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Response to Public Comment And Final Determination

R13-2829
R13-2831

Appalachia Midstream Services, LLC
Pleasants Compressor Station
Miller Compressor Station

Date: September 9, 2010

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BACKGROUND INFORMATION

On May 12, 2010, pursuant to §45-13-8, the West Virginia Division of Air Quality (DAQ) provided notice to the public of a preliminary determination to issue Permit Numbers R13-2829 and R13-2831 to Appalachia Midstream Services, LLC (AMS) for the construction of two (2) natural gas compressor stations proposed to be located near Howard and Bannen, Marshall County, WV. At that time, the draft permit and Engineering Evaluation/Fact Sheet were made available to the public for review. The permit application had previously been available for public review and remained so during the public comment period.

The public notice was followed by a public comment period (required to be a minimum of 30 days under §45-13-8) scheduled to end at 5:00 P.M. on June 11, 2010. During the public comment period, the DAQ accepted comments on our preliminary determination to issue permits R13-2829 and R13-2831 to AMS and on all documents related thereto. To provide information on the permitting action and to facilitate the submission of comments, the DAQ held, on July 1, 2010, and pursuant to §45-13-9, a public meeting concerning R13-2829 and R13-2831 at the Silver Hill Fire Department located in Wetzel County, WV.

OVERVIEW OF COMMENTS RECEIVED

The DAQ received written comments during the public comment period. Additional written and oral comments were made during the public meeting. Some comments were general in nature (and non-technical) either in support of issuance of the permit or against it. However, technical questions/comments were also submitted. Pursuant to §45-13-8.8, all submitted comments received during the public comment period have been reviewed and are appropriately addressed in this document.

ORGANIZATION OF COMMENT RESPONSE

The DAQ's response to the submitted comments will include both a general and specific response section. The general response will define issues over which the DAQ has authority and by contrast, identify those issues that are beyond the purview of the DAQ. The general response will also describe the statutory basis for the issuance/denial of a permit, discuss the role of the pre-construction permitting process in the larger divisional goal maintaining air quality in WV, and detail the current status of the ambient air quality of Marshall and Wetzel Counties.

The specific response will summarize each relevant non-general comment that falls within the purview of the DAQ and provide a response to it. Due to the size and number of the comments, this document will not reproduce all the comments here (they are available for review in the R13-2829 and R13-2831 file). Instead, each comment will be summarized and key points will be listed. The DAQ makes no claim that the summaries are complete; they are provided only to place the responses in a proper context. For a complete understanding of submitted comments, please see the original documents in the file. The DAQ responses, however, are directed to the entire comments and not just to what is summarized. Comments that are not directly identified and responded to in the specific response section of this document are assumed to be answered under the general response section (or not relevant to the AMS application or an air quality-related issue).

GENERAL RESPONSE TO COMMENTS

Statutory Authority of the DAQ

The statutory authority of the of the DAQ is given under the Air Pollution Control Act (APCA) - West Virginia Code §22-5-1, *et. seq.* - which states, under §22-5-1 ("Declaration of policy and purpose"), that:

> It is hereby declared the public policy of this state and the purpose of this article to achieve and maintain such levels of air quality **as will** [underlining and emphasis added] protect human health and safety, and to the greatest degree practicable, prevent injury to plant and animal life and property, foster the comfort and convenience of the people, promote the economic and social development of this state and facilitate the enjoyment of the natural attractions of this state.

Therefore, while the code states that the intent of the rule includes the criteria outlined in the latter part of the above sentence, it is clear by the underlined and bolded section of the above sentence that the scope of the delegated authority does not extend beyond the impact of air quality on these criteria. Based on the language under §22-5-1, et. seq., the DAQ, in making determinations on issuance or denial of permits under 45CSR13, does not take into consideration substantive non-air quality issues such as job creation, economic viability of proposed product, energy independence, nuisance potential (noise, sight line obstruction, traffic), non-air quality environmental impacts, grant eligibility, etc. Beyond the DAQ's position that the code does not grant us the authority to take into consideration such issues, it is also self-evident that these issues are beyond the expertise of the Division of Air Quality and that most are regulated by other Bodies with the mandates and expertise to do so.

Statutory Basis for Permit Denial

Pursuant to §22-5-4 ("Powers and duties of director; and legal services; rules"), the DAQ is authorized to:

> To promulgate legislative rules . . . providing for . . . [p]rocedures and requirements for permit applications, transfers and modifications and the review thereof;

This authorization is effected under WV Legislative Rule 45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation." Pursuant to §45-13-5.7, the DAQ shall issue a permit unless:

> a determination is made that the proposed construction, modification, registration or relocation will violate applicable emission standards, will interfere with attainment or maintenance of an applicable ambient air quality standard, cause or contribute to a violation of an applicable air quality increment, or be inconsistent with the intent and purpose of this rule or W. Va. Code §22-5-1 et seq., in which case an order denying such construction, modification, relocation and

operation shall be issued. The Secretary shall, to the extent possible, give priority to the issuance of any such permit so as to avoid undue delay and hardship.

It is clear under 45CSR13 that denial of a permit must be based on one of the above explicitly stated criteria or, as noted, is inconsistent with the intent of 45CSR13 or §22-5-1, *et. seq.* As is stated above, it is the DAQ's position that the intent of both of the APCA and 45CSR13 is to circumscribe the authority of the DAQ to air quality issues as outlined in the APCA and in West Virginia's State Implementation Plan (SIP).

The air quality issues evaluated relating to AMS' applications to construct two (2) natural gas compressor stations are outlined in the DAQ's Engineering Evaluation/Fact Sheet made public on May 12, 2010. The issues covered under that document represent the extent of the substantive air quality issues over which the DAQ believes it has authority to evaluate under 45CSR13 and the APCA as relating to AMS' permit applications R13-2829 and R13-2831.

DAQ Permitting Process in Context

It is important to note here that the DAQ permitting process is but one part of a system that works to meet intent of the APCA in WV. The DAQ maintains a Compliance/Enforcement (C/E) Section, a Monitoring Section, a Planning Section, *etc.* to effect this. Most pertinent to the permitting process, the C/E Section regularly inspects permitted sources to determine the compliance status of the facility including compliance with all testing, monitoring, record-keeping, and reporting requirements. If the source is not in compliance, the DAQ has legal means to require the facility to cease operating until it is again demonstrated to be in compliance.

