and operational or control device parameter monitoring.

**Report #2: Permit Deviation Report (must be reported "promptly")**

In addition to the monitoring requirements set forth in the permits as discussed above, each and every requirement of the permit is subject to deviation reporting. The reports must address deviations from permit

requirements, including those attributable to malfunctions as defined in this Appendix, the probable cause of such deviations, and any corrective actions or preventive measures taken. All deviations from any term or condition of the permit are required to be summarized or referenced in the annual compliance certification.

For purposes of this operating permit, "malfunction" shall refer to both emergency conditions and malfunctions. Additional discussion on these conditions is provided later in this Appendix.

*For purposes of this operating permit, the Division is requiring that the permit deviation reports are due as set forth in General Condition 21.* Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. For example, quarterly Excess Emission Reports required by an NSPS or Regulation No. 1, Section IV.

In addition to the monitoring deviations discussed above, included in the meaning of deviation for the purposes of this operating permit are any of the following:

(1) A situation where emissions exceed an emission limitation or standard contained in the permit;

(2) A situation where process or control device parameter values demonstrate that an emission limitation or standard contained in the permit has not been met;

(3) A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit; or,

(4) A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only if the emission point is subject to CAM)

For reporting purposes, the Division has combined the Monitoring Deviation Report with the Permit Deviation Report. All deviations shall be reported using the following codes:

| | |
|---|---|
| **1 = Standard:** | When the requirement is an emission limit or standard |
| **2 = Process:** | When the requirement is a production/process limit |
| **3 = Monitor:** | When the requirement is monitoring |
| **4 = Test:** | When the requirement is testing |
| **5 = Maintenance:** | When required maintenance is not performed |
| **6 = Record:** | When the requirement is recordkeeping |
| **7 = Report:** | When the requirement is reporting |
| **8 = CAM:** | A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. |
| **9 = Other:** | When the deviation is not covered by any of the above categories |

**Report #3: Compliance Certification (annually, as defined in the permit)**

Submission of compliance certifications with terms and conditions in the permit, including emission limitations, standards, or work practices, is required not less than annually.

Compliance Certifications are intended to state the compliance status of each requirement of the permit over the certification period. They must be based, at a minimum, on the testing and monitoring methods specified in the permit that were conducted during the relevant time period. In addition, if the owner or operator knows of other material information (i.e. information beyond required monitoring that has been specifically assessed in relation to how the information potentially affects compliance status), that information must be identified and addressed in the compliance certification. The compliance certification must include the following:

- The identification of each term or condition of the permit that is the basis of the certification;
- Whether or not the method(s) used by the owner or operator for determining the compliance status with each permit term and condition during the certification period was the method(s) specified in the permit. Such methods and other means shall include, at a minimum, the methods and means required in the permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Clean Air Act, which prohibits knowingly making a false certification or omitting material information;
- The status of compliance with the terms and conditions of the permit, and whether compliance was continuous or intermittent. The certification shall identify each deviation and take it into account in the compliance certification. Note that not all deviations are considered violations.[1]
- Such other facts as the Division may require, consistent with the applicable requirements to which the source is subject, to determine the compliance status of the source.

The Certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only for emission points subject to CAM)

Note the requirement that the certification shall identify each deviation and take it into account in the compliance certification. Previously submitted deviation reports, including the deviation report submitted at the time of the annual certification, may be referenced in the compliance certification.

**Startup, Shutdown, Malfunctions and Emergencies**

Understanding the application of Startup, Shutdown, Malfunctions and Emergency Provisions, is very important in both the deviation reports and the annual compliance certifications.

[1] For example, given the various emissions limitations and monitoring requirements to which a source may be subject, a deviation from one requirement may not be a deviation under another requirement which recognizes an exception and/or special circumstances relating to that same event.

