Colorado Department of Public Health and Environment

OPERATING PERMIT

Rockies Express Pipeline, LLC - Meeker Compressor Station

Issued: January 1, 2011
Last Revised: March 22, 2011

AIR POLLUTION CONTROL DIVISION
COLORADO OPERATING PERMIT

FACILITY NAME:	Meeker Compressor Station	OPERATING PERMIT NUMBER
FACILITY ID:	1030322	**09OPRB326**
ISSUE DATE:	January 1, 2011	
EXPIRATION DATE:	January 1, 2016	
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:	PLANT SITE LOCATION:
Rockies Express Pipeline, LLC 370 Van Gordon Street Lakewood, CO 80228-8304	26100 County Road 5 Rifle, CO 81650 Rio Blanco County

INFORMATION RELIED UPON

Operating Permit Application Received:	January 9, 2009
And Additional Information Received:	April 9 and August 17, 2010

Nature of Business:	Natural Gas Transmission
Primary SIC:	4922

RESPONSIBLE OFFICIAL		FACILITY CONTACT PERSON	
Name:	Kevin Philbrick	Name:	Dawn Meyers
Title:	Operations Director, Rocky Mountain Region	Title:	Senior Environmental Engineer
Phone:	(307) 232-4420	Phone:	(303) 914-7837

SUBMITTAL DEADLINES

Semi-Annual Monitoring Periods:	January 1 – June 30, July 1 – December 31)
Semi-Annual Monitoring Report:	Due on August 1, 2011 & February 1, 2012 & subsequent years
Annual Compliance Periods:	January 1 – December 31
Annual Compliance Certification:	Due on February 1, 2012 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 Upon arrival at the Rockies Express Pipeline, LLC (REX) – Meeker Compressor Station, pipeline quality gas enters a filter scrubber that separates any pipeline liquids from the gas stream prior to use as fuel for station equipment or routing through the compressors. The pipeline liquids are removed from the scrubber and stored in a condensate storage tank. When the condensate tank is full, the condensate/pipeline liquids are transported to an off-site facility for sales. The compressors are mechanically powered by reciprocating internal combustion engines and combustion turbines. The compressors compress and transport the natural gas downstream via pipeline. The significant emission units at the REX – Meeker Compressor Station consist of two natural gas-fired combustion turbines and three natural gas-fired internal combustion engines driving natural gas compressors. In addition, there is a natural gas-fired internal combustion engine powering an electric generator, which provides power during situations when the power to the facility is interrupted. The emergency generator is considered an insignificant activity and is included in the insignificant activity list in Appendix A of the permit. In addition, emissions from blowdown events from the testing of the emergency shutdown vent and maintenance and other shutdowns of the compressors are above the APEN de minimis level. Therefore, these activities are included in Section II of the permit as significant emission units.

The facility is located on approximately 3 acres of land located approximately 20 miles west-southwest of Meeker, Colorado at 26100 County Road 5, in Rio Blanco county. The area in which the facility is located is designated as attainment for all criteria pollutants.

There are no affected states within 50 miles of the plant. Flat Tops Wilderness Area, a Federal Class I designated area, is within 100 kilometers of the plant. In addition, Dinosaur National Monument is federal land within 100 kilometers of the facility. This area has been designated by the State to have the same sulfur dioxide increment as federal Class I designated areas.

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 The 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 revisions made using the provisions of Regulation No. 3, Part C shall become new applicable requirements for the 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: 06RB0564, 06RB0565, 06RB0566, 06RB0567, 06RB0568, and 09RB0019.

1.4 All conditions in this permit are enforceable by 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 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. Either electronic or hard copy records are acceptable.

2. Alternative Operating Scenarios

2.1 **Temporary and Permanent Engine Replacement (12/10/08 version).** The following Alternative Operating Scenario (AOS) for the temporary and permanent replacement of natural gas fired reciprocating internal combustion engines has been reviewed in accordance with the requirements of Regulation No. 3., Part A, Section IV.A, Operational Flexibility-Alternative Operating Scenarios, Regulation No. 3, Part B, Construction Permits, and Regulation No. 3, Part D, Major Stationary Source New Source Review and Prevention of Significant Deterioration, and it has been found to meet all applicable substantive and procedural requirements. This permit incorporates and shall be considered a Construction Permit for any engine replacement performed in accordance with this AOS, and the permittee shall be allowed to perform such engine replacement without applying for a revision to this permit or obtaining a new Construction Permit.

2.1.1 Engine Replacement

The following AOS is incorporated into this permit in order to deal with a compressor engine breakdown or periodic routine maintenance and repair of an existing onsite engine that requires the use of either a temporary or permanent replacement engine. “Temporary” is defined as in the same service for 90 operating days or less in any 12 month period. “Permanent” is defined as in the same service for more than 90 operating days in any 12 month period. The 90 days is the total number of days that the engine is in operation. If the engine operates only part of a day, that day shall count as a single day towards the 90-day total. The compliance demonstrations and any periodic monitoring required by this AOS are in addition to any compliance demonstrations or periodic monitoring required by this permit.

All replacement engines are subject to all federally applicable and state-only requirements set forth in this permit (including monitoring and record keeping), and shall be subject to any shield afforded by this permit.

The results of all tests and the associated calculations required by this AOS shall be submitted to the Division within 30 calendar days of the test or within 60 days of the test if such testing is required to demonstrate compliance with NSPS or MACT requirements. Results of all tests shall be kept on site for five (5) years and made available to the Division upon request.

The permittee shall maintain a log on-site and contemporaneously record the start and stop date of any engine replacement, the manufacturer, date of manufacture, model number, horsepower, and serial number of the engine(s) that are replaced during the term of this permit, and the manufacturer, model number, horsepower, and serial number of the replacement engine. In addition to the log, the permittee shall maintain a copy of all Applicability Reports required under section 2.1.1.2 and make them available to the Division upon request.

2.1.1.1 The permittee may **temporarily** replace an existing compressor engine that is subject to the emission limits set forth in this permit with an engine that is of the same manufacturer, model, and horsepower or a different manufacturer, model, or horsepower as the existing engine without modifying this permit, so long as the emissions from the temporary replacement engine comply with the emission limitations for the existing permitted engine as determined in section 2.2. Measurement of emissions from the temporary replacement engine shall be made as set forth in section 2.1.2.

The permittee may temporarily replace a grandfathered or permit exempt engine or an engine that is not subject to emission limits without modifying this permit. In this circumstance, potential annual emissions of NO_X and CO from the temporary replacement engine must be less than or equal to the potential annual emissions of NO_X and CO from the original grandfathered or permit exempt engine or for the engine that is not subject to emission limits, as determined by applying appropriate emission factors (e.g. AP-42 or manufacturer's emission factors).

2.1.1.2 The permittee may **permanently** replace the existing compressor engine for the emission points specified in Table 1 with the manufacturer, model, and horsepower engines listed in Table 1 without modifying this permit so long as the emissions from the permanent replacement engine comply with 1) the permitted annual emission limitations for the existing engine, 2) any permitted short-term emission limitations for the existing permitted engine, and 3) the applicable emission limitations as set forth in Appendix G. Measurement of emissions from the permanent replacement engine and compliance with the applicable emission limitations shall be made as set forth in section 2.1.2.

An Air Pollutant Emissions Notice (APEN) that includes the specific manufacturer, model and serial number and horsepower of the permanent replacement engine shall be filed with the Division for the permanent replacement engine within 14 calendar days of commencing operation of the replacement engine. The APEN shall be accompanied by the appropriate APEN filing fee, a cover letter explaining that the permittee is exercising an alternative operating scenario and is installing a permanent replacement engine, and a copy of the relevant Applicability Reports for

the replacement engine. Example Applicability Reports can be found in Appendix G. This submittal shall be accompanied by a certification from the Responsible Official indicating that "based on the information and belief formed after reasonable inquiry, the statements and information included in the submittal are true, accurate and complete".

This AOS cannot be used for permanent engine replacement of a grandfathered or permit exempt engine or an engine that is not subject to emission limits.

The permittee shall agree to pay fees based on the normal permit processing rate for review of information submitted to the Division in regard to any permanent engine replacement.

Table 1

Emission Point	Replacement Engine	Periodic Monitoring	Stack Test	MACT Status
S003	Exact replacement of engine and associated control device	See Footnote 1	No	Facility is an area source for purposes of the RICE MACT
S004	Exact replacement of engine and associated control device	See Footnote 2	No	
S005	Exact replacement of engine and associated control device	See Footnote 2	No	

[1] Monitoring is as specified in Section II.2 of this permit.

[2] Monitoring is as specified in Section II.3 or this permit

2.1.2 Portable Analyzer Testing

Note: In some cases there may be conflicting and/or duplicative testing requirements due to overlapping Applicable Requirements. In those instances, please contact the Division Field Services Unit to discuss streamlining the testing requirements.

Note that the testing required by this Condition may be used to satisfy the periodic testing requirements specified by the permit for the relevant time period (i.e. if the permit requires quarterly portable analyzer testing, this test conducted under the AOS will serve as the quarterly test and an additional portable analyzer test is not required for another three months).

The permittee may conduct a reference method test, in lieu of the portable analyzer test required by this Condition, if approved in advance by the Division.

The permittee shall measure nitrogen oxide (NO_X) and carbon monoxide (CO) emissions in the exhaust from the replacement engine using a portable flue gas analyzer *within seven (7) calendar days of commencing operation of the replacement engine*.

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 (tons/year) or short term (lbs/unit of time) 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.

For comparison with a short-term limit that is either input based (lb/MMBtu), output based (g/hp-hr) or concentration based (ppmvd @ 15% O_2) that the existing unit is currently subject to or the replacement engine will be subject to, the results of the test shall be converted to the appropriate units as described in the above-mentioned Portable Analyzer Monitoring Protocol document.

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.

2.1.3 Applicable Regulations for Permanent Engine Replacements

2.1.3.1 Reasonably Available Control Technology (RACT): Reg 3, Part B § II.D.2

All permanent replacement engines that are located in an area that is classified as attainment/maintenance or nonattainment must apply Reasonably Available Control Technology (RACT) for the pollutants for

which the area is attainment/maintenance or nonattainment. Note that both VOC and NO_X are precursors for ozone. RACT shall be applied for any level of emissions of the pollutant for which the area is in attainment/maintenance or nonattainment, except as follows:

In the Denver Metropolitan PM_{10} attainment/maintenance area, RACT applies to PM_{10} at any level of emissions and to NO_X and SO_2, as precursors to PM_{10}, if the potential to emit of NO_X or SO_2 exceeds 40 tons/yr.

For purposes of this AOS, the following shall be considered RACT for natural-gas fired reciprocating internal combustion engines:

VOC: The emission limitations in NSPS JJJJ
CO: The emission limitations in NSPS JJJJ
NO_X: The emission limitations in NSPS JJJJ
SO_2: Use of natural gas as fuel
PM_{10}: Use of natural gas as fuel

As defined in 40 CFR Part 60 Subparts GG (§ 60.331) and 40 CFR Part 72 (§ 72.2), natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet.

2.1.3.2 Control Requirements and Emission Standards: Regulation No. 7, Sections XVI. and XVII.E (State-Only conditions).

Control Requirements: Section XVI

Any permanent replacement engine located within the boundaries of an ozone nonattainment area is subject to the applicable control requirements specified in Regulation No. 7, section XVI, as specified below:

Rich burn engines with a manufacturer's design rate greater than 500 hp shall use a non-selective catalyst and air fuel controller to reduce emission.

Lean burn engines with a manufacturer's design rate greater than 500 hp shall use an oxidation catalyst to reduce emissions.

The above emission control equipment shall be appropriately sized for the engine and shall be operated and maintained according to manufacturer specifications.