Ambient Air Quality Status of Wetzel and Marshall Counties

The quality of the air of a defined local area - in this case Wetzel and Marshall Counties, WV - is determined by its status with respect to the National Ambient Air Quality Standards (NAAQS). The Clean Air Act, which was last amended in 1990, requires the Environmental Protection Agency (EPA) to set NAAQS for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for six principal pollutants, which are called "criteria" pollutants. They are listed at http://www.epa.gov/air/criteria.html.

Counties that are known to be violating these standards are, for specific pollutants, designated by the EPA as in "non-attainment" with the NAAQS. Counties that are not known to be violating these standards are, for specific pollutants, designated by the EPA as in "attainment" with the NAAQS. Wetzel County is designated by EPA as in attainment with the NAAQS. Marshall County is designated by EPA as being in attainment with the NAAQS for all pollutants except $PM_{2.5}$.

General Response Conclusion

In conclusion, in response to all commenters who referenced substantive non-air quality issues, the APCA and 45CSR13 does not grant the DAQ the authority to take into consideration such issues in determining to issue or deny the permit. Further, the requirements of 45CSR13 require the DAQ to, when denying a permit, explicitly state the reason pursuant to §45-13-5.7. Additionally, the permit is but the beginning of the involvement of the DAQ with a source. After issuance, the facility will receive regular inspections to determine compliance with the requirements as outlined in the applicable permit.

SPECIFIC RESPONSES TO COMMENTS

Comment #1
The Miller Compressor Station is being constructed on a 54 acre parcel of ground that is taxed in Wetzel County and shown on their Center District Sheet 1, parcel 06. The compressor pad is located on the southern tip of that property, completely south of the county line between Marshall and Wetzel counties. Why was this compressor station not required to be advertised in our local county newspaper, which is sold in local stores and otherwise readily available to all residents in the affected area?

DAQ Response
The compressor station is being located on a piece of property containing three tracts of land owned by AMS that is in Marshall and Wetzel Counties. The compressor station itself is proposed to be located on tract 2 of that property which is taxed in Marshall County. The third tract which is referenced above, has a small part of land located in Wetzel County.

According to the public review procedures of 45CSR13, it is required that the applicant and the Division of Air Quality (DAQ) shall place a Class I legal advertisement notifying the public of their intent in a newspaper of general circulation in the area where the source will be located. In areas that may be served by multiple newspapers, it is common practice to publish in daily newspapers. The *Moundsville Daily Echo* is a newspaper that is in general circulation and is a daily newspaper.

During the public comment period for these applications, comments were received and a public meeting was requested. A public meeting was held at the request of the commenters at the Silver Hill Fire Department on July 1, 2010. The public notice advertising this public meeting was published in both the *Moundsville Daily Echo* (Marshall County) and the *Wetzel Chronicle* (Wetzel County).

DAQ Action
None.

Comment #2
The fact that Miller location is in Wetzel Co. has made the failure to properly notify Wetzel Co residents a legal matter. The fact that both were advertised in a Moundsville paper that has a very small circulation is suggestive of a failure to give due importance to the need to notify the public who live here and will bear the brunt of any problems.

DAQ Response
See Response #1.

DAQ Action
None.

Comment #3
The open, uncontrolled gas flares at all the Marcellus shale wells in this area have all emitted both objectionable odors and fumes. Will the flare at the Miller compressor station have any means to monitor fumes and odors? How will objectionable odors, which can be temporary and irregular and hard to document.

DAQ Response
There is a difference in what is called the odor threshold, the concentration at which individuals smell an odor, in all individuals. Therefore, 45CSR4, the DAQ odor regulation, states that no person, shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. 45CSR4 then defines "objectionable odor" as an odor which, in the opinion of a duly authorized representative of the Director, based upon his/her investigations or his/her investigations and complaints, is objectionable. As these are new facilities, no odors have been deemed objectionable.

Both Draft Permits R13-2829 and R13-2831 state that AMS shall comply with all provisions of 45CSR4 (To Prevent and Control the Discharge of Air Pollutants into the Open Air which Causes or Contributes to an Objectionable Odor or Odors). Upon receiving comments on this issue, and the concern for air quality in this area due to the level of activity, the DAQ has decided to require control systems on the storage tanks.

The control efficiency that will be required on the tanks will be a control device that can achieve a 98% Volatile Organic Compound (VOC) emission reduction. For the Miller Station, AMS proposed their VOC tanks emissions to be 49.18 tons/year. Requiring a control efficiency of 98% reduces the tank emissions to 0.99 tons/year. This represents a VOC emission reduction of 48.19 tons/year. For the Pleasants Station, AMS proposed their VOC tanks emissions to be 13.17 tons/year. Requiring a control efficiency of 98% reduces the tank emissions to 0.27 tons/year. This represents a VOC emission reduction of 12.90 tons/year.

This would reduce the total VOC emissions from the Miller Station from 77.57 tons/year in the Draft Permit to 29.38 tons/year in the Final Permit. This would reduce the total VOC emissions from the Pleasants Station from 94.43 tons/year in the Draft Permit to 81.53 tons/year in the Final Permit.

The following tables indicate the control device efficiencies that are required:

R13-2829
Pleasants Compressor Station

Emission Unit	Pollutant	Control Device	Control Efficiency
EPCE-1 – EPCE-12 Compressor Engines	Nitrogen Oxides	Non Selective Catalytic Reduction (NSCR)	96.50 %
	Carbon Dioxide		93.25 %
	Volatile Organic Compounds		84.50 %
	Hazardous Air Pollutants		50.00 %
EUDHY-1 – EUDHY-3 Glycol Dehydration Units	BTEX (Benzene, Toluene, Ethylbenzene, Xylene)	Condenser/Combustion	99.70 %
	Volatile Organic Compounds		99.70 %
EPTK-1 – EPTK-3 Storage Tanks	Volatile Organic Compounds	DAQ approved control system	98.00 %
EPLOR Loadout Rack	Volatile Organic Compounds	Closed System	100.00 %

R13-2831
Miller Compressor Station

Emission Unit	Pollutant	Control Device	Control Efficiency
EPCE-1 – EPCE-6 Compressor Engines	Nitrogen Oxides	Non Selective Catalytic Reduction (NSCR)	96.50 %
	Carbon Dioxide		93.25 %
	Volatile Organic Compounds		84.50 %
	Hazardous Air Pollutants		50.00 %
EPGEN-1, EPGEN-1.2 Generator Engines	Nitrogen Oxides	NSCR	96.30 %
	Carbon Monoxide		93.50 %
	Volatile Organic Compounds		83.50 %
	Hazardous Air Pollutants		93.50 %
EPGEN-3, EPGEN-3.2 Generator Engines	Nitrogen Oxides	NSCR	95.00 %
	Carbon Monoxide		95.00 %
EUDHY-1 – EUDHY-2 Glycol Dehydration Units	BTEX (Benzene, Toluene, Ethylbenzene, Xylene)	Condenser/Combustion	99.70 %
	Volatile Organic Compounds		99.70 %
EPTK-1 – EPTK-12 Storage Tanks	Volatile Organic Compounds	DAQ approved control system	98.00 %
EPLOR Loadout Rack	Volatile Organic Compounds	Closed System	100.00 %

DAQ Action
Upon receiving comments on this issue, and the concern for air quality in this area due to the level of activity, the DAQ will require control systems on the storage tanks. The VOC control efficiency that will be required will be 98%. There are several different technologies that are available that will meet this level of emission reduction.

