

# Public Comment on BAQ-GPA/GP-5, BAQ-GPA/GP-5A, and Air Quality Permit Exemptions

Pursuant to Pennsylvania Bulletin 47 Pa.B. 733, Saturday, February 4, 2017, “Proposed General Plan Approval and/or General Operating Permit No. 5A for Unconventional Natural Gas Well Site Operations and Remote Pigging Stations; Proposed Modifications to General Plan Approval and/or General Operating Permit No. 5 for Natural Gas Compressor Stations, Processing Plants and Transmission Stations (BAQ-GPA/GP-5); Proposed Modifications to the Air Quality Permit Exemption List (275-2101-003)”, herein are my public comments on these three documents.

## *I. Items of Support*

### **1. Removal of new Unconventional Oil & Gas wells from coverage under Exemption 38 is commendable.**

Historically, all Oil & Gas wells were completely exempted from all air pollution permitting requirements under Exemption 38 in document 275-2101-003, despite the fact that Unconventional Oil & Gas wells are a significant source of air pollution. For many years, citizens have been regularly filing public comments asking DEP to remove Unconventional Oil & Gas wells from coverage under Exemption 38. I am therefore in emphatically strong support that DEP has finally done this. Removal of the exemption from air quality permitting of Unconventional Oil & Gas wells is highly commendable and long overdue. I would like to thank DEP for finally taking this step.

### **2. Requirement for new or modified Unconventional Oil & Gas wells to obtain a General Plan Approval under BAQ-GPA/GP-5A is commendable.**

While the version of Exemption 38 currently in force “reminds” the operator of an Unconventional Oil & Gas well that it is bound by the EPA’s Oil & Gas Air Rule (40 CFR Part 60, Subpart OOOO), DEP has not taken a properly active role in enforcing this. Specifically:

- There have been no Air Quality Inspections to verify compliance by operators of Unconventional Oil & Gas wells with 40 CFR Part 60, Subpart OOOO.
- The Bureau of Air Quality (BAQ) has had no mechanism in place to even *register* which wells were subject to 40 CFR Part 60, Subpart OOOO.
- There was no acknowledgment by BAQ that Unconventional Oil & Gas wells utilize many of the same kinds of pieces of equipment as other kinds of facilities that have been subject to permitting.

These problems will be remedied by the promulgation of GP-5A. I am in emphatic support that DEP has finally taken this step.

However: the problems listed above *still apply* to existing wells that are subject to proposed draft Exemption 38a. DEP has been remiss since August 10, 2013 in not applying a solution such as the proposed GP-5A to these wells. DEP must take an additional step and *delete* Exemption 38a. If this exemption is retained, I urge DEP in a subsequent proposal to *rescind* Exemption 38a. It is simply not satisfactory to merely “remind” operators of Unconventional Oil & Gas wells constructed since August 10, 2013 that they are subject to 40 CFR Part 60, Subpart OOOO. It is DEP, under the Pennsylvania State Implementation Plan (SIP) that is responsible for enforcing 40 CFR Part 60, Subpart OOOO. DEP has done the right thing for new or modified construction by codifying this obligation into GP-5A; it must finish the job by applying GP-5A to existing wells.

### 3. Prohibition of use of GP-5 / GP-5A for *circumvention* (Section A5(d)) is commendable.

I emphatically support Section A5(d) in GP-5 and GP-5A. DEP is to be commended for including this provision.

## II. Objections

### 4. There is no public comment on minor source determination under GP-5 / GP-5A. More generally, there is no public comment on eligibility for the use of GP-5 / GP-5A.

