



White Paper
Source Determination for the Oil and Gas Industry

submitted to
Pennsylvania Department of Environmental Protection, Bureau of Air Quality
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The members of the Marcellus Shale Coalition’s (“MSC”) Air and Emissions Subcommittee listened with interest at the Committee’s meeting with representatives of the Pennsylvania Department of Environmental Protection (“PA DEP”), Bureau of Air Quality (“BAQ”) on June 22, 2010. The MSC learned that BAQ is currently engaged in the development of technical guidance to assist in the evaluation of oil and gas facilities at multiple locations for possible aggregation into single source for permitting purposes. This process is commonly referred to as “source aggregation.” Given the MSC’s keen interest in the predictable and timely permitting of its members’ planned oil and gas facilities in Pennsylvania, the MSC would like to provide the BAQ with this White Paper raising a number of our concerns for your consideration in the development of such guidance.

Background

The ability of state permitting authorities and the federal EPA to aggregate multiple sources into a single major source permit is founded upon the definition of “stationary source” within the Clean Air Act (“CAA” or “the Act”) and the regulations promulgated under the Act to implement the NSR/PSD program and the Title V Operating Permit Program. The counterpart to the federal CAA is the Pennsylvania Air Pollution Control Act (“APCA”).¹

The Act defines a “stationary source” as “any building, structure, facility, or installation which emits or may emit any air pollutant.”² *Alabama Power Co. v. Costle*³ established boundaries on the scope of a source such that “(1) it must carry out reasonably the purposes of PSD; (2) it must approximate a common sense notion of ‘plant’; and (3) it must avoid aggregating pollutant-emitting activities that as a group would not fit within the ordinary meaning of ‘building,’ ‘structure,’ ‘facility,’ or installation.”⁴ In response, in the 1980 amendments to the PSD regulations, EPA clarified that emissions from facilities may be aggregated and considered a single major source for PSD permitting if they meet each of the following three criteria.

1. The sources are located on one or more “contiguous or adjacent” properties

¹ 35 PA. STAT. ANN. § 4001 et seq.

² 42 U.S.C. § 7411 (a)(3). The APCA defines an air contamination source as “any place, facility or equipment, stationary or mobile, at, from or by reason of which there is emitted into the outdoor atmosphere any air contaminant.” 35 PA. STAT. ANN. § 4003.

³ *Alabama Power Co. v. Costle*, 636 F.2d 323 (D.C. Cir. 1979).

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

2. The sources are under common control of the same person (or persons under common control)
3. The sources belong to a single major industrial grouping (same two digit major SIC code)

Only if all three criteria are met will the CAA permitting authority aggregate the facilities into a single NSR/PSD permit. After the 1990 CAA Amendments created the Title V Operating Permit Program, this three-factor analysis was extended to Title V major source permitting.⁵

As the BAQ is aware, EPA has recently addressed the issue of CAA source determinations in the oil and gas industry in a guidance document from the EPA Office of Air and Radiation (“McCarthy Memo”).⁶ The McCarthy Memo withdrew earlier guidance from EPA which concluded that the three prong aggregation analysis for oil and gas activities should begin by looking at and focusing more heavily on the proximity of the surface locations.⁷ The McCarthy Memo recognized that source determinations in the oil and gas industry will continue to be complex, and re-emphasized that the regulations list three criteria to be used in the analysis. The McCarthy Memo then acknowledged that there will be cases in which proximity is the “overwhelming factor,” but the agency is not going to pre-judge that by using a simplified approach, and that “reasoned decision-making” of each of the relevant factors needs to occur on a case-by-case basis.⁸