Comment #4
Will there be a significant difference between the overall projected emissions from the two compressor stations when comparing summer temperatures to winter, especially when evaluating the atmosphere vented storage tanks? What assumptions were made about average ambient temperature?

DAQ Response
In estimating emissions from the compressor engines, testing has been done by the engine manufacturers to develop emission factors (lb/hp-hr) for those engines. The owner's would use those values in conjunction with their horsepower to calculate their emissions. These values would then be used to set the emission limit and an initial performance test is required within 1 year of engine startup and subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance. The temperature assumptions made by the engine manufacturer for the compressors were standard conditions of 77 ^{0} F. The exhaust emissions were corrected to 5% O_2.

In regards to the tanks, these emissions were accounted for by emissions modeling using Tanks 4.0. TANKS is a Windows-based computer software program developed by USEPA that estimates volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions from storage tanks. TANKS uses chemical, meteorological, roof fitting, and rim seal data to generate emissions estimates for several types of storage tanks. The temperature assumptions made for the tanks was an average liquid surface temperature of 52^{0} F.

The two (2) tables shown above in Response #3 indicate the types of control devices and control efficiencies that are required for each emission unit.

DAQ Action
None.

Comment #5
The Miller station Engineering Evaluation Fact Sheet says that the 12 storage tanks will hold 16,865 gallons each, for a total capacity of 202,380 gallons. It also states that since the proposed individual tanks are less than the 19,813 gallon threshold referred to in 40CFR63 that subpart Kb is not applicable. Are these tanks freely vented to the atmosphere? Do you think it is moral and/or legal for facilities like these to build in such a manner? Meaning that even though the individual tank size meets/exceeds storage capacity as prescribed by law, the tank farm as a whole exceeds the intent of the law thereby allowing emissions that exceed prescribed emissions?

DAQ Response
40CFR60 Subpart Kb applies to tanks on an individual basis. In addition, 40CFR60 Subpart Kb does not set forth emission limits, only that the tank must be registered and the types of controls that must be used, if any.

The proposed tanks are not subject to 40CFR60 Subpart Kb.

As shown in Response #3, the DAQ is requiring AMS to install a control system that will achieve a VOC control efficiency of 98% for their storage tanks at both stations.

DAQ Action
None.

Comment #6
The emission values for Volatile Organic Compounds (VOC) listed in the engineering evaluation do not match what is listed in the Class I legal advertisement for the Miller Compressor Station. The numbers listed in the engineering evaluation would make Miller a major source of VOC emissions.

DAQ Response
The emission value in question is that of the VOC emissions from the six compressor engines (EPCE-1 – EPCE-6). The uncontrolled value was listed in the engineering evaluation (0.91 lb/hr and 4.00 ton/yr). However, the controlled value of 0.14 lb/hr and 0.62 ton/yr was listed in the permit. This controlled value was also used in calculating the total emissions for the Class I legal advertisement (public notice). By utilizing the catalytic reduction devices, the VOC emissions are reduced significantly (84.5% emissions reduction). Once issued, the permits are federally enforceable documents, thereby ensuring that the Miller Compressor Station is not a major source of VOC emissions.

With the additional controls that DAQ is requiring for the storage tanks, the Miller Compressor Station will have a potential to emit of 29.38 tons/year of VOC emissions, which is below the 100 tons/year major source threshold.

DAQ Action
None.

Comment #7
The newspaper public notice stated that Pleasants Compressor Station total VOC estimated will be 94.43 TPY. However, the total for all the individual sources listed in EEFS for VOC add up to approximately 117 TPY, with no fugitives listed. What accounts for this inconsistency?

DAQ Response
See Response #6.

DAQ Action
Emission values have been updated in the Engineering Evaluation/Fact Sheet to represent the controlled VOC emissions from the twelve (12) compressor engines (EPCE-1 – EPCE-12). The uncontrolled VOC emissions were previously listed in the original Engineering Evaluation/Fact Sheet.

Emission values have been updated in the Engineering Evaluation/Fact Sheet to represent the controlled VOC emissions from the three (3) storage tanks (EPTK-1 – EPTK-3) to reflect the control device system that DAQ is requiring to achieve a 98% control efficiency on the storage tanks.

Fugitive emission values have been updated in the Engineering Evaluation/Fact Sheet to represent the total VOC fugitive emissions from the facility. This number was not previously listed in the original Engineering Evaluation/Fact Sheet.

Comment #8
The newspaper public notice stated that Miller Compression Station total VOC estimated will be 76.29 TPY. However, the total for all the individual sources listed in EEFS for VOC add up to approximately 88 TPY. What accounts for this inconsistency?

DAQ Response
See Response #6.

DAQ Action
Emission values have been updated in the Engineering Evaluation/Fact Sheet to represent the controlled VOC emissions from the six (6) compressor engines (EPCE-1 – EPCE-6). The uncontrolled VOC emissions were previously listed in the original Engineering Evaluation/Fact Sheet.

Emission values have been updated in the Engineering Evaluation/Fact Sheet to represent the controlled VOC emissions from the twelve (12) storage tanks (EPTK-1 – EPTK-12) to reflect the control device system that DAQ is requiring to achieve a 98% control efficiency on the storage tanks.

Comment #9
Why are the VOC emissions from the tanks listed in the Miller application different from the Pleasants application?

DAQ Response
These emissions were accounted for by emissions modeling using Tanks 4.09. TANKS is a Windows-based computer software program that estimates volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions from storage tanks. TANKS uses chemical, meteorological, roof fitting, and rim seal data to generate emissions estimates for several types of storage tanks.

When using TANKS, the throughput is necessary in order to estimate the emissions. The difference between the two applications is that different throughput numbers were used. Therefore, the emissions would be different.