To put it bluntly, this issue has been a sore point in citizen comments on GP-5 for years. And it remains so! Consider a historic example from DEP's own records. At one time, DEP had an eligibility requirement for the use of GP-5 that prohibited its use if any compression engine exceeded 1500 bhp. (This requirement was very unfortunately dropped, and replaced with the requirement that a facility be a minor source.) An operator called MarkWest Liberty Midstream & Resources LLC applied for a permit for a compressor station in Washington County called the Welling Compressor Station (DEP Permit # 63-00958A, Site ID 737309). During public comment, the PTE calculation method was *successfully* challenged. It was agreed that, as applied for, the facility would not be a minor source and would require a Title V permit. MarkWest agreed to *withdraw* one engine in order to retain minor source status<sup>1</sup>. Consider what would have happened in that case using today's rules. The operator would have asserted that the original application qualified for GP-5 as a minor source. There would have been no public comment on this. DEP would have approved the permit with the original number of engines. I.e., DEP would have approved a General Permit for which its operator was not eligible — precisely because public comment on the individual application would not have been allowed.

Refusing to allow public comment on minor source determination presents the public with a Catch-22. If a member of the public wishes to challenge eligibility of a compressor station for GP-5, based on an argument that the facility in fact would constitute a major source, the citizen is ineligible to make that comment because the application takes place under GP-5 and there is no comment opportunity unless the application is for a full Plan Approval.

This situation is unacceptable.

Citizens are not the only ones objecting to this outrage. EPA has also objected<sup>2</sup>:

“EPA has consistently stated that to be federally enforceable, two criteria must be met: (1) the limitations must be contained in a permit *that is federally enforceable and has undergone public participation* and (2) the limitation must be enforceable as a practical matter. Since the application for authorization does not undergo any public review *EPA does not believe that it would be federally enforceable.*” [Emphasis added.]

In its Comment Response Document, DEP replied:

“The Department agrees that limiting the potential to emit (PTE) in accordance with the specifications in the Application for Authorization to Use GP-5 is not “federally enforceable” since the application seeking restriction of PTE has not undergone public participation.”

— but still refused to allow public comment on the grounds that the PTE itself is federally enforceable<sup>3</sup>. This

1 Memo from Devin P. Tomko to File PA-63-00958A, August 8, 2012, Comment and Response Document for Proposed Plan Approval PA-63-00958A.

2 An unofficial copy of EPA's comments on GP-5 as of 5/2/2012 is available here: <http://faymarwatch.org/documents/EPA%20GP-5%20Comments.pdf>.

3 The actual text in DEP's Comment Response and Document, General Permit GP-5, January 31, 2013, states: “The Department has

completely ignores the fact that PTE calculations have been successfully challenged during public comment periods.

It is time for DEP to quit trying to use double-speak to evade the requirement of the Clean Air Act that the public is allowed a say in the determination of whether a facility is properly designated as a minor source. This includes providing the public with the opportunity to challenge PTE calculations. The mere assertion by the operator that a facility does not require Title V, even with the assent of the DEP, is not good enough.

### **5. Handling of Synthetic Minor Sources under GP-5 / GP-5A is seriously deficient.**

A Synthetic Minor Source (as opposed to a Natural Minor Source) is a facility which would be designated as a Major Source (and thereby ineligible for GP-5 / GP-5A) except for special provisions in the operation of the facility. GP-5 / GP-5A make no distinction between synthetic and natural minor sources. An application for GP-5 / GP-5A must be required to **declare** whether or not it is a synthetic or natural minor source. In the case of a synthetic minor source, the operator should be required to **declare** the list of potentials to emit (PTE) if the special measures were not taken, and **to indicate in detail** what the operating provisions will be to ensure that only minor source emission levels happen.

The reason for imposing a requirement that the application for GP-5 / GP-5A list in detail the *means* by which minor source status will be maintained is clear: compliance that the operator is in fact adhering to these means can be verified.

