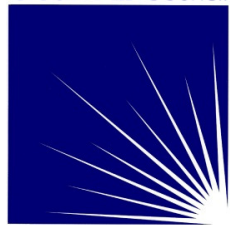




GROUP AGAINST SMOG & POLLUTION

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November 26, 2012

Via Electronic Mail

Jesse Parihar
Air Quality Engineering Specialist
Pennsylvania Department of Environmental Protection
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222

**Re: Group Against Smog and Pollution and Clean Air Council Comments Regarding
Plan Approval PA-63-00965A for the M3 Appalachia Gathering, LLC Twilight
Compressor Station**

Dear Mr. Parihar,

Please accept these comments regarding Plan Approval PA-63-00965A for M3 Appalachia Gathering, LLC's Twilight Compressor Station, West Pike Run Township, Washington County, submitted on behalf of the Group Against Smog and Pollution (GASP) and Clean Air Council.

If you have any questions or require additional information, please do not hesitate to get in touch.

Sincerely,

Lauren M. Burge, Esq.
Staff Attorney
Group Against Smog and Pollution

Joseph Otis Minott, Esq.
Executive Director
Clean Air Council

**GROUP AGAINST SMOG AND POLLUTION (GASP) AND CLEAN AIR COUNCIL
COMMENTS REGARDING THE M3 APPALACHIA GATHERING, LCC TWILIGHT
COMPRESSOR STATION (PA-63-00965A)**

I. Because a draft permit was unavailable to the public, the Department should re-notice this Plan Approval and provide all relevant documents for public review.

The Department did not make a draft of the Plan Approval document for the Twilight facility available for review during the public comment period. This prevents the public from fully evaluating the permit and providing meaningful comment, and indicates a lack of transparency on the part of the Department.

The Pennsylvania Air Pollution Control Act (APCA) requires that the Department involve the public in the permitting process. The APCA states that “[t]he department shall provide public notice and the right to comment on all permits prior to issuance or denial . . .”¹ It is also the Department’s policy to involve the public as much as possible before issuing a permit. DEP’s *Policy on Public Participation in the Permit Application Review Process* states that “[p]ublic participation is an integral part of environmental decision-making, and it is the policy of the Department that applications for Departmental approval should provide for effective involvement of the public.”² Additionally, “Department staff will make every effort to encourage public participation in the permit review process.”³ The effort has not been made to make all necessary documents available for public review in this instance.

Documents available for public review included the Department’s review memo, M3 Appalachia Gathering, LLC’s plan approval application, and some correspondence between DEP and the permittee. While these documents are useful when preparing comments on the facility, it is the plan approval itself that is binding on the parties involved. Because the public does not have the opportunity to review a draft plan approval, it cannot be determined whether there are errors in the permit itself or whether all necessary requirements from the review memo have been included in the permit. As such, the public’s ability to effectively comment on this facility is greatly limited.

The Department originally noticed this Plan Approval in the *Pennsylvania Bulletin* on October 6, 2012. However, this notice incorrectly listed the Twilight’s location as being in Cambria County. Because of this, Twilight was re-noticed on October 27, 2012 and correctly listed its location in Washington County. Because of this error, the Department had additional time to prepare and supply a draft plan approval for public inspection, but still failed to do so.

¹ 35 P.S. § 4006.1(b)(1).

² Pa. DEP, *Policy on Public Participation in the Permit Application Review Process*, Doc. No. 012-0900-003 (July 16, 2005) at 1, available at <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-48698/012-0900-003.pdf>.

³³ *Id.* at 3.

For these reasons, the Department should again re-notice the Twilight facility and provide a draft plan approval for public review to provide adequate opportunity for effective public comment.

II. The Department must clarify and correct the Twilight facility’s potential to emit greenhouse gases.

Table 8 on page 16 of the Department’s review memo, titled “Facility Greenhouse Gas Potential to Emit” needs to be corrected and clarified in order to accurately display potential greenhouse gas emissions from the Twilight facility. Commenters have identified 4 issues relating to Table 8:

- a. The first row of Table 8 indicates that the two existing Caterpillar G3516B engines that will remain on-site have the potential to emit 29,388.06 tpy of CO₂. However, based on the Permittee’s PTE estimates, Commenters believe that the 29,388.06 tpy figure is actually the PTE for all five engines currently on-site, not only the two that will remain. The Department should simply replace the label on the first row to reflect this fact; the table’s math will not be affected since it already accounts for the decrease in PTE by removing three of these engines.
- b. It is also unclear whether the figures in Table 8 for N₂O and CH₄ as listed have been converted to CO₂e. If these measurements are in CO₂e, the table should indicate this. If not, these measurements must be converted to CO₂e, which will result in a change in the facility’s total PTE for greenhouse gases.
- c. The N₂O numbers for the engines appear to correlate well with N₂O emissions estimates in CO₂e short tons based on Part 98 calculations. However, if the review memo CH₄ estimates are intended to be listed in CO₂e short tons, the CH₄ numbers provided for the engines are far lower than the results of a Part 98 calculation (~35% underestimate for the G3516B engines and ~ 65% underestimate for the G3612 engines).⁴ This suggests that the Table 8 CH₄ PTE figures are incorrect and must be recalculated.
- d. Additionally, the note below Table 8 should be clarified. It states that “[t]he above total CO₂ equivalent does not include blow down emissions, however, the applicant has agreed to accept that the facility wide emissions and plan approval will be conditioned accordingly until Plan Approval is modified.” While this statement indicates that blowdowns are not included in Twilight’s greenhouse gas calculations, the Table 8 does list methane emissions from “process blowdowns.” It is unclear whether there are other greenhouse gas emissions related to blowdowns that are not included in the total CO₂e calculation, or whether this note was included in error. If this note was correctly stated, the meaning of the statement

⁴ Attachment 1 –Greenhouse gas PTE calculations spreadsheet.

that “the facility wide emissions and plan approval will be conditioned accordingly” is also unclear. The Department must account for all greenhouse gas emissions in this Plan Approval in order to adequately determine the applicability of regulatory requirements related to greenhouse gas emissions.

