

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Air Quality

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TITLE: Guidance for Performing Single Stationary Source Determinations for Oil and Gas Industries

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AUTHORITY: Act of January 8, 1960, P.L. (1959) 2119, No 787, as amended, known as The Air Pollution Control Act, (35 P.S. § 4001 et seq.)

POLICY: Single source determinations for oil and gas operations arise when a company operates an air contamination source on-site or adjacent to another air contamination source. If the emissions from two or more air contamination sources meet the applicable regulatory criteria, they should be aggregated as a single source for air quality permitting purposes. If the emissions from those air contamination sources are aggregated as a single air contamination source, and reach major source emission thresholds, they would be subject to additional air quality permitting requirements under the Prevention of Significant Deterioration (“PSD”), Non-attainment New Source Review (“NSR”) and the Title V Permit programs. The plain language of the regulatory requirements should be followed in making such determinations.

PURPOSE: The purpose of this document is to provide guidance to assist the Department of Environmental Protection’s Air Program permitting staff in making single stationary source determinations for the oil and gas industries in Pennsylvania.

APPLICABILITY: This policy applies to case-by-case analyses conducted by DEP’s air program permitting staff when determining whether stationary sources at oil and gas facilities should be considered a single source for permitting requirements applicable to air permitting programs including PSD, Non-attainment NSR, and Title V Permits.

DISCLAIMER: The policies and procedures outlined in this guidance are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or a regulation. There is no intent on the part of DEP to give the rules in these policies that weight or deference. This document establishes the framework within which DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this policy statement if circumstances warrant.

INTRODUCTION

The purpose of this guidance is to provide assistance to the Department of Environmental Protection's ("Department") air program permitting staff in making single source determinations for the oil and gas industries in Pennsylvania. There are significant gas exploration and extraction activities occurring in the Commonwealth within the Marcellus Shale formation and other formations. As a result, there are permitting issues related as to whether the air emissions from exploration, extraction, or production activities need to be aggregated to determine whether the sources from these emissions qualify as a "major stationary source" or "major facility" for purposes of the PSD, Non-attainment NSR and Title V permitting programs.¹

APPLICABLE AIR QUALITY PERMITTING REQUIREMENTS

Single source determinations arise when air contamination sources under common control are located on property which is contiguous or adjacent to another air contamination source.² If the emissions from two or more air contamination sources meet the applicable regulatory criteria, they should be aggregated as a single source for air quality permitting purposes. If the emissions from the aggregated sources meet or exceed major source emission thresholds, they would be treated as a "single source" subject to additional air quality permitting requirements under the PSD, NSR, and Title V programs. The regulatory permitting requirements in Pennsylvania identify the criteria necessary to make such determinations.

Prevention of Significant Deterioration Regulations³

In Pennsylvania, major stationary air contamination sources located in attainment areas are subject to the PSD permit program.⁴ Before a person can construct a major stationary source in an attainment area, they must receive a plan approval (preconstruction permit) under the PSD program. Persons seeking to construct and operate such a source in an attainment area in

¹ A source is subject to Title V if it has the potential to emit 100 tons per year ("TPY") or more of carbon monoxide ("CO"), nitrogen oxides ("NOx"), sulfur oxides ("SOx"), particulate matter of 10 microns or less ("PM-10"), particulate matter of 2.5 microns or less ("PM-2.5"), 50 TPY of volatile organic compounds ("VOCs"), 10 TPY of a single hazardous air pollutant ("HAP"), and 25 TPY of multiple HAPs. In southeastern Pennsylvania, the Title V thresholds for NOx and VOCs are 25 TPY.

² "Air contamination source" is defined 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 P.S. § 4003. "Air contaminant" is defined as "smoke, dust, fume, gas, odor, mist, radioactive substance, vapor, pollen, or any combination thereof." *Id.*

³ While the discussion in this section focuses on the PSD program, it is also applicable to the Title V program. *See* 61 Fed. Reg. 34202, 34210 (July 1, 1996).

⁴ The PSD program applies to sources that have the potential to emit at least 250 TPY of a regulated pollutant, or at least 100 TPY of a regulated pollutant if the source falls within a listed source category. 40 C.F.R. § 52.21(b)(1).

