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Questions Remain About Proposed EPA Air Rules for Natural Gas Wells

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Special to the Legal

On Nov. 30, the public comment period closed on proposed revisions to the air emission standards prescribed by the federal New Source Performance Standard (NSPS) and the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Oil and Natural Gas source category. One aspect of the NSPS proposal establishes standards for “well completion operations with hydraulic fracturing” and as such has been hailed in the press as the first federal air rules applicable to hydraulic fracturing, the technology used to unlock the natural gas trapped in the Marcellus Shale and other shale plays across the United States.

The U.S. Environmental Protection Agency proposed these new rules in August as part of a settlement of a lawsuit initiated by two environmental groups alleging that the EPA failed to meet its obligations under the Clean Air Act to review its NSPS and NESHAP for the Oil and Natural Gas source category. Under the settlement (and subsequent revisions agreed to by the plaintiffs and the EPA) the proposed rules are set to take effect on April 3, 2012.

The EPA, however, received more than 4,200 comments by the Nov. 30 deadline, including a number of lengthy and detailed comments from industry groups challenging the legal basis for the new well completion standards. The number and, as detailed in the balance of this article, substance of these comments raise important questions as to whether the EPA can — or should — impose its proposed well completion air emission standards without additional time, process and substantial revisions.



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PROPOSED WELL COMPLETION PERFORMANCE STANDARDS

At the outset, it is important to appreciate what the proposed NSPS is and what it is not. Unlike how it has been portrayed in the press, the proposed NSPS does not prescribe air emission standards that would be applicable during a hydraulic fracturing stimulation treatment, i.e., the time when water, sand and specially engineered fluids are pumped into a formation at high volumes and pressures in order to induce fractures and allow oil or natural gas to flow through the well. The hydraulic fracturing portion of a well completion is a short-lived event that typically requires the use of portable nonroad engines, which are already subject to federal emission standards promulgated pursuant to Title II of the Clean Air Act.

What the proposed NSPS purportedly targets are the volatile organic compound (VOC) emissions that occur during “flowback,” the time period when fluids and natural gas flow back up the well shortly after a hydraulic fracturing treatment. In

short, the well completion portions of the NSPS require well operators to implement reduced emission completions or “green completions” at established well fields to capture and separate the natural gas — which contains varying levels of methane, VOCs and other constituents depending upon the formation — from the fluid that is released during flowback and route the captured gas to a transmission pipeline for sale as opposed to venting the gas to the atmosphere. At exploratory or delineation wells not in proximity to a natural gas gathering line, the EPA would require emissions to be directed to a pit flare for combustion. The duration of the flowback period depends in large part on the number and spacing of hydraulic fracturing treatments applied to a well, but typically lasts three to 10 days. Thus, the emissions that the EPA is seeking to control through the proposed NSPS have a very limited duration in comparison to the expected 20- to 30-year operational lifetime of a producing natural gas well in the Marcellus.

SOURCE CATEGORY QUESTIONS

As referenced earlier, the EPA has proposed to mandate green completions or pit flaring at every newly drilled and hydraulically fractured well through revisions to the NSPS for the Oil and Natural Gas source category. The EPA established this source category in 1979 pursuant to §111(f) of the Clean Air Act, which required the EPA to establish a list of major stationary sources that had not yet been listed under the NSPS program.

At the time it established the Oil and Natural Gas source category, the EPA prescribed two separate standards under this source category applicable only to natural gas processing plants, the large

stationary sources that collect natural gas from a number of wells and prepare it for transmission and sale. In its 2011 proposal, the EPA argues that because it previously established the Oil and Natural Gas source category, it is now authorized to expand the types of sources that can be regulated under the source category beyond natural gas processing plants to include all aspects of oil and gas operations, including flowback operations following hydraulic fracturing.

Many industry comments, however, argue that the EPA has improperly expanded the scope of the original source category and as a result bypassed other substantive and procedural obligations of the Clean Air Act that must be satisfied before the

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EPA can establish an NSPS for flowback and other operations associated with natural gas production. According to these criticisms, well completion operations are fundamentally different from natural gas processing operations in that they are short-lived construction operations that the EPA traditionally does not regulate under the NSPS program.

Accordingly, the EPA is only allowed to prescribe standards for these new sources if it establishes these types of construction sources as a separate category of stationary sources and determines that these particular emissions when evaluated apart from emissions associated with other more permanent operations cause or significantly contribute to endangerment of public health or the environment as required under §111(b) of the Clean Air Act. This “endangerment finding” process is not a mere formality, as evidenced by the lengthy and contentious actions surrounding the EPA’s 2010 endangerment finding for greenhouse gases made pursuant to analogous mobile source provisions of the Clean Air Act.

OPERATIONAL CONCERNS

According to industry, the EPA’s inappropriate attempt to expand the scope of the current NSPS absent the necessary administrative steps has resulted in proposed standards for VOC emissions control during flowback that are overbroad, only marginally effective and not feasible on the schedule demanded by the EPA. Some of the specific criticisms include:

- The amount of VOC emissions during any flowback operation will vary significantly depending on the location of the reservoir, with some locations (including the “dry gas” areas of the Marcellus) emitting little or no VOCs during flowback. In these locations, the cost per ton of VOC emissions reduced far exceeds what has been previously considered feasible for emissions controls. Accordingly, any EPA standards focusing on reducing VOC emissions during flowback must be less prescriptive.

- By focusing on natural gas control without regard to the variations in VOC content, the EPA is effectively regulating greenhouse gas emissions in the form of methane at levels much lower than what is currently authorized by the EPA’s tailoring rule, which only requires controls for the largest sources of GHG emissions.

- There will be a severely insufficient supply of reduced emissions completion equipment and trained operators to meet demand by the EPA’s proposed compliance date of April 3, 2012. Up to this point, reduced emission completion technology has been deployed on a voluntary basis and in select states where required in appropriate circumstances. This shortage of equipment and personnel could significantly disrupt U.S. natural gas production operations if the EPA does not allow for a reasonable phase-in period.

- The proposed NSPS imposes a number of new notification, record-keeping and reporting burdens associated with well completion activities, including a 30-day notice in advance of a well completion operation and the possibility of third-party verification. These administrative expenditures are not justified given the amount of expected emission reductions.

- Establishing an NSPS for well completion activities raises issues as to whether these temporary operations should be subject to minor or major new source review air permitting by individual states, and whether the states are equipped to administer the number of permits necessary on a timely basis. Pennsylvania’s air permitting program currently exempts oil and gas exploration and production operations, but the Department of Environmental Protection has made recent efforts to revise that exemption, and the proposed NSPS could ultimately affect the scope of any revised exemption.

In sum, industry comments strongly urge the EPA at a minimum to revisit its decision to regulate VOC emissions from flowback and perhaps eliminate such standards for what industry views as a temporary construction activity not associated with normal operation of production wells. The discussions in this regard are sprinkled with the buzzwords “arbitrary and capricious” and include detailed analyses of the EPA’s legal authority to promulgate the standards at issue, thereby preserving the industry’s ability to mount a legal challenge to any unacceptable provisions of a revised NSPS for the Oil and Natural Gas source category.

It is uncertain whether any industry members or groups would be willing to proceed down a litigation path if the EPA does not significantly revise the well completion standards in the proposed NSPS. Based on industry comments, however, it appears that the EPA’s recent proposal will not be the last word regarding the regulation of air emissions from natural gas wells in the Marcellus Shale and other plays across the United States. •

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