**Startup, Shutdown, and Malfunctions**

Please note that exceedances of some New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) standards that occur during Startup, Shutdown or Malfunctions may not be considered to be non-compliance since emission limits or standards often do not apply unless specifically stated in the NSPS. Such exceedances must, however, be reported as excess emissions per the NSPS/MACT rules and would still be noted in the deviation report. In regard to compliance certifications, the permittee should be confident of the information related to those deviations when making compliance determinations since they are subject to Division review. The concepts of Startup, Shutdown and Malfunctions also exist for Best Available Control Technology (BACT) sources, but are not applied in the same fashion as for NSPS and MACT sources.

**Emergency Provisions**

Under the Emergency provisions of Part 70 certain operational conditions may act as an affirmative defense against enforcement action if they are properly reported.

**DEFINITIONS**

**Malfunction** (NSPS) means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

**Malfunction** (SIP) means any sudden and unavoidable failure of air pollution control equipment or process equipment or unintended failure of a process to operate in a normal or usual manner. Failures that are primarily caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

**Emergency** means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

## Monitoring and Permit Deviation Report - Part I

1. Following is the **required** format for the Monitoring and Permit Deviation report to be submitted to the Division as set forth in General Condition 21. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

2. Part II of this Appendix B shows the format and information the Division will require for describing periods of monitoring and permit deviations, or malfunction or emergency conditions as indicated in the Table below. One Part II Form must be completed for each Deviation. Previously submitted reports (e.g. EER's or malfunctions) may be referenced and the form need not be filled out in its entirety.

FACILITY NAME: Colorado Interstate Gas Co. – Ft. Morgan Compressor Station
OPERATING PERMIT NO: 95OPMR010
REPORTING PERIOD:_____ (see first page of the permit for specific reporting period and dates

| Operating Permit Unit ID | Unit Description | Deviations Noted During Period?[1] | | Deviation Code[2] | Malfunction/ Emergency Condition Reported During Period? | |
|---|---|---|---|---|---|---|
| | | YES | NO | | YES | NO |
| E003/CG-7 | White Superior Model 8GTL-825, 4-Cycle Rich Burn, 1000 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 18684. Natural Gas Fired. | | | | | |
| E004/CG-8 | White Superior Model 8GTL-825, 4-Cycle Rich Burn, 1000 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 20003. Natural Gas Fired. | | | | | |
| E005/CG-9 | White Superior Model 8GTL-825, 4-Cycle Rich Burn, 600 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 20624. Natural Gas Fired. | | | | | |
| E006/CG-10 | White Superior Model 8GTLB, 4-Cycle Lean Burn, 1100 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 322919. Natural Gas Fired. | | | | | |
| E007/CG-11 | White Superior Model 8GTLB, 4-Cycle Lean Burn, 1100 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 322910. Natural Gas Fired. | | | | | |
| E008/CG-12 | Caterpillar Model G3516LE, 4-Cycle, Low $NO_X$ Design, 1151 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 4EK03805. Equipped with an Oxidation Catalyst. Natural Gas Fired. | | | | | |
| D003 | Engineering Technologies, Inc., 500 mmSCF/day, Triethylene Glycol Dehydration Unit with Flash Tank. Model and Serial No. Not Available. Emissions from the still vent and flash tank are routed to a flare. | | | | | |
| B001 | Maxon Reboiler, Model No. SPL Tube-O-Flame, rated at 6.3 mmBtu/hr. Serial No. Not Available. Natural Gas Fired. | | | | | |

| Operating Permit Unit ID | Unit Description | Deviations Noted During Period?[1] | | Deviation Code[2] | Malfunction/ Emergency Condition Reported During Period? | |
|---|---|---|---|---|---|---|
| | | YES | NO | | YES | NO |
| F001 | Plant Flare, Non-assisted | | | | | |
| | General Conditions | | | | | |
| | Insignificant Activities | | | | | |

[1] See previous discussion regarding what is considered to be a deviation. Determination of whether or not a deviation has occurred shall be based on a reasonable inquiry using readily available information.

