



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

**JUN 28 2012**

OFFICE OF  
AIR AND RADIATION

The Honorable Ed Whitfield  
Chairman  
Subcommittee on Energy and Power  
Committee on Energy and Commerce  
U.S. House of Representatives  
Washington, D.C. 20515

Dear Mr. Chairman:

Thank you for your letter of March 28, 2012, co-signed by two of your colleagues, to Administrator Jackson concerning the New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) which will control air emissions from operations in the oil and natural gas sector. As you may know, the final rule, "Oil and Natural Gas Sector; New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews," was signed by Administrator Jackson on April 17, 2012.

We believe the rule relies on available, affordable technology already in use that will both continue growth in domestic energy production and offset the cost of pollution controls through capture of natural gas otherwise lost. I have provided responses to each of your questions in the attached enclosure.

Again, thank you for your letter. If you have further questions, please contact me or your staff may call Cheryl Mackay in EPA's Office of Congressional and Intergovernmental Relations at (202) 564-2023.

Sincerely,

A handwritten signature in blue ink, appearing to read "Gina McCarthy".

Gina McCarthy  
Assistant Administrator

Enclosure

Responses to Questions Raised in March 28, 2012, Letter

1. What is EPA's legal rationale for expanding the NSPS to cover operations and equipment not previously regulated without an endangerment finding?

**Response:** The April 17, 2012, final rule for the Oil and Natural Gas sector does not expand the source category that was previously covered. The EPA Oil and Natural Gas source category for which the EPA previously made an endangerment finding covers at least those operations in this industry which are covered by the April 17 standards. As we explained in the preamble to the proposed rule, when the EPA initially listed this source category, it did so in a document where it described its listings as broad (76 FR 52745). Specifically, when promulgating the first sets of standards of performance for this source category, we stated that the source category "encompass[es] the operations of exploring for crude oil and natural gas products, drilling for these products, removing them from beneath the earth's surface, and processing these products from oil and gas fields for distribution to petroleum refineries and gas pipelines" (49 FR 2637). That preamble linked the endangerment finding under Clean Air Act section 111(a) to the industry as a whole: "the crude oil and natural gas production industry causes or contributes significantly to air pollution that may reasonably be anticipated to endanger public health or welfare" (49 FR 2636). As all of the operations that we are regulating fall within the scope of the original listing and endangerment finding, the EPA has the authority to set standards for these operations without another endangerment finding.

2. With respect to volatile organic compound (VOC) emissions, EPA proposes to use natural gas, which is primarily methane, as a surrogate for VOC emissions.
  - a. Is it EPA's intent to regulate methane and/or natural gas as a pollutant under the Clean Air Act's Prevention of Significant Deterioration (PSD) program?
  - b. If EPA does not intend to regulate methane and/or natural gas as a PSD pollutant, how does EPA intend to clarify that in the final rule?

**Response:** This rule causes neither methane nor natural gas to be a regulated pollutant under the PSD program. The final rule does not regulate methane. Further, as explained in the final rule, we used natural gas as a surrogate for VOC emissions in expressing an emission limit for pneumatic controllers given the proportional relationship between them. When a natural gas stream is emitted to the atmosphere, VOCs in the gas reach the atmosphere in the same proportion as it occurs in the natural gas stream.

3. With regard to the standards for VOC emissions, the EPA has not proposed any minimum threshold below which emissions would be exempt from regulation.
  - a. What is EPA's rationale for not including a VOC threshold as is provided in many existing NSPS regulations? In the final rule, does EPA plan to include a threshold?
  - b. In regulating methane or natural gas emissions with little or no VOC content, how has EPA considered costs as required under Section 111(a) of the Clean Air Act?

**Response:** The final rule includes a VOC emissions threshold for application of the storage vessel standards. During the rulemaking, we evaluated the cost effectiveness of regulating storage tanks with various levels of crude oil and condensate throughput rates. We estimated that storage vessels with a throughput rate of one barrel per day of crude oil or 20 barrels per day of condensate emit about six tons per year of VOC and determined that regulation at those throughput levels was cost effective. Accordingly, affected storage vessels are limited to those which emit at least six 6 tons per year of VOCs. In cases where a storage vessel is constructed at a location with no wells already in production, the NSPS provides for a 30-day period for the operator to determine whether the VOC emissions from the tank will exceed the threshold, plus an additional 30 days to install controls, if needed.

