Clean Air Impacts on Fracking Expansion

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This week I have been attending the American Law Institute's Annual Environmental Law Seminar in Washington DC. One of the topics discussed at the Seminar was the effect of the Federal Clean Air Act on horizontal hydraulic fracking. In recent years there has been much discussion about fracking's impact on surface waters, ground water, and soil. There has been much less concern about the impacts of fracking on ambient air, but those impacts could be significant.

Increases in natural gas production have already resulted in a decreased demand for coal. With gas being a cheaper and cleaner alternative, gas suppliers and electric power plants are both seeking natural gas supplies, resulting in a greater need for infrastructure. Additional wells, pipelines, and gas fired electric power plants are all in the planning and design phase. This additional infrastructure will result in additional emission sources and a greater potential for leaks of methane. Infrastructure storage tanks and compression stations will likely require permits for installation and operation. Multiple compression stations along a linear pipeline could be considered a single emission source for permitting purposes. New and modified emission sources in excess of statutory thresholds can trigger stringent permitting requirements.

Clean Air Act regulations define "source" to include facilities that are (a) under common control, (b) in the same industrial grouping, and (c) contiguous or adjacent. The Bush EPA considered "proximity" to be the most informative factor in aggregating facilities under one source for permitting purposes. The Obama EPA has taken a different approach, and considers facility aggregation on a case-by-case analysis, considering "functional interrelatedness" in addition to geographic proximity. Recently, however, this approach was struck down by the Sixth Circuit Court of Appeals in the case of *Summer Petroleum Corp. v. EPA.* The Court stated that in determining whether facilities are "adjacent", the EPA may not consider "functional interrelatedness" to the exclusion of "geographic proximity." The EPA's response has been that the Court's reasoning only applies in the Sixth Circuit.

Another air issue related to hydraulic fracking is the issue of methane leakage. While the carbon dioxide produced from the burning of natural gas is less than ½ of that produced in burning coal, some question whether the leakage of methane from exploration and production infrastructure offsets these gains. One EPA study estimates that fracking infrastructure has a 2.4% leakage rate. An Environmental Defense Fund study suggests that a leakage rate of 3.2% could offset the environmental advantage gained in burning natural gas rather than coal.

Another issue discussed is how exploration and production of natural gas will impact states' efforts to comply with the National Ambient Air Quality Standards (NAAQS). Methane is many times more conducive to the production of ground level ozone than carbon dioxide. Portions of Eastern Ohio are already in non-attainment for compliance with the ozone NAAQS. The addition of natural gas infrastructure will not make reaching attainment any easier. "Green completion" air pollution control technology will be required for all new and modified infrastructure starting in 2015. While facilities installed before that time will be grandfathered from this requirement, for states having non-attainment areas for ozone, pressure may grow to require green completion on these grandfathered sites as well.

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