[2]Use the following entries as appropriate:

**1 = Standard:** When the requirement is an emission limit or standard
**2 = Process:** When the requirement is a production/process limit
**3 = Monitor:** When the requirement is monitoring
**4 = Test:** When the requirement is testing
**5 = Maintenance:** When required maintenance is not performed
**6 = Record:** When the requirement is recordkeeping
**7 = Report:** When the requirement is reporting
**8 = CAM:** A situation in which an excursion or exceedance as defined in 40 CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred.
**9 = Other:** When the deviation is not covered by any of the above categories

**Monitoring and Permit Deviation Report - Part II**

FACILITY NAME: Colorado Interstate Gas Co – Ft. Morgan Compressor Station
OPERATING PERMIT NO: 95OPMR010
REPORTING PERIOD:

Is the deviation being claimed as an: Emergency _____ Malfunction_____ N/A

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction _____
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Operating Permit Condition Number Citation

Explanation of Period of Deviation

Duration (start/stop date & time)

Action Taken to Correct the Problem

Measures Taken to Prevent a Reoccurrence of the Problem

Dates of Malfunctions/Emergencies Reported (if applicable)

Deviation Code _____ Division Code QA: _____

**SEE EXAMPLE ON THE NEXT PAGE**

# EXAMPLE

FACILITY NAME: Acme Corp.
OPERATING PERMIT NO: 96OPZZXXX
REPORTING PERIOD: 1/1/04 - 6/30/06

Is the deviation being claimed as an: Emergency _____ Malfunction __XX____ N/A

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Asphalt Plant with a Scrubber for Particulate Control - Unit XXX

Operating Permit Condition Number Citation

Section II, Condition 3.1 - Opacity Limitation

Explanation of Period of Deviation

Slurry Line Feed Plugged

Duration

START- 1730 4/10/06
END- 1800 4/10/06

Action Taken to Correct the Problem

Line Blown Out

Measures Taken to Prevent Reoccurrence of the Problem

Replaced Line Filter

Dates of Malfunction/Emergencies Reported (if applicable)

5/30/06 to A. Einstein, APCD

Deviation Code _____ Division Code QA: _____

**Monitoring and Permit Deviation Report - Part III**

**REPORT CERTIFICATION**

SOURCE NAME: Colorado Interstate Gas Co – Ft. Morgan Compressor Station

FACILITY IDENTIFICATION NUMBER: 0870003

PERMIT NUMBER: 95OPMR010

REPORTING PERIOD:_____ (see first page of the permit for specific reporting period and dates)

All information for the Title V Semi-Annual Deviation Reports must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. This signed certification document must be packaged with the documents being submitted.

**STATEMENT OF COMPLETENESS**

**I have reviewed the information being submitted in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this submittal are true, accurate and complete.**

**Please note that the Colorado Statutes state that any person who knowingly, as defined in Sub-Section 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of Sub-Section 25-7 122.1, C.R.S.**

Printed or Typed Name | Title

Signature of Responsible Official | Date Signed

**Note: Deviation reports shall be submitted to the Division at the address given in Appendix D of this permit. No copies need be sent to the U.S. EPA.**

# APPENDIX C

## Required Format for Annual Compliance Certification Reports

with codes ver 2/20/07

Following is the format for the Compliance Certification report to be submitted to the Division and the U.S. EPA annually based on the effective date of the permit. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

FACILITY NAME: Colorado Interstate Gas Co – Ft. Morgan Compressor Station

OPERATING PERMIT NO: 95OPMR010
REPORTING PERIOD:

I. Facility Status

___ During the entire reporting period, this source was in compliance with **ALL** terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the Permit.