However, we did not set a VOC threshold for well completions, because available data do not support establishing a threshold and because of implementation concerns. Specifically, even if such a VOC concentration threshold were applied, to ensure compliance with the rule, an operator would have to determine with certainty before production whether a particular well was going to be above or below the threshold in order to mobilize the necessary capture equipment and secure a flow line, etc. This would require the operator to determine the reservoir composition, or , the gas composition prior to separation, in advance of the well completion (in that case, the determination of whether the well would be subject to the NSPS would have to be performed before the information on which to base such a determination would be available). Although nearby existing wells could potentially provide some indication of the general VOC content of the gas from the future well in question, there would be no assurance of certainty. Although we did not set a VOC threshold for well completions, we improved the final rule by including a subcategory of “low pressure” wells, which should cover over 85 percent of the coalbed methane wells which could be relatively low in VOC content. Low pressure wells will not be required to perform green completions, but will be required to use flaring to control emissions. Throughout the NSPS, in determining the best system of emission reduction, we fully considered cost effectiveness, as required under Clean Air Act section 111.

4. EPA’s proposed rule would set new standards for well completions (and recompletions), compressors, pneumatic controllers, and storage vessels (condensate and crude oil tanks).
  - a. Has EPA surveyed companies that provide the control equipment needed to comply with the rule regarding the availability of such equipment?
  - b. If yes, are sufficient quantities readily available to timely service the entire oil and gas industry under the rule’s applicable compliance periods?
  - c. Does EPA plan to provide a phase-in period for compliance with the rule?

**Response:** Through EPA and industry events and collaborative studies, the EPA has interacted with operating companies that have extensive experience implementing reduced emissions completions (REC). In particular, the EPA developed a detailed study<sup>1</sup> on REC in collaboration with service

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1 Available at: [http://www.epa.gov/gasstar/documents/reduced\\_emissions\\_completions.pdf](http://www.epa.gov/gasstar/documents/reduced_emissions_completions.pdf).

providers. Based on this experience, the EPA has gained extensive information on this technology. Based on information received in public comments following proposal, we believe that, currently, there is already significant demand for REC equipment. For example, Colorado, Wyoming, the City of Fort Worth, Texas, and the City of Southlake, Texas require REC under certain conditions. Additionally, public comments, reports to the EPA's Natural Gas STAR Program and press statements from companies indicate that some producers implement REC voluntarily, based upon economic and environmental objectives. If REC were to be immediately required of all well completions, NSPS would place significant additional demands on REC equipment supply and experienced personnel. As the near-term supply of REC equipment and trained personnel could be insufficient to meet the new national demand for equipment and labor, immediate compliance with the REC requirements could be challenging, potentially causing producers to delay well completions until appropriate equipment and labor are available. Because of uncertainties in the supply of equipment and labor over the near-term, and based on our analysis described above, the EPA concluded that REC might not always be available through 2014. Therefore, during this period, the best system of emission reduction (BSER) for well completions is to combust completion emissions. REC with combustion as an alternative to combustion is permitted by the rule so that facilities that are able to obtain REC equipment may still capture completion emissions using REC. After January 1, 2015, capturing completion emissions using REC will be considered the BSER and will be required under the NSPS. This period will permit the companies producing REC units to increase production to levels sufficient to meet new demand.