Recently Colorado Department of Public Health and Environment (“DPHE”) issued its final decision on the Kerr-McGee/Anadarko Frederic Compressor Station⁹ in response to Administrator Jackson’s order for Colorado to review the permit.¹⁰ This decision reemphasizes the use of this three prong analysis for source aggregation determinations. In this response the state of Colorado undertook a thorough case by case analysis of the Kerr-McGee Frederic Compressor Station operations as well as an extensive review of past aggregation decisions. From this Colorado determined that the Frederic Compressor Station should *not* be aggregated with the surrounding oil and gas production locations.¹¹ The MSC believes the thorough analysis in the Colorado decision may be helpful to BAQ in developing its technical guidance

⁵ 42 U.S.C. § 7661 (2). It is important to keep in mind that the three factor test for aggregation must be considered in light of the requirements under *Alabama Power Co. v Costle*. A source must meet the component terms of stationary source (building, structure, facility or installation) and comport with the common sense notion of a plant.

⁶ See “Withdrawal of Source Determinations for Oil and Gas Industries,” memorandum from Gina McCarthy to Regional Administrators (September 22, 2009) (hereinafter *McCarthy Memo*) withdrawing the 2007 EPA memo “Source Determinations for Oil and Gas Industries,” memorandum from William L. Wehrum to Regional Administrators (January, 12, 2007) (hereinafter *Wehrum Memo*).

⁷ See Wehrum Memo.

⁸ McCarthy Memo.

⁹ “Response of Colorado Department of Public Health and Environment, Air Pollution Control Division, to Order Granting Petition for Objection to Permit,” Petition No. VIII-2008-02 (July 14, 2010) (hereinafter *Colorado Permit*).

¹⁰ “Order Granting Petition for Objection to Permit,” Petition No. VIII-2008-02 (October 8, 2009).

¹¹ Colorado Permit at 42.

The Role of SIC Codes in Source Determinations

The 1980 preamble to the PSD regulations established the use of two-digit major SIC codes in lieu of analyzing functional interdependence of sources. The Agency specifically addressed this issue stating that “any assessment of functional interrelationships would be highly subjective” and “any attempt to assess those interrelationships would have embroiled the Agency in numerous, fine-grained analysis.”¹² In response to these concerns the Agency chose to adopt the use of SIC codes in the aggregation analysis. The Agency pointed out that SIC codes are “narrow enough to separate sets of activities into common sense groupings” yet “broad enough to minimize the likelihood of artificially dividing a set of activities that does constitute a plant.”¹³

However, beginning in the 1990s, long after EPA promulgated its 1980 PSD regulations, the Agency began to emphasize the role of “functional interdependence” between and among multiple sources being considered for aggregation in a number of informal regulatory interpretation letters involving source determinations under the CAA.¹⁴ Some of these letters posed a number of questions to be asked about sources being evaluated for possible aggregation such as whether the sources were connected by pipelines, conveyors, roads, and other means by which materials and products or intermediate products are transferred between them. In some cases, the answers to these questions led the Agency to recommend the aggregation of sources connected by such structures on the basis that they acted as a single source even though separated by significant distances and therefore not “contiguous or adjacent”.

The MSC believes, and the industry has long maintained, that this reliance by the EPA on physical connections between non-contiguous and non-adjacent sources as a basis for aggregating them into a single CAA major source permit is improper and not supported by the statute, applicable case law, and EPA’s own regulations. Furthermore, the use of functional interdependency cannot be used in lieu of performing the case by case analysis using the three factors.

The Proximity of Oil and Gas Facilities

To be aggregated, sources must be contiguous or adjacent. Unfortunately the terms “contiguous or adjacent” have never been officially defined.¹⁵ Several decisions, including the Colorado Frederick Station decision, chose to use the dictionary definition of these terms.¹⁶ Those definitions are:

Contiguous: being in actual contact; touching along a boundary or at a point

Adjacent: not distant; nearby; having a common endpoint or border

¹² 45 Fed. Reg. 52676, 52695 (Aug. 7, 1980).

¹³ *Id.*

¹⁴ Colorado Permit at 16-21.

¹⁵ Colorado Permit at 12.

¹⁶ Colorado Permit at 15.