A historic example will illustrate the problem. Appendix 1 shows an application letter dated September 6, 2011 from an operator called Laurel Mountain Midstream for a GP-5 permit for its Springhill #2 Compressor Station. The permit number became GP5-26-00587B. In the letter, the applicant clearly indicates that this facility is a Synthetic Minor Source, and is applying for a new permit on *the same equipment* as its existing permit “to allow the Springhill Compressor Station to remain a minor source of emissions”. It goes on to describe its PTEs as “self-imposed *elective* emission restrictions” [emphasis added]. The clear implication of this letter is that without its “elective” PTE limitations it could be considered a Major Source. But: at no point in the File Review documents for this facility is there any detail concerning just what the operator intends to *do* to achieve its “elective” limitations. This facility had two Caterpillar G3615LE engines at 1340 bhp — *only one of which had an oxidation catalyst* — and a dehydrator. This facility was subject to numerous complaints, citizen intervention in the Act 14 county comment process, and extensive litigation (still ongoing). There is an inspection report clearly stating only one gas-fired engine was running at the time of the inspection. Nearby residents were alarmed for years by siren-like sounds, which turned out to be starter-gas emissions from an engine which failed restart. So: was this facility in fact adhering to its “elective” means of achieving Synthetic Minor Source qualifying PTEs? We simply don’t know.

DEP is extremely clear that operators of a facility permitted under GP-5 are accountable for maintaining 12-month rolling sum minor source threshold emission amounts. The brutal truth of the matter is that monitoring for compliance is not easy, even for DEP. Instruments capable of detecting quantifiable emission amounts that could tip a facility into 12-month rolling Major Source PTE amounts during an inspection are expensive. On the other hand, if an operator of a Synthetic Minor Source is achieving minor source thresholds by specific operational means, such as limiting run-time hours, or only using a compression engine as “stand-by”, auditing compliance with such means is straightforward and inexpensive.

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prohibited the use of the final GP-5 for Title V facilities. Condition 9(c) of Section A in the final GP-5 requires the emissions from all sources and associated air pollution control equipment located at a natural gas compression and/or processing facility to be less than the major source thresholds on a 12-month rolling sum basis. Condition 14 of Section A in the final GP-5 requires the owner or operator of the facility to maintain records that clearly demonstrate to the Department that the facility is not a Title V facility. Therefore, the emission limits established in GP-5 are federally enforceable.” (p. 29)

Also, it is worth noting that since a declaration in detail of what provisions will ensure that a Synthetic Minor Source does not cross Major Source thresholds is likely to be specific to the facility, applicability of a so-called “standard” (i.e. General) permit to a Synthetic Minor Source is highly questionable.

**6. Where actual emission amounts exceed PTE, these actuals must be fed back into calculation of potential from that point forward.**

Suppose a compressor station is permitted under GP-5, and it is determined that a 12-month emission amount has exceeded a Major Source threshold. Since actual emission amounts have exceeded a Major Source threshold, one can no longer assert that *potential* emission amounts are below all Major Source thresholds. The idea that if actuals exceed declared potentials, the potential need not be raised to match the actual simply defies the common sense understanding of the word “potential”. That means: in such a situation, *eligibility for GP-5 must be immediately suspended*. Now conceivably in such a case as this, it might be argued that the facility should be considered as a Synthetic Minor Source rather than a Major Source, if operating conditions can be identified that would have prevented the Major Source threshold exceedance. This might be acceptable if the operator’s current permit is suspended and the operator is compelled to reapply as a Synthetic Minor Source following guidelines as outlined in point 5 above. But the basic principle still applies: actuals must be fed back into the calculation of PTE where the actual exceeds the potential.

Perhaps the reader is thinking that this is all hypothetical, certainly there’s never been a case of an actual emissions amount exceeding a Major Source threshold. That would be incorrect. In fact there is an example in DEP’s historical records of exactly such a case. Appendix 2 provides a letter from the operator of a facility known as the Bernville Compressor Station in Berks County, DEP Facility Id 467487, showing emission of no less than 61 tons of VOC in a single incident lasting *less than an hour*. (The Major Source threshold for VOC in many locations is 50 tons.) There are several notable points about this case. (1) The figure of 61 tons of VOC released is in fact *the operator’s* figure. (2) The emission amount of VOC was calculated based on the amount of input gas released and gas analysis of the input gas. The cause of this incident was a stuck valve. But the same effect could happen at any compressor station from accumulated blowdowns if their total duration within a one-year period was high enough. (3) An incident such as this raises very serious concerns about the risk of acute exposure to toxic air pollutants.