___ With the possible exception of the deviations identified in the table below, this source was in compliance with all terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference, during the entire reporting period. The method used to determine compliance for each term and condition is the method specified in the Permit, unless otherwise indicated and described in the deviation report(s). Note that not all deviations are considered violations.

| Operating Permit Unit ID | Unit Description | Deviations Reported [1] | | Monitoring Method per Permit?[2] | | Was Compliance - Continuous or Intermittent?[3] | |
|---|---|---|---|---|---|---|---|
| | | Previous | Current | YES | NO | Continuous | Intermittent |
| E003/ CG-7 | White Superior Model 8GTL-825, 4-Cycle Rich Burn, 1000 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 18684. Natural Gas Fired. | | | | | | |
| E004/ CG-8 | White Superior Model 8GTL-825, 4-Cycle Rich Burn, 1000 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 20003. Natural Gas Fired. | | | | | | |
| E005/ CG-9 | White Superior Model 8GTL-825, 4-Cycle Rich Burn, 600 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 20624. Natural Gas Fired. | | | | | | |

| Operating Permit Unit ID | Unit Description | Deviations Reported [1] | | Monitoring Method per Permit?[2] | | Was Compliance - Continuous or Intermittent?[3] | |
|---|---|---|---|---|---|---|---|
| | | Previous | Current | YES | NO | Continuous | Intermittent |
| E006/ CG-10 | White Superior Model 8GTLB, 4-Cycle Lean Burn, 1100 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 322919. Natural Gas Fired. | | | | | | |
| E007/ CG-11 | White Superior Model 8GTLB, 4-Cycle Lean Burn, 1100 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 322910. Natural Gas Fired. | | | | | | |
| F001 | Fugitive Volatile Organic Compound Emissions from Equipment Leaks | | | | | | |
| E008/ CG-12 | Caterpillar Model G3516LE, 4-Cycle, Low $NO_X$ Design, 1151 hp, Internal Combustion Engine Used for Gas Compression, Serial No. 4ED03805. Equipped with an Oxidation Catalyst. Natural Gas Fired. | | | | | | |
| D003 | Engineering Technologies, Inc., 500 mmSCF/day, Triethylene Glycol Dehydration Unit with Flash Tank. Model and Serial No. Not Available. Emissions from the still vent and flash tank are routed to a flare. | | | | | | |
| B001 | Maxon Reboiler, Model No. SPL Tube-O-Flame, rated at 6.3 mmBtu/hr. Serial No. Not Available. Natural Gas Fired. | | | | | | |
| F001 | Plant Flare, Non-assisted | | | | | | |
| | General Conditions | | | | | | |
| | Insignificant Activities [4] | | | | | | |

[1] If deviations were noted in a previous deviation report , put an "X" under "previous". If deviations were noted in the current deviation report (i.e. for the last six months of the annual reporting period), put an "X" under "current". Mark both columns if both apply.

[2] Note whether the method(s) used to determine the compliance status with each term and condition was the method(s) specified in the permit. If it was not, mark "no" and attach additional information/explanation.

[3] Note whether the compliance status with of each term and condition provided was continuous or intermittent. "Intermittent Compliance" can mean either that noncompliance has occurred or that the owner or operator has data sufficient to certify compliance only on an intermittent basis. Certification of intermittent compliance therefore does not necessarily mean that any noncompliance has occurred.

NOTE:

The Periodic Monitoring requirements of the Operating Permit program rule are intended to provide assurance that even in the absence of a continuous system of monitoring the Title V source can demonstrate whether it has operated in continuous compliance for the duration of the reporting period. Therefore, if a source 1) conducts all of the monitoring and recordkeeping required in its

permit, even if such activities are done periodically and not continuously, and if 2) such monitoring and recordkeeping does not indicate non-compliance, and if 3) the Responsible Official is not aware of any credible evidence that indicates non-compliance, then the Responsible Official can certify that the emission point(s) in question were in continuous compliance during the applicable time period.

[4] Compliance status for these sources shall be based on a reasonable inquiry using readily available information.