III. The proposed VOC and CO emission limits for the G3612LE engines do not constitute best available technology (BAT).

New sources must “[s]how that the emissions from a new source will be the minimum attainable through the use of the best available technology.”⁵ The review memo erroneously states that the applicant has satisfied the best available technology (BAT) requirement for VOC and CO emissions from the G3612LE engines.⁶ However, as noted in the table below, on multiple previous occasions the Department has determined that more stringent CO and VOC emission limits constituted BAT for lean burn natural gas fired engines.

	Twilight	Shamrock ⁷	Welling ⁸	Proposed GP-5 ⁹
CO (g/bhp-hr)	0.14	0.096	0.12	0.12
VOC (g/bhp-hr)	0.22	0.17	0.12	0.12 (as NMNEHC)

Both the Shamrock and Welling determinations are now nearly 2 years old, and the feasibility of achieving these lower emission rates is sufficiently well established that the Department has incorporated 0.12 g/bhp-hr emission rates for CO and NMNEHCs into its proposed revisions to GP-5.¹⁰ Thus BAT for CO and VOC emissions from the proposed G3612LE engines at Twilight must, at the very minimum, be set at 0.12 g/bhp-hr.

IV. The Department should employ recommendations from EPA’s Natural Gas STAR Program to reduce methane emissions from this facility.

U.S. EPA’s Natural Gas STAR Program is a voluntary program that encourages participating oil and natural gas companies to reduce methane emissions by implementing

⁵ 25 Pa.Code § 127.12(a)(5)

⁶ PADEP, Review of Plan Approval – Twilight Compressor Station (Oct. 15, 2012) at 8.

⁷ Attachment 2 – PADEP, Review of Plan Approval - Shamrock Compressor Station (Nov. 12, 2010, Revised Nov. 23, 2010), at 5-7.

⁸ Attachment 3 – PADEP, Review of Plan Approval – Welling Compressor Station (Dec. 29, 2010, Revised Jan. 12, 2011), at 9.

⁹ PADEP, Revised GP-5 Draft (Feb. 10, 2012), Section B.2(e) available at [http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-87177/GP-5%20Substantive%20Revisions%20%202-10-2012%20final%20version%20\(2\).pdf](http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-87177/GP-5%20Substantive%20Revisions%20%202-10-2012%20final%20version%20(2).pdf).

¹⁰ *Id.*

emission control technologies and best management practices.¹¹ These practices both reduce methane emissions and increase operational efficiency, often resulting in significant cost-savings for industry. Reducing methane emissions is essential because methane is over 20 times more potent as a greenhouse gas than CO₂, and the oil and natural gas industry is the largest source of man-made methane emissions in the United States and the single largest source globally.¹² Most of the Natural Gas STAR recommendations have the co-benefit of reducing VOC, and, in some cases, NO_x emissions. The Department must evaluate EPA Natural Gas STAR methane reduction recommendations¹³ for inclusion in Twilight's permit, including but not limited to the measures discussed below.

There are a number of practices that do not seem to have been considered here that could be used to reduce emissions from compressor engine startup and shutdown. To reduce emissions during startup, the number of startups should be limited; additionally, maintaining engine ignitions to reduce the number of failed ignitions will prevent gas from being vented to the atmosphere as part of ignition.¹⁴ To reduce emissions during shutdown, whenever possible the compressor should remain pressurized during shutdown, blowdown vent lines should be connected to the fuel gas system, and static seals should be employed to prevent rod packing leaks.¹⁵

Other practices that may be applicable to this facility can be used to address emissions from dehydrators and valves. No-bleed pneumatic controllers should be used to limit emissions if electricity is available on-site; if electricity is unavailable, low-bleed controllers should be required instead.¹⁶ In general, the Department should thoroughly review EPA's Natural Gas STAR recommendations and identify those that can be applied at this facility and in future permitting actions. Many of these options provide cost-effective means of reducing methane emissions, and should be incorporated into Twilight's final plan approval.

¹¹ See U.S. EPA's Natural Gas STAR Program website, <http://www.epa.gov/gasstar/basic-information/index.html#overview1>; U.S. EPA, *What is Natural Gas STAR?* Fact Sheet, http://www.epa.gov/gasstar/documents/ngstar_mktg-factsheet.pdf.

¹² U.S. EPA, *What is Natural Gas STAR?* Fact Sheet, http://www.epa.gov/gasstar/documents/ngstar_mktg-factsheet.pdf.

¹³ U.S. EPA Natural Gas STAR, *Recommended Technologies and Practices*, <http://www.epa.gov/gasstar/tools/recommended.html>.

¹⁴ U.S. EPA Natural Gas STAR, *Reduce Natural Gas Venting with Fewer Compressor Engine Startups & Improved Engine Ignition*, <http://www.epa.gov/gasstar/documents/reducethefrequencyofenginestarts.pdf>.

¹⁵ U.S. EPA Natural Gas STAR, *Reducing Emissions When Taking Compressors Off-Line*, http://www.epa.gov/gasstar/documents/ll_compressorsoffline.pdf.

¹⁶ U.S. EPA Natural Gas STAR, *Recommended Technologies and Practices – Valves*, <http://www.epa.gov/gasstar/tools/recommended.html#valves>.