DAQ Action
None.

Comment #10
Have the natural gas condensate vapor emissions been included in the increase in potential emissions from the stations?

DAQ Response
Yes. These emissions were accounted for by emissions modeling using Tanks 4.09. TANKS is a Windows-based computer software program that estimates volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions from storage tanks. TANKS uses chemical, meteorological, roof fitting, and rim seal data to generate emissions estimates for several types of storage tanks.

At the Miller Station natural gas condensate that exists is stabilized to remove volatile components before being stored in storage tanks and transported off site by truck.

At the Pleasants Station natural gas condensate is stored in storage tanks and transported off site by truck.

DAQ Action
None.

Comment #11
Have the vapors created during the natural gas condensate stabilization been included in the increase in potential emissions from the stations?

DAQ Response
See Response #10.

DAQ Action
None.

Comment #12
Will the condensate vapors talked about in the above question be included in the increase in potential emissions from the stations?

DAQ Response
See Response #10

DAQ Action
None.

Comment #13
Will any natural gas condensate outside of that generated by the compressor stations be handled by the compressor stations?

DAQ Response
Miller Station: Condensate from other sites will be fed into the condensate stabilizer prior to going to the storage tanks and transported off site.

Pleasants Station: No.

DAQ Action
None.

Comment #14
The Miller Station lists Stabilized Condensate Storage Tank not included in the Pleasants Station. Does that indicate a connection between the two stations that requires both of their potential emissions be treated as one unit?

DAQ Response
No. USEPA uses a three criteria test to determine whether or not multiple facilities should be considered one source. All three scenarios must be true in order for this to be reviewed as such. The facilities must be under common ownership and control, have the same Standard Industrial Classification (SIC) code, and be contiguous and adjacent. Both the Pleasants and Miller Stations are under common ownership and control and have the same SIC codes.

In making a determination on whether the sources are contiguous and adjacent, USEPA has stated that it is necessary to take a common sense approach to this issue, and not aggregate pollutant emitting activities that as a group would not fit within the ordinary meaning of 'building', 'structure', 'facility', or 'installation'. These stations can operate independent of the other. With that statement, being connected by a pipeline does not constitute that these facilities are contiguous and adjacent.

Therefore, they are not required to be reviewed as the same facility.

DAQ Action
None.

Comment #15
Did the WVDEP evaluate the overall environmental impact of BOTH of these compressor stations together?

DAQ Response
See Response #14.

DAQ Action
None.

Comment #16
All current and future gas wells should be considered contiguous and adjacent. I would think that we would all agree that the process of aggregation is the most significant issue to be decided. My assumption with regard to aggregation is that it does not have to be viewed as a burden or as unduly restrictive to natural gas producers or to our state. It might be restrictive in the short run. It is in our nation's best interest to have more energy available that can be cleaner than some other alternative, like coal. It is in our state's best interest to encourage gas extraction, but only if managed and regulated prudently as a potential economic development force.

DAQ Response
See Response #14.

In regards to the truck mounted internal combustion engines that are located at the wells during the drilling phase, these engines are considered nonroad engines and not stationary sources under the Clean Air Act permitting rules. Therefore, the emissions from these sources cannot be considered under NSR/PSD, Title V or hazardous air pollutants under section 112 of the Clean Air Act.

DAQ Action
None.

Comment #17
All of AMS's operations should be aggregated as one source for PSD purposes.

DAQ Response
See Response #14.

DAQ Action
None.

Comment #18
How does our WVDEP-DAQ implement relevant guidelines from EPA for "Prevention of Significant Deterioration" which should apply in situations like this with clusters of large gas wells in close proximity to large compressor stations?

DAQ Response
See Response #14 and Response #16.

DAQ Action
None.

Comment #19
What volumes of condensate will be generated and passed through the stations?

DAQ Response
From TANKS modeling:

Miller Station: 11,497,500 gallons per year of stabilized condensate, and 2,299,500 gallons of pipeline fluids (water, brine).

Pleasants Station: 4,500,000 gallons per year of produced water and pipeline fluids (water, brine).

DAQ Action
None.

Comment #20
Significant noise levels will be caused by both compressor stations. They have a total combined 24,840 HP of compressors and also 3,202 HP of engines driving primary electric generators. What measures will be taken to guarantee that the overall noise level will not be objectionable?

DAQ Response
The Director of the DAQ only has those authorities specifically granted in the West Virginia Code and supporting regulations promulgated there under. It is the responsibility of the DAQ to apply the rules and regulations of the state of West Virginia and of the USEPA as they apply to air quality. The DAQ has no control or influence over noise issues.

However, according to AMS, the engines will be housed inside of a structure that will contain sound lowering material to help with these issues.

DAQ Action
None.

Comment #21
In the ENGINEERING EVALUATION / FACT SHEET for Miller, the UTM Lat-Lon coordinates should be changed to agree with the correct ones given in the draft permit, Pg.2

DAQ Response
The UTM coordinates listed in the Engineering Evaluation/Fact Sheet for the Miller Station were incorrect. The correct UTM coordinates were listed in the draft permit.

DAQ Action
The UTM coordinates listed in the Engineering Evaluation/Fact Sheet for the Miller Station will be changed to match those listed in the draft permit.

Comment #22
Will specific air quality testing be done now in the immediate areas surrounding these two compressor stations, especially down wind, to provide base line historical data for future reference?

DAQ Response
AMS's compressor engines are subject to 40CFR60 Subpart JJJJ, which sets forth emission limits, fuel requirements, installation requirements, and monitoring requirements based on the year of installation of the subject internal combustion engine. 40CFR60 Subpart JJJJ is applicable to owners and operators of new stationary spark ignition internal combustion engines manufactured after July 1, 2007, for engines with a maximum rated power capacity greater than 500 hp.
Owner or operators of a stationary SI internal combustion engines greater than 500 HP, must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, they must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

DAQ Action
AMS will be required to conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

Comment #23
Will electric utility power be available to both compressor sites and will it be used whenever possible instead of the natural gas powered electric generators?

DAQ Response
According to AMS, electric utility power is available.

The Director of the DAQ only has those authorities specifically granted in the West Virginia Code and supporting regulations promulgated there under. It is the responsibility of the DAQ to apply the rules and regulations of the state of West Virginia and of the USEPA as they apply to air quality. The DAQ has no control over which type of utility power is used.

DAQ Action
None.