II. Status for Accidental Release Prevention Program:

A. This facility _____ is subject _____ is not subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act)

B. If subject: The facility _____ is _____ is not in compliance with all the requirements of section 112(r).

1. A Risk Management Plan _____ will be _____ has been submitted to the appropriate authority and/or the designated central location by the required date.

III. Certification

All information for the Annual Compliance Certification must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. This signed certification document must be packaged with the documents being submitted.

**I have reviewed this certification in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this certification are true, accurate and complete.**

**Please note that the Colorado Statutes state that any person who knowingly, as defined in § 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of § 25-7 122.1, C.R.S.**

_____

Printed or Typed Name Title

_____

Signature Date Signed

**NOTE:** All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

# APPENDIX D

## Notification Addresses

1. **Air Pollution Control Division**

Colorado Department of Public Health and Environment
Air Pollution Control Division
Operating Permits Unit
APCD-SS-B1
4300 Cherry Creek Drive S.
Denver, CO 80246-1530

ATTN: Jim King

2. **United States Environmental Protection Agency**

Compliance Notifications:

Office of Enforcement, Compliance and Environmental Justice
Mail Code 8ENF-T
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

Permit Modifications, Off Permit Changes:

Office of Partnerships and Regulatory Assistance
Air and Radiation Programs, 8P-AR
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

# APPENDIX E

## Permit Acronyms

Listed Alphabetically:

| | |
|---|---|
| AIRS | Aerometric Information Retrieval System |
| AP-42 | EPA Document Compiling Air Pollutant Emission Factors |
| APEN | Air Pollution Emission Notice (State of Colorado) |
| APCD | Air Pollution Control Division (State of Colorado) |
| ASTM | American Society for Testing and Materials |
| BACT | Best Available Control Technology |
| BTU | British Thermal Unit |
| CAA | Clean Air Act (CAAA = Clean Air Act Amendments) |
| CCR | Colorado Code of Regulations |
| CEM | Continuous Emissions Monitor |
| CF | Cubic Feet (SCF = Standard Cubic Feet) |
| CFR | Code of Federal Regulations |
| CO | Carbon Monoxide |
| COM | Continuous Opacity Monitor |
| CRS | Colorado Revised Statute |
| EPA | Environmental Protection Agency |
| FR | Federal Register |
| G | Grams |
| Gal | Gallon |
| HAPs | Hazardous Air Pollutants |
| HP | Horsepower |
| HP-HR | Horsepower Hour (G/HP-HR = Grams per Horsepower Hour) |
| LAER | Lowest Achievable Emission Rate |
| LBS | Pounds |
| M | Thousand |
| MM | Million |
| MMscf | Million Standard Cubic Feet |
| MMscfd | Million Standard Cubic Feet per Day |
| N/A or NA | Not Applicable |
| NOx | Nitrogen Oxides |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NSPS | New Source Performance Standards |
| PM | Particulate Matter |
| $PM_{10}$ | Particulate Matter Under 10 Microns |
| PSD | Prevention of Significant Deterioration |
| PTE | Potential To Emit |
| RACT | Reasonably Available Control Technology |
| SCC | Source Classification Code |

| | |
|---|---|
| SCF | Standard Cubic Feet |
| SIC | Standard Industrial Code |
| $SO_2$ | Sulfur Dioxide |
| TPY | Tons Per Year |
| TSP | Total Suspended Particulate |
| VOC | Volatile Organic Compounds |