The source shall submit copies of the relevant Applicability Reports required under Condition 2.1.1.2.

Emission Standards: Section XVII.E – State-only requirements

Any permanent engine that is either constructed or relocated to the state of Colorado from another state, after the date listed in the table below shall operate and maintain each engine according to the manufacturer's written instructions or procedures to the extent practicable and consistent with technological limitations and good engineering and maintenance practices over the entire life of the engine so that it achieves the emission standards required in the table below:

Max Engine HP	Construction or Relocation Date	Emission Standards in G/hp-hr		
		NO_X	CO	VOC
100<Hp<500	January 1, 2008	2.0	4.0	1.0
	January 1, 2011	1.0	2.0	0.7
500≤Hp	July 1, 2007	2.0	4.0	1.0
	July 1, 2010	1.0	2.0	0.7

The source shall submit copies of the relevant Applicability Reports required under Condition 2.1.1.2.

2.1.3.3 NSPS for spark ignition internal combustion engines: 40 CFR 60, Subpart JJJJ

A permanent replacement engine that is manufactured on or after 7/1/09 for emergency engines greater than 25 hp, 7/1/2008 for engines less than 500 hp, 7/1/2007 for engines greater than or equal to 500 hp except for lean burn engines greater than or equal to 500 hp and less than 1,350 hp, and 1/1/2008 for lean burn engines greater than or equal to 500 hp and less than 1,350 hp are subject 40 CFR 60, Subpart JJJJ. An analysis of applicable monitoring, recordkeeping, and reporting requirements for the permanent engine replacement shall be included in the Applicability Reports required under Condition 2.1.1.2. Any testing required by the NSPS is in addition to that required by this AOS. Note that the initial test required by NSPS Subpart JJJJ can serve as the testing required by this AOS under Condition 2.1.2, if approved in advance by the Division, provided that such test is conducted within the time frame specified in Condition 2.1.2.

Note that under the provisions of Regulation No. 6. Part B, section I.B. that Relocation of a source from outside of the State of Colorado into the State of Colorado is considered to be a new source, subject to the requirements of Regulation No. 6 (i.e., the date that the source is first relocated to Colorado becomes equivalent to the manufacture date for purposes of determining the applicability of NSPS JJJJ requirements).

However, as of November 1, 2008 the Division has not yet adopted NSPS JJJJ. Until such time as it does, any engine subject to NSPS will be subject only under Federal law. Once the Division adopts NSPS JJJJ,

there will be an additional step added to the determination of the NSPS. Under the provisions of Regulation No. 6, Part B, § I.B (which is referenced in Part A), any engine relocated from outside of the State of Colorado into the State of Colorado is considered to be a new source, subject to the requirements of NSPS JJJJ

2.1.3.4 Reciprocating internal combustion engine (RICE) MACT: 40 CFR Part 63, Subpart ZZZZ

a. Area Source for HAPs

A permanent replacement engine located at an area source that commenced construction or reconstruction after June 12, 2006 as defined in § 63.2, will meet the requirements of 40 CFR Part 63, Subpart ZZZZ by meeting the requirements of 40 CFR Part 60, Subpart JJJJ. An analysis of the applicable monitoring, recordkeeping, and reporting requirements for the permanent engine replacement shall be included in the Applicability Reports required under Condition 2.1.1.2. Any testing required by the MACT is in addition to that required by this AOS. Note that the initial test required by the MACT can serve as the testing required by this AOS under Condition 2.1.2, if approved in advance by the Division, provided that such test is conducted within the time frame specified in Condition 2.1.2

b. Major source for HAPs

A permanent replacement engine that is located at major source is subject to the requirements in 40 CFR Part 63 Subpart ZZZZ as follows:

Existing, new or reconstructed spark ignition 4 stroke rich burn engines with a site rating of more than 500 hp are subject to the requirements in 40 CFR Part 63 Subpart ZZZZ.

New or reconstructed (construction or reconstruction commenced after 12/19/02) 2 stroke and 4 stroke lean burn engines with a site rating of more than 500 hp are subject to the requirements in 40 CFR Part 63 Subpart ZZZZ.

New or reconstructed (construction or reconstruction commenced after 6/12/06) 4 stroke lean burn engines with a site rating of greater than or equal to 250 but less or equal to 500 hp and were manufactured on or after 1/1/08 are subject to the requirements in 40 CFR Part 63 Subpart ZZZZ.

New or reconstructed (construction or reconstruction commenced after 6/12/06) 2 stroke lean burn or 4 stroke rich burn engines with a site rating of 500 hp or less will meet the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart JJJJ.

New or reconstructed (construction or reconstruction commenced after 6/12/06) 4 stroke lean burn engines with a site rating of less than 250 hp will meet the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart JJJJ.

An analysis of the applicable monitoring, recordkeeping, and reporting requirements for the permanent engine replacement shall be included in the Applicability Reports required under Condition 2.1.1.2. Any testing required by the MACT is in addition to that required by this AOS. Note that the initial test required by the MACT can serve as the testing required by this AOS under Condition 2.1.2, if approved in advance by the Division, provided that such test is conducted within the time frame specified in Condition 2.1.2

2.1.4 Additional Sources

The replacement of an existing engine with a new engine is viewed by the Division as the installation of a new emissions unit, not "routine replacement" of an existing unit. The AOS is therefore essentially an advanced construction permit review. The AOS cannot be used for additional new emission points for any site; an engine that is being installed as an entirely new emission point and not as part of an AOS-approved replacement of an existing onsite engine has to go through the appropriate Construction/Operating permitting process prior to installation.

2.2 **Temporary and Permanent Turbine Replacement (8/23/06 version).** The following Alternative Operating Scenario (AOS) for temporary and permanent combustion turbine replacement and turbine component replacement has been reviewed in accordance with the requirements of Regulation No. 3., Part A, Section IV.A, Operational Flexibility-Alternative Operating Scenarios, and Regulation No. 3, Part B, Construction Permits, and Regulation No. 3, Part D, Major Stationary Source New Source Review and Prevention of Significant Deterioration and has been found to meet all applicable substantive and procedural requirements. This permit incorporates and shall be considered a Construction Permit for any combustion turbine replacement performed in accordance with this AOS, and the permittee shall be allowed to perform such turbine or turbine component replacement without applying for a revision to this permit or obtaining a new Construction Permit.

2.2.1 Routine Turbine Component Replacements

2.2.1.1 The following physical or operational changes to the turbines in this permit are not considered a modification for purposes of NSPS GG, NSR/PSD, or Regulation No. 3:

a. Replacement of stator blades, turbine nozzles, turbine buckets, fuel nozzles, combustion chambers, seals, and shaft packings, provided that they are of the same design as the original.

b. Changes in the type or grade of fuel used, if the original gas turbine installation, fuel nozzles, etc. were designed for its use.

c. An increase in the hours of operation (unless limited by a permit condition).

d. Variations in operating loads within the engine design specification.

e. Any physical change constituting routine maintenance, repair, or replacement.

2.2.1.2 Turbines undergoing any of the above changes are subject to all federally applicable and state-only requirements set forth in this permit (including monitoring and record keeping), and shall be subject to any shield afforded by this permit. If replacement of any of the components listed in Condition 2.2.1.1.a or e above results in a change in serial number for the turbine, a letter explaining the action as well as a revised APEN and appropriate filing fee shall be submitted to the Division within 30 days of the replacement.

2.2.1.3 Note that the repair or replacement of components must be of genuinely the same design. Except in accordance with the Alternate Operating Scenario set forth below, the Division does not consider that this allows for the entire replacement (or reconstruction) of an existing turbine with an identical new one or one similar in design or function. Rather, the Division considers the repair or replacements to encompass the repair or replacement of components at a turbine with the same (or functionally similar) components.

2.2.2 Turbine Replacement

The following AOS is incorporated into this permit in order to deal with a turbine breakdown or periodic routine maintenance and repair of an existing onsite turbine that requires the use of a replacement turbine. “Temporary” is defined as in the same service for 90 operating days or less in any 12 month period. The 90 days is the total number of days that the turbine is in operation. If the turbine operates only part of a day, that day counts towards the 90 day total. Note that the compliance demonstrations made as part of this AOS are in addition to any compliance demonstrations required by this permit.

All replacement turbines are subject to all federally applicable and state-only requirements set forth in this permit (including monitoring and record keeping), and shall be subject to any shield afforded by this permit.

Results of all tests and the associated calculations pursuant required by this AOS shall be submitted to the Division within 30 calendar days of the test. Results of all tests shall be kept on site for five (5) years and made available to the Division upon request.

The permittee shall maintain a log on-site to contemporaneously record the start and stop date of any turbine replacement, the manufacturer, model number, horsepower, and serial number of the turbine(s) that are replaced during the term of this permit, and the manufacturer, model number, horsepower, and serial number of the replacement turbine.

2.2.3 The permittee may **temporarily** replace an existing permitted turbine provided such replacement turbines are Solar Taurus Model No. 60 combustion turbines without modifying this permit**,** so long as the emissions from the temporary replacement turbine comply with the emission limitations for the existing permitted turbine as determined in Condition 2.2.5. Measurement of emissions from the temporary replacement turbine shall be made as set forth in Condition 2.2.5.

The permittee may *temporarily* replace a grandfathered turbine or a turbine that is not subject to emission limits without modifying this permit. In this circumstance, potential annual emissions of NO_X and CO from the temporary replacement turbine must be less than or equal to the potential annual emissions of NO_X and CO from the original grandfathered turbine or for the turbine that is not subject to emission limits, as determined by applying appropriate emission factors (e.g. AP-42 or manufacturer's emission factors).

2.2.4 The permittee may **permanently** replace the existing permitted combustion turbine provided such replacement turbines are Solar Taurus Model No. 60 combustion turbines without modifying this permit so long as the emissions from the permanent replacement turbine comply with the emission limitations for the existing permitted turbine as determined in Condition 2.2.5.

An Air Pollutant Emissions Notice (APEN) that includes the specific manufacturer, model, and serial number of the permanent replacement turbine shall be filed with the Division for the permanent replacement turbine within 14 calendar days of commencing operation of the replacement turbine. The APEN shall be accompanied by the appropriate APEN filing fee and a cover letter explaining that the permittee is exercising an alternative operating scenario and is installing a permanent replacement turbine.

This AOS cannot be used for permanent turbine replacement of a grandfathered turbine or a turbine that is not subject to emission limits.

The permittee shall agree to pay fees based on the normal permit processing rate for review of information submitted to the Division in regard to any permanent turbine replacement.

2.2.5 Portable Analyzer Testing

The permittee shall measure nitrogen oxide (NO_X) and carbon monoxide (CO) emissions in the exhaust from the replacement turbine using a portable flue gas analyzer *within seven (7) calendar days of commencing operation of the replacement engine*.

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 turbine 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 turbine 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 turbine is taken offline.

2.2.6 Additional Sources

The replacement of an existing turbine with a new turbine is viewed by the Division as the installation of a new emissions unit, not "routine replacement" of an existing unit. The AOS is therefore essentially an advanced construction permit review. The AOS cannot be used for additional new emission points for any site; a turbine that is being installed as an entirely new emission point and not as part of an AOS-approved replacement of an existing onsite turbine must go through the appropriate Construction/Operating permitting process prior to installation.

3. Prevention of Significant Deterioration (PSD)

3.1 Based on the information provided by the applicant, this source is not categorized as a PSD major stationary source as of the issue date of this permit. Any future modification at this facility which is major by itself (i.e. Potential to Emit of $\geq$ 250 tons/year) for any pollutant listed in Regulation No. 3, Part D, Section II.A.42 for which the area is in attainment or attainment/maintenance may result in the application of the PSD review requirements.