Now it is true in the Bernville case that the facility in question was already permitted as a Major Source, and did incur a violation over this incident (Inspection ID 2120319, Violation ID 654988). What would have happened if a similar incident had occurred at a facility permitted under GP-5? Even more problematic: what would happen if gas analysis implies that accumulated blowdowns within a 12-month period for a compressor station permitted under GP-5 exceed 50 tons in an area where that is the Major Source threshold for VOC? Would eligibility for GP-5 for that facility be immediately suspended? What will happen if an operator reports emission amounts for a facility permitted under GP-5 under the Marcellus Shale Air Emissions Inventory Program that exceeds a Major Source threshold?

DEP must make it clear in its eligibility requirement for GP-5 that past 12-month emission amounts exceeding PTE will be required to be fed back into future PTE calculations, and that where 12-month emission amounts exceed a Major Source threshold, eligibility for GP-5 will be suspended immediately.

**7. There is no requirement under GP-5 / GP-5A for facility operators to estimate the risk of exposure to doses of air emission chemicals capable of causing harmful health effects.**

It is known that many of the chemical components of air emissions from compressor stations and unconventional gas wells can have serious harmful health effects, e.g. BTEX chemicals, formaldehyde, and many more. Emission of such chemicals is regulated by DEP through the PTE calculation process, which measures emissions as tons per year on a 12-month rolling basis. Meanwhile, the agencies concerned with health effects from acute

exposure to toxic chemicals, such as OSHA and ATSDR, issue safety standards measured in units such as parts per million over a given number of hours. There is a profound deficiency in the entire methodology by which DEP is supposedly protecting our health from harmful air pollutants in that there is no clear way to extrapolate from an emission amount measured in tons per year to probability of exposure to the kind of dosage expressed in an OSHA or ATSDR standard.

In several compressor station Comment Response Documents or Review Memos, DEP has attempted to refute this argument by loosely referencing dispersion/screening studies that “the department has received” concerning landfill gas fired engines<sup>4</sup>. This analysis is severely flawed for the following reasons:

(a) These studies are not cited in a form that the public can access.

The studies have not been published by DEP. They have not even been attached to Public Comment Response documents and provided to commenters who have raised this issue in the past. Where they are presumably available at all to the public through the process of File Review, they are not cited with actual permit numbers so the public can know which files to review. In short, DEP has treated these studies as if they were private information which cannot be challenged by any process of Public Comment. This is inexcusable.

(b) The fuel supply for the engines in question is not directly relevant to natural gas fired compression engines at compressor stations.

(c) The studies were supplied by industry or applicants and have not been peer-reviewed.

(d) As noted above, the studies have not been subjected to public comment.

(e) The studies only address formaldehyde, and not e.g. benzene. Benzene is known to become dangerous at 0.5 ppm.

(f) The studies take no account of the actual kind of equipment actually installed at compressor stations. For instance, they take no account of the kind of malfunction that occurred at Bernville Compressor Station referenced above.

The Bernville case shows conclusively that PTE-level amounts can be released in a single incident, all at once. Surely it would not take a release this massive to cause acute-effect exposure to toxic chemicals under adverse conditions, such as a temperature inversion together with little wind and low cloud cover. It is particularly notable that whereas malodors are specially singled out in Section A9(c)(iii), there is no such singling out for exposures to acute-amount dosages of chemicals harmful to health.

DEP must remedy this problem by requiring compressor station operators to submit a dispersion study providing a forecast probability of exposure to toxic air pollutants — including under adverse weather conditions.

