



October 12, 2012

RE: PENNSYLVANIA HYDRAULIC FRACTURING DISCLOSURE, TRACKING, & DISPOSAL REQUIREMENTS - 2012

As a result of the passing of The Act Amending Title 59 (Oil and Gas) of the Pennsylvania Consolidated Statutes (Act 13 of 2012)” (Act 13) in February 2012 several improvements to the disclosure and tracking requirements of hydraulic fracturing and hydraulic fluids have been required for operating in Pennsylvania. These improvements were built out of the requirements of Act 13 in the form of revised state regulations. These state regulations setup the infrastructure for Pennsylvania to manage hydraulic fracturing and the tracking of these fluids, pre- and post completion. The following is a summary of these improvements and requirements and illustrates how Pennsylvania is properly implementing Act 13 and managing responsible natural gas exploration in Pennsylvania.

Operators in Pennsylvania are required to disclose hydraulic fracturing chemicals and information under Act 13. The information submitted by operators utilizing FracFocus is that which is required under Pennsylvania State law. Under the law, the information is to be transparent and searchable. In addition to the disclosure of hydraulic fracturing chemicals, operators are required to disclose specific concentrations with their corresponding CAS numbers. The law also requires that operators disclose the total volume of base fluid as part of their specific state required Water Management Plan.

With respect to landowner notifications, Act 13 requires that landowners be notified prior to drilling and hydraulic fracturing occurring on their property. In addition, pre-drill notifications are required for all unconventional wells which are proposed to all surface landowners, water purveyors, coal owners and operators within 3,000 feet. The host municipality and all adjacent municipalities within 3,000 feet are required to be notified as well. The required notifications provide the opportunity for various public and private stakeholders to comment on the proposed drilling and hydraulic fracturing of nearby wells.

Pennsylvania has established, under the law, that operators who drill gas wells within 2,500 feet of private or public water supply are presumed to be responsible for impacting these water supplies should a complaint arise from the land owner or water purveyor. This encourages the operator to prepare third party baseline testing of all water supplies within 2,500 feet to illustrate the existing conditions of the water supplies. The operator is fully responsible for completing pre and post testing to prove that no impact on water supplies has occurred.

Under Act 13 operators are required to disclose geological formations which a well traverses. Pennsylvania has adopted, revised, and implemented regulations specific to oil and gas drilling namely Pennsylvania Title 25, Article I – Land Resources, Chapter 78 Oil and Gas Wells (Chapter 78). Under Chapter 78 operators are required to report annulus pressures at wells and well storage facilities.

Marcellus operators have taken a lead role in developing technologies to recycle flowback water. The majority of flowback water in Pennsylvania is recycled. The flowback water which is not recycled is treated at a state approved facility. Underground injection wells are regulated by the Federal EPA. The underground injection wells which are utilized for flowback water are regulated as Class II wells, which have more stringent regulations than Class I wells used for petroleum refining, chemical production and metal production. The proper treatment and disposal of flowback water is a requirement under Act 13 and implemented via newly revised state regulations.

The disposal of flowback water is regulated by the National Pollutant Discharge Elimination System (NPDES) permit program. The Clean Water Act authorizes this program. The NPDES program has been delegated to states to implement in accordance with their own state clean water and clean streams laws. Pennsylvania has also adopted comprehensive regulations under the above federal mandates and Act 13 for the handling of flowback water which results from unconventional shale gas drilling. The program is managed through the Pennsylvania Department of Environmental Protection (DEP) Bureau of Waste Management and hydraulic fracturing waste characterization requirements, reporting, disposal, and transport are defined under the residual waste program. This program provides the reporting mechanism for generators of hydraulic fracturing fluids through the use of the Department's form "26R". This program in Pennsylvania requires flowback volumes, tracking, transportation, treatment, and disposal to be reported.

In summary, over the last year and as a result of the implementation of Act 13, Pennsylvania has enacted laws and regulations to properly and safely develop natural gas via unconventional wells. Hydraulic fracturing chemical disclosure, flowback water tracking, treatment and disposal are highly regulated within the Commonwealth and this promotes the responsible and safe development of this natural resource.