In addition, future modifications at this facility may result in the facility being classified as a major stationary source for PSD. Once that threshold is exceeded, future modifications at this facility resulting in a significant net emissions increase (see 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 for which the area is in attainment or attainment/maintenance may result in the application of the PSD review requirements.

3.2 There are no other Operating Permits associated with this facility for purposes of determining applicability of PSD review regulations.

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

4.1 Based on the information provided by the applicant, this facility is not 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:

Pre-controlled CO emissions from the Caterpillar G3616 engines are above the major source level and pre-controlled formaldehyde emissions from the Caterpillar G3616 and G3612 engines are above the major source level. The control devices on the Caterpillar G3616 and G3612 engines are used to meet their CO and HAP emission limitations, therefore CAM applies to these engines. However, since controlled CO and HAP emissions from the Caterpillar G3616 and G3612 engines are below the major source level, CAM does not apply until the renewal of this permit.

6. Summary of Emission Units

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

Facility Identifier	AIRS Stack Number	Description	Startup Date	Pollution Control Device
S001/ ST60-1	001	Solar Taurus Natural Gas Fired Turbine, Model No. 60, Serial No. 1669T. The turbine is rated at 54.03 MMBtu/hr (LHV at 100% load and 20 ºF). Turbine Drives a Compressor.	December 2007	$SoLoNO_X$ Combustion Technology
S002/ ST60-2	002	Solar Taurus Natural Gas Fired Turbine, Model No. 60, Serial No. 1668T. The turbine is rated at 54.03 MMBtu/hr (LHV at 100% load and 20 ºF). Turbine Drives a Compressor.	December 2007	$SoLoNO_X$ Combustion Technology
S003/ CATG3612	003	Caterpillar, Model No. G3612, 4-Cycle Lean Burn Internal Combustion Engine, Rated at 3,550 hp (nameplate) and 27.2 MMBtu/hr, Serial No. BKE00310. Natural Gas Fired. Engine Drives a Compressor.	December 2007	Oxidation Catalyst
S004/ CATG3616A	004	Caterpillar, Model No. G3616, 4-Cycle Lean Burn Internal Combustion Engine, Rated at 4,735 hp (nameplate) and 36.5 MMBtu/hr, Serial No. BLB00328. Natural Gas Fired. Engine Drives a Compressor.	December 2007	Oxidation Catalyst
S005/ CATG3616B	005	Caterpillar, Model No. G3616, 4-Cycle Lean Burn Internal Combustion Engine, Rated at 4,735 hp (nameplate) and 36.5 MMBtu/hr, Serial No. BLB00326. Natural Gas Fired. Engine Drives a Compressor.	December 2007	Oxidation Catalyst
S007 &S008	010	Emissions from Blowdown Events from Testing of Emergency Shutdown Device and Maintenance and Other Shutdowns of Compressors (Turbines and Engines).	December 2007	Uncontrolled

SECTION II - Specific Permit Terms

1. S001 & S002 – Solar Taurus, Model No. 60 Combustion Turbines, Each Rated at 54.03 MMBtu/hr

Unless Otherwise Specified, Limitations Apply to <u>Each</u> Turbine

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
PM	1.1	0.177 lb/MMBtu		N/A	Fuel Restriction	Only Natural Gas is Used as Fuel
SO_2	1.2.	0.060 lb/MMBtu		N/A	See Condition 1.2.	
		N/A	3.6 tons/yr	0.0150 lb/MMBtu		
VOC	1.3.	N/A	8.3 tons/yr	0.035 lb/MMBtu	Recordkeeping and Calculation	Monthly
NO_X	1.4	25 ppm @ 15% O_2		N/A	Performance Tests	Annually/Once Every 2 Years (See Condition 1.4.3)
		N/A	14.2 tons/yr	0.060 lb/MMBtu	Portable Monitoring	Quarterly
					Recordkeeping and Calculation	Monthly
CO	1.5.	N/A	14.4 tons/yr	0.061 lb/MMBtu	Recordkeeping and Calculation	Monthly
					Portable Monitoring	Quarterly
HAP Emissions	1.6.	**For Each Turbine:** Formaldehyde 0.20 tons/yr **Facility Wide Limits:** Formaldehyde: 9.5 tons/yr Other Individual HAP: < 8 tons/yr Total HAPs: < 20 tons/yr		AP-42, Section 3.1 (dated 4/00), Table 1.3-1.	Recordkeeping and Calculation	Monthly
Natural Gas Use	1.7.	N/A	498.21 MMscf/yr	N/A	Fuel Meter and Calculation	Monthly
Btu Content of Natural Gas	1.8.	N/A	N/A	N/A	ASTM Methods	Semi-Annually
Hours of Operation	1.9.	N/A	N/A	N/A	Recordkeeping	Monthly
NSPS Subpart KKKK General Requirements	1.10.	N/A	N/A	N/A	See Condition 1.10.	
NSPS General Provisions	1.11.	N/A	N/A	N/A	See Condition 1.11.	

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
Opacity	1.12.	Not to Exceed 20% Except as Provided for Below		N/A	Fuel Restriction	Only Natural Gas is Used as Fuel
		For Startup - Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes				

1.1 Particulate Matter (PM) emissions **from each turbine** shall not exceed the above limitations (Colorado Regulation No. 1, Section III.A.1.b). In the absence of credible evidence to the contrary, compliance with the particulate matter emission limit is presumed since only natural gas is permitted to be used as fuel in these turbines.

The numeric PM standard was determined using the design heat input of each turbine (54.03 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

1.2 Sulfur Dioxide (SO_2) emissions shall not exceed the following limitations:

1.2.1 You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input. (40 CFR Part 60 Subpart KKKK § 60.4330(a)(2)) Compliance with the fuel sulfur limit shall be monitored in accordance with the requirements in 40 CFR Part 60 Subpart KKKK § 60.4365(a).

1.2.2 SO_2 emissions **from each turbine** shall not exceed the annual emission limitation stated above (Colorado Construction Permits 06RB0564 and 06RB0565, as modified under the provisions of Section I, Condition 1.3 to remove the monthly limits and to increase annual limits as indicated on the APEN submitted August 17, 2010). Monthly emissions **from each turbine** shall be calculated by the end of the subsequent month using the above emission factor (based on FERC Tariff restriction on fuel sulfur content of natural gas (5 gr/100scf) and an assumed heat content of 950 Btu/scf), the monthly natural gas consumption (as required by Condition 1.7) and the Btu content of the natural gas (as required by Condition 1.8) in the equation below:

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

Monthly emissions **from each turbine** 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.

1.3 VOC emissions **from each turbine** shall not exceed the annual emission limitation stated above (Colorado Construction Permits 06RB0564 and 06RB0565, as modified under the provisions of Section I, Condition 1.3 to remove the monthly limits and to increase annual limits as indicated on the APEN submitted August 17, 2010). Monthly emissions **from each turbine** shall be calculated by the end of the subsequent month using the above emission factor (from manufacturer's data, at 100% load and 20 ºF), the monthly natural gas consumption (as required by Condition 1.7) and the Btu content of the natural gas (as required by Condition 1.8) in the equation below:

$$\text{tons/mo} = \frac{[\text{EF (lbs/MMBtu) x natural gas usage (MMscf/mo) x heat content of fuel (MMBtu/MMscf)}]}{\text{2000 lbs/ton}}$$

Monthly emissions **from each turbine** 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.

1.4 NO_X emissions shall not exceed the following limitations:

1.4.1 NO_X emissions shall not exceed 25 ppm at 15 % O_2 (40 CFR Part 60 Subpart KKKK § 60.4320(a)).

1.4.2 NO_X emissions **from each turbine** shall not exceed the annual emission limitation stated above (Colorado Construction Permits 06RB0564 and 06RB0565, as modified under the provisions of Section I, Condition 1.3 to remove the monthly limits and to increase annual limits as indicated on the APEN submitted August 17, 2010).

Compliance with the NO_X limits shall be monitored as follows:

1.4.3 If you are not using water or steam injection to control NO_X emissions, you must perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NO_X emission result from the performance test is less than or equal to 75 percent of the NO_X emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_X emission limit for the turbine, you must resume annual performance tests. (40 CFR Part 60 Subpart KKKK § 60.4340(a))

Performance tests shall be conducted in accordance with the requirement sin 40 CFR Part 60 Subpart KKKK §§ 60.4400(a) and (b)

A stack testing protocol shall be submitted for Division approval at least thirty (30) calendar days prior to performance of the test required under this condition. No stack test required herein shall be performed without prior written approval of the protocol by the Division. The Division reserves the right to witness the test. In order to facilitate the Division's ability to make plans to witness the test, notice of the date (s)

for the stack test shall be submitted to the Division at least thirty (30) calendar days prior to the test. The Division may for good cause shown, waive this thirty (30) day notice requirement. In instances when a scheduling conflict is presented, the Division shall immediately contact the permittee in order to explore the possibility of making modifications to the stack test schedule. The required number of copies of the compliance test results shall be submitted to the Division within forty-five (45) calendar days of the completion of the test unless a longer period (not to exceed 60 days) is approved by the Division.

1.4.4 Portable monitoring shall be conducted as quarterly as specified in Condition 6.

1.4.5 Except as provided below, the emission factors listed above (from manufacturer's data, at 100% load and 20 ºF) have been approved by the Division and shall be used to calculate emissions from these turbines.

Monthly emissions **from each turbine** shall be calculated by the end of the subsequent month using the above emission factors, the natural gas consumption (as required by Condition 1.7) and the Btu content of the natural gas (as required by Condition 1.8) in the following equation:

$$\text{tons/mo} = \frac{\text{EF (lbs/MMBtu) x fuel use (MMSCF/mo) x Btu content of gas (MMBtu/mo)}}{\text{2000 lbs/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. 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 1.4.4 show that the NO_X 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**.**

1.5 CO emissions **from each turbine** shall not exceed the annual emission limitation stated above (Colorado Construction Permits 06RB0564 and 06RB0565, as modified under the provisions of Section I, Condition 1.3 to remove the monthly limits and to increase annual limits as indicated on the APEN submitted August 17, 2010). Compliance with the CO emission limitations shall be monitored as follows:

1.5.1 Portable monitoring shall be conducted quarterly as required by Condition 6.

1.5.2 Except as provided below, the emission factors listed above (from manufacturer's data, at 100% load and 20 ºF) have been approved by the Division and shall be used to calculate emissions from these turbines.

Monthly emissions **from each turbine** shall be calculated by the end of the subsequent month using the above emission factors, the natural gas consumption (as required by Condition 1.7) and the Btu content of the natural gas (as required by Condition 1.8) in the following equation:

$$\text{tons/mo} = \text{EF}\ \frac{\text{(lbs/MMBtu) x fuel use (MMSCF/mo) x Btu content of gas (MMBtu/mo)}}{\text{2000 lbs/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. 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 1.5.1 show that the 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**.**

1.6 Hazardous Air Pollutant (HAP) emissions are subject to the following requirements:

1.6.1 Formaldehyde emissions **from each turbine** shall not exceed the above annual limitations (Colorado Construction Permits 06RB0564 and 06RB0565, as modified under the provisions of Section I, Condition 1.3 to remove the monthly limits). Monthly emissions **from each turbine** shall be calculated by the end of the subsequent month using the AP-42 emission factor for formaldehyde (AP-42, Section 3.1, dated 4/00, table 3.1-3), the monthly natural gas consumption (as required by Condition 1.7) and the Btu content of the natural gas (as required by Condition 1.8) in the equation below:

$$\text{tons/mo} = \text{EF}\ \frac{\text{(lbs/MMBtu) x fuel use (MMscf/mo) x Btu content of gas (MMBtu/mo)}}{\text{2000 lbs/ton}}$$

Monthly emissions 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.

