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One Air Emission Source or Many?

Two recent appeals to the Pennsylvania Environmental Hearing Board raise difficult issues concerning aggregation of air emission sources for purposes of regulating them under the federal Clean Air Act and the Pennsylvania Air Pollution Control Act

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Two recent appeals to the Pennsylvania Environmental Hearing Board raise difficult issues concerning aggregation of air emission sources for purposes of regulating them under the federal Clean Air Act and the Pennsylvania Air Pollution Control Act. Of course, those appeals arise from natural gas development activity associated with the Marcellus Shale.

Both *Group Against Smog and Pollution v. Department of Environmental Protection*, filed May 2, and *Clean Air Council v. Department of Environmental Protection*, filed May 13, challenge permits granted by the DEP on the ground that the equipment being permitted should have been viewed as part of a larger, aggregated, air pollution source and subjected to more rigorous permitting procedures and more stringent emission standards.

In general, constructing or modifying any source of air pollution emissions or any piece of air pollution control equipment requires a permit, known as a "plan approval," beforehand under the commonwealth's air pollution statute. Once the source has been constructed, one cannot operate it without a permit to operate.

These state law requirements apply to all sources or modifications that increase air emissions unless the DEP exempts them. If not exempt, some smaller or less significant sources or modifications may be permitted by rule or by general permit.

Under the federal Clean Air Act, new sources of air pollution that will emit more than a threshold amount of a pollutant in a year, or modifications that will increase emissions by more than a threshold amount, must receive a permit to construct and a permit to operate that satisfies federal standards. A Pennsylvania plan approval and permit to operate will suffice, because the DEP's rules are crafted to satisfy federal criteria, and the DEP is the permitting agency in Pennsylvania for Clean Air Act permits.

However, in order for a Pennsylvania plan approval and permit to operate to suffice, the DEP cannot use any of its streamlined procedures to issue a permit, but instead must walk through the relatively rigorous permitting process set out by the Clean Air Act.

The Clean Air Act also requires stringent air pollution controls for new or modified sources of air pollution that are large enough. If a new or modified source will result in an emission in excess of certain threshold amounts, technology-based pollution controls must be implemented. In areas where the air quality falls below a national ambient air quality standard for a pollutant, a new source of that pollutant must not only meet a technology-based pollution control standard, but must also obtain offsets to "make room" for itself; some other emission must be reduced to allow the new or modified source to operate while still making progress toward air quality standards.

The state air pollution statute also requires technology-based pollution control, but streamlined general permits or permits by rule or exemptions can make application of this requirement relatively straightforward and easy.

In general, then, large sources face more difficult permitting processes and more stringent permit standards than do smaller sources. If you want to develop a facility, best to keep it as a "minor" source. If you want to oppose development of a facility, best to find a way to make it a "major" source.

Natural gas development highlights some of these disputes precisely because it is controversial. A natural gas well does not itself have a very large air emission under ordinary conditions. Once drilled, gas leaves the well and goes into a small pipeline called a "gathering system." The idea is to capture all of the gas for sale, so there is no substantial air emission of the natural gas.

In some places, the gas that comes out of the well is "wet," meaning that when it cools and becomes less pressured at the surface, some of the larger molecules other than methane will condense into liquids. The well may require a condensate tank to collect these liquids, and some of those liquids will evaporate if left uncontrolled. Nevertheless, natural gas wells themselves are highly unlikely to be major sources of air emissions.

Gathering systems and processing plants also have air emissions, and they are the subjects of the Clean Air Council and GASP appeals. In order to move gas through a pipeline, one typically requires a pump. Compression stations along the gathering system contain engines that serve as those pumps. If the compressor station engines run on a fuel (as opposed to electricity), they will have an air emission.

When the fuel is natural gas, the emission of concern will typically be oxides of nitrogen, but other pollutants may prove problematic. Nevertheless, one can, if one chooses, design a compressor station so that its emissions fall below the threshold for a major source. If the gathering system requires more compression, one can locate another set of engines elsewhere.

Processing plants are like miniature oil refineries, and they too have air emissions. Economies of scale often dictate that they will be major sources of air pollution.

