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DEP Announces Comprehensive Oil and Gas Development Radiation Study

HARRISBURG -- At the direction of Governor Corbett, the Department of Environmental Protection announced today it will undertake a study to look at naturally occurring levels of radioactivity in by-products associated with oil and natural gas development.

In the coming weeks, DEP will seek a peer review of its study plan and begin to sample and analyze the naturally occurring radioactivity levels in flowback waters, treatment solids and drill cuttings, as well as associated matters such as the transportation, storage and disposal of drilling wastes.

DEP routinely reviews radioactivity data in wastes the oil and natural gas industry and other industries generate, and the information the agency has obtained to date indicates very low levels of natural radioactivity. This study, which is expected to take 12 to 14 months, is aimed at ensuring that public health and the environment continue to be protected.

"This administration is undertaking what will be the most comprehensive study of its kind anywhere, and Gov. Corbett has directed us to do so in order to be proactive for the future and to continue Pennsylvania's leadership in responsible development of domestic natural gas resources," DEP Secretary Mike Krancer said. "This thorough and rigorous study, which will focus on conditions here in Pennsylvania, is further demonstration that states are best suited to responsibly oversee the natural gas exploration and production activities taking place in our respective borders.

"DEP's current regulations and monitoring networks are designed to protect the public from exposure to unsafe levels of radiation, and our regulations in this field have led the nation for years," Krancer said.

The agency will collect samples of flowback water, rock cuttings, treatment solids and sediments at well pads and wastewater treatment and waste disposal facilities. The study will also analyze the radioactivity levels in pipes and well casings, storage tanks, treatment systems and trucks.

Throughout the study, DEP will provide progress reports to its water, waste, radiation and citizens' advisory councils.

Pennsylvania is the only state that requires through regulation that landfills monitor for radiation levels in the incoming wastes. Should waste trigger a radiation monitor, the landfill must use a conservative and highly protective protocol that DEP developed to determine if the amount and concentration of the radioactive material can be accepted. This protocol

ensures that the materials, such as Marcellus Shale drill cuttings and other sources of naturally occurring radiation in the waste stream, do not pose a risk to public health during disposal.

Drill cuttings and other materials associated with oil and gas have occasionally triggered radiation monitors at landfills. DEP's data indicates that less than half a percent of all drill cuttings produced by the Marcellus Shale industry in 2012 that were disposed of in landfills triggered radiation monitors. The cuttings did not contain levels of radioactivity that would be harmful to the public, and they were safely disposed of in the landfills.

In 2011, DEP announced the results of in-stream radiation water quality monitoring for seven rivers in Pennsylvania. The monitors were placed downstream of treatment plants that had been discharging treated Marcellus Shale wastewater, a now defunct practice as a direct result of DEP's call to industry to cease delivery of wastewater to plants that were not equipped to fully treat it. The in-stream monitoring results showed that radioactivity levels in all seven rivers were at or below normal background levels and below federal safe drinking water standards.

In 2011, DEP also required 14 public water suppliers to report early the results of routine monitoring for radioactivity in drinking water. Such monitoring is required as part of the state's oversight of public water supplies. Most results showed no detectable levels of radioactivity, and the levels that were detectable did not exceed safe drinking water standards.

DEP will work on the study with Perma-Fix Environmental Services of Pittsburgh, which has worked with the agency as a consultant on health physics and radiological issues and has assisted DEP for more than a decade with radioactivity monitoring and assessments.

The agency will consult with independent members of academia to peer review the project's detailed study plan. Once the peer review is complete, DEP will publish the study plan on its website, where the agency's proposal for the study is currently viewable.

For more information and to view the study proposal and a summary of the study, visit www.dep.state.pa.us and click the "Oil and Gas Development Radiation Study" button on the front page.