1.6.2 **Facility wide emissions** shall not exceed the following limitations (Colorado Construction Permits 06RB0564 and 06RB0565, as modified under the provisions of Section I, Condition 1.3 to revise the facility wide formaldehyde limit):

1.6.2.1 Formaldehdyde emissions shall not exceed 9.5 tons/yr.

1.6.2.2 Single HAP emissions, other than formaldehyde, shall be less than 8 tons/yr.

1.6.2.3 Combined HAP emissions shall be less than 20 tons/yr.

Compliance with the facility wide HAPs limits shall be monitored by calculating monthly emissions of individual HAP by the end of the subsequent month, as follows:

Formaldehyde emissions **from each turbine** shall be calculated as specified in Condition 1.6.1.

Emissions of other individual HAPs **from each turbine** shall be calculated using AP-42 emission factors (AP-42, Section 3.1, dated 4/00, table 3.1-3), the monthly natural gas consumption (as required by Condition 1.7) and the Btu content of the natural gas (as required by Condition 1.8) in the equation below:

$$\text{tons/mo} = \text{EF}\ \frac{\text{(lbs/MMBtu) x fuel use (MMSCF/mo) x Btu content of gas (MMBtu/mo)}}{\text{2000 lbs/ton}}$$

Monthly individual HAP emissions **from each turbine** will be summed together to determine monthly total HAP emissions.

Monthly HAP (formaldehyde, other individual HAP, total HAP) emissions **from each turbine** shall be used in a twelve month rolling total of facility wide emissions as specified in Condition 5.1.

1.7 Natural gas consumption from each turbine shall not exceed the above limitation (Colorado Construction Permits 06RB0564 and 06RB0565, as modified under the provisions of Section I, Condition 1.3 to remove the monthly limits). 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 turbine will be based on the turbine 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 turbine** 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.

1.8 The Btu content of the natural gas used to fuel these turbines shall be verified semi-annually using the appropriate ASTM Methods or equivalent, if approved in advance by the Division. The Btu content of the natural gas shall be based on the lower heating value of the fuel. Calculation of monthly emissions shall be made using the heat content derived from the most recent required analysis.

1.9 Hours of Operation **for each turbine** will be monitored monthly and recorded and maintained to be available to the Division on request. Hours of operation shall be used to allocate natural gas use as indicated in Condition 1.7.

1.10 You must operate and maintain your stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. (40 CFR Part 60 Subpart KKKK § 60.4333(a))

1.11 **Each turbine** is subject to the NSPS Subpart A, General Provisions requirements (Colorado Regulation No. 6, Part A, Federal 40 CFR 60.1 through 60.19). Specifically, these units are subject to the following:

1.11.1 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 § 60.12)

1.11.2 Records of startups, shutdowns, and malfunctions shall be maintained, as required under 40 CFR § 60.7.

1.11.3 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 Administrator 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 § 60.11(d)).

1.12 **Each turbine** is subject to the following opacity requirements:

1.12.1 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).

1.12.2 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from start-up which is in excess of 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

In the absence of credible evidence to the contrary, compliance with the above opacity requirements shall be presumed since only natural gas is permitted to be used as fuel for these turbines.

2. S003 – Caterpillar, Model No. 3612 Internal Combustion Engine, Rated at 3550 hp

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
NO_X	2.1.	N/A	24.0	0.20 lb/MMBtu	Recordkeeping and Calculation	Monthly
CO		N/A	6.0	5.40×10^{-2} lb/MMBtu	Portable Monitoring	Quarterly
VOC	2.2.	N/A	9.5	7.66×10^{-2} lb/MMBtu	Recordkeeping and Calculation	Monthly
Natural Gas Use	2.3.	N/A	250.52 MMscf/yr	N/A	Fuel Meter and Calculation	Monthly
Hours of Operation	2.4.	N/A	N/A	N/A	Recordkeeping	Monthly
Btu Content of Natural Gas	2.5.	N/A	N/A	N/A	ASTM Methods	Semi-Annually
HAP Emissions	2.6.	**For this Engine:** Formaldehyde 2.5 tons/yr		Formaldehyde: 2.07×10^{-2} lb/MMBtu	Recordkeeping and Calculation Portable Monitoring	Monthly Semi-Annually
		Facility Wide Limits: Formaldehyde: 9.5 tons/yr Other Individual HAP: < 8 tons/yr Total HAPs: < 20 tons/yr		Other HAPs: AP-42, Section 3.2 (dated 7/00), Table 3.2-2	Recordkeeping and Calculation	Monthly
Control Device Requirements	2.7.	N/A	N/A	N/A	See Condition 2.7.	
Oxygen Concentration in Engine Exhaust	2.8.	N/A	N/A	N/A	Portable Analyzer	Quarterly
MACT Subpart ZZZZ*	2.9.	Compliance with MACT met by complying with NSPS Subpart JJJJ		N/A	See Condition 2.9.	
Opacity	2.10.	Not to Exceed 20% Except as Provided for Below		N/A	Fuel Restriction	Only Natural Gas is Used as Fuel
		For Startup - Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes				

*Note that as of the issuance date of this permit [January 1, 2011], the provisions in 40 CFR Part 60 Subpart JJJJ and 40 CFR Part 63 Subpart ZZZZ (those provisions published in the January 18, 2008 Federal Register) have not been adopted in Colorado Regulation No. 6, Part A and Colorado Regulation No. 8, Part E

2.1 Emissions of Nitrogen Oxides and Carbon Monoxide shall not exceed the limitations stated above (Colorado Construction Permit 06RB0566, as modified under the provisions of Section I, Condition 1.3, to remove the monthly limits). Compliance with the emission limitations shall be monitored as follows:

2.1.1 Except as provided below, the emission factors listed above (from manufacturer, at max. load (in units of g/hp-hr), converted to lbs/MMBtu based on an engine heat rate of 7,653 Btu/hp-hr and an assumed control efficiency of 93% for CO) have been approved by the Division and shall be used to calculate emissions from these engines.

Monthly emissions shall be calculated by the end of the subsequent month using the above emission factor, the natural gas consumption (as required by Condition 2.3) and the Btu content of the natural gas (as required by Condition 2.5) in the equation below

$$\text{tons/mo} = \frac{[\text{EF (lbs/MMBtu) x fuel use (MMscf/year) x heat content of fuel (MMBtu/MMscf)}]}{\text{2000 lbs/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. 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 as required by Condition 6.

2.2 VOC emissions shall not exceed the annual emission limitation stated above (Colorado Construction Permit 06RB0566, as modified under the provisions of Section I, Condition 1.3 to remove the monthly limits). Monthly emissions shall be calculated by the end of the subsequent month using the above emission factor (from manufacturer, at 59% of site rated load (in units of g/hp-hr), converted to lbs/MMBtu based on an engine heat rate of 7,653 Btu/hp-hr and an assumed control efficiency of 80%), the monthly natural gas consumption (as required by Condition 2.3) and the Btu content of the natural gas (as required by Condition 2.5) in the equation below:

$$\text{tons/mo} = \frac{[\text{EF (lbs/MMBtu) x fuel use (MMscf/year) x heat content of fuel (MMBtu/MMscf)}]}{\text{2000 lbs/ton}}$$

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

2.3 Natural gas consumption from this engine shall not exceed the above limitation (Colorado Construction Permit 06RB0566, as modified under the provisions of Section I, Condition 1.3 to remove the monthly limits). 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 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.

2.4 Hours of Operation will be monitored monthly and recorded and maintained to be available to the Division on request. Hours of operation shall be used to allocate natural gas use as indicated in Condition 2.3.

2.5 The Btu content of the natural gas used to fuel this engine shall be verified semi-annually using the appropriate ASTM Methods or equivalent, if approved in advance by the Division. The Btu content of the natural gas shall be based on the lower heating value of the fuel. Calculation of monthly emissions shall be made using the heat content derived from the most recent required analysis.

2.6 Hazardous Air Pollutant (HAP) emissions are subject to the following requirements:

2.6.1 Formaldehyde emissions from this engine shall not exceed the above annual limitations (Colorado Construction Permit 06RB0566, as modified under the provisions of Section I, Condition 1.3 to remove the monthly limits). Compliance with the formaldehyde emissions shall be monitored as follows:

2.6.1.1 Monthly emissions from this engine shall be calculated by the end of the subsequent month using the above emission factor (from manufacturer at 59% of site rated load, converted to lbs/MMBtu based on an engine heat rate of 7,653 Btu/hp-hr and an assumed control efficiency of 85%), the monthly natural gas consumption (as required by Condition 2.3) and the Btu content of the natural gas (as required by Condition 2.5) in the equation below:

$$\text{tons/mo} = \frac{\text{EF (lbs/MMBtu) x fuel use (MMscf/mo) x Btu content of gas (MMBtu/mo)}}{\text{2000 lbs/ton}}$$

Monthly emissions 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.

2.6.1.2 Portable Monitoring shall be conducted semi-annually to verify that the percent reduction of CO emissions is no less than 93%. Portable monitoring shall be conducted in accordance with the requirements in Condition 6 to determine the inlet and outlet CO emission rate. Inlet and outlet CO values shall be used to determine the percent reduction.

2.6.2 **Facility wide emissions** shall not exceed the following limitations (Colorado Construction Permit 06RB0566, as modified under the provisions of Section I, Condition 1.3 to revise the facility wide formaldehyde limit):

2.6.2.1 Formaldehdyde emissions shall not exceed 9.5 tons/yr.

2.6.2.2 Single HAP emissions, other than formaldehyde, shall be less than 8 tons/yr.

2.6.2.3 Combined HAP emissions shall be less than 20 tons/yr.

Compliance with the facility wide HAPs limits shall be monitored by calculating monthly emissions by the end of the subsequent month, as follows:

Formaldehyde emissions from the engine shall be calculated as specified in condition 2.5.1.1.

Emissions from other individual HAPs shall be calculated using AP-42 emission factors (AP-42, Section 3.1, dated 4/00, table 3.1-3), the monthly natural gas consumption (as required by Condition 2.3) and the Btu content of the natural gas (as required by Condition 2.5) in the equation below:

$$\text{tons/mo} = \text{EF}\ \frac{\text{(lbs/MMBtu) x fuel use (MMSCF/mo) x Btu content of gas (MMBtu/mo)}}{\text{2000 lbs/ton}}$$

Monthly individual HAP emissions from the engine will be summed together to determine monthly total HAP emissions.

Monthly HAP (formaldehyde, other single HAP and total HAP) emissions shall be used in a twelve month rolling total of facility wide emissions as specified in Condition 5.1.

2.7 Emissions of CO, VOC and formaldehyde emissions from this engine shall be controlled by an oxidation catalyst. The engines and oxidation catalyst are subject to the following requirements:

2.7.1 This engine will be operated and maintained in accordance with good engineering practices. Manufacturer's recommendations or company written maintenance procedures shall be maintained and made available to the Division upon request. Maintenance shall be conducted in accordance with manufacturer's recommendations and records of routine maintenance activities shall be retained. A copy of the operation and maintenance procedures, schedules for maintenance activities and the records of routine maintenance shall be made available to the Division upon request.

2.7.2 The oxidation catalyst shall be operated and maintained as follows:

2.7.2.1 The oxidation catalyst shall be operated and maintained in accordance with good engineering practices. Manufacturer's recommendations or company written maintenance procedures shall be maintained and made

available to the Division upon request.

2.7.2.2 The source shall clean, recondition and replace the catalyst in accordance with the manufacturer's and/or packager's recommendations. Records of the catalyst cleaning, reconditioning or replacement shall be documented and made available to the Division upon request.

2.7.2.3 Maintenance and/or inspections shall be conducted in accordance with the manufacturer's and/or packager's recommendations and records of routine maintenance and/or inspections shall be retained. A copy of the operation and maintenance procedures, schedules for maintenance and/or inspection activities and the records of routine maintenance and/or inspections shall be made available to the Division upon request.