If one aggregates the whole network of wells, gathering lines, compressor stations, and processing plants, or even if one aggregates some of them, the aggregated system will typically have air emissions above any regulatory threshold. However, the individual parts may not.

What counts as a single source and what counts as multiple sources for purposes of regulation under the Clean Air Act has presented issues from the outset. Congress explicitly subjects each "building, structure, facility, or installation" to regulation as a single source under the New Source Review and Prevention of Significant Deterioration programs. A "source" is more than just an individual stack or vent, but instead the whole facility.

Where the "building, structure, facility, or installation" begins and ends is not always apparent. Should the

regulator aggregate two plants on the same parcel? How about plants across the street, or a plant and its vehicle maintenance facility a half-mile away? Should all the electric power plants owned by the same utility be one source, or multiple sources?

In 1980, the D.C. Circuit Court of Appeals considered a plenary set of challenges to the EPA's New Source Review and Prevention of Significant Deterioration regulations in *Alabama Power Co. v. Costle*. That court made clear that the EPA could not expand the definition of a "source" beyond the four statutory terms — "building," "structure," "facility" or "installation" — and that it should interpret those terms consistently with common sense notions of a single plant.

The EPA responded to that decision by establishing a three-part test for determining whether multiple emission points were within a single "source" or were in multiple "buildings," "structures," "facilities" or "installations." Activities form a single "source" if they are undertaken by a single person or under persons under common control (such as corporate affiliates); are conducted on contiguous or adjacent properties; and are within the same major industrial grouping (that is, the activities share a two-digit Standard Industrial Classification). So, plants across an alley may be a single source, but plants across town will be two.

Natural gas development facilities pose a difficult case. Without a gathering system, the wells have no use; indeed, a well without a gathering system is "shut in." The gathering system physically connects all of the activities along it, so that the wells, the compressor stations and the processing plants are all on arguably "contiguous" parcels. If the operators of any of them share common control, then one might argue that they are a single source.

Of course, the network of interstate pipelines and distribution systems connect many sources. We do not ordinarily think of a natural-gas-fired industrial boiler as part of the same "building, facility, structure, or installation" as the natural gas well that supplied it hundreds or thousands of miles away. Therefore, even if some sources ought to be aggregated, surely some should be distinct.

By a memorandum dated Jan. 12, 2007, EPA Acting Assistant Administrator William Wehrum provided guidance to the states and the EPA regional offices concerning single-source determinations in the oil and gas industry. He concluded that in most cases, each single facility — well, compressor station or processing plant — would constitute a distinct source. Of course, each determination would require a consideration of its individual facts.

Under the Wehrum memorandum, most natural gas wells and most gathering system compressor stations could avoid regulation as a major stationary source. By memorandum dated Sept. 22, 2009, after an intervening national election, assistant administrator Gina McCarthy withdrew the Wehrum memorandum. She did not require permitting authorities to regulate networks of wells and their gathering systems as a single source, but she removed the thumb that the Wehrum memorandum had placed on the scales against aggregation.

In 2010, Pennsylvania DEP issued a draft technical guidance memorandum that described these authorities and catalogued certain single-source determinations in the oil and gas industry. That draft guidance did not mandate aggregation, but tended to suggest that aggregation might be appropriate at least some of the time. In February 2011, after an intervening state election, the DEP withdrew that technical guidance.

Surprisingly, on Feb. 2, 2011, the EPA — the same agency that had replaced the Wehrum memorandum with the more aggregation-friendly McCarthy memorandum — decided *In re Anadarko Petroleum Corp., Frederick Compressor Station*, a petition for aggregation involving a natural gas gathering system and wells in Colorado. In that case, the EPA administrator refused to object to the Colorado state regulator's decision not to aggregate sources in a wellfield in that state.

And so we have confusion. All of the confusion is about whether certain relatively small engines and certain relatively small condensation tanks ought to be subjected to a complicated regulatory process. We will learn more when the EHB decides its two pending appeals. Some have suggested, and with good reason, that this misses the point entirely. Perhaps we do not need a complicated permitting process; perhaps we only

need reasonable standards of performance for these sources.

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