# APPENDIX F

## Permit Modifications

| DATE OF REVISION | TYPE OF REVISION | SECTION NUMBER, CONDITION NUMBER | DESCRIPTION OF REVISION |
|---|---|---|---|
| July 24, 2007 | Minor Modification | **Emission Increase** | **This modification results in an increase in permitted emissions from the triethylene glycol (TEG) dehydration unit as follows: $NO_X$ – 2.33 tpy, CO – 12.43 tpy and VOC – 16.01 tpy.** |
| | | Section I | Revised the citations in Condition 3 to reflect recent revisions to Colorado Regulation No. 3. |
| | | Section II.2 | Corrected the $NO_X$ emission factor in the table (Condition 2.1). |
| | | Section II.4 | Corrected the criteria in Condition 4.1 for the cold separator temperature to be "At or Above". Included the appropriate MACT provisions for these units in Condition 4.4. Prior to permit issuance, the permit conditions for these units were removed, based on a 6/6/07 notification that the units were rendered inoperable and request to cancel construction permits. |
| | | Section II.5 | Removed the formaldehyde performance test requirement (Condition 5.7.2) since the test has been completed. |
| | | Section II.6 | Removed Conditions 6.1 (commence construction), 6.2 (removal of EG units) and 6.3 (startup notification) since the unit has started up and the source requested cancellation of the construction permits for the EG units. Increased the $NO_X$, CO and VOC emissions as requested (Conditions 6.4 and 6.5). Revised the calculation method in Condition 6.4 to use a heat content of 554.8 Btu/scf (note this value is subsequently revised with the significant modification processed concurrently – see below). Revised the comparison criteria for stripping gas and inlet gas temperature (Condition 6.5.1). Revised Condition 6.5.3 to indicate that a GLYCalc run is not required if the unit operates 10 days or less in a month. Changed the quantity of supplemental fuel in Condition 6.8 to 200 scf/hr (note this value is subsequently revised with the significant modification processed concurrently – see below). Changed the quantity of gas consumed by the flare (Condition 6.9). Corrected typographical errors in Condition 6.10. |
| | | Section II.7 | Corrected typographical errors in the table (Condition 7.8). Removed Conditions 7.3 (commence construction) and 7.4 (startup notice) since the unit has started up. Corrected the equation and permit language in Condition 7.1 to address emission factors in units of lb/mmBtu, rather than lb/mmSCF and revised the language in Condition 7.2 to specify that the fuel consumption is based on hours of operation, design rate and the Btu content of the Fuel. Added a condition to determine the Btu content of the natural gas |

| DATE OF REVISION | TYPE OF REVISION | SECTION NUMBER, CONDITION NUMBER | DESCRIPTION OF REVISION |
|---|---|---|---|
| July 24, 2007 | Minor Modification | Section IV | The upset revisions in the Common Provisions Regulation (general condition 3.d) were revised December 15, 2006 (effective March 7, 2007) and the revisions were included in the permit. Note that these provisions are state-only enforceable until approved by EPA into Colorado's state implementation plan (SIP). Replaced the phrase "enhanced monitoring" with "compliance assurance monitoring" in Condition 22.d. Replaced the reference to "upset" in Condition 5 (emergency provisions) and 21 (prompt deviation reporting) with "malfunction". |
| | | Appendices B and C | Replaced with latest versions. |
| | | Appendix D | Changed the mailing address for EPA. |
| | | Appendix G | Revised the VOC emission limits for the TEG Unit. |
| July 24, 2007 | Significant Modification | Section II.6 | Removed Conditions 6.8 (supplemental fuel requirement) and 6.9.1 (supplemental fuel) and references to supplemental fuel in Condition 6.9. Revised the equation in Condition 6.4 to use a gas heat content of 552.1 Btu/scf. |
| July 24, 2007 | Significant Modification | Sections II.2, 3 and 5 | Revised the language for determining the Btu content of natural gas in Conditions 2.6, 3.4 and 5.3. |
| | | Section II.5 | Changed the formaldehyde emission factor from $1.42 \times 10^{-2}$ lb/mmBtu to $1.89 \times 10^{-2}$ lb/mmBtu in Condition 5.7. In addition, the formaldehyde emission limit was increased to 0.75 tons/yr. |
| September 9, 2008 | Minor Modification | Section I | Revised the language in Condition 1.1 to update information on the triethylene glycol (TEG) unit (use of dedicated flare, rather than plant flare), the propane refrigeration equipment (specifically engines CG-1 and 2 – removed and/or rendered inoperable) and the plant flare. Replaced the reference to "Section II, Condition 6.6" with "Section II, Condition 5.5" in Condition 1.4 due to the removal of permit conditions. Revised the table in Condition 7.1 to indicate the flare on the TEG unit is air-assisted, to remove engines CG-1 and CG-2 and to add the plant flare. |
| | | Section II.1 | Removed the conditions for engines CG-1 and CG-2 since they have been removed and/or rendered inoperable and the APENs cancelled. |
| | | Sections II.2 thru II.8 | Permit conditions have been renumbered to reflect the removal of Section II.1. |
| | | Section II.5 | Revised the table header to say "Flare" rather than "Facility Flare". The phrase "ten (10) days" in Condition 5.2.3 was replaced with "240 hours", Revised the language in Condition 5.8.3.1 to require a gas heating value of 300 Btu/scf for air-assisted flares. Revised the language in Condition 5.8.3.2 to specify the maximum exit velocity for air-assisted flares. Added language to Condition 5.9 to indicate that the performance test requirements apply (applied) to the facility flare, the temporary dedicated flare and the permanent dedicated flare. |
| | | Section II.6 | Removed Condition 6.3 since the reboiler has been operating for more than a year and the compliance certification requirement has been met. |