2.7.2.4 If maintenance activities or actions are dependent upon hours of operation, then engine operating hours shall be recorded and made available to the Division upon request.

2.7.3 Parameters associated with the oxidation catalyst shall be monitored as follows:

2.7.3.1 The pressure drop across the oxidation catalyst shall be monitored and recorded monthly.

2.7.3.2 The inlet temperature to the oxidation catalyst system shall be monitored and recorded daily and kept between 450 and 1350 º F.

If the engine is not operated during a day (or calendar month), recording of the above parameters is not necessary. When portable monitoring is scheduled, the above parameters shall be recorded during the portable monitoring event.

2.8 The oxygen concentration in the engine exhaust gas shall be measured and recorded for this engine during each portable monitoring event required by Condition 2.1.2. During portable monitoring events to determine the inlet and outlet CO emissions (as required by Condition 2.6.1.2), the inlet and outlet oxygen concentration shall be measured and recorded.

2.9 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 follows:

Note that as of the date of revised permit issuance [January 1, 2011], the requirements in 40 CFR Part 63 Subpart ZZZZ (those provisions published in the January 18, 2008 Federal Register) have not been adopted into Colorado Regulation No. 8, Part E by the Division and are therefore not state-enforceable. In the event that the Division adopts these requirements, these requirements will become both state and federally enforceable.

An affected source that is a new or reconstructed stationary RICE located at an area source must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart JJJJ. No further requirements apply for such engines under this part. (§ 63.6590(c))

Note that although this engine is not subject to the requirements in NSPS Subpart JJJJ (engine ordered prior to June 12, 2006 and manufactured prior to July 1, 2007), no further requirements apply under MACT Subpart ZZZZ.

2.10 This engine is subject to the following opacity requirements:

2.10.1 Except as provided for in Condition 2.10.2, 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).

2.10.2 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from start-up which is in excess of 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

In the absence of credible evidence to the contrary, compliance with the above opacity requirements shall be presumed since only natural gas is permitted to be used as fuel for this engine.

3. S004 & S005 – Caterpillar, Model No. 3616, Internal Combustion Engines, Each Rated at 4,735 hp

Unless Otherwise Specified, Limitations Apply to <u>Each</u> Engine

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
NO_X	3.1.	N/A	32.0	0.20 lb/MMBtu	Recordkeeping and Calculation	Monthly
CO		N/A	8.0	5.40×10^{-2} lb/MMBtu	Portable Monitoring	Quarterly
VOC	3.2.	N/A	12.5	7.66×10^{-2} lb/MMBtu	Recordkeeping and Calculation	Monthly
Natural Gas Use	3.3.	N/A	336.1 MMscf/yr	N/A	Fuel Meter and Calculation	Monthly
Hours of Operation	3.4.	N/A	N/A	N/A	Recordkeeping	Monthly
Btu Content of Natural Gas	3.5.	N/A	N/A	N/A	ASTM Methods	Semi-Annually
HAP Emissions	3.5.	**For each Engine:** Formaldehyde 3.3 tons/yr		Formaldehyde: 2.07×10^{-2} lb/MMBtu	Recordkeeping and Calculation	Monthly
					Portable Monitoring	Semi-Annually
		Facility Wide Limits: Formaldehyde: 9.5 tons/yr Other Individual HAP: < 8 tons/yr Total HAPs: < 20 tons/yr		Other HAPs: AP-42, Section 3.2 (dated 7/00), Table 3.2-2	Recordkeeping and Calculation	Monthly
Control Device Requirements	3.7.	N/A	N/A	N/A	See Condition 3.7.	
Oxygen Concentration in Engine Exhaust	3.8.	N/A	N/A	N/A	Portable Analyzer	Quarterly
MACT Subpart ZZZZ*	3.9.	Compliance with MACT met by complying with NSPS Subpart JJJJ		N/A	See Condition 3.9.	
Opacity	3.10.	Not to Exceed 20% Except as Provided for Below		N/A	Fuel Restriction	Only Natural Gas is Used as Fuel
		For Startup - Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes				

*Note that as of the issuance date of this permit [January 1, 2011], the provisions in 40 CFR Part 60 Subpart JJJJ and 40 CFR Part 63 Subpart ZZZZ (those provisions published in the January 18, 2008 Federal Register) have not been adopted in Colorado Regulation No. 6, Part A and Colorado Regulation No. 8, Part E

3.1 Emissions of Nitrogen Oxides and Carbon Monoxide **from each engine** shall not exceed the limitations stated above (Colorado Construction Permits 06RB0567 and 06RB0568, as modified under the provisions of Section I, Condition 1.3, to remove the monthly limits). Compliance with the emission limitations shall be monitored as follows:

3.1.1 Except as provided below, the emission factors listed above (from manufacturer, at max. load, (in units of g/hp-hr), converted to lbs/MMBtu based on an engine heat rate of 7,697 Btu/hp-hr and an assumed control efficiency of 93% for CO) have been approved by the Division and shall be used to calculate emissions from these engines.

Monthly emissions **from each engine** shall be calculated by the end of the subsequent month using the above emission factor, the natural gas consumption (as required by Condition 3.3) and the Btu content of the natural gas (as required by Condition 3.5) in the equation below

$$\text{tons/mo} = \frac{[\text{EF (lbs/MMBtu) x fuel use (MMscf/year) x heat content of fuel (MMBtu/MMscf)}]}{2000 \text{ lbs/ton}}$$

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. 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 as required by Condition 6.

3.2 VOC emissions shall not exceed the annual emission limitation stated above (Colorado Construction Permits 06RB0567 and 06RB0568, as modified under the provisions of Section I, Condition 1.3 to remove the monthly limits). Monthly emissions shall be calculated by the end of the subsequent month using the above emission factor (from manufacturer, at 59% of site rated load (in units of g/hp-hr), converted to lbs/MMBtu based on an engine heat rate of 7,697 Btu/hp-hr and an assumed control efficiency of 80%), the monthly natural gas consumption (as required by Condition 3.3) and the Btu content of the natural gas (as required by Condition 3.5) in the equation below:

$$\text{tons/mo} = \frac{[\text{EF (lbs/MMBtu) x fuel use (MMscf/year) x heat content of fuel (MMBtu/MMscf)}]}{2000 \text{ lbs/ton}}$$

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

3.3 Natural gas consumption **from each engine** shall not exceed the above limitation (Colorado Construction Permits 06RB0567 and 06RB0568, as modified under the provisions of Section I, Condition 1.3 to remove the monthly limits). 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 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.

3.4 Hours of Operation **for each engine** will be monitored monthly and recorded and maintained to be available to the Division on request. Hours of operation shall be used to allocate natural gas use as indicated in Condition 3.3.

3.5 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. The Btu content of the natural gas shall be based on the lower heating value of the fuel. Calculation of monthly emissions shall be made using the heat content derived from the most recent required analysis.

3.6 Hazardous Air Pollutant (HAP) emissions are subject to the following requirements:

3.6.1 Formaldehyde emissions **from each engine** shall not exceed the above annual limitations (Colorado Construction Permits 06RB0567 and 06RB0568, as modified under the provisions of Section I, Condition 1.3 to remove the monthly limits). Compliance with the formaldehyde emissions shall be monitored as follows:

3.6.1.1 Monthly emissions **from each engine** shall be calculated by the end of the subsequent month using the above emission factor (from manufacturer at 59% of site rated load, converted to lbs/MMBtu based on an engine heat rate of 7,697 Btu/hp-hr and an assumed control efficiency of 85%), the monthly natural gas consumption (as required by Condition 3.3) and the Btu content of the natural gas (as required by Condition 3.5) in the equation below:

$$\text{tons/mo} = \frac{\text{EF (lbs/MMBtu) x fuel use (MMscf/mo) x Btu content of gas (MMBtu/mo)}}{\text{2000 lbs/ton}}$$

Monthly emissions 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.

3.6.1.2 Portable Monitoring shall be conducted semi-annually to verify that the percent reduction of CO emissions is no less than 93%. Portable monitoring shall be conducted in accordance with the requirements in Condition 6 to determine the inlet and outlet CO emission rate. Inlet and outlet CO values shall be used to determine the percent reduction.

3.6.2 **Facility wide emissions** shall not exceed the following limitations (Colorado Construction Permits 06RB0567 and 06RB0568, as modified under the provisions of Section I, Condition 1.3 to revise the facility wide formaldehyde limit):

3.6.2.1 Formaldehdyde emissions shall not exceed 9.5 tons/yr.

3.6.2.2 Single HAP emissions, other than formaldehyde, shall be less than 8 tons/yr.

3.6.2.3 Combined HAP emissions shall be less than 20 tons/yr.

Compliance with the facility wide HAPs limits shall be monitored by calculating monthly emissions by the end of the subsequent month, as follows:

Formaldehyde emissions **from each engine** shall be calculated as specified in condition 3.6.1.1.

Emissions of other individual HAPs **from each engine** shall be calculated using AP-42 emission factors (AP-42, Section 3.1, dated 4/00, table 3.1-3), the monthly natural gas consumption (as required by Condition 3.3) and the Btu content of the natural gas (as required by Condition 3.5) in the equation below:

$$\text{tons/mo} = \text{EF}\ \frac{\text{(lbs/MMBtu) x fuel use (MMSCF/mo) x Btu content of gas (MMBtu/mo)}}{\text{2000 lbs/ton}}$$

Monthly individual HAP emissions **from each engine** will be summed together to determine monthly total HAP emissions.

Monthly HAP (formaldehyde, other single HAP and total HAP) emissions shall be used in a twelve month rolling total of facility wide emissions as specified in Condition 5.1.

3.7 Emissions of CO, VOC and formaldehyde emissions **from each engine** shall be controlled by an oxidation catalyst. The engines and oxidation catalysts are subject to the following requirements:

3.7.1 These engines shall be operated and maintained in accordance with good engineering practices. Manufacturer's recommendations or company written maintenance procedures shall be maintained and made available to the Division upon request. Maintenance shall be conducted in accordance with manufacturer's recommendations and records of routine maintenance activities shall be retained. A copy of the operation and maintenance procedures, schedules for maintenance activities and the records of routine maintenance shall be made available to the Division upon request.

3.7.2 The oxidation catalysts shall be operated and maintained as follows:

3.7.2.1 The oxidation catalysts shall be operated and maintained in accordance with good engineering practices. Manufacturer's recommendations or

company written maintenance procedures shall be maintained and made available to the Division upon request.

3.7.2.2 The source shall clean, recondition and replace the catalyst in accordance with the manufacturer's and/or packager's recommendations. Records of the catalyst cleaning, reconditioning or replacement shall be documented and made available to the Division upon request.

3.7.2.3 Maintenance and/or inspections shall be conducted in accordance with the manufacturer's and/or packager's recommendations and records of routine maintenance and/or inspections shall be retained. A copy of the operation and maintenance procedures, schedules for maintenance and/or inspection activities and the records of routine maintenance and/or inspections shall be made available to the Division upon request.

3.7.2.4 If maintenance activities or actions are dependent upon hours of operation, then engine operating hours shall be recorded and made available to the Division upon request.

3.7.3 Parameters associated with the oxidation catalysts shall be monitored as follows:

3.7.3.1 The pressure drop across the oxidation catalyst shall be monitored and recorded monthly.

3.7.3.2 The inlet temperature to the oxidation catalyst system shall be monitored and recorded daily and kept between 450 and 1350 º F.

If the engine is not operated during a day (or calendar month), recording of the above parameters is not necessary. When portable monitoring is scheduled, the above parameters shall be recorded during the portable monitoring event.