### **8. Dehydrator PTE calculations are determined by modeling based on unrealistic Gas Analysis assumptions.**

As explained in the DEP Technical Support Document published in conjunction with this comment period<sup>5</sup>, a

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4 See e.g. Review Memo from Alan A. Binder to Air Quality Permit File PA-63-00968A (Smith Compressor Station, Washington County), December 13, 2012, p. 14; Review Memo from Alexander Sandy to Air Quality Permit File GP5-26-00587C (Springhill #2 Compressor Station, Fayette County), pp 9-10.

5 *Technical Support Document, General Plan Approval and General Operating Permit for Unconventional Natural Gas Well Site Operations and Remote Pigging Stations (BAQ-GPA/GP-5A) and for Natural Gas Compressor Stations, Processing Plants, and Transmission Stations (BAQ-GPA/GP-5)*, <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-116052/Technical>

dehydrator creates a direct pathway to the atmosphere for any hydrocarbons captured by the glycol when the water is boiled off from the wet glycol<sup>6</sup>. Emissions from this pathway are modeled, not measured, by means of a software program known as GRI-GlyCalc. Emission amounts output by this software are only as reliable as the gas analysis amounts that are provided as input. PTE numbers for a dehydrator are estimated before the compressor station is even built. That means gas analysis figures are simply assumed to be constant over a geographic region and over time. ***There is no scientific basis for this assumption.***

A historic example will illustrate the problem. In its 2013 Air Emissions Inventory Data for the Unconventional Natural Gas Industry,<sup>7</sup> Laurel Mountain Midstream reported the astonishing figure of 5.15 tons of toluene from its Springhill #2 Compressor Station (referenced above). This amount made this compressor station the top 2013 emitter of toluene in the entire state for the entire Marcellus Air Emissions Inventory. No one took any note of this shocking release amount, until this was brought up at a remand hearing before the Fayette County Zoning Hearing Board. At a subsequent session of this hearing, Laurel Mountain Midstream explained it as a data entry error: the gas analysis input figure for toluene used in the 2013 calculations was off by one decimal point. The correct figure for toluene should have been 0.515. This fiasco shows several things. (1) *No one is minding the store* in reviewing the Air Emissions Inventory Data for the Unconventional Natural Gas Industry. (2) Emissions calculations for dehydrators are not based on actual measured numbers. (3) No one is really checking the gas analysis figures that are input to GRI-GlyCalc. In the face of DEP's acknowledgment that a dehydrator does create a direct pathway to the atmosphere for hydrocarbon emissions, this laxity of attention to emissions calculations for dehydrators is simply inexcusable.

DEP must require PTE amounts for dehydrators to be periodically recalculated based on ***measured*** gas analysis from the wells that feed that dehydrator. DEP must require up-to-date gas analysis reporting in GP-5A.

## **9. The applicability of LDAR has been severely narrowed, in a manner that is completely improper.**

It may not have been the intention of DEP to totally gut the effectiveness of LDAR (Leak Detection And Repair) in the currently in force version of GP-5, but that is the effect of the draft proposal. There are numerous problems with the treatment of LDAR in the current draft proposal.

- While the currently in force GP-5 requires LDAR to be applied to a facility as a whole, the draft proposed GP-5 only applies LDAR to "Fugitive Emission Components".
- The definition of "Fugitive Emissions Component" completely excludes all vents and exhausts (except if a leak occurs from a "different place" than the designed vent or exhaust. In particular, a vent which is designed to emit e.g. only steam and water vapor, is not considered a "Fugitive Emissions Component" if it also emits hydrocarbons.

To put it colloquially, this is a hole big enough to drive a "residual waste" truck through. Let's be clear: A leak is a leak. To remove from scrutiny a vent or exhaust which emits "the wrong substance" has exactly the same effect as a leak "from the wrong place". The effect of excluding vents from consideration as "Fugitive Emissions Components" is basically to remove dehydrators from LDAR scrutiny completely.

