OZONE TRANSPORT COMMISSION

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Lisa P. Jackson, Administrator
U.S. Environmental Protection Agency
Air and Radiation Docket
Mail Code 6102T
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

RE: Proposed Rule – Docket No. EPA-HQ-OAR-2010-05051076

Dear Administrator Jackson:

The Ozone Transport Commission (OTC) appreciates the opportunity to provide comments on the Environmental Protection Agency's (EPA's) August 23, 2011 proposed rule entitled "Notice of Proposed Rulemaking (NPRM) for Oil and Natural Gas Production and for Natural Gas Transmission and Storage" (40 CFR parts 60 and 63, 76 FR 52738), (the "Oil/Gas Rule").

EPA's proposal takes important sector-based steps to limit emissions of volatile organic compounds (VOCs) from the oil/gas sector, limitations that will benefit the states in the Ozone Transport Region (OTR) and nationwide.

The OTC requests that the proposed rule be expanded to address NOX emissions from the oil/gas sector. While the proposed rule addresses VOC emissions and a suite of air toxics, it explicitly omits NOx emissions from the oil/gas sector, and thus fails to address significant emissions of a criteria pollutant that is a precursor to ozone, another criteria pollutant.

OTC believes that an appropriate sector-based approach should include NOx standards for the oil/gas sector. First, the proposed rule should include nonroad rules for the oil/gas sector, since many of the engines used in the oil/gas sector that emit NOx and other pollutants are classified as nonroad, not point sources. OTC believes that since these engines are moved from state to state, EPA is much better equipped to regulate these engines than are the states. Second, the proposed rule should include NOx regulations for stationary engines, compressor engines, heaters and boilers and other point sources used in the oil/gas sector, to encompass a complete sector-based approach that includes all NOx emissions sources in the oil/gas sector.

In the preamble to the proposed rule, EPA acknowledges that there are a number of significant sources of NOx emissions at oil and gas sites, due to: 1) the

combustion of natural gas in reciprocating engines and combustion turbines used to drive the compressors that move the natural gas through the system; and 2) combustion of natural gas in heaters and boilers. However, EPA then states that "While these engines, turbines, heaters and boilers are co-located with processes in the oil and natural gas sector, they are not incorporated in the Oil and Natural Gas source category and are not being addressed in this action."

NOx emissions from oil, natural gas, coal bed methane field and intermediate operations are significant, and have significant air quality impacts. Of particular concern are the NOx emissions from the rapidly expanding natural gas supply industry, resulting from increasing natural gas demand and production of shale gas. There are many significant NOx sources associated with natural gas production that should be addressed in this Oil/Gas Rule, including:

- Diesel and spark ignition reciprocating engines in drilling rig operations
- Diesel engines, spark ignition engines, and combustion turbines driving electric generators for power in remote locations and for supporting electric motor prime movers
- Diesel and spark ignition engines, engines driving hydraulic fracturing pumps, recovery pumps, and water recirculating pumps
- Gas heating units in well field pipelines and processing facilities working with "wet" gas
- Heating units and boilers supporting gas processing operations (such as for dehydration unit regeneration, etc.)
- Refrigeration compressors supporting gas processing operations
- Well field gas compressors, gas processing facility inlet and outlet gas compressors, and pipeline compressors
- Flares (these are addressed in the current rulemaking).

NOx emissions from these natural gas industry sources are significant (even though emissions at a particular site are highly dependent upon the local geology and well depth, gas quality, and other localized factors), and cost-effective NOx control technologies exist for the majority of these sources.

A report by the Western Region Air Partnership specifically addressed regional emissions from the natural gas industry. [1] This report used regional data to estimate the following NOx emissions factors for gas operations in New Mexico. These values are not presented as representative of the industry average, but rather as realistic emissions factors for the given local conditions. The emissions factors are:

Drilling: 7.1 tons of NOx/well
Well completion: 0.15 tons of NOx/well
Heaters: 0.86 tons of NOx/well
Gas Compression: 2.3X10^(-5) tons of NOx/MMcuft

[1] http://www.epa.gov/ttn/chief/conference/ei15/session12/russell.pdf

NOx emissions from natural gas operations become significant when taken in context of the number of natural gas wells and the amount of natural gas produced.[2]

Further, these emissions are expected to increase in future years, particularly in extracting natural gas from shale formations such as the Marcellus Shale within and outside of the OTR. In 2009, the Energy Information Administration (EIA) reported that there were 493,100 producing natural gas wells in the United States—a marked increase of 16,448 wells since 2008. EIA data also indicate that in 2009 the United States produced 20,580,076 MMcuft of dry natural gas, an increase of 1,398,096 MMcuft from 2008. The EIA data indicated that in 2009, shale gas contributed 3,383,532 MMcuft to the total gas produced, an increase of 1,099,317 MMcuft from 2008.[3] EIA's Annual Energy Outlook 2011 reports that from 2006 to 2010, U.S. shale gas production grew by an average of 48 percent per year and that growth is expected to continue.[4]

NOx emissions are a growing issue in the oil/gas sector in all phases of production, processing and transport of natural gas. OTC urges EPA to take further steps to properly regulate sources of NOx emissions throughout the entire oil/gas sector. This includes natural gas compressors, wellhead compressors, stationary engines, nonroad engines and other stationary sources involved in the production and transport of natural gas from wellhead to the consumer. OTC finds that NOx controls for this sector are necessary, readily available and cost-effective.[5]

We appreciate the opportunity to comment on EPA's proposed Oil/Gas Rule. We would be pleased to respond to any questions EPA may have; you may contact me at (202) 508-3840.

Sincerely,

William L. Driscoll
Executive Director

[2] Ibid
[3] http://www.eia.doe.gov/pub/oil_gas/natural_gas/analysis_publications/ngpipeline/develop.html
[4] http://www.eia.gov/forecasts/aeo/pdf/0383(2011).pdf
[5] OTC White Paper – NOx Controls for Natural Gas Compressor Prime Movers, pp. 2-3