
U.S. Environmental Protection Agency Issues Final Hydraulic Fracturing Air Emission Standards

By Kenneth von Schaumburg, Michael J. Pattwell / May 10, 2012

On April 17, 2012, the U.S. Environmental Protection Agency (EPA) issued its final [Oil & Natural Gas Sector New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants](#) rule (Final Rule). The Final Rule, promulgated under the Clean Air Act, creates New Source Performance Standards (NSPS) and air toxics standards for onshore oil & gas extraction, transportation, storage and processing operations, and is the first federal rule specifically targeting the controversial oil & gas extraction process of hydraulic fracturing or "fracking." The Final Rule comes on the heels of EPA's controversial [Carbon Pollution Standards for New Power Plants](#) proposal. The Carbon Pollution Standards for New Power Plants proposal, if adopted, would significantly limit the amount of carbon dioxide new power plants could emit, likely rendering impracticable the construction of new coal-fired power plants in the U.S. Taken together, the two actions represent a drastic change in the EPA's regulation of the coal, electric power, and oil & gas industries.

Prior to promulgation of the Final Rule, the NSPS for emission of Volatile Organic Compounds (VOCs) and Sulfur Dioxide (SO₂) applied only to leak detection and repair at natural gas processing plants. The Final Rule: (1) increases those existing leak detection and repair requirements; (2) imposes a NSPS for VOCs on the compressors, pneumatic controllers and storage vessels used to transport and store gas extracted from fracked wells; and (3) establishes a VOC NSPS for the approximately 25,000 wells fracked or re-fracked each year in the U.S.

Most relevantly, the Final Rule strives to achieve a 95 percent reduction in VOC emissions generated during the completion of fracked wells through the mandated use of flaring and/or "reduced emissions completions" (RECs). The flaring process requires owners and operators of fracked wells to capture and direct flowback emissions to a combustion device equipped with a reliable continuous ignition source. Flaring however, is not required if it would result in a fire hazard or an explosion, or where high heat emissions from a completion combustion device would negatively impact tundra, permafrost or waterways. RECs on the other hand, involve the utilization of special equipment to separate gas and liquid hydrocarbons contained in the flowback produced from the initial fracking activity. Once separated, all recovered salable gas must be routed to a collection system or gas gathering line for resale or use on site. Notably, wildcat (exploratory), delineation and certain defined low pressure wells are exempted from the REC requirement and, in situations where it is infeasible to institute the REC process, the Final Rule requires flaring to be used.

Due to an overwhelming number of comments from industry and consumer groups that the proposed rule did not provide sufficient time for manufacture of the required control equipment or the training of personnel to use such equipment, the Final Rule now contains a transition period comprised of two phases. During the first phase, which spans from the Final Rule's effective date to Dec. 31, 2014, reduction of flowback emissions may be obtained by flaring. During the second phase, which commences on Jan. 1, 2015, reduction of flowback emissions must be obtained through the implementation of RECs.

With respect to the transportation and storage of natural gas, the Final Rule calls for a 95 percent reduction of VOCs from wet seal centrifugal compressors, and from storage vessels with emissions equal to or greater than 6 tons per year. The Final Rule further requires that: (1) the rod packing systems in reciprocating compressors be replaced every 26,000 hours of operation or every 36 months; (2) new or replaced pneumatic controllers located at processing plants have zero emissions of natural gas; and (3) new or replaced pneumatic controllers located elsewhere have natural gas emissions no greater than six square cubic feet per hour.

The Final Rule goes into effect 60 days after it is published in the Federal Register and imposes several different notification, record keeping and reporting requirements. For more information on the Final Rule, contact Kenneth von Schaumburg at (202) 772-0904 or Michael J. Pattwell at (517) 318-3043.