The requirement for Optical Gas Imaging to provide "adequate thermal background" (Section K3(a)(vi)(A)(5)(i)) is interesting but equivocal in its effect. The scientific principle on which OGI is based is that several hydrocarbons are known to absorb infrared in a very narrow band of wavelengths, approximately 3.2-3.5

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[%20Support%20Document%20GP-5%20and%205A.pdf](#), p.33.

6 As stated in the Technical Reference Document: "the glycol does absorb small amounts of methane and other hydrocarbons from the natural gas. The hydrocarbons are released to the atmosphere along with the water vapor from the regenerator vent."

7 [http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Business%20Topics/Emission%20Inventory/marcellus/Nat%20Gas%20Emissions%202013%20-WellFarmStation\\_20141217.xlsx](http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Business%20Topics/Emission%20Inventory/marcellus/Nat%20Gas%20Emissions%202013%20-WellFarmStation_20141217.xlsx)

microns. Where an “adequate thermal background” exists, OGI is effective to the extent that it illustrates absorbency. This will show (while the imagery is “positive” rather than “negative”) as something looking like black smoke. While I agree that “the black smoke effect” is certainly definitive of hydrocarbons, and definitely to be desired as “best evidence”, FLIR systems claims in its training courses that even absent “adequate thermal background”, hydrocarbons can be inferred to be present (as opposed to “only steam”, for example) by the *behavior* of an emissions plume.

What is the actual impact of the requirement to ensure “adequate thermal background”? I fear there may be no practical way to actually achieve this except to perform OGI from the air shooting down toward the ground. Operators of natural gas infrastructure are likely to object that this is an undue burden, and to be deterred from performing OGI. I urge DEP to reconsider this requirement. It will not contribute to LDAR actually happening. The LDAR provisions in the currently in force GP-5 are commendable. DEP should not be promulgating disincentives to perform LDAR.

#### **10. Municipal notification requirements do not provide sufficient basis for local governments to determine impact.**

There is no requirement for PTE amounts to be listed in municipal (Act 14) notifications, and in our experience in Fayette County, none are provided. Act 14 requires provision of municipal/county comment periods, and 25 PA code § 127.43a includes this language:

“The notice shall state that there is a 30-day comment period which begins upon receipt of the notice by the municipality and county”.

In our experience in Fayette County, this language is missing from Act 14 notifications for GP-5 applications. DEP must incorporate this language into the text of GP-5 (and GP-5A). It is worth noting here that legislative authority for the 30 day comment period does not come from 25 PA code; it comes from Act 14.

#### **11. Reporting requirements must disclose which wells are connected to which compressor stations.**

The relationship between wells and compressor stations significantly impacts air pollution. If a compressor station is down, gas cannot be transmitted from any connected wells. This in turn can cause pressure to build at well sites, requiring gas to be released for pressure relief. This means that the well / compressor station relationship is important for both auditing air emissions inventory data and estimating PTE at the well site. Accordingly, GP-5 must require reporting of which wells are connected via pipeline to the facility, and GP-5A must require reporting of the “next-hop” destination of hydrocarbons transmitted to market from the well site.

#### **12. GP-5 Activity Notifications (Section A10(b)) must be published to the public on the Internet.**

DEP’s Office of Oil and Gas Management publishes to the Internet an Electronic Notifications Report giving queryable access to all notifications of change of status to Oil & Gas wells<sup>8</sup>. BAQ must follow suit. All notifications issued under Section A10(b) should be posted to the Internet in electronic form.

James E. Rosenberg  
Fayette Marcellus Watch  
jr@amanue.com  
555 Davidson Road  
Grindstone, PA 15442

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8 [http://www.depreportingservices.state.pa.us/ReportServer?/Oil\\_Gas/OG\\_Notifications](http://www.depreportingservices.state.pa.us/ReportServer?/Oil_Gas/OG_Notifications)

Appendix 1  
Example Application Letter for a GP-5 as a Synthetic Minor Source with No Change to  
Equipment



GP5-26-00587B

ASPL /  
HISTORY /  
Fee /

Auth # 894174  
Site # 720794  
Clnt # 274129  
APS # 759362  
PF # 719219  
SF #

