

Air Emissions Inventory for the Natural Gas Industry

There are significant gas exploration and extraction activities occurring in Pennsylvania within the Marcellus Shale and other formations. The Pennsylvania Department of Environmental Protection (DEP) will collect data from the owners/operators of natural gas production and processing operations in unconventional shale formations across the state. The development of a comprehensive emissions inventory for natural gas operations in shale formations will allow DEP to quantify and assess air contaminant emissions from these facilities.

What are the reporting and regulatory requirements?

Under federal law, DEP is required to report total statewide air pollutant emissions to the U.S. Environmental Protection Agency (EPA) every three years. The emissions inventories for calendar year 2011 are due to EPA by Dec. 31, 2012, and will provide the first-ever comprehensive data on point, area, mobile (including on-road and non-road sources) and biogenic sources.

DEP notified the 99 potentially affected owners and operators of the new reporting requirements on Dec. 6, 2011. The data is due to DEP by March 1, 2012. Companies may be granted an extension to submit their data on a case-by-case basis if they show “reasonable cause” why they can’t meet the deadline.

What types of sources and information will be required to report?

Basic information about air contamination sources will be required, including company contact; lease/facility location; and equipment and production data, or hours of operation, type of control equipment used, amount of gas produced, amount of fuel used and amount of frac water processed. Air emissions data for sources associated with natural gas development including production, processing and related activities also will be reported to DEP.

Owners/operators will download spreadsheets from the DEP Oil and Gas Reporting-Electronic (OGRE) system specific to their facilities that provide for reporting of the different processes in the natural gas activities. Owners/operators will provide emissions data and source reports for sources including:

- Stationary engines
- Heaters
- Tanks/impoundments
- Dehydration units
- Pneumatic pumps
- Fugitives
- Venting and blowdown
- Drill rigs
- Well completions

What types of air contaminant emissions should be reported to DEP?

Emissions data should be reported for air contaminants including the following:

- Carbon monoxide
- Oxides of nitrogen
- Particulate matter less than 10 micrometers in diameter (PM10)
- Particulate matter less than 2.5 micrometers in diameter (PM2.5)
- Sulfur dioxide
- Volatile organic compounds

Additionally, emissions of hazardous air pollutants, including benzene, ethylbenzene, formaldehyde, N-hexane, toluene and 2,2,4-trimethylpentane, also should be reported to the department.

What if I need more information?

For more information, visit www.dep.state.pa.us, keyword: Emission Inventory.