



GROUP AGAINST SMOG & POLLUTION

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VIA EMAIL AND FIRST CLASS MAIL

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Group Against Smog & Pollution Comments Regarding Plan Approval 30-00194: EQT Gathering, LLC, Callisto Compressor Station, Morris Township, Greene County:

Dear Mr. Tomko,

Please accept these comments regarding Plan Approval 30-00194 for EQT Gathering, LLC's Callisto Compressor Station in Morris Township, Greene County (41 Pa.B. 735) (Feb.. 5, 2011) on behalf of the Group Against Smog and Pollution.

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

Sincerely,

Joe Osborne, Esq.
Legal Director
Group Against Smog & Pollution

**GROUP AGAINST SMOG & POLLUTION COMMENTS REGARDING PLAN
APPROVAL 30-00194: EQT GATHERING, LLC, CALLISTO COMPRESSOR
STATION, MORRIS TOWNSHIP, GREENE COUNTY**

**1. The Facility-Wide Potential to Emit Calculation Does Not Appear to
Account for All Hazardous Air Pollutant (HAP) Emissions**

EQT's facility-wide emissions summary lists a facility-wide VOC PTE of 32.2 TPY.¹ This 32.2 figure includes a total of 26.1 TPY of VOCS from the CAT 3616 compressor engines.² However, the 26.1 TPY figure appears to be based on the NMNEHC emission rate provided by the oxidation catalyst vendor.³ NMNEHC does not include a number of other VOCs associated with natural gas combustion, including, but not limited to the 5.5 TPY of formaldehyde the CAT 3616 compressor engines will produce.⁴

The plan approval lists a VOC PTE of 34.0 TPY;⁵ this figure still appears to low to account for the formaldehyde and other VOCs that were not included in the EQT PTE calculation for VOCs. Facility-wide VOC PTE has been significantly underestimated; facility-wide PTE must be recalculated to include the omitted VOCs.

**2. The Facility-Wide Potential to Emit Calculation Does not Appear to
Account for All Volatile Organic Compound (VOC) Emissions**

EQT's facility-wide emissions summary lists a Callisto Station total HAP PTE of 15.7 TPY.⁶ This 15.7 figure includes a total of 13.7 TPY of HAPs from the CAT 3616 compressor engines.⁷ While this table places the 13.7 figure in a row labeled "Total HAPs (including HCHO),"⁸ a review of Callisto Application Appendix B "Detailed Emission Calculations" indicates that, despite the "including HCHO" label, formaldehyde was not included in the total HAP PTE for the compressor engines.⁹

The plan approval lists a total HAP PTE of 17.0 TPY;¹⁰ this figure still appears to low to account for the formaldehyde that was not included in EQT PTE calculation for total HAPs. Facility-wide total HAP PTE has been significantly underestimated; this PTE must be recalculated to include the omitted 5.5 TPY of formaldehyde.

¹ EQT, Revised Callisto Facility-wide Criteria Pollutants and HAP Summary (Dec. 2, 2010).

² EQT, Revised Callisto Facility-wide Criteria Pollutants and HAP Summary (Dec. 2, 2010).

³ EQT, Callisto Plan Approval Application, Oxidation Catalyst Vendor Spec. Sheet (Jul., 2010).

⁴ EQT, Revised Callisto Facility-wide Criteria Pollutants and HAP Summary (Dec. 2, 2010).

⁵ PADEP, Proposed Plan Approval for EQT Callisto Compressor Station (Feb. 25, 2011) at 46.

⁶ EQT, Revised Callisto Facility-wide Criteria Pollutants and HAP Summary (Dec. 2, 2010).

⁷ Id.

⁸ Id.

⁹ EQT, Callisto Plan Approval Application, Appendix B - Detailed Emission Calculations (Jul., 2010).

¹⁰ PADEP, Proposed Plan Approval for EQT Callisto Compressor Station (Feb. 25, 2011) at 46.