707379



Laurel Mountain Midstream, LLC  
Westpointe Center Three  
1605 Coraopolis Heights Rd.  
Moon Township, PA 15108  
(412) 865-2174  
(412) 865-2104 fax

September 6, 2011

Mark Gorog  
New Source Review Program Manager  
Air Quality Program  
Southwest Regional Office  
Pennsylvania Department of Environmental Protection  
400 Waterfront Drive  
Pittsburgh, Pennsylvania 15222



**Subject: Application for General Plan Approval and General Operating Permit for Natural Gas Production Facilities (BAQ-GPA/GP-5); Springhill Compressor Station Laurel Mountain Midstream Operating, LLC**

Dear Mr. Gorog:

On behalf of Laurel Mountain Midstream, LLC (LMM), Williams Midstream Field Services (Williams) is submitting an application for a General Plan Approval and General Operating Permit for the existing Springhill Compressor Station, near Springhill Township, Fayette County, Pennsylvania. The application is being submitted to establish self-imposed, federally enforceable emission limitations for the facility and equipment to allow the Springhill Compressor Station to remain a minor source of emissions. No physical changes are being made at the facility with this permit application.

The existing equipment and operations are in full conformance with the GP-5 permit requirements. With the requested federally enforceable limitations (FEL), the facility qualifies as a synthetic minor source under New Source review (NSR), Prevention of Significant Deterioration (PSD), and Title V Operating Permits.

The facility is also an area source for HAPs under the National Emission Standards for Hazardous Air Pollutants (NESHAP) and a minor source of Carbon Dioxide equivalent (CO2e) under the Greenhouse Gas (GHG) regulations.

LMM is providing self-imposed elective emission restrictions for the Springhill Compressor Station. As identified in the attached BAQ-GPA/GP-5 permit application, LMM requests the following federally enforceable emission restrictions for the reciprocating engines and other equipment at the facility:

**Federally Enforceable Emission Restrictions - Engines**

Unit	Description	Pollutant	Emission Rates		
			g/bhp-hr	lb/hr	tpy
Engine 2	Caterpillar (CAT) G3516LE (4SLB)	NOX	2.00	5.91	25.88
		CO	1.89	5.58	24.46
		VOC	0.56	1.65	7.25
		HCHO	0.25	0.74	3.23
Engine 3 (w/OxCat)	Caterpillar (CAT) G3516LE (4SLB)	NOx	2.00	5.91	25.88
		CO	0.19	0.55	2.39
		VOC	0.16	0.46	2.02
		HCHO	0.03	0.08	0.34

**Federally Enforceable Emission Restrictions – All Equipment**

Unit	Description	NOx		CO		VOC		HCHO (HAP)	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Engine 2 - 1,340 bhp	Caterpillar G3516 LE	5.91	25.88	5.58	24.46	1.65	7.25	0.74	3.23
Engine 3 - 1,340 bhp	Caterpillar G3516 LE (w/OxCat)	5.91	25.88	0.55	2.39	0.46	2.02	0.08	0.34
Facility Wide SSM	Startup/Shutdown/Maintenance	---	---	---	---	---	5.00	---	---
Dehydrator 1 (25 MMscfd)	Regenerator Vent	---	---	---	---	2.12	9.30	---	---
	Reboiler (0.25 MMBtu/hr)	0.02	0.11	0.02	0.09	0.001	0.006	neg	neg
Process Fugitives	Process Piping Fugitives	---	---	---	---	0.14	0.63	---	---
Storage Tanks	Condensate/Produced Water	---	---	---	---	0.10	0.42	---	---
Truck Load-out	Condensate/Produced Water	---	---	---	---	---	0.29	---	---

TOTAL PTE:	11.84	51.86	6.15	26.94	4.48	24.91	0.82	3.57
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51.86                      51.83                      36.97

Further discussion regarding the specific equipment, federally enforceable emission limitations, applicability of federal regulations, a process flow diagram, and a location map, are in Attachment A. The General Permit Application Forms are in Attachment B; Emission Calculations are in Attachment C, and various Supporting Documents are in Attachment D.