Oil and gas facilities are physically located based upon the ability to efficiently and economically extract the mineral resource. Oil and gas conservation laws and regulations also dictate proximity through spacing, pooling and unitization orders intended to prevent waste and promote the efficient production of the natural resource. The vast majority of the MSC's members' facilities are not, and will not be, "contiguous or adjacent" within the plain meaning of those terms, and are and will be located on separate leases separated by significant distances, consistent with the engineering, operational and spacing requirements applicable to such facilities. In response to this reality, Colorado noted that "such large, complex and dynamic processes generally do not fit consistently within the common sense notion of a plant."¹⁷

Even though oil and gas facilities are connected by pipelines, most, if not all, operate independent of one another by design, to enhance production and reliability. The Agency addressed pipeline operations in the 1980 preamble stating that "it does not intend 'source' to encompass activities that would be many miles apart along a long-line operation"¹⁸ and then specifically used a pipeline as an example. Any suggestion that facilities connected to one another by pipelines across significant distances should somehow render them "contiguous or adjacent" is a serious misapplication of the required three-factor analysis. Furthermore, the fact sources are connected by a pipeline does not indicate the operations are part of the same emission source.¹⁹

Several states have developed their own guidance documents for aggregation.²⁰ Since the terms contiguous and adjacent have not been defined, and determining what is adjacent is notoriously difficult, many states have used a ¼ mile rule of thumb.²¹ Historically oil and gas facility located beyond ¼ mile of one another have not been considered adjacent. Furthermore, facilities located within ¼ mile of each other only prompts the state to take a closer look and apply the three factor case by case analysis. It is important to note that facilities within a ¼ mile radius are *not* automatically adjacent; it simply triggers the state to perform additional analysis. As states have addressed the question of adjacency they have been mindful that the 1980 preamble clearly indicated the EPA did not intend to aggregate long-line operations such as facilities connected by a pipeline.²²

The MSC's members therefore urge the BAQ to remain mindful of the unique operational requirements of oil and gas exploration and production facilities, and to avoid aggregating sources,

¹⁷ Colorado Permit at 4.

¹⁸ 45 Fed. Reg. 52676, 52695 (Aug. 7, 1980).

¹⁹ Colorado Permit at 5.

²⁰ See, e.g., Texas Commission on Environmental Quality "Definition of Site Guidance," available at http://www.tceq.state.tx.us/permitting/air/guidance/titlev/tv_fop_guidance.html; Oklahoma Department of Environmental Quality guidance entitled "Permitting Collocated Facilities," available at <http://www.deq.state.ok.us/factsheets/>; and Louisiana Department of Environmental Quality guidance entitled "Interpretation of Contiguous for Oil and Gas," available at <http://www.deq.state.la.us/portal/tabid/2347/Default.aspx>.

²¹ It is important to note that the use of the ¼ mile rule of thumb has never been formalized in any state or federal statute or regulation.

²² 45 Fed. Reg. 52676, 695 (Aug. 7, 1980). As Louisiana noted in their guidance document, facilities should not be daisy-chained together for permitting purposes. For example, if Pad A is ¼ mile from Pad B which is ¼ mile from Pad C but Pads A and C are more than a ¼ mile apart, a daisy-chain of all three pads should not be used to establish contiguous and adjacent.

even if connected by pipelines, that are not contiguous or adjacent and do not fall within the common sense notion of a plant.

Common Control in Aggregation Decisions

The EPA relies on the Securities and Exchange Commission (“SEC”) definition of control.²³ The SEC defines control as “the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person (or organization or association) whether through ownership of voting shares, contract, or otherwise.” In their guidance documents both Texas and Oklahoma provided a list of factors to consider when determining common control.²⁴ These factors include ownership, decision making authority, and contractual relationships.²⁵

Oil and gas operations depend on the operator of the facility to make the day to day decisions for that site. Consequently control can often be determined by looking at who is listed as the operator for the location.