3.8 The oxygen concentration **in each engine** exhaust gas shall be measured and recorded for this engine during each portable monitoring event required by Condition 3.1.2. During portable monitoring events to determine the inlet and outlet CO emissions (as required by Condition 3.5.1.2), the inlet and outlet oxygen concentration shall be measured and recorded.

3.9 These engines are 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 follows:

Note that as of the date of revised permit issuance [January 1, 2011], the requirements in 40 CFR Part 63 Subpart ZZZZ (those provisions published in the January 18, 2008 Federal Register) have not been adopted into Colorado Regulation No. 8, Part E by the Division and are therefore not state-enforceable. In the event that the Division adopts these requirements, these requirements will become both state and federally enforceable.

An affected source that is a new or reconstructed stationary RICE located at an area source must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart JJJJ. No further requirements apply for such engines under this part. (§ 63.6590(c))

Note that although these engines are not subject to the requirements in NSPS Subpart JJJJ (engine ordered prior to June 12, 2006 and manufactured prior to July 1, 2007), no further requirements apply under MACT Subpart ZZZZ.

3.10 **Each engine** is subject to the following opacity requirements:

3.10.1 Except as provided for in Condition 3.10.2, 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).

3.10.2 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from start-up which is in excess of 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

In the absence of credible evidence to the contrary, compliance with the above opacity requirements shall be presumed since only natural gas is permitted to be used as fuel for these engines.

4. S007 & S008 – Emissions from Blowdown Events from Testing of the Plant Emergency Shutdown Vent and Maintenance and Other Shutdowns of Compressors (Engines and Turbines)

Parameter	Permit Condition Number	Limitations		Compliance Emission Factor	Monitoring	
		Short Term	Long Term		Method	Interval
VOC Emissions	4.1.	N/A	25 tons/year	Material Balance	Recordkeeping and Calculation	Monthly
HAP Emissions	4.2.	**Facility Wide Limits:** Formaldehyde: 9.5 tons/yr Other Individual HAP: < 8 tons/yr Total HAPs: < 20 tons/yr		Material Balance	Recordkeeping and Calculation	Monthly
Blowdown Events	4.3.	N/A	N/A	N/A	Recordkeeping	Each Event
Volume of Natural Gas Vented	4.4.	N/A	30.3 MMscf/yr	N/A	Recordkeeping and Calculation	Each Event
Natural Gas Composition	4.5.	N/A	N/A	N/A	ASTM Methods	Semi-Annual

4.1 Emissions of VOC shall not exceed the above limitation (Colorado Construction Permit 09RB0019, as modified under the provisions in Section I, Condition 1.3, to incorporate 09RB0020 and increase emissions as specified in the APEN submitted on August 17, 2010). Compliance with the emission limitation shall be monitored by calculating monthly VOC emissions from blowdown events from testing of the emergency shutdown vent and maintenance and other shutdowns of the compressors. Monthly emissions shall be calculated by the end of the subsequent month, using the quantity of natural gas vented (as required by Condition 4.4) and the weight percent VOC of the natural gas (as required by Condition 4.5). Monthly emissions shall be used in a twelve month rolling 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 **Facility wide emissions** shall not exceed the following limitations (Colorado Construction Permit 09RB0019, as modified under the provisions of Section I, Condition 1.3 to include the facility wide formaldehyde limit):

4.2.1 Formaldehyde emissions shall not exceed 9.5 tons/yr.

4.2.2 Single HAP emissions, other than formaldehyde, shall be less than 8 tons/yr.

4.2.3 Combined HAP emissions shall be less than 20 tons/yr.

Compliance with the facility wide HAPs limits shall be monitored by calculating monthly emissions by the end of the subsequent month, as follows:

Blowdown events are not a source of formaldehyde emissions; therefore, emission calculations to estimate formaldehyde emissions are not required.

Emissions of other individual HAPs shall be calculated using the quantity of natural gas vented (as required by Condition 4.4) and the weight percent of individual HAP in the natural gas (as required by Condition 4.5).

Monthly individual HAP emissions will be summed together to determine monthly total HAP emissions.

Monthly HAP (other single HAP and total HAP) emissions shall be used in a twelve month rolling total of facility wide emissions as specified in Condition 5.1.

4.3 The permittee shall record the date, time and duration of each blowdown event.

4.4 The volume of gas released from blowdown events shall not exceed the above limitation (Colorado Construction Permit 09RB0019, as modified under the provisions in Section I, Condition 1.3, to incorporate 09RB0020 and replace limits on the number events with limit on quantity of gas vented as in accordance with August 17, 2010 submittal). The permittee shall record such parameters as necessary to calculate the volume of gas released such as pressure and pipeline dimensions. The calculations determining the volume from each release shall clearly show the methodology to estimate the volume of gas vented and shall be made available to the Division upon request. Quantities of gas released from each blowdown event shall be summed to determine a monthly total of gas vented. Monthly quantities of gas release 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 determined using the previous twelve months data.

4.5 The composition of the natural gas (VOC and HAPs) shall be verified semi-annually using the appropriate ASTM methods, or equivalent if approved in advance by the Division. Calculation of VOC and HAP emissions (required by Conditions 4.1 and 4.2) shall be based on the most recent required analysis.

4.6 Within thirty (30) days of permit issuance [January 1, 2011], the permittee shall submit a request to cancel Colorado Construction Permit 09RB0020 and AIRs point 011.

5. Facility Wide Requirements

Parameter	Permit Condition Number	Limitations Short Term	Limitations Long Term	Compliance Emission Factor	Monitoring Method	Monitoring Interval
HAP Emissions	5.1	Formaldehyde: 9.5 tons/yr Other Individual HAP: < 8 tons/yr Total HAPs: < 20 tons/yr		See Condition 5.1.	Recordkeeping and Calculation	Monthly
Insignificant Activities	5.2.	Formaldehyde: < 0.5 tons/yr		See Condition 5.2.	Recordkeeping and Calculation	One-Time
Facility Access Limitations	5.3.	Facility Enclosed by a Fence		N/A	See Condition 5.3.	

5.1 Facility wide Emissions of HAPSs shall not exceed the above limitations (Colorado Construction Permits 06RB00564 through 06RB0568 and 09RB0019, as modification under the provisions of Section I, Condition 1.3 to remove the monthly limits and set the facility wide formaldehyde limit at 9.5 tons/yr). Monthly emissions of formaldehyde, other single HAPs and combined HAPs from the turbines, engines and blowdown events shall be calculated in accordance with the requirements in Conditions 1.6.2, 2.5.2, 3.5.2 and 4.2.

Monthly emissions of formaldehyde, other single HAPs and combined HAPs from turbines, engines and blowdown events shall be summed together and used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month rolling total shall be calculated using the previous twelve months' data.

5.2 Formaldehyde emissions from insignificant activities shall be less than 0.5 tons/yr ((Colorado Construction Permits 06RB00564 through 06RB0568 and 09RB0019, as modification under the provisions of Section I, Condition 1.3 to set the facility wide insignificant activity limit at < 0.5 tons/yr). Compliance with the limitation shall be monitored by conducting a potential to emit (PTE) analysis of formaldehdye emissions from insignificant activities that demonstrates that formaldehyde emissions are less than 0.5 tons/yr. The analysis, as well as the calculations and any supporting documentation, shall be retained on site and made available to the Division upon request.

Based on the information available as of permit issuance [January 1, 2011], the insignificant activities to be included in the above analysis are as follows: emergency generator (Waukesha, Model No. L5774LT, 1246 hp) and nineteen (19) line heaters (each rated at 60,000 Btu/hr).

The above analysis shall be updated if any new insignificant activities that can potentially emit formaldehyde emissions are added to the facility.

5.3 This facility shall be completely enclosed by a fence and posted with no trespassing signs that preclude public access to this site as described in the NO_X modeling analysis for this facility.

This requirement is impose as a result of the modeled ambient air NO_X impacts that result from the facility operations. (Colorado Construction Permits 06RB00564 through 06RB0568 and 09RB0019)

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

Emission measurements of nitrogen oxides (NO_X) and carbon monoxide (CO) (inlet and outlet on a semi-annual basis for the engines) from each engine and turbine shall be conducted quarterly using a portable flue gas analyzer. At least one calendar month shall separate the quarterly tests**.** Note that if the unit 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 these units.

For comparison with the NSPS KKKK NO_X limitations on the turbines, the results of the tests shall be converted to ppm at 15% O_2 in order to monitor compliance with the NSPS NO_X emission limitations. For comparison with the Reg 7, Section XVII.E.2.b requirements for the engines, the results of the tests will be converted to g/hp-hr in order to monitor compliance with the Reg 7 NO_X and CO emission limitations.

For comparison with an annual or short term (monthly) 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 unit 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 unit 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**.**

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 & Number	Applicable Requirement	Justification
Facility	40 CFR Part 63 Subpart HH, as adopted by reference in Colorado Regulation No. 8, Part E, Section III - National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities	This facility is not a natural gas production facility as specified in 40 CFR Part 63 Subpart HH §§ 63.760(a)(2) & (3).
Facility	40 CFR Part 63 Subpart HHH, as adopted by reference in Colorado Regulation No. 8, Part E, Section III – National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities.	This facility is not major source for HAPS and does not have any glycol dehydrators.
Emergency Generator	Colorado Regulation No. 7, Section XVII.E	These regulations do not apply since actual uncontrolled emissions from the emergency generator are below the permitting thresholds in Colorado Regulation No. 3, Part B.

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
Turbines	
Section II, Condition 1.2.1	Colorado Regulation No. 1, Section VI.B.4.c.(i) [SO_2 emissions shall not exceed 0.8 lb/MMBtu]
Section II, Condition 1.1	Colorado Regulation No. 6, Part B, Section II.C.2 [particulate matter emissions shall not exceed $0.5(FI)^{-0.26}$ lbs/MMBtu] **– State Only Requirement**
Section II, Condition 1.12	Colorado Regulation No. 6, Part B, Section II.C.3 [opacity of emissions shall not exceed 20%] **– State Only Requirement**
Section II, Condition 1.2.1	Colorado Regulation No. 6, Part B, Section II.D.3.a [SO_2 emissions shall not exceed 0.8 lbs/MMBtu] **– State Only Requirement**
Section II, Condition 1.4.3	40 CFR Part 60 Subpart KKKK § 60.4375(b) [submit performance test results within 60 days]
Section II, Condition 1.11	Regulation No. 6, Part B, Section I [general provisions] **- State-only Requirement**
Engines	
Section II, Conditions 2.6 and 3.6	Colorado Regulation No. 7, Section XVI [lean burn engines > 500 hp shall be equipped with oxidation catalysts]

SECTION IV - General Permit Conditions

11/16/10 version

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 Controls 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, “asbestos control.”

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. Sections 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.

The requirements in paragraphs a, b and e apply to sources located in an ozone non-attainment area or the Denver 1-hour ozone attainment/maintenance area. The requirements in paragraphs c and d apply statewide.

a. 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.

b. 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.

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

d. 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.

e. Beer production and associated beer container storage and transfer operations involving volatile organic compounds with a true vapor pressure of less than 1.5 PSIA actual conditions are exempt from the provisions of paragraph b, above.

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 - COMPLIANCE MONITORING REPORT FORMAT
C - COMPLIANCE CERTIFICATION REPORT FORMAT
D - NOTIFICATION ADDRESSES
E - PERMIT ACRONYMS
F - PERMIT MODIFICATIONS
G - PERMANENT ENGINE AOS APPLICABILITY REPORTS

*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:

The site is located on approximately 3 acres of land approximately 20 miles south-southwest of Meeker, CO along County Road 5, just south of County Road 24.