Mark Gorog  
Southwest Regional Office - PADEP  
September 6, 2011  
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If you have any questions concerning this submittal or need additional information, please contact me at (412) 865-2174 (office) or (307) 871-2347 (cell).

Sincerely,



Dick Baker  
Senior Environmental Specialist

Attachment A – Permit Application Supplement  
Attachment B – Permit Application Forms  
Attachment C – Emission Calculations  
Attachment D – Supporting Documents

Appendix 2  
Operator Letter Showing Compressor Station Major Source Emissions from a Single  
Incident

TEXAS EASTERN TRANSMISSION, LP  
2601 Market Place Street, Suite 400  
Harrisburg, PA 17110  
717.540.8300 office  
717.540.8350 fax



November 20, 2012

Mr. William Weaver  
Air Quality Program Manager  
PA Department of Environmental Protection  
909 Elmerton Ave.  
Harrisburg, PA 17110

**Re: TEXAS EASTERN TRANSMISSION, LP  
BERNVILLE COMPRESSOR STATION  
REVISED MALFUNCTION REPORT**

Dear Mr. Weaver:

On Monday October 29, 2012 the Texas Eastern Transmission, LP, Bernville Compressor Station (Title V No. 06-05033), experienced an emergency shutdown (ESD). The ESD occurred due to a malfunctioning gas detector in the turbine building. Station personnel responded to the station that evening to evaluate the facility. The gas detector was repaired on Tuesday October 30, 2012 and the station was brought back into service.

As a result of internal miscommunication, the gas loss and VOC emissions reported in my letter of October 31, 2012 did not include the total amount of gas vented during this incident. As has been subsequently verbally reported by Texas Eastern to agency representatives, coincidental with the ESD, a suction valve inside the station piping failed to close resulting in additional gas loss that was not included in my initial report. Upon investigation, we have determined that after recent valve maintenance, the operator failed to engage the valve assembly properly. This faulty condition was not detected until after the station attendant arrived to investigate the event.

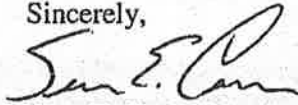
The total gas loss was 174,536 MCF which resulted in 61.31 tons of VOC emissions. Attached you will find an explanation of our emission calculations. Gas was vented for forty three minutes. Due to weather conditions on the 29<sup>th</sup>, it took the station attendant an extended period of time to get to the station. Once inside the station fencing, the station attendant closed the suction valve within two minutes. No additional personal protective equipment (PPE), besides standard PPE - ear protection, a hard hat, and safety toed shoes, were required to be worn by the station attendant. The gas released during this incident readily dissipated in the ongoing storm winds occurring during that time. The odor in the area associated with the incident was due to the mercaptan odorant that is injected into the gas stream.

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Pennsylvania Department of Environmental Protection  
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We regret the error in our initial report and have initiated a review of our reporting procedures to ensure that such internal miscommunications do not reoccur. We further regret causing alarm and resulting complaints from our neighbors concerning the mercaptan odor. Texas Eastern is reviewing whether sufficient data is available to evaluate ambient concentrations from this release through dispersion analysis and will apprise the agency once a determination of that is made.

If you have any questions or comments, please feel free to contact me at 717-540-8303.

Sincerely,



Sean E. Cramer  
Sr. EHS Specialist  
Northeast Region

Mr. William Weaver  
Pennsylvania Department of Environmental Protection  
November 20, 2012  
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Gas Loss Calculation - Bernville ESD 10/29/12:

Volume of Gas \*VOC density = tons VOC released  
 $(174,536,400 \text{ scf}) * (0.0007 \text{ lb VOC/scf}_{\text{gas}}) * (1 \text{ ton}/2000 \text{ lbs}) = 61 \text{ tons VOC}$