3. The Callisto PTE Calculations Should be Based on an Assumed Natural Gas Heat Value of 1020 Btu/scf

EQT's PTE calculations assume a natural gas heat value of 1050 Btu/scf.¹¹ Commenter assumes this figure was used in place of the standard 1020 Btu/scf,¹² on the basis of site-specific gas composition data. However, there is no guarantee actual gas combusted at Callisto will have this atypically high heat value, in which case PTE is underestimated. PTE emissions should be recalculated on the basis of a natural gas heat value of 1020 Btu/scf. The 1020 figure more accurately reflects average natural gas heat content, and the use of a more conservative figure is in keeping with the purpose of PTE calculations: to reflect the "*maximum* capacity of a source to emit a pollutant under its physical and operational design."¹³

4. PADEP Must Include VOC and HAP Emissions from Storage Tanks Located at the Callisto Station in its PTE Calculations

EQT did not include emissions from six liquid storage tanks in its PTE calculations.¹⁴ Depending on the nature of the stored liquid, natural gas-site storage tank venting can be a significant source of VOCs and HAPs. In its application, EQT concedes that some VOC/HAP emissions are expected from fluid storage.¹⁵

For the reasons provided in the sections above, the revised VOC and total HAP PTEs will be much closer to exceeding major source thresholds. Thus PADEP must consider VOC and HAP emissions from these storage tanks to determine whether a major source PTE threshold has been exceeded.

5. BAT for the TEG Dehydrators Should Require Use of Flash Tank Separators or Other Means of Recovering Flash Gas.

The applicant's PTE calculation for the TEG dehydrators projects 2.5 TPY of VOCs and 1.71 TPY of HAPs. The proposed BAT for the TEG Dehydrators is use of a ground flare.¹⁶ However, other cost-effective control options exist that would result in lower VOC and HAP emissions, such as installation of a flash tank separator, rerouting still column emissions to the glycol reboiler, or rerouting these emissions to a vapor

¹¹ EQT, Callisto Plan Approval Application (Jul. 6, 2010) at 5-1.

¹² EPA, AP 42, Chapter 1 at 1.4-1, ("The average gross heating value of natural gas is approximately 1,020 British thermal units per standard cubic foot").

¹³ 25. Pa. Code 121.1, definition of potential to emit (emphasis added); Letter from S. Riva, EPA Region 2, to W. O'Sullivan, New Jersey DEP (Feb. 14, 2006), *available at*: <http://www.epa.gov/region7/air/nsr/nsrmemos/generator.pdf> ("to determine PTE, a source must estimate its emissions based on the worst-case scenario.").

¹⁴ EQT, Callisto Plan Approval Application (Jul. 6, 2010) at 5-2.

¹⁵ EQT, Callisto Plan Approval Application (Jul. 6, 2010) at 2-2, ("the produced fluid storage tank will be designed with pressure/vacuum relief devices to minimize atmospheric venting of VOC/HAP emissions during normal operations.").

¹⁶ EQT, Callisto Plan Approval Application (Jul. 6, 2010) at 4-1.

recovery unit.¹⁷ It is unclear to the commenter why one of these more effective, practical, and inexpensive control methods is not required as BAT.

6. DEP Should Require EQT to Provide a Process Flow Diagram and Other Relevant Details to Allow DEP to Perform a Proper Source Determination Analysis.

EQT's plan approval application stated that the Callisto Station is located near the Browns Creek Station, and the application analyzed the two stations separately, and then as a single source.¹⁸ However, in letter to DEP on January 27, 2011, EQT instead argued that source aggregation was not required here because "there are no other emission sources that are either contiguous, adjacent or that are functionally dependent on the operation of Callisto," and that other sources that may use the Callisto Station are not owned and operated by EQT Gathering, LLC.¹⁹ This analysis was impermissibly narrow and does not correctly apply prior EPA guidance and source determinations. DEP should require further information and apply the appropriate tests to determine whether aggregation is required in this case.