Plant Address: 26100, County Road 5, Rifle, CO 81650

Plant Phone Number: (970) 878-3158

Safety Equipment Required:

Eye Protection
Hard Hat
Safety Shoes
Hearing Protection

Facility Plot Plan:

Figure 1 (following page) shows the plot plan as submitted on January 9, 2009 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.

<u>Units with emissions less than the APEN de minimis – criteria (Reg 3 Part C.II.E.3.a)</u>

Fugitive VOC emissions from equipment leaks (VOC emissions < 2 tons/yr)
TK-1 - 5,830 gal condensate storage tank (VOC emissions < 2 tons/yr)
TK-3 – 5,830 gal produced water tank (VOC emissions < 2 tons/yr)
TK-5 - 5,830 gal ambitrol tank (VOC emissions < 2 tons/yr)

<u>Fuel (gaseous) burning equipment < 5 MMBtu/hr (Reg 3, Part C.II.E.3.k)</u>

Nineteen (19) line heaters (each rated at 60,000 Btu/hr)
One (1) fuel gas heater (rated at 864,000 Btu/hr)

<u>Storage tanks less than 40,000 gal capacity - lubricating oil (Reg 3 Part C.II.E.3.aaa)</u>

TK-4 lube oil tank (6,050 gal)
TK-2 used oil tank (5,830 gal)

Emergency Power Generators – limited size or hours (Reg 3 Part C.II.E.nnn.(iii))

Waukesha, Model L5774LT, 1246 hp, emergency generator – formerly covered under 06RB0569 (less than 1,840 hp and operates less than 100 hrs/yr)

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.

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

[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.

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: Rockies Express Pipeline, LLC – Meeker Compressor Station
OPERATING PERMIT NO: 09OPRB326
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
S001	Solar Taurus Natural Gas Fired Turbine, Model No. 60, Serial No. 1669T. The turbine is rated at 54.03 MMBtu/hr (LHV at 100% load and 20 ºF). Turbine Drives a Compressor.					
S002	Solar Taurus Natural Gas Fired Turbine, Model No. 60, Serial No. 1668T. The turbine is rated at 54.03 MMBtu/hr (LHV at 100% load and 20 ºF). Turbine Drives a Compressor.					
S003	Caterpillar, Model No. G3612, 4-Cycle Lean Burn Internal Combustion Engine, Rated at 3,550 hp (nameplate) and 27.2 MMBtu/hr, Serial No. BKE00310. Natural Gas Fired. Engine Drives a Compressor.					
S004	Caterpillar, Model No. G3616, 4-Cycle Lean Burn Internal Combustion Engine, Rated at 4,735 hp (nameplate) and 36.5 MMBtu/hr, Serial No. BLB00328. Natural Gas Fired. Engine Drives a Compressor.					
S005	Caterpillar, Model No. G3616, 4-Cycle Lean Burn Internal Combustion Engine, Rated at 4,735 hp (nameplate) and 36.5 MMBtu/hr, Serial No. BLB00326. Natural Gas Fired. Engine Drives a Compressor.					
S007 & S008	Blowdown Events from Testing of Emergency Shutdown Device and Maintenance and Other Shutdowns of Compressors (Turbines and Engines).					

Operating Permit Unit ID	Unit Description	Deviations Noted During Period?[1]		Deviation Code[2]	Malfunction/ Emergency Condition Reported During Period?	
		YES	NO		YES	NO
	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 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

Monitoring and Permit Deviation Report - Part II

FACILITY NAME: Rockies Express Pipeline, LLC – Meeker Compressor Station
OPERATING PERMIT NO: 09OPRB326
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: Rockies Express Pipeline, LLC – Meeker Compressor Station

FACILITY IDENTIFICATION NUMBER: 1030322

PERMIT NUMBER: 09OPRB326

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: Rockies Express Pipeline, LLC – Meeker Compressor Station

OPERATING PERMIT NO: 09OPRB326
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
S001	Solar Taurus Natural Gas Fired Turbine, Model No. 60, Serial No. 1669T. The turbine is rated at 54.03 MMBtu/hr (LHV at 100% load and 20 ºF). Turbine Drives a Compressor.						
S002	Solar Taurus Natural Gas Fired Turbine, Model No. 60, Serial No. 1668T. The turbine is rated at 54.03 MMBtu/hr (LHV at 100% load and 20 ºF). Turbine Drives a Compressor.						

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
S003	Caterpillar, Model No. G3612, 4-Cycle Lean Burn Internal Combustion Engine, Rated at 3,550 hp (nameplate) and 27.2 MMBtu/hr, Serial No. BKE00310. Natural Gas Fired. Engine Drives a Compressor.						
S004	Caterpillar, Model No. G3616, 4-Cycle Lean Burn Internal Combustion Engine, Rated at 4,735 hp (nameplate) and 36.5 MMBtu/hr, Serial No. BLB00328. Natural Gas Fired. Engine Drives a Compressor.						
S005	Caterpillar, Model No. G3616, 4-Cycle Lean Burn Internal Combustion Engine, Rated at 4,735 hp (nameplate) and 36.5 MMBtu/hr, Serial No. BLB00326. Natural Gas Fired. Engine Drives a Compressor.						
S007 & S008	Blowdown Events from Testing of Emergency Shutdown Device and Maintenance and Other Shutdowns of Compressors (Turbines and Engines).						
	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: Matt Burgett

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
DSCF -	Dry Standard Cubic Feet
EF -	Emission Factor
EPA -	Environmental Protection Agency
FI -	Fuel Input Rate in MMBtu/hr
FR -	Federal Register
G -	Grams
Gr-	Grains
Gal -	Gallon
GPM -	Gallons per Minute
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
P -	Process Weight Rate in Tons/Hr
PE -	Particulate Emissions

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 Classification
SO_2 -	Sulfur Dioxide
TPY -	Tons Per Year
TSP -	Total Suspended Particulate
VOC -	Volatile Organic Compounds

APPENDIX F

Permit Modifications

DATE OF REVISION	MODIFICATION TYPE	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION
March 22, 2011	Administrative Amendment	Section II.3	Corrected the summary table header to indicate the engines are designated as S004 & S005. This correction is also reflected in the table of contents.
		Appendix D	Changed the APCD individual to whom the Title V reports are to be submitted.

APPENDIX G

Permanent Engine AOS Applicability Reports

ver 12/10/08

Note: A MS Word version of this Appendix can be found at:

http://www.cdphe.state.co.us/ap/oilgaspermitting.html

DISCLAIMER:

These are only example reports and do not cover all possible requirements.

Engine AOS Applicability Report Certification Language

All information for the Applicability Reports must be certified by either 1) for Operating Permits, a Responsible Official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. or 2) for Construction and General Permits, the person legally authorized to act on behalf of the source. 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. Further, I agree that by signing and submitting these documents I agree that any new requirements identified in the Applicability Report(s) shall be considered to be Applicable Requirements as defined in Colorado Regulation No. 3, section I.B.9., and that such requirements shall be enforceable by the Division and its agents and shall be considered to be revisions to the underlying permit(s) referenced in the Report(s) until such time as the Permit is revised to reflect the new requirements.

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

Colorado Regulation No. 7
Sections XVI and XVII.E

DISCLAIMER: This is only an example report and does not cover all possible Reg 7 requirements.

Company: Acme Gas Processing
Source ID: 999/1234/001
Permit #: 93OPXX999
Date: October 1, 2008

Determination of compliance and reporting requirements for a

Manufacturer: BestEngineCompany
Model: 777 LowNox
Nameplate HP: 1340
Construction date: July 1, 2007

Note: If the engine is exempt from a requirement due to construction date or was relocated from within Colorado, supporting documentation must be provided.

Determination of Regulation No. 7 requirements:

Regulation No. 7, § XVI

☐ Does not apply to this engine. Engine is not located in the ozone nonattainment area or does not have a manufacturer's design rate greater than 500 horsepower or did not commence operation on or after June 1, 2004.

☐ Does apply to this engine and applicable emissions controls have been installed.

Regulation No. 7, § XVII.E

☐ Does not apply to this engine. Engine does not have a maximum horsepower greater than 100 or the construction or relocation date precedes the applicability dates.

☐ Does apply to this engine. The following emission limits apply to the engine:

NO_X (g/hp-hr): 2.0
CO (g/hp-hr): 4.0
VOC (g/hp-hr): 1.0

Max Engine HP	Construction or Relocation Date	Emission Standards in g/hp-hr		
		NO_X	CO	VOC
100<Hp<500	January 1, 2008	2.0	4.0	1.0
	January 1, 2011	1.0	2.0	0.7
500≤Hp	July 1, 2007	2.0	4.0	1.0
	July 1, 2010	1.0	2.0	0.7

NSPS JJJJ Example Report Format

DISCLAIMER: This is only an example report and does not cover all possible JJJJ requirements.

Note that as of September 1, 2008 that the Division has not yet adopted NSPS JJJJ. Until such time as it does, any engine subject to NSPS will be subject only under Federal law. Once the Division adopts NSPS JJJJ, there will be an additional step added to the determination of the NSPS. Under the provisions of Regulation No. 6, Part B, § I.B (which is referenced in Part A), any engine relocated from outside of the State of Colorado into the State of Colorado is considered to be a new source, subject to the requirements of NSPS JJJJ.

NSPS Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Company: Acme Gas Processing
Source ID: 999/1234/001
Permit #: 93OPXX999
Date: October 1, 2008

Manufacturer: BestEngineCompany
Model: 777 LowNox
Nameplate HP: 1340
Engine Type: 2 Stroke Rich Burn
Manufacture Date: July 1, 2007
Date Engine Ordered: April 1, 2007

Note: If the engine is exempt from a requirement due to construction/manufacture date, supporting documentation must be provided.

Upon adoption of NSPS Subpart JJJJ into Colorado Regulation No. 6, Part A, if the engine is exempt because the engine was relocated within the state of Colorado, supporting documentation must be provided.

☐ NSPS JJJJ **does not apply** to this engine.

☐ NSPS JJJJ **does apply** to this engine.

Note: Using the format below, the source must submit to the Division an analysis of all of the NSPS JJJJ applicable requirements that apply to this specific engine. **The analysis below is an example only**, based on a hypothetical engine that is a rich burn engine, greater than 500 HP, with a manufacture date after July 1, 2007.

Determination of NSPS JJJJ requirements:

60.4230 Applicability

(a)(4)(i) Applies to this engine since it is a rich burn engine, greater than 500 HP, with a manufacture date after July 1, 2007.

60.4233 Emission Standards for Owners and Operators

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than 100 HP must comply with the standards in Table 1.

Non-Emergency SI, Natural Gas, HP≥500, Manufactured after 7/1/2007

NO_x	2.0 g/HP-hr or 160 ppmvd@15% O_2
CO	4.0 g/HP-hr or 540 ppmvd@15% O_2
VOC	1.0 g/HP-hr or 86 ppmvd@15% O_2

Other Requirements for Owners and Operators

60.4234 Emission standards must be met for the lifetime of the engine.
60.4235 N/A - Sulfur content of gasoline.
60.4236 N/A (for now) - After July 1, 2009 owners and operators may not install engines with a power rating ≥ 500HP that do not meet the emissions standards in 60.4230.
60.4237 N/A - Emergency Engines.

60.4238 - 60.4242 Compliance Requirements for Manufacturers – (Not Applicable)

60.4243 Compliance Requirements for Owners and Operators

(b)(2)(ii) To maintain compliance with the emission limits in 60.4233, owners of SI ICE ≥ 500HP must:

- Keep a maintenance plan;
- Keep records of conducted maintenance;
- Maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions;
- Conduct an initial performance test; and
- Conduct subsequent performance tests every 8,760 hours or every three years, which ever comes first, in order to demonstrate compliance with the emission limits.

