

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection
Southwest Regional Office

MEMO

TO Air Quality Permit File PA-65-01017A

FROM Alexander Sandy 
Air Quality Engineering Specialist
Air Quality Program

THROUGH Mark R. Gorog, P.E. 
Environmental Engineer Manager
Air Quality Program


Mark A. Wayner, P.E.
Regional Manager
Air Quality Program

DATE May 30, 2014

RE Response to Public Comments
Mountain Gathering, LLC
Westmoreland Compressor Station
Fairfield Township, Westmoreland County
APS 785635 Auth 934385 PF 751047

On July 16, 2012, the Department received a plan approval application from Mountain Gathering, LLC for the construction and temporary operation of a new compressor station known as the Westmoreland Compressor Station (Westmoreland) located in Fairfield Township, Westmoreland County. Review of this application by the Department has been completed and in accordance with 25 Pa. Code §§ 127.44-45, notice of intent to issue the plan approval was published in the *Pennsylvania Bulletin* on April 12, 2014, beginning the 30-day public comment period. The draft plan approval and review memo were sent to the applicant on April 16, 2014. The 30-day public comment period ended at the close of business on May 12, 2014.

An informal file review was conducted by Group Against Smog & Pollution (GASP) on April 25, 2014.

On May 12, 2014, the Department received comment letters from GASP and Clean Air Council with via email. A summary of the public comments received and the Department's responses are listed below. I recommend issuance of this plan approval for a period of 18 months.

LIST OF COMMENTATORS

1. Group Against Smog & Pollution
Joe Osborne
Legal Director
2. Clean Air Council
Joseph Otis Minott, Esq.
Executive Director

COMMENTS AND RESPONSES

Clean Air Council

1. **Comment:** Air monitoring and modeling must be conducted at the proposed site.

Response: The Clean Air Act required EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment and establishes two levels of national air quality standards:

- a. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly; and
- b. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

Per 25 Pa. Code 127.12(a)(6), "An application for approval shall... Show that the source will not prevent or adversely affect the attainment or maintenance of ambient air quality standards when requested by the Department." Minor sources of air contamination (with respect to criteria pollutants) are not expected to cause an exceedance of the NAAQS or exceed the significant impact levels for the NAAQS. Modeling demonstration is normally required for new air contamination sources subject to Prevention of Significant Deterioration (PSD) requirements. This plan approval is not subject to the requirements of PSD. As a minor facility, worst case potential emissions are not expected to exceed the NAAQS or significant impact limits for the NAAQS therefore a modeling demonstration will not be required.

With respect to the January 24, 2013, Barto modeling report cited by the commenter, on May 14, 2014, the Department sent a response to the commenter on this report. The Department noted a number of shortcomings in the commenter's report, including the use of a model that over predicts ambient pollution concentrations. In addition, the Department requested additional data from the commenter to support their modeling results. The commenter did not respond to the Department's request. Also, existing monitors near compressor stations in this Commonwealth do not show an exceedance of the NO₂ NAAQS.

Although outside of the scope of this plan approval application review, the Department previously conducted three short-term ambient air quality sampling studies in various drilling regions of the state, including Washington and Greene Counties.¹ The Department also announced a long-term air monitoring study of unconventional natural gas extracted from the Marcellus shale formation underlying Washington County. The Department released a technical support document² that provides additional information about the study's sampling site locations and equipment configurations.

¹ http://www.dep.state.pa.us/dep/deputate/airwaste/aq/aqm/docs/Marcellus_SW_11-01-10.pdf

² http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/TSD_for_Marcellus_LTMS_Final_August_2013.pdf

- 2. Comment:** Selective catalytic reduction (SCR) must be properly considered in the Best Available Technology (BAT) review.

Response: The commenter states that the Department has provided \$/ton figures for the reduction of NO_x from the GP-5 technical support document and the applicant that are considered cost prohibitive, but has not provided a \$/ton value that is economically feasible, rendering the determination conclusory.