Comment #24
In the ENGINEERING EVALUATION/FACT SHEET for the Miller compressor station it says that "...The generators provide electric power to the flash gas compressor, glycol pumps, hot oil pumps and other electrical equipment...." Can these motor driven items be supplied by utility electric power instead?

DAQ Response
See Response #23.

DAQ Action
None.

Comment #25
Was there any analysis done to evaluate the total overall cumulative environmental impact due to the exhaust emissions from the thousands of gallons of diesel fuel consumed by the hundreds of large trucks and equipment needed to prepare, build and support these gas compressor stations?

DAQ Response
The Director of the DAQ only has those authorities specifically granted in the West Virginia Code and supporting regulations promulgated there under. It is the responsibility of the DAQ to apply the rules and regulations of the state of West Virginia and of the USEPA as they apply to air quality. The DAQ has no control over mobile sources.

DAQ Action
None.

Comment #26
In both the Miller and Pleasants draft permits it states that:

> *WVDEP DAQ did not determine whether the permittee is subject to an area source air toxics standard requiring Generally Achievable Control Technology (GACT) promulgated after January 1, 2007 pursuant to 40 CFR 63, including the area source air toxics provisions of 40 CFR 63, Subpart HH and 40 CFR 63, Subpart ZZZZ.*

Please explain why those sections of 40CFR63 were not considered.

DAQ Response
The USEPA has not provided any additional funding to implement these new federal area source air toxics rules. Further, DAQ considers these standards to be resource-intensive and costly to implement as a practical matter, without achieving commensurate air quality benefits. For these reasons, West Virginia is one of several states in EPA Region III that are adopting some, but not all, of the area source air toxics rules. EPA Regional Offices will be implementing those standards not adopted by the states, thereby providing a measure of regulatory certainty and consistency.

In regards to reciprocating internal combustion engines, the DAQ has incorporated by reference the New Source Performance Standards, 40CFR60 Subpart JJJJ, Standards of Performance for

Stationary Spark Ignition Internal Combustion Engines. This rule addresses in large part, the new area source Most Available Control Technology (MACT) requirements. This language is present in both of the draft permits (R13-2829 and R13-2831).

DAQ Action
None.

Comment #27
Since all the spark ignition internal combustion engines (SI-ICE) will not be certified by the manufacturer, the projected emissions which form the basis for the permit calculations are the likely the theoretical ideal values achievable under new, controlled conditions. Given the many variables which affect (SI-ICE) and their combustion efficiencies and since the shale gas might have varying BTU content and chemical composition, will there be adequate monitors and sensors and will the air-fuel ratio controllers be able to achieve and maintain the predicted level of air quality? Will the engine sensors and controls be required to be modified later based on the actual testing and measurements done in the first six months? And during the subsequent required tests as the controls deteriorate with age?

DAQ Response
AMS's compressor engines are subject to 40CFR60 Subpart JJJJ, which sets forth emission limits, fuel requirements, installation requirements, and monitoring requirements based on the year of installation of the subject internal combustion engine. 40CFR60 Subpart JJJJ is applicable to owners and operators of new stationary spark ignition internal combustion engines manufactured after July 1, 2007, for engines with a maximum rated power capacity greater than 500 hp.

Owner or operators of a stationary SI internal combustion engines greater than 500 HP, must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, they must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

If the gas composition changes over time, AMS will be required to take the necessary steps in order to meet their permitted emission limits.

DAQ Action
None.

Comment #28
Will each compressor station be manned 24/7 with a trained operator capable of responding to any upset, accurately assessing the potential danger or problem and able to implement prompt corrective actions? If these gas plants will not have experienced personnel on duty on site 24/7 will there be an integrated, comprehensive system of monitoring instruments on all relevant variables, designed to activate appropriate fail safe control systems circuits? Will this integrated plant electronic controller be connected to a telemetry system capable of transmitting in real time to a 24/7 live operator.

DAQ Response
According to AMS, these stations will not be manned 24 hours a day, 7 days a week. There will be AMS personnel on site daily. The compressor stations will have monitoring systems that will transmit data to AMS.

DAQ Action
None.

Comment #29
Is the WVDEP concerned about the overall regional impact of the air quality issues of these two gas fired compressor locations and how they might affect the south-west counties of Penn.?

DAQ Response
Yes. The West Virginia and Federal air quality rules have been written to protect the attainment status. Therefore, if a source is in compliance with these rules, then compliance with the National Ambient Air Quality Standards (NAAQS) should be met. For sources that are considered major (either Title V or PSD permitting), states are required to notify adjoining states of the proposed permitting actions. This notification is required through those permitting programs. These sources are not major sources and it is not required that adjoining states be notified. However, as required in 45CSR13, EPA was notified of both of these facilities.

DAQ Action
None.

Comment #30
At the compressor locations there will need to be valves. Older types were high-bleed pneumatic devices which contribute to unnecessary emissions. These pneumatic devices can be substantial sources of CH_4, VOC, and HAP emissions. Newer low or no-bleed pneumatic devices are available and are cost effective. Pressurized instrument air can be used as the pneumatic fluid instead of natural gas. Will the best known technology be required to be used at these locations? Please address these topics.

DAQ Response
Because the Pleasants and Miller Stations have a Joule-Thomson Plant (non-fractionating natural gas processing plant) they are subject to a Federal New Source Performance Standard (NSPS). The NSPS they are subject to is 40CFR60 Subpart KKK (Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants).

AMS will be required to perform Leak Detection and Repair (LDAR) at their facilities.

DAQ Action
None.

Comment #31
The directions to the Miller Compressor Station cite off the beaten track jeep trails, on unmarked roads, rather than the general road used by all the construction vehicles and the local residents. Why were the directions not given from Silver hill and the south end of Johnson Ridge which is Wetzel County 1/22?

DAQ Response
Most permit applicants use online mapping programs to provide directions to the DAQ from the Charleston office. These directions may not always be the same that are used by people who live in the area.

DAQ Action
None.

Comment #32
Fugitive emissions are mentioned in both permit documents. These emissions can come from any of the many valves, piping, fittings, unions, flanges, compressor seals and rod packing etc. They can be caused by routine wear, rust and corrosion, improper initial installation or faulty components or lax maintenance procedures and the general deterioration that comes with age and operation. What is the estimate of all the fugitive emissions at each compressor location? How will they be measured and what method will be used to identify and correct the source of them? New standards on this topic are addressed in NSPS Subpart KKK. Will they be implemented here? They have been shown to be cost effective.

DAQ Response
Fugitive emissions from these sources are estimated using emission factors that were developed by the American Petroleum Institute (API) Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Gas Industry.