| DATE OF REVISION | TYPE OF REVISION | SECTION NUMBER, CONDITION NUMBER | DESCRIPTION OF REVISION |
|---|---|---|---|
| September 9, 2008 | Minor Modification | "New" Section II.8 | Added requirements for the plant flare. |
| | | Section III | In the first column in Section 3 (streamlined conditions), the references to Conditions 6.4 and 6.7 were revised to Conditions 5.3 and 5.6 due to the removal of permit conditions. |
| | | Appendices B and C | Revised the tables to indicate that the still vent and flash tank emissions from the TEG unit are routed to a flare, to remove engines CG-1 and CG-2 and to add the plant flare. |
| | | Appendix G | Replaced the references to "non-assisted flare" with "air-assisted flare" and the reference in Section I.b to Condition 5.2 was revised to Condition 4.2 due to the removal of permit conditions. |
| August 20, 2009 | Minor Modification | Section II, Condition 4.2.2 | Added language to clarify that annual sampling is on a calendar year and revised language to specify that samples shall be one month apart (rather than 4 months apart) when sampling frequency is twice per withdrawal period. |
| | | Section II, Condition 4.2.3 | Added a sentence to clarify that GLYCalc runs are not required for months in which the unit operates 240 hours or less. |
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# APPENDIX G

## Compliance Assurance Monitoring Plan

## I. Background

a. Emission Unit Description:

Engineering Technologies, Inc., 500 mmSCF/day Triethylene Glycol Dehydration Unit with Flash Tank

b. Applicable Regulation, Emission Limit, Monitoring Requirements:

Regulations: Operating Permit Section II, Condition 4.2.
Emission Limitations: VOC 3.5 tons/mo and 40.9 tons/yr

c. Control Technology:

Air-Assisted Flare

## II. Monitoring Approach

| | Indicator No. 1 | Indicator No. 2 |
|---|---|---|
| I. Indicator Measurement Approach | Presence of Flame | Pilot Light Spark |
| | Thermal Device | Audible |
| II. Indicator Range | An excursion is defined as no flame present or no flame sensed.<br>Excursions trigger the permittee to investigate the flare performance and make any repairs or adjustments necessary. Any adjustments or repairs shall be recorded in a log, to be made available to the Division upon request. | An excursion is defined as no audible detection for more than twenty two seconds.<br>Excursions trigger the permittee to investigate the flare performance and make any repairs or adjustments necessary. Any adjustments or repairs shall be recorded in a log, to be made available to the Division upon request. |
| III. Performance Criteria | | |
| a. Data Representativeness | The thermal device monitors the presence of a flame, so either a flame or no flame is indicated. | Audible sound is high voltage arcing on igniter head. If spark is not functioning the pilot flame will not re-ignite after a flame-out situation. |
| b. Verification of Operational Status | If the flame goes out, a call-out is initiated. | Failure of pilot flame ignition and lack of audible sound. |

