



EPA Proposes New Clean Air Act Requirements for the Oil and Natural Gas Industry Affecting Extraction, Transmission and Storage

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On July 28, 2011, the EPA released proposed rules substantially expanding the regulatory requirements imposed on the oil and natural gas industry under the Clean Air Act. The proposed rules expand the application of requirements and impose additional new requirements on the oil and gas industry under two Clean Air Act programs: New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants (NESHAP).

New Source Performance Standards (NSPS) are requirements for new and modified stationary sources that cause or contribute significantly to air pollution and may reasonably be anticipated to endanger public health or welfare. Since 1985, only natural gas processing plants have been subject to NSPS since 1985, and such regulations were limited to volatile organic compound (VOC) leak detection and repair at new or modified plants. The EPA's proposed rule will subject **all** oil and gas operations to NSPS, and gas processing plants will see an expanded application of NSPS.¹ The EPA estimates that compliance with the NSPS rules will cost \$738 million in 2015. However, the EPA estimates that the industry will quickly recover these costs and achieve a net cost savings of \$45 million as low-emission technologies increase revenues through additional natural gas and condensate recovery.

National Emissions Standards for Hazardous Air Pollutants are standards for air toxics, a.k.a. Hazardous Air Pollutants (HAP), from stationary sources. The EPA proposes expanding its NESHAP rules to oil and gas "major sources" (i.e.,

¹ Specifically, source categories impacted by this rule include: Crude Petroleum and Natural Gas Extraction (SIC 211111), Natural Gas Liquid Extraction (SIC 211112); Natural Gas Distribution (SIC 221210); Pipeline Distribution of Crude Oil (SIC 486110); Pipeline Transportation of Natural Gas (SIC 486210).

sources with greater than 10 tons per year of a single air toxic or 25 tons per year of total air toxics). The rule would increase the number of facilities deemed to be major sources. Large glycol dehydration units would need to reduce air toxic emissions by 95 percent, and could no longer utilize the alternative benzene compliance option currently available. Small glycol dehydrators at major sources would be subject to new emission standards. Crude oil and condensate tanks at major sources would also be required to reduce air toxic emissions by 95 percent. The EPA estimates that compliance with its new NESHAP requirements will cost \$16 million in 2015.

Industry members are likely to disagree substantially with the EPA's estimates of both the compliance costs and the benefits of the proposed NSPS and NESHAP rules. It is therefore important for industry members to file comments with the EPA on the proposed rules by the deadline of October 24, 2011, and operators are urged to identify speakers for the public hearings by September 6, 2011.

Background to EPA Proposal

Section 111 of the Clean Air Act (CAA) authorizes the EPA to define source categories, determine the pollutants for which NSPS should be developed, identify the facilities within each source category to be covered, and set emissions limits. 42 U.S.C. § 7411. The EPA may revise the NSPS pursuant to a review it is required to undertake every eight years. 42 U.S.C. § 7411(b)(1)(B).

Section 112 of the CAA authorizes the EPA to control air toxics, or HAP emissions, by establishing NESHAP, which set maximum achievable control technology (MACT) standards. 42 U.S.C. § 7412. MACT standards must require the maximum degree of emission reduction that the EPA determines to be achievable by each particular source category. As with the NSPS, the EPA may revise the NESHAP pursuant to a review it is required to undertake every eight years. 42 U.S.C. § 7411(d)(6).

On January 14, 2009, environmental groups Wildearth Guardians and San Juan Citizens Alliance sued the EPA alleging that the EPA had failed to comply with nondiscretionary requirements of the Clean Air Act to review, revise, and promulgate air pollution control standards for oil and gas production. The EPA settled this litigation by entering into a consent decree with the environmental groups on February 4, 2010. The consent decree required the EPA to sign either proposed rules or proposed determinations that revisions are unnecessary with respect to NSPS, NESHAP, and residual risk standards.

The EPA's deadline for signing proposed rules and/or determinations was July 28, 2011, and its deadline for issuing final rules and/or determinations is February 28, 2012.

Proposed Regulations

The proposed rules apply new emissions control regulations to oil and gas production, processing, transmission, storage, and distribution. Specifically, the regulations include: a NSPS for volatile organic compounds (VOCs); a NSPS for sulfur dioxide (SO₂); and an air toxics standard for oil and natural gas production, transmission, and storage.

1. NSPS for VOCs: Expanding Coverage to All Oil and Gas Operations

Having regulated only VOCs from natural gas processing plants in the past, the EPA proposes a new Subpart OOOO that would have sweeping application to the oil and gas industry by applying the current NSPS for VOC found in Subparts KKK and LLL broadly equipment at new and modified extraction, transmission, storage, and distribution facilities. See Proposed 40 C.F.R. Part 60.5365(a)-(g). Equipment that will be subject to the new VOC standard includes: gas wellheads, Christmas trees, gathering lines, pumps, separators, centrifugal compressors, reciprocating compressors, pneumatic controllers, storage vessels, and sweetening units.