The estimated fugitive emissions for the Pleasants Compressor Station (R13-2829) is 17.09 tons per year of Volatile Organic Compounds, and 0.17 tons per year of Hazardous Air Pollutants.

The estimated fugitive emissions for the Miller Compressor Station (R13-2831) is 15.39 tons per year of Volatile Organic Compounds, and 0.16 tons per year of Hazardous Air Pollutants.

40CFR60 Subpart KKK addresses the Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. Both compressor stations are subject to this subpart based on the Joule-Thomson (J-T) system. AMS will be required to perform Leak Detection and Repair (LDAR) at their facilities.

DAQ Action
None.

Comment #33
The Pleasants compressor permit does not address the significant carbon dioxide emissions from this plant. What environmental impact will CO2 emissions have? (I do not think it is mentioned at all in the Miller compressor permit either).

DAQ Response
Carbon Dioxide (CO_2) is not a regulated air pollutant. Therefore, it is not required that permit applicants account for CO_2 emissions.

DAQ Action
None.

Comment #34
A properly reported gas leak was denied by Chesapeake Energy, a site very close to the proposed Pleasants site. As these incidents are now record with the federal authorities, the denial would become a serious legal issue when this and other incidents go to court. The permit seems to suggest that monitoring will be done by the company, the same company that has failed to maintain equipment causing documented wrecks and accidents. The same company that has falsely denied spill of VOCs and serious gas contamination including a flare during a State of West Virginia emergency when the roads were closed and the weather perilous, we have a video of this at the proposed Miller drilling area. The very idea that our air is to be the receiver of benzene, toluene is shocking as it is well documented the capture and burning is the only best practice accepted at this time in USA. The SO_2 emissions were falsely denied by this company and this is now a matter of public record and knowledge.

DAQ Response
AMS's compressor engines are subject to 40CFR60 Subpart JJJJ, which sets forth emission limits, fuel requirements, installation requirements, and monitoring requirements based on the year of installation of the subject internal combustion engine. 40CFR60 Subpart JJJJ is applicable to owners and operators of new stationary spark ignition internal combustion engines manufactured after July 1, 2007, for engines with a maximum rated power capacity greater than 500 hp.

Owner or operators of a stationary SI internal combustion engines greater than 500 HP, must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, they must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

AMS will be required to perform the following monitoring:

1. Monitor and record quantity of natural gas consumed for all engines, and combustion sources.

2. Monitor all applicable requirements of 40CFR60 Subparts JJJJ and KKK.

AMS will be required to perform the following recordkeeping:

1. Maintain records of the amount of natural gas consumed in each combustion source.
2. Maintain records of testing conducted in accordance with the permit. Said records shall be maintained on-site or in a readily accessible off-site location
3. Maintain the corresponding records specified by the on-going monitoring requirements of and testing requirements of the permit.
4. Maintain records of the visible emission opacity tests conducted per the permit.
5. Maintain a record of all potential to emit (PTE) HAP calculations for the entire facility. These records shall include the natural gas compressor engines and ancillary equipment.
6. The records shall be maintained on site or in a readily available off-site location maintained by AMS for a period of five (5) years.
7. Maintain records of all applicable requirements of 40CFR60 Subparts JJJJ and KKK.

DAQ Action
None.

Comment #35
It is very difficult to accept that you have been paid a combined total of $6,500.00 and do not even have the location of the site in the proper county.

DAQ Response
AMS paid application fees of $4,500 for Pleasants Station and $2,000 for Miller Station. AMS overpaid the Pleasants Station by $2,500. A refund of $2,500 is currently being processed for the Pleasants Station.

In regards to the location, the compressor station is being located on a piece of property containing three tracts of land owned by AMS that is in Marshall and Wetzel Counties. The compressor station itself is proposed to be located on tract 2 of that property which is located and taxed in Marshall County. The third tract which is referenced above, has a small part of land located in Wetzel County.

DAQ Action
A refund of $2,500 is currently being processed for the Pleasants Station.

Comment #36
The welfare and air quality that are necessary for life of citizens is the standard of any further activity in Charleston.

DAQ Response
It is the responsibility of the DAQ to apply the rules and regulations of the state of West Virginia and of the USEPA as they apply to air quality. The state rules and federal regulations are designed to ensure human health and safety, and environmental welfare. Upon review of the permit application, it was determined that the facility, as proposed, would meet all applicable state rules and federal regulations.

DAQ Action
None.

Comment #37
You need to develop new federal guidelines that will prevent the continued pollution that the documents describe and immediately find federal help to comply with the legislation. In doing so you will demonstrate your intention to obey US law.

DAQ Response
The DAQ does not develop federal rules. This is the responsibility of USEPA.

DAQ Action
None.

Comment #38
Send air monitoring equipment to provide a baseline reading for several locations in this area as is now being done in the adjoining state of Pennsylvania.

DAQ Response
The DAQ Air Monitoring Section, with ambient air quality sampling sites located throughout West Virginia, monitors air pollutants on either a continuous or periodic basis. The sampling sites are located to assess air quality levels based on population exposure, industry emissions, determine compliance with the National Ambient Air Quality Standards (NAAQS), background levels and other special purposes.

The monitoring network is reviewed annually and revised as necessary to accommodate changing Federal requirements. The data collected is used by the DAQ to implement programs to insure attainment of NAAQS for criteria pollutants. The closest site is in Wheeling and this includes the Metropolitan Statistical Area (MSA) of Ohio and Marshall Counties in West Virginia, and Belmont County in Ohio. This site has a $PM_{2.5}$ and SO_2 monitor.

DAQ Action
None.

Comment #39
There is the problem of disposal of wastes including benzene and toluene which are an issue already due to the sloppy and criminally inept behavior of the drilling industry which is now facing suits from cancer victims who worked in an environment of contaminated air. As federal law supercedes state of West Virginia law the current agreements you have with the drilling industry need to be re-examined for compliance with a higher authority.

DAQ Response
The Director of the DAQ only has those authorities specifically granted in the West Virginia Code and supporting regulations promulgated there under. It is the responsibility of the DAQ to apply the rules and regulations of the state of West Virginia and of the USEPA as they apply to air quality. The DAQ has no control or influence over the drilling industry.

DAQ Action
None.

Comment #40
Will the Miller compressor site gas engine powered generators be able to provide ANY electric power to the Pleasants station since the Miller site has 5,600 HP of generators available (50% listed as backup) and the Pleasants has only 724 HP of electric generating capacity.

DAQ Response
No. The natural gas compressor engines are not electric generating units.