| | Indicator No. 1 | Indicator No. 2 |
|---|---|---|
| c. QA/QC Practices and Criteria | The thermal device is fail-safe. If the thermal device is not functioning, the control system assumes the flame is out.<br>The thermal device is repaired or replaced if not working.. | Audible is fail-safe. If the spark malfunctions and the flame goes out, the flame cannot be re-ignited and will result in the thermal device noting that the flame is out and initiate call-out.<br>The pilot light is repaired or replaced if not working. |
| d. Monitoring Frequency | Flame status monitored continuously by thermal device. | Audible sound for two seconds every twenty seconds. Because the presence of a spark is audible, it is only monitored when an operator is present on site. |
| f. Data Collection Procedures | A visual check for the presence of a flame is made and recorded daily.<br>Excursions and any adjustments or repairs made to the flare following an excursion shall be noted in daily log. | Repairs or replacements of the pilot spark are noted in a log.<br>Excursions and any adjustments or repairs made to the flare following an excursion shall be noted in daily log. |
| e. Averaging Time | N/A | N/A |

## III. Justification

a. Background:

The pollutant specific emission unit (PSEU) is the glycol dehydrator. The glycol dehydrator can process 500 million cubic feet per day of natural gas. Emissions from the dehydrator still vent and flash tank are routed to a air-assisted flare.

b. Rational for Selection of Performance Indicators and Indicator Ranges:

As noted above, the destruction of VOC is dependant upon combustion. The flare is provided with burner control panels that provide constant assurance of a lit flame and re-occurring spark. The burner control panel provides a spark for two seconds every twenty seconds. The spark is audible and the absence of the audible can be detected when operators are on-site. The flare is also equipped with a thermal device to ensure that a flame is present. If the thermal device indicates there is no flame detected, the pilot flame may be re-lit by the spark. If the flame is not re-lit within two to three cycles of the spark (40 – 60 seconds), the operator on call is notified via a wireless alarm system.

The CAM rule specifies that presumptively acceptable monitoring includes monitoring required for any standards that are exempt from CAM (i.e. MACT standards), provided the monitoring is applicable to the control device (40 CFR Part 64 § 64.4(b)(4), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV). The specific monitoring requirements for a glycol dehydrator equipped with an open flare in the Natural Gas Transmission and Storage (NGTS) facilities MACT are found at § 63.1283(d)(3)(i)(C) and state that “For a flare, a heat

sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame". Therefore, the Division considers that specifying a heat sensing monitoring device to detect the presence of a flame is an appropriate indicator, since the NGTS MACT requires monitoring for the presence of a flame. CAM specifies that for small pollutant specific emission units (i.e. emission units with controlled emissions less than the major source level) that the minimum monitoring frequency for at least some parameters is every 24 hours (40 CFR Part 64 § 64.3(b)(4)(iii) as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV). Therefore, although the heat sensing device continuously monitors the presence of a flame, since the dehydrator is a small pollutant specific emission unit, the Division considers that a continuous recorder is not necessary to meet the CAM requirements and therefore, daily checks on the presence of a flame are sufficient to meet CAM. Therefore, although the monitoring cannot be considered presumptive CAM, the indicator (presence of a flame) and the monitoring method (heat sensing device) are consistent with the parameters and monitoring method specified in the NGTS MACT and the frequency of monitoring the indicator meets the requirements in 40 CFR Part 64 § 64.3(b)(4)(iii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV; therefore the Division considers that the monitoring in the CAM plan meets the CAM requirements. Note that monitoring the pilot light spark is not required under the NGTS MACT but is an additional measure to prevent flame outages.