A stationary source is defined as "any building, structure, facility, or installation which emits or may emit a regulated NSR pollutant."²⁰ A "building, structure, facility, or installation" is defined as:

All of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, are under the control of the same person (or persons under common control) except the activities of any vessel. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same "Major Group" (i.e., which have the same first two digit code).²¹

If pollutant emitting activities are part of the same "building, structure, facility, or installation," their emissions must be aggregated and treated as a single source for permitting purposes.²² In September 2009, EPA issued a memo (the McCarthy Memo)

¹⁷ Natural Gas Dehydration Lessons Learned from the Natural Gas STAR Program (Mar. 23, 2010), available at: http://www.epa.gov/gasstar/documents/workshops/vernal-2010/02_dehydration.pdf; Attachment 1 - WVDEP, Engineering Evaluation, Miller Compressor Station (Sep. 9, 2010) at 2.

¹⁸ See Plan Approval, Section 3, Tables 5-1 and 5-2.

¹⁹ Letter from Jerry McGinnis, Environmental Supervisor, EQT, to Mark Wayner, Regional Air Quality Program Manager, PADEP, *Plan Approval Application, EQT Gathering, LLC – Callisto Compressor Station* (Jan. 27, 2011) [hereinafter "EQT Letter"].

²⁰ 40 C.F.R. §§ 51.165(a)(1)(i); 52.21(b)(5).

²¹ 40 C.F.R. §§ 51.165(a)(1)(ii); 52.21(b)(6); while federal title V rules do not define "building, structure, facility, or installation," the definition of "stationary source" is to be interpreted to be consistent with the definition in the PSD program. Memo from Assistant Administrator Gina McCarthy to Regional Administrators, *Withdrawal of Source Determination for Oil and Gas Industries*, Sept. 22, 2009 [hereinafter "McCarthy Memo"].

²² 40 C.F.R. §§ 51.165(a)(1)(iv)(A); 52.21(b)(1)(i).

clarifying the method for making source determinations for oil and gas operations.²³ While the McCarthy Memo acknowledged the complexity of source determinations for the oil and gas industry, it reaffirmed that the three factors from EPA’s “building, structure, facility, or installation” definition – whether facilities have the same SIC code, are under common control, and are contiguous or adjacent – must be considered on a case-by-case basis in making such determinations. In addition to applying these three criteria, the explanation in the preamble to the 1980 revisions to the PSD/NNSR rules²⁴ and past determinations made by Regional Office should be considered in making these determinations.²⁵

a. Same SIC Code

Natural gas compressor stations and wells generally have the same SIC code; additionally, EQT seemed to assume in its letter that this prong of the three-part test for aggregation was met.²⁶ Thus, this requirement is likely met in this case.

b. Common Control

EQT’s analysis did not correctly apply the criteria for determining whether facilities are under common control. Common control is a fact-specific inquiry that EPA conducts on a case-by-case basis.²⁷ It involves “the power of one business entity to affect the construction decisions or pollution control decisions of another business entity.”²⁸ While EPA does not have a specific test for determining if common control exists, it adopts the SEC’s definition of control, which “means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person, whether through ownership of voting shares, by contract, or otherwise.”²⁹

EPA guidance has established a method by which it can be determined whether common control exists. Common control can be established if:

- (1) There is “ownership of multiple sources by the same parent corporation or by a parent and a subsidiary of the parent corporation,” or if
- (2) “an entity such as a corporation has the power to direct the management and policies of a second entity, thus controlling its operations, through a contractual agreement or a voting interest.”

If neither of these conditions exist, then the permitting authority should:

²³ Memo from U.S. EPA Assistant Administrator Gina McCarthy to Regional Administrators, “Withdrawal of Source Determination for Oil and Gas Industries” (September 22, 2009), *available at*:

<http://www.epa.gov/region7/air/nsr/nsrmemos/oilgaswithdrawal.pdf> [hereinafter “McCarthy Memo”]

²⁴ 45 Fed. Reg. 52676, 52694-95 (Aug. 7, 1980).