DAQ Action
None.

Comment #41
In the Miller Permit all the listed compressor and generator "SI-ICE" (permit page 5) have non-selective catalytic reduction (NSCR) features except for the EUGEN-2 Capstone C-600 and the 805 hp generator. Why are these devices not required to have the same emission control devices as the others?

DAQ Response
AMS's compressor engines are subject to 40CFR60 Subpart JJJJ, which sets forth emission limits, fuel requirements, installation requirements, and monitoring requirements based on the year of installation of the subject internal combustion engine. 40CFR60 Subpart JJJJ is applicable to owners and operators of new stationary spark ignition internal combustion engines manufactured after July 1, 2007, for engines with a maximum rated power capacity greater than 500 hp.

Owner or operators of a stationary SI internal combustion engines greater than 500 HP, must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, they must conduct an initial performance

test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

In some instances, it may be necessary for engine manufacturers to use catalytic reduction devices to achieve certain emission standards. However, if an engine meets an emission standard, it is not required that further control devices be used. All of the engines that AMS has proposed meet the emission standards.

DAQ Action
None.

Comment #42
Comprehensive modeling analysis should be done on the impact of these gas operations on overall air quality.

DAQ Response
45CSR13 does not require air modeling in order for a source to apply for a construction permit. Air modeling is required for those sources that are subject to PSD (45CSR14, 45CSR19) regulations. In order for a natural gas compressor station to be considered a 45CSR14 source they would need to have a regulated air pollutant that would exceed 250 tons/year. In order for a natural gas compressor station to be considered a 45CSR19 source they would need to have a regulated air pollutant that would exceed 100 tons/year. In either instance the applicant would be required to employ BACT.

Neither of these compressor stations are subject to these rules.

DAQ Action
None.

Comment #43
A Title V permit should be required.

DAQ Response
Neither the Pleasants nor Miller compressor stations are major sources of emissions. Therefore, a Title V (45CSR30) permit is not required.

DAQ Action
None.

Comment #44
Which gas well sites feed the Miller and Pleasants Compressor Stations?

DAQ Response
This information is not required from the applicant as part of a 45CSR13 permit application.

DAQ Action
None.

Comment #45
Which of Chesapeake's existing well sites and additional ones already permitted, whether under construction or in various stages of development primarily feed gas to Pleasants Compressor Station?

DAQ Response
See Response #44.

DAQ Action
None.

Comment #46
Which of Chesapeake's existing well sites and additional ones already permitted, whether under construction or in various stages of development primarily feed gas to Miller Compressor Station?

DAQ Response
See Response #44.

DAQ Action
None.

Comment #47
Are there any means for wells that feed one compressor stations to be fed to the other compressor station?

DAQ Response
According to AMS, the wells will only be fed to one of the proposed compressor stations and not both.

DAQ Action
None.

Comment #48
For purposes of redundancy, dependability, and to allow for back-up compressor availability (e.g., outages, storm damage, equipment failure, etc.) will there be ANY means for any of the wells which are primary feeds to one compressor station to feed to the other?

DAQ Response
See Response #47.

DAQ Action
None.

Comment #49
Are the variable speed drives on the glycol pumps accounted for in the emission values?

DAQ Response
Yes. The pump rates on the glycol pumps may fluctuate depending on the conditions. However, the maximum design rate cannot be exceeded. The estimated emissions were based on the maximum design rate of the pumps. Therefore, fluctuation in the pump rates will not result in the emission rate being exceeded, as it was based on the maximum design rate of the pump.

DAQ Action
None.

Comment #50
In the current draft permit a glycol dehydration system is proposed. It is my understanding that, since methane emissions are proportional to glycol circulation rates, will the glycol pumps have variable speed controls to change pump speed as a function of moisture content of gas as the gas supply composition changes over the years?

DAQ Response
See Response #49.

DAQ Action
None.

Comment #51
You mentioned that the air quality in our area met standards, and was better than some other parts of the state with major sources of air pollution. The only two ways I know of to see if our air meets the standards would be the use of air monitoring equipment or the use of computer models. You stated that the use of air monitoring equipment is impractical due to the expense and data gathering time frame. I assume your observation on our air quality was based on computer modeling of our area, because you mentioned modeling several times.

The reason that I am skeptical about the model having the correct inputs is that we cannot open our windows or sit on our porch at times due to the obvious smells associated with the gas development activities. I experience this even though I live on the edge of the development activity. When I respond to emergencies, as an emergency volunteer responder, I witness conditions in the center of the activity that are worse than where I live.

Please give me any information that you have about your models for our area. I am particularly interested in the inputs used by the model. Before I retired, I worked as a process modeler for the metals industry so I have a lot of knowledge about computer modeling of physical and chemical processes.

If you used another method for determining that our air quality met standards, please let me know what that method is.

DAQ Response

The DAQ Air Monitoring Section, with ambient air quality sampling sites located throughout West Virginia, monitors air pollutants on either a continuous or periodic basis. The sampling sites are located to assess air quality levels based on population exposure, industry emissions, determine compliance with the National Ambient Air Quality Standards (NAAQS), background levels and other special purposes.

The monitoring network is reviewed annually and revised as necessary to accommodate changing Federal requirements. The data collected is used by the DAQ to implement programs to insure attainment of NAAQS for criteria pollutants. The closest site is in Marshall County. This site has a $PM_{2.5}$, $PM_{2.5}$ speciation, and SO_2 monitor. Marshall County is currently a non-attainment county for $PM_{2.5}$. However, based on the most recent 2007-2009 data, this area now monitors attainment for the annual standard.

Air monitors also exist in nearby Ohio County (PM_{10}, $PM_{2.5}$, ozone), Brooke County (PM_{10}, $PM_{2.5}$, CO, SO_2), Hancock County (PM_{10}, $PM_{2.5}$, CO, SO_2, ozone), Marion County ($PM_{2.5}$), and Monongalia County ($PM_{2.5}$, SO_2).

The 2009 State of West Virginia Air Quality Annual Report which includes information on National Ambient Air Quality Standards in regards to all regulated air pollutants, the air quality index from around the state, and detailed technical information on how the monitoring program works in making these determinations can be downloaded from the following website:

http://www.dep.wv.gov/daq/Air%20Toxics/PublishingImages/Annual%20Report%202009.pdf

In regards to odor issues, there is a difference in what is called the odor threshold, the concentration at which individuals smell an odor, in all individuals. Therefore, 45CSR4, the DAQ odor regulation, states that no person, shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. 45CSR4 then defines "objectionable odor" as an odor which, in the opinion of a duly authorized representative of the Director, based upon his/her investigations or his/her investigations and complaints, is objectionable. As these are new facilities, no odors have been deemed objectionable.