Pennsylvania must comply with the preconstruction permitting requirements under the PSD program.⁵

The federal PSD regulations, which Pennsylvania incorporates by reference in their entirety, define "stationary source" to mean "any building, structure, facility, or installation which emits or may emit a regulated NSR pollutant."⁶ Moreover, a "building," "structure," "facility," or "installation" is defined as all the pollutant-emitting activities which: (1) belong to the same industrial grouping⁷; and (2) are located on one or more contiguous or adjacent properties; and (3) are under the control of the same person.⁸ If two or more air contamination sources are determined to be a single source, under the three-part test of this latter definition, with emissions that collectively meet or exceed the major source thresholds, the sources should be treated as a single air contamination source for PSD and Title V permitting purposes. However, if the three-pronged regulatory criteria for single source determinations are met, all sources should be aggregated irrespective of their separate status as "minor" or "major" air contamination sources.

In the preamble to these regulations, the U.S. Environmental Protection Agency ("EPA") stated that, to be a "source" for the purposes of the PSD program, an activity must: (1) carry out reasonably the purposes of the PSD program; (2) approximate a common sense notion of "plant"; and (3) avoid aggregating pollutant-emitting activities that as a group would not fit within the ordinary meaning of "building," "structure," "facility," or "installation."⁹ As a result, these additional factors should also be addressed on a case-by-case basis when analyzing whether a group of pollutant-emitting activities (i.e., two or more air contamination sources) should be grouped together as a single air contamination source.

Non-attainment NSR Regulations

In Pennsylvania, major stationary air contamination sources¹⁰ located in non-attainment areas are subject to the non-attainment NSR permit program. The entire Commonwealth is considered a "moderate" ozone nonattainment area for NO_x and VOCs because Pennsylvania is a jurisdiction in the Ozone Transport Region established by operation of law under Section 184 of the Clean Air Act.¹¹ Before a person can construct and operate a major source in a non-attainment area in

⁵ See 25 Pa. Code, Chapter 127, Subchapter D. The PSD requirements promulgated in 40 C.F.R. Part 52 are adopted in their entirety by the Department and incorporated by reference under this subchapter.

⁶ 40 C.F.R. § 52.21(b)(5).

⁷ Under this definition, activities are within the same industrial grouping if they share the same two-digit Standard Industrial Classification ("SIC"). Exploration, extraction, or production activities in the oil and natural gas development industry share the same two-digit SIC code – 13.

⁸ 40 C.F.R. § 52.21(b)(6).

⁹ See 45 Fed. Reg. 52676, 52693 (August 7, 1980).

¹⁰ The non-attainment program applies to sources that have the potential to emit at least 100 TPY of a regulated non-attainment pollutant. 42 U.S.C. § 7602(j). These thresholds have been lowered for areas with more acute non-attainment problems. For instance, to 50 TPY for VOC and NO_x in serious ozone non-attainment areas, to 25 TPY for severe areas, and 10 TPY for extreme areas. See generally, 42 U.S.C. § 7511a.

¹¹ 42 U.S.C. § 7511c.

Pennsylvania, they must comply with the preconstruction permitting and operating permit requirements under the non-attainment NSR program.¹²

For non-attainment NSR purposes, Pennsylvania defines “facility” to mean “an air contamination source or combination of air contamination sources located on one or more contiguous or adjacent properties and which is owned and operated by the same person under common control.”¹³ If two or more air contamination sources are determined to be a single source with emissions, which collectively meet or exceed the major source thresholds and the two-part criteria under this definition, they should be treated as a single air contamination source for non-attainment NSR permitting purposes. However, the case-by-case single source determination would apply to all sources irrespective of their separate status as “minor” or “major” air contamination sources.

APPLICATION OF THESE REGULATORY REQUIREMENTS TO NATURAL GAS AIR CONTAMINATION SOURCES IN PENNSYLVANIA

Air quality permitting staff should rely on the three-part regulatory criteria identified above to determine whether emissions from two or more facilities should be aggregated and treated as a single source for air quality permitting purposes. These regulatory criteria are: whether the activities belong to the same industrial grouping; whether the activities are located on one or more contiguous or adjacent properties; and whether the activities are under the control of the same person (or persons under common control).¹⁴ If two or more facilities meet these criteria, they would be treated as a single facility for PSD and Title V permitting purposes. However, for nonattainment NSR applicability determinations in the Commonwealth, the case-by-case determination is a two-part test which considers whether the air contamination source or combination of sources are located on one or more contiguous or adjacent properties and whether the sources are owned or operated by the same person under common control.

Sources belonging to the same industrial grouping

Under the PSD and Title V permitting programs, pollutant-emitting activities are considered to be part of the same industrial grouping if they have the same first two-digit Standard Industrial Classification or SIC code.¹⁵ In addition, a support facility is considered to be part of the same industrial grouping as that of the primary facility it supports even if the support facility has a different two-digit SIC code. Support facilities are typically those which convey, store, or

¹² See 25 Pa. Code, Chapter 127, Subchapter E.