Public comments on the proposed storage vessel requirements stated that there will be a shortage of control equipment available to meet the storage vessel requirements, and recommended revisions to the compliance deadline for storage vessels based on a variety of considerations, including the availability of control devices, lead time needed for manufacturer testing of their combustors to be compliant with the NSPS, and time needed to install the compliant devices. We agree that it will likely take some time beyond the effective date of the NSPS for combustor manufacturers to have control devices constructed, tested, documented and available for operators to install in efforts to comply with the storage vessel requirements of the NSPS. Under the final rule, operators are not required to conduct individual performance tests on combustors installed in the field if the combustor manufacturer tests the equipment and documents for the owner or operator that the model achieves a control efficiency of 95 percent. We believe this testing and documentation program would require an "adjustment period" for manufacturers to be ready to supply the operators with the correct equipment they need. Accordingly, we concluded that there is no BSER for storage vessel affected facilities during the first year after the effective date of the NSPS, which we believe is appropriate for the adjustment period mentioned above. At the end of this adjustment period, we believe owners and operators should have no problem securing control devices that are manufacturer-tested and have appropriate documentation for determining control efficiency. Accordingly, the final rule provides for a one-year phase-in beginning 60 days after publication of the final rule in the Federal Register after which the requirement is 95-percent control.

5. Section 111(f)(3) of the Clean Air Act requires EPA to consult with the appropriate representatives of the Governors and state air pollution control agencies before promulgating NSPS regulations or listing any category of major stationary sources.
  - a. Has EPA consulted with Governors and State agencies regarding the proposed rule, including the proposed NSPS requirements and the expansion of the source category to cover processes and equipment not previously subject to regulation? If yes, with whom and when did EPA consult?
  - b. Has EPA consulted with Governors and State agencies to determine whether adequate State resources are available to accommodate the expected increase in permitting, reporting and recordkeeping requirements associated with the rule?
  - c. Has EPA performed an analysis of the potential impacts of this proposed rule on near- or long-term oil and natural gas production? If yes, please provide the Committee with copies of all such analyses.

**Response:** We believe that Clean Air Act section 111(f)(3) applies only to the initial promulgation of the NSPS regulation for a listed source category. The NSPS regulation for the listed Oil and Natural Gas source category was promulgated in 1985. Furthermore, as explained above, the EPA did not expand the category listing in the recent revision to the Oil and Natural Gas NSPS because we concluded the current listing covers the new emission sources. Thus, Clean Air Act section 111(f)(3) is not implicated in this instance.

During development of the rule, the EPA consulted with state agencies. In August of 2010, the project team conducted several days of site visits arranged and accompanied by the Colorado Department of Public Health and Environment and by the Wyoming Department of Environmental Quality. We arranged several teleconferences with the states of Texas, Colorado and Wyoming as we continued to develop our rulemaking. Further, we briefed the Western Regional Air Partnership (WRAP), participated in WRAP teleconferences and referred to data developed by WRAP in our rulemaking. We participated in several teleconferences, and in February of 2011 briefed the Marcellus Shale Working Group, which included the EPA, industry and state agencies. After the public comment period, we arranged teleconferences to obtain further clarification of comments submitted by Colorado and Wyoming. We believe this state consultation improved the quality of our final action. In addition, we incorporated provisions in the final rule that we believe will help minimize the permitting burden on state agencies and owners and operators. For example, existing gas wells that are refractured are not "affected facilities" under the NSPS if the well completion operation is conducted using REC and meets notification, reporting and recordkeeping requirements. By not being "affected facilities" under the NSPS, these sources may not be subject to state permitting requirements. Another example of this concept is that we limited applicability of the final NSPS to only "high bleed" pneumatic controllers; all other pneumatic devices are not affected facilities under the NSPS. Similarly, we removed centrifugal compressors with dry seal systems from final NSPS applicability.

Finally, we analyzed energy system impacts of the final NSPS using the U.S. Energy Information Administration's National Energy Modeling System (NEMS). See section 1.2.3 of the Regulatory Impacts Analysis (RIA) for this discussion, available at [http://www.epa.gov/ttn/ecas/regdata/RIAs/oil\\_natural\\_gas\\_final\\_neshap\\_nsp\\_s\\_ria.pdf](http://www.epa.gov/ttn/ecas/regdata/RIAs/oil_natural_gas_final_neshap_nsp_s_ria.pdf).

Our analysis, based on NEMS, shows that domestic natural gas production is not likely to change in 2015, the year used in the RIA to analyze impacts. Average natural gas prices are also not estimated to change in response to the final rules. Domestic crude oil production is not expected to change, while average crude oil prices are estimated to decrease slightly (about \$0.01/barrel or about 0.01 percent at the wellhead for onshore production in the lower 48 states). All prices are in 2008 dollars.