(g) Air to fuel ratio controllers (AFRCs) must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

60.4244 Testing Requirements for Owners and Operators

(a) Each performance test must be conducted within 10% of the highest achievable load and must comply with the testing requirements listed in 60.8 and Table 2 of NSPS JJJJ.

(b) Performance tests may not be conducted during periods of startup, shutdown, or malfunction, as specified in 60.8(c). If the engine is non-operational when a performance test is due, the engine does not need to be started up just to test it, but will need to be tested immediately upon startup.

(c) Three separate test runs must be conducted for each performance test as specified by 60.8(f). Each run must be within 10% of max load and be at least 1 hour in duration.

(d) To determine compliance with the NO_x, CO, and VOC mass per unit output emission limitations, the measured concentration must be converted using the equations outlined in this section of NSPS JJJJ.

60.4245 Notification, Reports, and Records for Owners and Operators

(a) Owners of all stationary SI ICE must keep records of the following:
(1) All notifications submitted to comply with this subpart;
(2) Maintenance conducted on the engine;
(3) N/A - Manufacturer information for certified engines, and
(4) Documentation that shows non-certified engines are in compliance with the emission standards.

(b) N/A – For emergency engines only.

(c) Owners of non-certified engines ≥ 500HP must submit an initial notification as required in 60.7(a)(1) which includes the following information:
(1) Name and address of the owner or operator;
(2) The address of the affected source;
(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
(4) Emission control equipment; and
(5) Fuel used.

CONCLUSION OF FINDINGS (EXAMPLE ONLY)

In general, Acme's 1,235HP, Waukesha 7042 GSI engine is subject to the emissions limitations summarized in Table 1 of NSPS JJJJ. ACME will meet these emission limitations using an AFRC and a non-selective catalytic converter (NSCR). These emission rates will be met throughout the life of the engine. A maintenance plan will be kept and all maintenance activities will be recorded. Compliance with the emission limits will be confirmed by the initial performance tests, which shall be conducted following the procedures outlined in 60.4244. Copies of performance test results will be submitted within 60 days of the completion of each test. Since this is an uncertified engine, an initial notification will be submitted including all of the requested information in 40.4245 within 30 days of startup. ACME will keep records of all compliance related materials.

MACT ZZZZ *Area Source* Example Report Format

DISCLAIMER: This is only an example report and does not cover all possible ZZZZ requirements.

MACT Subpart ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Company: Acme Gas Processing
Source ID: 999/1234/001
Permit #: 93OPXX999
Date: October 1, 2008

Manufacturer: Best Engine Company
Model: 777 LowNox
Nameplate HP: 1340
Engine Type: 2 Stroke Rich Burn
Manufacture Date: July 1, 2007
Date Engine Ordered: April 1, 2007

Note: If the engine is exempt from a requirement due to construction/reconstruction date, supporting documentation must be provided.

☐ MACT ZZZZ **does not apply** to this engine.

☐ MACT ZZZZ **does apply** to this engine.

Note: Using the format below, the source must submit to the Division an analysis of all of the area source MACT ZZZZ applicable requirements that apply to this specific engine. **The analysis below is an example only**, based on a hypothetical new engine located at an area source of HAP emissions.

Determination of MACT ZZZZ requirements:

63.6585 Applicability

This subpart is applicable to Acme's engine since they are going to be operating a new stationary reciprocating internal combustion engine (RICE) at an area source of HAP emissions.

63.6590 What Parts of My Plant Does This Subpart Cover?

(c) A new or reconstructed stationary RICE located at an area source of HAP emissions that is subject to 40 CFR Part 60, must meet the requirements of this part by meeting the requirements of 40 CFR Part 60 subpart JJJJ.

CONCLUSION OF FINDINGS (EXAMPLE ONLY)

Since this engine is subject to NSPS JJJJ, no additional requirements apply under MACT ZZZZ.

MACT ZZZZ *Major Source* Example Report Format

DISCLAIMER: This is only an example report and does not cover all possible ZZZZ requirements.

MACT Subpart ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Company: Acme Gas Processing
Source ID: 999/1234/001
Permit #: 93OPXX999
Date: October 1, 2008

Manufacturer: BestEngineCompany
Model: 777 LowNox
Nameplate HP: 1340
Engine Type: 2 Stroke Rich Burn
Manufacture Date: July 1, 2007
Date Engine Ordered: April 1, 2007

Note: If the engine is exempt from a requirement due to construction/reconstruction date, supporting documentation must be provided.

☐ MACT ZZZZ **does not apply** to this engine.

☐ MACT ZZZZ **does apply** to this engine.

Note: Using the format below, the source must submit to the Division an analysis of all of the major source MACT ZZZZ applicable requirements that apply to this specific engine. **The analysis below is an example only**, based on a hypothetical new engine located at a major source of HAP emissions.

Determination of MACT ZZZZ requirements:

63.6585 Applicability

This subpart is applicable to Acme's engine since they are going to be operating a new stationary reciprocating internal combustion engine (RICE) at a major source of HAP emissions.

63.6590 What Parts of My Plant Does This Subpart Cover?

This subpart covers Acme's new stationary reciprocating internal combustion engine.

63.6595 When do I have to comply with this Subpart?

(a)(5) The engine must comply with the applicable emission limitations and operating limitations upon startup.

63.6600 Emission and operating limitations for RICE site rated at more than 500 hp

(a) The engine is subject to the emission limits in table 1a and the operating limits in table 1b. ACME will meet the emission limitations by reducing formaldehyde emissions by 76 percent and will maintain the catalyst such that the pressure drop does not change by more than 2 inches of H_2O at 100 % load plus or minus 10 percent from the pressure drop measured during the initial performance test and will maintain the temperature of the engine exhaust so that the catalyst inlet temperature is greater than or equal to 750 º F and less than or equal to 1250 º F.

The engine will be equipped with non-selective catalytic reduction and an air fuel controller to meet the emission limitations.

63.6601 & 63.6611 Requirements for 4SLB engines between 250 and 200 hp

These requirements do not apply.

63.6605 General Requirements

(a) The engine will comply with the emission and operating limitations at all times, except during periods of startup, shutdown and malfunction (SSM)

(b) The engine, including air pollution control and monitoring equipment shall be operating in a manner consistent with good air pollution control practices for minimizing emissions at all times, including during SSM.

63.6610 Initial performance test

(a) the performance tests specified in Table 4 (select sampling port and measure O_2, moisture and formaldehyde at inlet and outlet of the control device) shall be conducted within 180 days of startup.

(b) & (c) not applicable construction did not commence between 12/19/02 and 6/15/04.

(d) previous performance tests have not been conducted on this unit within two years, therefore, this provision does not apply.

63.6615 Subsequent performance tests

Subsequent tests will be conducted as specified in Table 3. No additional testing is required for 4SRB engines meeting the formaldehyde percent reduction requirements.

63.6620 Performance test procedures

(b) tests must be conducted at 100 % load plus or minus 10%

(c) tests may not be conducted during periods of SSM.

(d) must conduct three 1-hr test runs

(e) equation (e)(1) shall be used to determine compliance with the percent reduction requirement.

(f), (g) & (h) Not applicable

(i) engine load during test shall be determined as specified in this paragraph.

63.6625 Monitoring, installation, operation and maintenance requirements

(a), (c) & (d) Not applicable

(b) a continuous parameter monitoring system (CPMS) shall be installed to measure the catalyst inlet temperature. The CPMS will meet the requirements in § 63.8

63.6630 Demonstrating initial compliance

(a) initial compliance shall be determined in accordance with table 5 (initial performance test must indicate formaldehyde reduction of 76 percent or more, a CPMS must be installed to measure inlet temperature of the catalyst and the pressure drop and catalyst inlet temperature must be recorded during the initial performance test).

(b) pressure differential will be established during the initial performance test.

(c) Notification of compliance status will be submitted and will contain the results of the initial compliance demonstration.

63.6635 Monitoring to demonstrate continuous compliance

(b) except for monitor malfunctions, associated repairs, and required QA/QC activities monitoring must be continuous at all time the engine is operating.

(c) data recorded during monitoring malfunctions, associated repairs and required QA/QC activities must not be used in data averages and calculations to report operating levels, however, all the valid data collected during other periods shall be used.

63.6640 Demonstrating continuous compliance

(a) continuous compliance will be demonstrated as specified in table 6 (collect catalyst inlet temperature data, reduce that data to 4-hr rolling average and maintain the 4-hr rolling averages to within the operating limitation and measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop meets the operating limitation.

(b) deviations from the emission and operating limitations must be reported per § 63.6550.
If catalyst is changed the operating parameters established during the initial performance test must be re-established.
When operating parameters re-established a performance test must also be conducted.

63.6645 Notifications

(a) Submit notifications in §§ 63.7(b) & (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) thru (e) & (g) & (h) that apply by dates specified.

(b) Not applicable. Acme unit started after effective dated for Subpart ZZZZ.

(c) Submit initial notification within 120 days after becoming subject to Subpart ZZZZ.

(d) thru (f) Not applicable. Acme engine greater than 500 hp and subject to requirements in Subpart ZZZZ.

(g) & (h) Submit notification of intent to conduct performance test and notification of compliance status.

63.6650 Reports

(a) Submit reports required by table 7 (compliance report and SSM reports (if actions inconsistent with SSM plan)

(b) Not applicable, an alternate schedule for report submittal has been approved. Reports will be submitted with title v reports

(c) Compliance reports to contain the following information: company name and address, statement by responsible official certifying accuracy, date of report and beginning and end of reporting period, if SSM the information in 63.10(d)(5)(i), if no deviations a statement saying that, if no periods when CPMS out of control a statement saying that.

(d) Not applicable, using CPMS

(e) For each deviation the information in (e)(1) thru (e)(12) shall be provided.

(f) Applicable. Compliance reports are submitted with title v reports. Compliance reports under Subpart ZZZZ include all necessary info for title v deviation report with respect to Subpart ZZZZ requirements.

(g) Not applicable. Acme engine not firing landfill or digester gas.

63.6655 Recordkeeping

(a) Retain records as follows: copy of each notification and report (including all documentation supporting any initial notification or notification of compliance status), records in 63.6(e)(iii) thru (v) related to SSM, and records of performance tests and evaluations.

(b) CPMS records including records in 63.10(b)(2)(vi) thru (xi), previous versions of the performance evaluation plan required by 63.8(d)(3) and requests for alternatives to the relative accuracy test for CPMS as required by 63.8(f)(6)(i).

(c) Not applicable. Acme engine not firing landfill or digester gas.

(d) Will keep records required in Table 6 (monthly pressure drop readings, 4-hr averages of catalyst inlet temperature) to show continuous compliance with emission and operating limits.

63.6660 Form and length of records

(a) records must be in a form suitable and readily available for expeditions review

(b) records must be retained for five years

(c) records must be retained on-site for first 2 years, may be retained off-site for the remaining 3 years

63.6665 General Provisions

This engine must comply with the general provisions as indicated in Table 8.

CONCLUSION OF FINDINGS (EXAMPLE ONLY)

Since this engine is subject to the requirements of MACT Subpart ZZZZ. The engine will be installed with a non-selective catalyst to meet the formaldehyde reduction requirement of 76% or more. An initial performance test will be conducted within 180 days of startup to demonstrate compliance with the formaldehyde percent reduction requirement. During the initial performance test, the pressure drop across the catalyst will be measured. A CPMS will be installed to measure the catalyst inlet temperature. Continuous compliance will be demonstrated by keeping the 4-hr rolling averages of catalyst inlet temperature within the operating limitations and recording the pressure drop across the catalyst monthly and demonstrating that the pressure drop is within the operating limitation.

Records, notifications and reports will be submitted as required. To that end required reports and notifications include initial notification, notice of intent to conduct performance test, notification of compliance status, SSM reports (if required) and semi-annual compliance reports.