Further, the DAQ will require control systems on the storage tanks. The VOC control efficiency that will be required will be 98%. There are several different technologies that are available that will meet this level of emission reduction. This should eliminate the possibility of most odors associated with these facilities.

45CSR13 does not require air modeling in order for a source to apply for a construction permit. Air modeling is required for those sources that are subject to PSD (45CSR14, 45CSR19) regulations. In order for a natural gas compressor station to be considered a 45CSR14 source they would need to have a regulated air pollutant that would exceed 250 tons/year. In order for a natural gas compressor station to be considered a 45CSR19 source they would need to have a

regulated air pollutant that would exceed 100 tons/year. In either instance the applicant would be required to employ BACT.

DAQ Action
None.

Comment #52
We cannot allow the lowest standards to be implemented. If we do so, we will be limiting future drilling activity by forcing future drillers to much higher standards after our air quality is degraded. The purpose of the (NSR) New Source Review process is to get ahead of these problems, but it is not too late since these compressor stations are still being built and equipment is just beginning to be put on site. If we implement BACT standards now -- across the board -- we can foster both LONG-term gas extraction and reasonably clean air quality. We need to keep in mind that the Marcellus Shale has been here for a while and will not be going anywhere else any time soon.

DAQ Response
45CSR13 permits do not require Best Available Control Technology (BACT). This technology is only required when a facility is a 45CSR14 (attainment PSD) or 45CSR19 (non-attainment PSD) source.

"Best available control technology" or "BACT" means an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each regulated pollutant which would be emitted from any proposed major stationary source or major modification which the Secretary, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR part 60 or 61. If the Secretary determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

In order for a natural gas compressor station to be considered a 45CSR14 source they would need to have a regulated air pollutant that would exceed 250 tons/year. In order for a natural gas compressor station to be considered a 45CSR19 source they would need to have a regulated air pollutant that would exceed 100 tons/year. In either instance the applicant would be required to employ BACT.

Neither of these compressor stations are subject to these rules.

DAQ Action
None.

Comment #53
The Engineering Evaluation Fact Sheet (EEFS) for Miller Compression Station shows that fugitive emissions are estimated to be 15.39 tons per year of VOC. However, the EEFS for Pleasants Compressor Station lists no estimate for fugitive emissions. What accounts for this apparent omission?

DAQ Response
This number was inadvertently left out of the table.

DAQ Action
Fugitive emission values have been updated in the Engineering Evaluation/Fact Sheet to represent the total VOC fugitive emissions from the facility. This number was not previously listed in the original Engineering Evaluation/Fact Sheet.

Comment #54
Are there ANY provisions or plans for expansion at either Pleasants or Miller Compression Station which would increase the initial emissions levels and, if so, what are they and by how much? Are you aware of any provisions, plans, or intentions to add additional compressors at the Miller Compression Station? If so, how many and how will they increase the overall estimated emissions?

DAQ Response
AMS has made no application for either a modification or administrative update at either facility as of yet.

DAQ Action
None.

CHANGES TO DRAFT PERMIT & ENGINEERING EVALUATION/FACT SHEET

As a result of comments received, Draft Permits R13-2829 and R13-2831 have been revised. All revisions due to comments received were noted above in the DAQ's responses to comments. All revisions are listed here for clarity:

R13-2829 (Pleasants Compressor Station)

Emission values have been updated in the Engineering Evaluation/Fact Sheet to represent the controlled VOC emissions from the twelve (12) compressor engines (EPCE-1 – EPCE-12). The uncontrolled VOC emissions were previously listed in the original Engineering Evaluation/Fact Sheet.

Emission values have been updated in the Engineering Evaluation/Fact Sheet to represent the controlled VOC emissions from the three (3) storage tanks (EPTK-1 – EPTK-3) to reflect the control device system that DAQ is requiring to achieve a 98% control efficiency on the storage tanks.

Fugitive emission values have been updated in the Engineering Evaluation/Fact Sheet to represent the total VOC fugitive emissions from the facility. This number was not previously listed in the original Engineering Evaluation/Fact Sheet.

An emission table was added to the Engineering Evaluation/Fact Sheet to reflect the facility wide annual emissions for each pollutant.

A control device/control efficiency table was added to the Engineering Evaluation/Fact Sheet to reflect the control devices that are required.

New requirements were added to the permit to require AMS to install a control device system that shall be designed to achieve a minimum guaranteed control efficiency of 98% for volatile organic compound (VOC) emissions. Associated testing and recordkeeping requirements were also added for this control device system.

R13-2831 (Miller Compressor Station)

Emission values have been updated in the Engineering Evaluation/Fact Sheet to represent the controlled VOC emissions from the six (6) compressor engines (EPCE-1 – EPCE-6). The uncontrolled VOC emissions were previously listed in the original Engineering Evaluation/Fact Sheet.

Emission values have been updated in the Engineering Evaluation/Fact Sheet to represent the controlled VOC emissions from the twelve (12) storage tanks (EPTK-1 – EPTK-12) to reflect the control device system that DAQ is requiring to achieve a 98% control efficiency on the storage tanks.

An emission table was added to the Engineering Evaluation/Fact Sheet to reflect the facility wide annual emissions for each pollutant.

A control device/control efficiency table was added to the Engineering Evaluation/Fact Sheet to reflect the control devices that are required.

New requirements were added to the permit to require AMS to install a control device system that shall be designed to achieve a minimum guaranteed control efficiency of 98% for volatile organic compound (VOC) emissions. Associated testing and recordkeeping requirements were also added for this control device system.

The UTM coordinates listed in the Engineering Evaluation/Fact Sheet were changed to match those listed in the draft permit.

FINAL DETERMINATION

Pursuant to §45-13-8.8, all submitted relevant comments received during the R13-2829 and R13-2931 public comment period have been reviewed and are appropriately addressed in this document. It is the view of the DAQ that, after consideration of all comments received and revisions to the draft permit as noted above, the available information indicates AMS' proposed construction of two (2) natural gas compressor stations proposed to be located near Howard and Bannen, Marshall County, WV will meet the emission limitations and conditions set forth in the permit and should comply with all currently applicable state and federal air quality management rules and standards.

Jerry Williams II, P.E.
Engineer

Beverly D. McKeone
NSR Program Manager

John A. Benedict
Director

9-9-10
Date