TECHNICAL REVIEW DOCUMENT
MODIFICATION TO
OPERATING PERMIT 95OPMF031

to be issued to:

Questar Gas Management Company
Powder Wash Compressor Station
Moffat County
Source ID 0810049

Prepared by Ashley Campsie
November 17, 1999

I. Purpose:

This document establishes the basis for decisions made regarding any new Applicable Requirements, Emission Factors and Monitoring Plans of Emission Units covered within the major modification to the Operating Permit proposed for this site. It is designed for reference during review of the proposed modified permit by the EPA, the Public and other interested parties. The conclusions made in this report are based on information provided in correspondence submitted October 18, November 2 and December 16, 1999. 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. Description of Permit Modification Request:

The source requested modification to this permit to change some engine emission factors and remove portable monitoring for those engine. The modification is classified as a significant modification due to a significant change in emissions and in existing monitoring permit terms or conditions.

The requested emission increases for the engines are based on an increase in CO and VOC emission factors. These new emission factors would result in facility wide emission increases as follows:

Pollutant	Increase (tpy)
CO	356.1
VOC	0.5

Modeling was performed for CO using Screen 3, no potential violation of the National Ambient Air Quality Standards (NAAQs) was indicated.

In addition to the changes listed below Appendix B and C were changed to updated wording.

When emission factors change on an engine it is Division policy to look at the engine when it was first installed to determine if it triggered PSD. None of the emission changes are above significance levels (CO < 100 tpy) or are pre-PSD therefore PSD review has not been triggered for this modification. Each unit that was modified is discussed below.

III. Emission Sources Modified:

The following sources were modified in this permit as discussed below:

Unit P102 - Waukesha 4-Cycle Rich Burn Internal Combustion Engine, Model L5788G, S/N: 9703278, 4.9 MMBtu/hr, 639 hp, Natural Gas Fired.

Discussion:

The new emission factors have been converted to fuel based using the horsepower-based emission factor, the design heat rate of the engine, and the engine horsepower as shown in the attached Engineering Calculation Worksheet. The emission limits have been increased based on the new factors.

Pollutant	Increase (tpy)
CO	112.6
VOC	0.1

The source requested to increase throughput to maximum based on design rate. The current fuel limit was determined in 1998 to synthetic minor out of PSD review based on NOx emissions. Therefore, the fuel limit will not be increased and NOx emissions will remain at 99.4 tons per year.

This engine replaced an existing engine at the facility in 1998. The source was an existing major stationary source at the time (>250 tons per year for any criteria pollutant). The emission changes stated above are based on old emission factors to new emission factors. The Division has assumed the original manufacturer emission factor (1 g/hp-hr) was incorrect and that the new emission factor is more representative for this particular engine

including both the old engine and the new one. Therefore, new emission factors are used for both pre and post engine replacement which results in an increase of 46.4 tons per year and is below the 100 tpy significance level.

Unit P103 - Waukesha 4-Cycle Rich Burn Internal Combustion Engine, Model L5788G, S/N: 72066, 4.9 MMBtu/hr, 639 hp, Natural Gas Fired.

Unit P104 - Waukesha 4-Cycle Rich Burn Internal Combustion Engine, Model L7042G, S/N: 193857, 5.5 MMBtu/hr, 756 hp, Natural Gas Fired.

Discussion:

Unit P104 was installed in 1974 which was pre PSD. Unit P103 was installed in 1964 and then overhauled in 1979 which can be considered a modification. However, the emission factors used to determine emissions did not change in 1979 (no net emissions increase). Therefore, both engines were installed prior to PSD and the overhaul in 1979 did not result in a significant increase in emissions. PSD review was not triggered for this modification.

Unit P305 - Waukesha 4-Cycle Rich Burn Internal Combustion Engine, Model F3521GU, S/N: 295183, 2.76 MMBtu/hr, 300 hp, Natural Gas Fired.

Discussion:

The new emission factors have been converted to fuel based using the horsepower-based emission factor, the design heat rate of the engine, and the engine horsepower as shown in the attached Engineering Calculation Worksheet. The emission limits have been increased based on the new factors.

Pollutant	Increase (tpy)
CO	2.0
NOx	-0.1

This engine was installed in 1994. The source was an existing major stationary source at the time (>250 tons per year for any criteria pollutant). The emission changes are not above significance levels (CO < 100 tpy) therefore PSD review has not been triggered.

IV. Alternative Operating Scenarios

None

V. Permit Shield

No additional regulations were requested for the permit shield.