Although the GP-5 technical support document does not explicitly state what cost would be considered economically feasible, costs analyzed in the document greater than \$6,000/ton are considered cost prohibitive. This is consistent with the Department's analysis conducted for the GP-9 for diesel or No. 2 fuel-fired internal combustion engines in 2004. During this analysis, the Department utilized a \$5,000 per ton threshold for economic feasibility of NO_x controls on diesel-fired engines in moderate nonattainment areas. Adjusting the 2004 value of \$5,000/ton with the current Consumer Price Index yields approximately \$6,300/ton as the inflated rate. Based upon the above economic feasibility, the applicant's estimated cost of over \$15,000/ton is considered cost prohibitive. It should also be noted that thus far, the Department is not aware of any natural gas-fired lean burn engines of this size that have been required to install an SCR to meet BAT requirement.

- 3. Comment:** Mountain Gathering provided an inadequate natural gas analysis.

Response: The natural gas analysis provided by Mountain Gathering was determined to be a conservative representation of the natural gas expected at Westmoreland. Mountain Gathering accounted for a HAPs concentration even though no HAPs were detected in the analysis to account for potential variation in gas quality. Furthermore, small variations in gas quality are expected to have little or no effect on the compressor engine emissions since it is near pipeline quality. Control of emissions from the proposed dehydrator is over 98%, therefore small variation in the gas quality will also have little effect on the emissions to the atmosphere.

The commenter has suggested the Department requires the applicant provide a gas analysis from nearby XTO (Mountain Gathering's parent company) wells or from the Stickle Compressor Station owned and operated Burnett Oil Co, Inc. and located less than 2 miles away. Using the gas analysis from Stickle would result in reduced emissions since Mountain Gathering has accounted for potential HAPs and a VOC concentration nearly 5x that at Stickle. This plan approval will require Mountain Gathering to perform periodic natural gas analyses to demonstrate continued compliance with the conditions and emission limits of this plan approval.

- 4. Comment:** PA DEP must discharge its duty under Pennsylvania's Environmental Rights Amendment and protects the people's right to breathe clean air (Article I, Section 27 of the Pennsylvania Constitution).

Response: This plan approval is consistent with applicable statutory and regulatory requirements. These requirements, as well as the considerations undertaken by the Department and the terms and conditions of this plan approval, satisfy Article I, Sec 27 of the Pennsylvania Constitution. With respect to potential impacts from air emissions on nearby residents, the Department has addressed this issue by

requiring emission restrictions, testing requirements, monitoring requirements, recordkeeping requirements, reporting requirements, and work practice standards consistent with 25 Pa. Code Chapters 121 – 145. The Department believes that it has satisfied its Art I Sec 27 obligations with respect to the question of human health impacts on nearby residents from the air emissions allowed under this plan approval.

Also, please see response to Comment 1 regarding the Department's short term and long term air monitoring studies.

Group Against Smog & Pollution

5. **Comment:** The Department's source determination analysis is inadequate because it fails to consider the adjacent XTO Energy, Inc. Fairfield Township Pig Station.

Response: The commenter refers to a spreadsheet tab labeled "Emissions from Exempted Facilities" included with the file which lists two compressor engines and pigging emissions. On May 23, 2014, I confirmed with the applicant that this tab was carried over from a generic template. The applicant confirmed that there is in fact a pig station that is considered part of the Westmoreland Compressor Station however there are no additional compressor engines at the pig station. The only source of emissions from the pig station is a small amount of natural gas release during the pigging operation. Estimated VOC emissions from the pig station have been estimated to be 0.04 tpy VOC by the applicant. Additional emissions from the pig station do not cause the facility-wide potential to emit to exceed the major source thresholds.

6. **Comment:** The draft plan approval reference to GT Exhaust engine catalyts may be in error.

Response: Based on the information provided by the applicant, the proposed oxidation catalyts will be provided through Powertherm Co., Inc. Powertherm is an industrial exhaust system provider which supplies products from GT Exhaust, among others. The quote provided with the application from Powertherm is for GT Exhaust model number 201 VO-4-200-7124 oxidation catalyts.