²⁵ McCarthy Memo, *supra* note 23.

²⁶ EQT Letter, *supra* note 19 at 2.

²⁷ 45 Fed. Reg. 59874, 59878 (Sept. 11, 1980).

²⁸ *Id.*

²⁹ 17 C.F.R. § 210.1-02(g), 45 Fed. Reg. at 59878.

(3) “consider whether there is a contract for service relationship between the two companies or if a support/dependency relationship exists between the two companies.”³⁰

In the EQT letter, it was asserted that common control did not exist because “the other existing emission sources that may utilize Callisto are not owned and operated by EQT Gathering, LLC but rather EQT Production Company . . .”³¹ This is an erroneous application of the common control determination. While EQT Gathering and EQT Production may be different entities, they likely have the same parent company and thus would be considered to be under common control based on the above definition. DEP should request more information concerning the relationship between the companies in order to determine whether common control exists.

c. Contiguous or Adjacent

Source aggregation decisions made by EPA Regional Offices over the last thirty years concerning whether facilities are “contiguous or adjacent,” generally focus on proximity, dependency or interdependence, and the existence of a physical connection, such as a pipeline, between facilities. These considerations represent how EPA determines if source aggregation is necessary to ensure the equipment and activities being permitting conform to the common sense notion of a plant. In addition, even if one of the criteria, such as proximity, is somewhat weak, particularly strong facts in another category, such as dependency or the existence of a physical connection, can weigh in favor of the facilities being considered contiguous or adjacent.³²

The contiguous or adjacent analysis in the EQT Letter is overly narrow and does not consider all factors that EPA has said were relevant in past source determinations. The EQT Letter discusses the complexity of natural gas distribution systems and of its Jupiter Gathering System in particular, and relies on the fact that gas can flow in a number of directions in determining that the gas wells operate independently of Callisto and thus are not contiguous or adjacent.³³ This explanation is too general; there may be individual wells or other compressor stations (such as the Browns Creek Station, which was aggregated with Callisto in Callisto’s plan approval application) that meet the contiguous or adjacent requirements. PADEP should require a more detailed explanation of the system including a flow diagram to determine if there are any wells that do satisfy

³⁰ EPA Region 8, *Single Source Determination for Coors/TriGen*, Nov. 12, 1998, at 2, available at <http://www.epa.gov/region7/air/title5/t5memos/coostri.pdf>; John S. Seitz, Memorandum, *Major Source Determinations for Military Installations under the Air Toxics, New Source Review, and Title V Operation Permit Programs of the Clean Air Act (Act)*, Aug. 2, 1996, at 3-4, available at <http://www.epa.gov/region7/air/nsr/nsrmemos/dodguid.pdf>.

³¹ EQT Letter, *supra* note 19, at 1.

³² Letter from Richard R. Long, Director, Air and Radiation Program, EPA Region 8, to Dennis Myers, Construction Permit Unit Leader, Colorado Department of Public Health and Environment, Air Pollution Control Division (Apr. 20, 1999), available at <http://www.epa.gov/region07/air/nsr/nsrmemos/amersoda.pdf> (“we believe that the distance alone does not preclude these two being considered adjacent for PSD permitting purposes.”).

³³ EQT Letter, *supra* note 19, at 2-3.

the requirements for aggregation, or if aggregation with another compressor station would be appropriate.

PADEP is required to carry out a complete analysis to determine whether aggregation is necessary when issuing a permit and must fully explain its determination.³⁴ This analysis has not been fully carried out here; PADEP should request further information from EQT and perform a fully aggregation analysis applying the correct standards.

³⁴ Order Granting Petition for Objection to Permit, *In the Matter of Kerr-McGee/Anadarko Petroleum Corporation, Frederick Compressor Station*, Lisa Jackson, EPA Administrator, Oct. 8, 2009, at 7-8, available at <http://www.cdphe.state.co.us/ap/down/A-1EPAOrderAnadarkoFrederickStation10.08.09.pdf>.