The proposed rule sets standards for more than 25,000 wells fractured or re-fractured each year. The EPA estimates that well completions using hydraulic fracking emit 200 more VOCs than completions not involving fracking. The proposed new standards require a combination of reduced emission completions or "green completions," as already used in Wyoming and Colorado, and pit-flaring. According to the EPA, "green completions" can reduce VOC emissions of hydraulically fractured wells by 95 percent.

For each completion or re-completion of a hydraulically fractured gas well, the proposed NSPS requires a 30-day advance notice including the anticipated date of completion and geographic coordinates of the well. This information would be made available to the public. The EPA seeks comments on whether the rule should require third-party verification of compliance electronic reporting.

EPA also proposed VOCs standards for gas-driven pneumatic devices, centrifugal and reciprocating compressors, and new and modified storage vessels. Centrifugal compressors would be required to be equipped with dry

seal systems, and reciprocating compressors would have to replace the rod packing system every 26,000 hours of operation to reduce VOCs. Pneumatic controllers would have NSPS VOC emissions limitations. Storage tanks are subject to a VOC emissions reduction of 95 percent.

The new rule updates leak detection and repair requirements (LDAR) for VOCs at gas processing plants by lowering the definition of a leak from 10,000 ppm to 500 ppm and requiring the monitoring of connectors. 40 C.F.R. 60, Subparts KKK and Subpart VVa.

2. NSPS for SO₂: More Stringent Standard for Natural Gas Processing Plants

Subpart LLL of 40 CFR Part 60, provides specific standards for SO₂ emissions reduction efficiency based on sulfur feed rates and the sulfur content of natural gas at natural gas processing plants. The EPA proposes to "strengthen" its NSPS for SO₂ at natural gas processing plants by amending Subpart LLL to require a maximum initial and continuous efficiency of 99.9 percent for SO₂ control systems at natural gas processing plants with sulfur feed rates greater than 5-long tons per day and H₂S content equal to or greater than 50 percent.

3. Emissions Reductions of HAPs: Expansion of Coverage and Elimination of Benzene Compliance Option

The EPA proposes MACT for previously unregulated "small" dehydrators to require certain measures and methods be applied to reduce or eliminate benzene, ethylbenzene, toluene and xylene (BTEX) emissions through process changes. Proposed 40 C.F.R. 63.765. Small glycol dehydrators are defined as those with an annual average gas flow rate of less than 85,000 scmd in the oil and natural gas production source category, an annual average gas flow rate of less than 283,000 scmd in the transmission and storage source category, or average benzene emissions of less than 0.9 Mg/yr in either category. The proposed new regulations would require new small glycol dehydrators at production facilities to meet a standard of 4.66×10^{-6} grams BTEX/scm-ppmv and existing small glycol dehydrators at production facilities to meet a standard of 1.10×10^{-4} grams BTEX/scm-ppmv. New small glycol dehydrators at transmission and storage facilities will be required to meet a standard of 1.10×10^{-5} grams BTEX/scm-ppmv and existing small glycol dehydrators at transmission and storage facilities will be required to meet a standard of 6.42×10^{-5} grams BTEX/scm-ppmv.

Large glycol dehydrators have been subject to a 95 percent control glycol dehydrator MACT standard under 40 CFR Part 63, Subparts HH and HHH. The EPA proposes to amend Subparts HH and HHH to eliminate the long-used 0.9 Mg/yr benzene limit compliance alternative that instead allowed facilities to certify compliance with the regulations by emitting less than 1 ton of benzene per year. The proposal further expands the MACT standard to area sources. Proposed 40 C.F.R. 63.765.

As for storage vessels, only crude oil and condensation tanks with a potential for flash emissions were previously subject to the benzene MACT. The EPA's proposal eliminates that limitation and imposes the Subpart HH MACT on all storage vessels. Storage tanks would no longer be defined as "associated equipment" with emissions exempt from contributing to major source status.

The EPA further seeks to eliminate the startup, shutdown, and maintenance exemption for oil and gas production, transmission, and storage facilities currently available under the rules.

Public Comment

Comments on the proposed rules must be filed with the EPA on or by October 24, 2011. The EPA will host three public hearings on the rule in Denver, Dallas, and Pittsburgh if someone requests to speak at each hearing by September 6, 2011. Persons interested in speaking at or attending the hearings are advised to contact Ms. Joan Rogers at (919) 541-4487. The dates of the hearings will be announced online at <http://www.epa.gov/airquality/oilandgas>, but a public hearing will be cancelled without further notice if no one requests to speak at it by September 6, 2011. The EPA must take final action on its proposal by February 28, 2012 pursuant to a consent decree.

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