TECHNICAL REVIEW DOCUMENT
for
OPERATING PERMIT 04OPLA269
to be issued to:

Pioneer Natural Resources, USA
Cottontail Pass Compressor Station

Las Animas County
Source ID 0710030

Prepared by Geoffrey Drissel
August 18, 2005

I. Purpose:

This document establishes the basis for decisions made regarding the Applicable Requirements, Emission Factors, Monitoring Plan and Compliance Status of Emission Units covered within the Operating Permit proposed for this site. It is designed for reference during review of the proposed permit by the EPA, the Public and other interested parties. Conclusions made in this report are based on information provided by the applicant in the Title V application received January 28, 2004, subsequent additional information submittals, and review of Division files. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised Construction Permit.

II. Source Description:

This facility consists of one 3100 HP compressor engine and six 3300 HP compressor engines. The facility compresses coal-bed methane gas for sales to a pipeline, and is defined under Standard Industrial Classification 1311. The engines are equipped with oxidation catalysts to control CO, VOC, and formaldehyde emissions. The engines are fueled with coal seam gas.

The facility is located in Las Animas County in southeastern Colorado. The area in which the plant operates is designated as attainment for all criteria pollutants. New Mexico is an affected state located within 50 miles of the plant. The Great Sand Dunes National Monument and Wheeler Peak National Wilderness Area

(located in New Mexico) are Federal Class I designated areas located within 100 kilometers of the plant.

Facility wide emissions are as follows:

Pollutant	Potential to Emit (tpy)
NO_x	149.3
CO	70.0
VOC	19.6
Formaldehyde	9.7

The potential to emit is based on permitted emission limits. Actual emissions are much less than PTE since two of the seven engines have not yet been installed at the facility. The source indicated in their application that they are not subject to 112(r), the Accidental Release Requirements.

III. Emission Sources:

The following sources are specifically regulated under terms and conditions of the Operating Permit for this Site:

Unit P001- Caterpillar Model 3612 TALE Natural Gas Fired Internal Combustion Engine, 4 Cycle, Lean Burn, Rated at 3,100 HP, Serial No. 1YG00197. The engine is equipped with a low NOx combustion system. CO, VOC and formaldehyde emissions are controlled with an oxidation catalyst.

Units P002 through P007- Caterpillar Model 3612 TALE Natural Gas Fired Internal Combustion Engines, 4 Cycle, Lean Burn, Rated at 3,300 HP, Serial Nos. 1YG00225, 1YG00226, BFK00200, BKE00219, Two S/N Unavailable. The engines are equipped with low NOx combustion systems. CO, VOC and formaldehyde emissions are controlled with an oxidation catalyst.

1. Applicable Requirements – Prior to Title V application submittal, Colorado Construction Permit 02LA274 defined applicable requirements for these engines. The limits shown in that permit are for all engines combined. Subsequent to the submittal of the Operating Permit application, modifications to the Construction Permit revising the existing permit limits were requested by the applicant. Consequently, the Operating Permit will be issued with the revised Construction Permit terms. Those terms are as follows:

Parameter	Short Term Limit	Long Term Limit
NOx	25,360.5 lbs/mo	149.3 tons/yr
CO	11,890.4 lbs/mo	70.0 tons/yr
VOC	3,329.3 lbs/mo	19.6 tons/yr
Formaldehyde	1,647.7 lbs/mo	9.7 tons/yr

Fuel Use	NA	1,429.3 MMscf/yr

In accordance with Division policy, none of the short term limits in the current Construction Permit will be incorporated into the Operating Permit. The annual NOx, CO, VOC, formaldehyde and fuel use limitations and the 20% opacity limit will be incorporated into the Operating Permit.

Formaldehyde emissions from insignificant activities will be limited in order to ensure the source remains a synthetic minor source for MACT purposes.

2. Emission Factors- Emissions from the engines are produced during the combustion process, and are dependent upon operating conditions and specific properties of the natural gas being burned. The pollutants of concern are Nitrogen Oxides (NO_X), Carbon Monoxide (CO), and Volatile Organic Compounds (VOC). Small quantities of Hazardous Air Pollutants (HAPs) are also emitted dependent upon the makeup of the fuel and combustion efficiency.

Emission limits for the engines were taken from the limits in the current Construction Permit. Those limits were established using manufacturer's engine emission data and catalyst control efficiencies demonstrated during performance tests conducted at a nearby facility on the same or similar engines.

3. Monitoring Plan- The source shall be required to monitor compliance with the emission limits by monitoring fuel consumption and using emission factors based on heat input. The source shall be required to record fuel consumption and calculate emissions monthly. The Division has developed specific monitoring guidance for Internal Combustion engines located in attainment areas, as shown on the attached grid titled "Compliance/Scenario Summary - Gas Fired IC Engines." Facility emissions are less than 200 tons/year, and the permit contains limits, and controls are used. Therefore, according to the monitoring grid, for the IC engines, the source will be required to: conduct the emission calculations and record fuel use on a monthly basis; record catalyst parameters on a monthly or daily basis and during portable monitoring; and perform quarterly portable monitoring. Monitoring of the inlet catalyst temperature ensures that the temperature is within the recommended range for proper catalyst operation. Pressure drop measurements assist the operator in determining proper operation of the catalyst, and if the catalyst is damaged or fouled. In the absence of credible evidence to the contrary, compliance with the formaldehyde emission limits is assumed when CO emission limits are met using these monitoring methods. In addition, for HAP sources with emission limits greater than 8 tons/year but less than the major threshold of 10 tons/year, catalyst inlet and outlet CO measurements are required on the schedule set forth in the MACT standard. The source should use the parameter data to monitor performance of the catalyst, and to make any necessary adjustments for proper operation. In addition, the source uses the data to determine compliance status for the semi-annual and annual reports (Appendices B and C of the permit).

The heat content of the natural gas shall be determined semi-annually using appropriate ASTM methods. In the absence of credible evidence to the contrary, compliance with the opacity limits is assumed when natural gas is used as fuel.

4. Compliance Status- The permittee indicated in their application that they are in compliance with all applicable requirements.

IV. Compliance Assurance Monitoring (CAM) Requirements

The engines are equipped with an oxidation catalyst to control CO, VOC and formaldehyde emissions. Since the engines are not large pollutant specific emission units (i.e. potential controlled emissions, including limits in the Construction Permit, are less than 100 tons/year criteria pollutants and less than 10/25 tons year HAPS), the applicant is not required to submit a CAM plan until the permit is renewed (if applicable). Therefore, in accordance with the provisions of 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV, the engines are not subject to the compliance assurance monitoring (CAM) requirements at this time.

V. Alternative Operating Scenarios

The Construction Permit includes an Alternative Operating Scenario (AOS) which allows the permittee to temporarily or permanently replace existing engines with similar engines. This operating permit includes the most recent version of the AOS.

VII. Maximum Available Control Technology (MACT)

This facility is considered a synthetic minor source for MACT purposes (individual HAP emissions limited to <10 TPY and total HAP emissions limited to <25 TPY), therefore the MACT provisions do not apply to this facility.