¹³ 25 Pa. Code §121.1. The definition “facility” under Section 121.1 applies to the non-attainment NSR permit provisions under Subchapter E.

¹⁴ 40 C.F.R. § 52.21 (b)(6).

¹⁵ See 40 CFR Part 52.21(b)(6).

otherwise assist in the production of the principal product." ¹⁶ If scenarios exist where the SIC code is different for two sources, staff should determine if a support relationship exists.

However, in defining the source where a potential support relationship exists between two or more facilities in a PSD or attainment area, for PSD applicability purposes, the difference in SIC codes becomes irrelevant. The only factors remaining to be considered are whether the sources or facilities are located on contiguous or adjacent properties and under common control using the common sense notion of what constitutes a plant or single source.

Under non-attainment NSR, Pennsylvania's federally approved definition of "facility" found at 25 Pa. Code, Section 121.1 (relating to definitions) does not include a requirement for sources to have the same SIC code to be part of the same facility. So, here too, the only factors to be considered for non-attainment NSR applicability purposes are whether the facilities are contiguous or adjacent and under common control.

Sources located on one or more contiguous or adjacent properties

Neither Pennsylvania nor federal regulations define the terms "contiguous" or "adjacent" or place any definitive restrictions on how distant two emission units can be and still be considered located on contiguous or adjacent properties for the purposes of a single source determination.

The plain meaning of "contiguous" is – sharing an edge or boundary; touching; neighboring, adjacent, connecting without a break."¹⁷ "Adjacent" is defined as – "close to; lying near, next to; adjoining."¹⁸

These words mean and relate to spatial relationship or spatial distance or proximity. The concept of contiguous or adjacent looks at whether the properties associated with the air contamination source are abutting to, or are close-by, property associated with another air contamination source.

Because of the nature of the oil and gas extraction industry, wells are scattered across a large resource area creating duplicate facilities that perform identical functions. For instance, well production pads and compressor stations are dispersed across a wide area that could encompass many square miles so that the leased properties can be accessed and natural gas can be extracted, compressed, and conveyed via pipeline to a nearby processing facility. Such expansive operations would not generally comport with the "common sense notion of a plant."

Additionally, two aggregate stationary sources located on properties spread throughout a large geographical area would not be consistent with the plain meaning of the terms contiguous or

¹⁶ See 45 Fed. Reg. 52695 (August 7, 1980).

¹⁷ See Dictionary.com. *The American Heritage Dictionary of the English Language, Fourth Edition*, Houghton Mifflin Co., 2004. <http://dictionary.reference.com/browse/contiguous>.

¹⁸ See Dictionary.com. *The American Heritage Dictionary of the English Language, Fourth Edition*, Houghton Mifflin Co. 2004. <http://dictionary.reference.com/browse/adjacent>.

adjacent properties. Consequently, only sources that are in close proximity should be considered contiguous or adjacent properties for single source determination purposes.

EPA's nonbinding policy does not include a bright line or numeric standard for determining how far apart activities may be and still be considered "contiguous" or "adjacent."¹⁹ Historically, EPA has stated that it is a case-by-case, fact-specific determination and has made that claim since the promulgation of the PSD regulations on August 7, 1980, and in a number of EPA interpretative letters and guidance documents. EPA guidance generally provides that the determination of whether sources are adjacent is based on the "common sense" notion of source and whether they functionally operate as a single source. In explaining this concept, EPA has noted that whether or not facilities are adjacent depends not only on the "common sense" notion of a source, but also the interdependence of the facilities and is not simply a matter of physical distance between the two facilities.²⁰

EPA's non-binding guidance memoranda are merely instructive; they are not dispositive. While interdependence may be considered when conducting a single source determination, the plain meaning of the terms "contiguous" and "adjacent" should be the dispositive factor when determining whether stationary sources are located on contiguous or adjacent properties.

As defined in 40 CFR Section 52.21(b)(5), a stationary source is "any building, structure, facility or installation which emits or may emit a regulated NSR pollutant." These stationary sources can be aggregated when they meet "the common sense notion of a plant." There should be no aggregation when the activities as a group do not fit within the ordinary meaning of "building," "structure," "facility" or "installation."

In applying the "contiguous or adjacent" prong of this criterion, some states have used a quarter-mile rule of thumb.²¹ That is, properties located a quarter mile or less apart are considered contiguous or adjacent properties for PSD, Non-attainment NSR and Title V applicability determinations. Properties located beyond this quarter-mile range may only be considered contiguous or adjacent on a case-by-case basis.