Additional Considerations in the Development of Technical Guidance

The MSC’s members suggest that the BAQ consider some additional factors that courts have also found appropriate in the review of source determinations under the CAA. Courts have acknowledged the heavy administrative burden potentially associated with source determinations in the oil and gas sector. Given the pace at which exploration and production activities proceed (and must proceed), the timeliness of permitting becomes a major concern. However, if emissions from many oil and gas facilities are aggregated into single major source permits, the ability to modify permits to add additional facilities will become a very significant constraint and source of delay for operators while also creating a large burden for permitting authorities such as PA DEP. Rather than impose undue burdens on the agency’s limited staff resources, we urge BAQ to be cautious in its approach to source determinations for the oil and gas sector, and suggest that any technical guidance to be developed consider the approach taken in other oil and gas producing states

Furthermore, oil and gas locations are typically minor sources which are subject to federal and state performance standards.²⁶ The equipment being installed at these locations is the latest technology and effective at controlling air emissions. In its analysis Colorado reviewed any potential emissions reductions through aggregation and determined that aggregation would not lead to a

²³ See “Requirements for Preparation, Adoption, and Submittal of Implementation Plans; Emission Offset Interpretive Ruling,” 45 Fed. Reg. 59874, 878 (Sept. 11, 1980).

²⁴ See, e.g., Texas Commission on Environmental Quality “Definition of Site Guidance,” available at http://www.tceq.state.tx.us/permitting/air/guidance/titlev/tv_fop_guidance.html; and Oklahoma Department of Environmental Quality guidance entitled “Permitting Collocated Facilities,” available at <http://www.deq.state.ok.us/factsheets/>.

²⁵ *Id.*

²⁶ Pennsylvania guidance currently considers oil and gas exploration and production facilities to be of minor significance. Oil and gas compressor stations are typically minor sources. See Department of Environmental Protection: Air Quality document “Air Quality Permit Exemptions” dated (July 26, 2003).

significant environmental benefit.²⁷ The MSC suggests that any potential air quality benefits of aggregation in the oil and gas sector would be very greatly outweighed by the administrative burdens of such an approach. Furthermore, the modifications being made to the GP-5 will be adequate to address any concerns the state may have regarding emissions from oil and gas operations.

Finally, most states, including Pennsylvania, have SIP-approved minor source permitting programs and delegation of authority to implement federal NSPS and NESHAP programs. There are several NSPS and NESHAP standards that apply to the oil and gas industry and are intended to reduce criteria air pollutant emissions and hazardous air pollutant (HAP) emissions, respectively. Many of the NESHAP requirements also have the collateral benefit of reducing some criteria pollutants. Examples of common NSPS Subparts that apply to oil and gas industry include: 40 CFR Part 60 Subparts Dc, Kb, KKK, LLL, IIII, and JJJJ. NESHAP subparts that frequently apply to the oil and gas industry include: 40 CFR Part 63 Subparts HH, HHH, and ZZZZ. These control requirements serve to further reduce emissions from minor sources in the oil and gas sector (and especially for newer equipment), thereby making NSR regulation of those sources much less beneficial, even while such regulation is unquestionably burdensome to all concerned (including involved agencies). Furthermore, as the BAQ is well aware, the EPA is in the process of reviewing these standards and expanding their application to include additional emission sources.

Conclusion

The MSC's members appreciate the opportunity to provide BAQ with this White Paper regarding source determinations under the NSR/PSD and Title V operating permit programs in Pennsylvania. While not comprehensive, we hope it is useful to BAQ. Furthermore, we would be happy to provide BAQ with any additional information or follow up discussions on this topic as the agency moves toward developing its own guidance document.

²⁷ Colorado Permit at 41. The Colorado Frederick Station decision addressed the benefit of aggregating the compressor station and associated wells. The decision established that aggregation in that situation, which is typical of oil and gas operations, would not create a reduction in air emissions.