A case-by-case determination is needed to determine if sources are considered contiguous or adjacent. The following items should be considered in the analysis: (1) properties located within

¹⁹ See Memo from Pamela Blakely, U.S. EPA Region 5 to Don Smith, Minnesota Pollution Control Agency, March 23, 2010.

²⁰ See e.g., Memo from Steven C. Riva, U.S. EPA Region 2 to John T. Higgins, New York Department of Environmental Conservation, October 11, 2000.

²¹ See, e.g., Texas Commission on Environmental Quality "Definition of Site Guidance," available at http://www.tceq.texas.gov/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>. It should be noted that these guidance documents provide that interdependent properties located more than a quarter mile apart may also be considered contiguous.

a quarter mile are considered contiguous or adjacent; (2) sources within this quarter-mile distance should be aggregated so long as they meet the other two regulatory criteria (same industrial grouping and common control); (3) emission units on two or more separate, but nearby, properties and separated by an intervening railroad, road, or some other obstacle may be considered contiguous or adjacent; (4) facilities should not be “daisy-chained” together to establish a contiguous grouping; and (5) properties located outside a quarter mile may be considered contiguous or adjacent on a case-by-case basis.

The application of the quarter-mile or less rule of thumb takes a "common sense approach" to determining if sources are located on adjacent or contiguous properties and does not aggregate pollutant-emitting activities that as a group would not fit within the ordinary meaning of “building,” “structure,” “facility,” or “installation.” That is, the proximity focus of the analysis should guide the permit reviewer in determining whether two sources should be treated as one plant. Moreover, such an approach would implement the air quality permitting program according to applicable statutory and regulatory requirements.

Sources under the control of the same person

The remaining factor to be considered in defining the source is whether a common control relationship exists between the two facilities. As with the contiguous or adjacent factor, common control is determined on a case-by-case basis and is guided by the general definition of control used by the Securities and Exchange Commission (“SEC”).²² The SEC defines “control” (including the terms "controlling," "controlled by" and "under common control with") as the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting securities, by contract, or otherwise.²³

There may be a number of other ways to assist in determining whether a common control relationship exists. First, common control can be established by ownership. Second, common control can be established if an entity such as a corporation has decision-making authority over the operation of a second entity through a contractual agreement or voting interest. If common control is not established by the first two ways, then one should next look at whether there is a contract for service relationship between the two companies or if a support/dependency relationship exists between the two companies in order to determine if a common control relationship exists.

Permit reviewers may also consider the following questions to assist them in determining whether there is common control:

²² 45 Fed. Reg. 59874, 59878 (September 11, 1980).

²³ 17 C.F.R. § 240.12b-2.

- Do the facilities share common workforces, plant managers, security forces, corporate executive officers or board executives?
- Will managers or other workers frequently shuttle back and forth to be involved actively in both facilities?
- Do the facilities share common payroll activities, employee benefits, health plans, retirement funds, insurance coverage, or other administrative functions?
- Are there any financial arrangements between the two entities?
- Are there any legal or lease agreements between the facilities?
- Are there any contracts for service activities?
- Are there multiple owners of an operation?
- Do the owners have voting or control rights over an operation?

This list is not exhaustive and serves only as a vetting tool for determining “common control” of the air contamination sources. If the owners or operators of a facility can provide information showing that one facility has few significant ties to another facility, then they are most likely separate sources under their own control.

Conclusion

Pennsylvania air quality permitting staff should make single source determination based on the following five-step analysis in determining whether two or more facilities should be treated as a single source for air quality permitting purposes: (1) air emission sources may be treated as a single source for air permitting purposes if they meet the applicable two- or three-part regulatory test; (2) each of the elements must be met in order to treat separate emission units as a single stationary source; (3) while federal guidance may be instructive, it is not dispositive; (4) the aggregation test must be applied on a case-by-case basis to the specific facts of the matter before the agency; and (5) the plain meaning of the terms "contiguous" and "adjacent," particularly in the context of the “common sense notion of a plant,” and the terms “building,” “structure,” “facility,” or “installation,” are appropriate considerations in the application of the aggregation test.

Finally, properties located a quarter mile or less apart are considered contiguous or adjacent properties for applicability determinations, including those related to the PSD, Non-attainment NSR and Title V programs. Properties located beyond this quarter-mile range may only be considered contiguous or adjacent on a case-by-case basis.