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Before the Pennsylvania House Democratic Policy Committee
Hearing on DEP Accountability for Marcellus Shale Air and Water Testing

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Thank you for the opportunity to speak today. I commend Chairman Sturla and members of the House Democratic Policy Committee for holding a hearing on a subject of great importance to many Pennsylvania residents. Many thanks to Representative Jesse White, who has been a leader in supporting the interests of his constituents living on the frontlines of Marcellus Shale development. He has also rightly called for greater transparency by the Pennsylvania Department of Environmental Protection—including with the introduction of House Bill 268 to provide homeowners with much-needed information on their water quality.

Founded in 1988, Earthworks is a nonprofit organization dedicated to protecting communities and the environment from the negative impacts of irresponsible mineral and energy development while seeking sustainable solutions. We expose the health, environmental, economic, and social aspects of extractive industries through work informed by sound science. As Eastern Program Coordinator, I focus on both policy and community concerns related to Marcellus Shale gas development in Pennsylvania.

It is a central part of the mission of environmental agencies to prevent pollution and to resolve problems when they do occur. Air and water quality testing should be a key part of DEP's responsibilities while overseeing and regulating the oil and gas industry. When homeowners have concerns about their water and air quality, they should be able to call on the DEP, as a public agency, to respond, help figure out what's wrong, and provide

assistance. Unfortunately, in the midst of the Marcellus Shale gas boom that is sweeping Pennsylvania, it has been our experience that DEP often seems to have forgotten this key part of their mission.

In our view, the disclosure by DEP staff that the agency provides only partial water test results to homeowners represents a significant lapse in responsibility and transparency. A great deal is at stake, because while people are being left in the dark about the contaminants to which they are exposed, health problems may well be growing worse.

In Pennsylvania and many other states, a lack of regular, frequent, and comprehensive water and air testing at or near oil and gas facilities means that many contaminants released into the environment are simply not detected or documented. And when contaminants are not clearly established as being present, the assumption is made that they are absent.

As a consequence, operators are able to maintain that pollution does not exist, or that they did not cause it. This also lets regulatory agencies, such as the DEP, off the hook for holding operators accountable and taking the steps necessary to stop and prevent damage. It also becomes difficult for homeowners, policymakers, medical professionals, and advocates to establish connections between oil and gas activities and environmental and health problems—making it much harder to find ways to solve and prevent them.

In our work, we have documented such connections in states where oil and gas development has been underway for a long time, including Wyoming, Texas, and Colorado. Last year, we conducted a project across Pennsylvania to identify possible links between pollution from natural gas wells and facilities and the health problems reported by nearby residents. We collected data from 108 health symptom surveys and 34 air and water tests. Results are detailed in the report *Gas Patch Roulette,* as well as a research paper that has been peer-reviewed and accepted for publication. (See http://health.earthworksaction.org.)

In sum, our analysis showed that health symptoms reported at participating households closely match the scientifically established effects of exposure to chemicals detected in the air and water at those same locations. For example, benzene, toluene, xylene, chloromethane, carbon disulfide, and acetone were detected at the same households where survey participants reported sinus, respiratory, skin, vision, and neurological problems. In addition, members of households located closer than 1500 feet to gas facilities were found to have significantly higher rates of several symptoms (such as throat irritation, skin rashes, headaches, and nosebleeds) than those living farther away.

These findings underscore the fact that even routine operations and properly permitted facilities can pose health threats, and that accidents, spills, and equipment failures inevitably occur. As in every other industry, bad actors exist and mistakes happen. That is why it is imperative for the agency responsible for protecting the environment to be up to the complex and vital task of oversight and enforcement.

With this in mind, in 2011-2012, Earthworks investigated the enforcement capacity of oil and gas regulatory agencies in six states. The resulting report, *Breaking All the Rules,* details our findings in this area. (See http://enforcement.earthworksaction.org).

Our research on Pennsylvania—based largely on state databases—showed that in 2011, 86 percent of active oil and gas wells in the state were not inspected. Between 2005 and 2011, there were more than 15,000 violations of oil and gas regulations. We also found that many operators repeatedly violate the same rule at different well sites, from one year to the next. Yet in the beginning of 2012, only 20 percent of violations led to enforcement action by DEP, compared to 24 percent in 2011 and more than 50 percent in 2004.

In recent years, DEP has taken some steps to increase the numbers of inspectors and has begun to conduct more testing at facilities. The agency has also experienced steady budgetary cutbacks, with its funding now only 40 percent of what it was a decade ago. However, it is also crystal clear that DEP simply cannot keep pace with the expansion of the gas industry—and without significant changes, public health and environmental quality

will continue to suffer.

We recommend that the Pennsylvania legislature and DEP work together to:

1. **Conduct testing** for both private wells and public drinking water supplies prior to drilling and at, or near, different facilities during all phases of operations, and make this information publicly available.
2. **Expand parameters for air and water testing** in light of the many chemicals used and potential mobilization of contaminants during oil and gas development. For example, it appears that DEP does not routinely test for some substances that have associated federal and state safety levels and which are often recommended as parameters in oil and gas fields, including methane, surfactants, volatile organic compounds, and oil and grease.
3. **Establish a long-term, comprehensive plan for the scope and pace of permits** for wells and other facilities, with priority given to the protection of air and water quality.
4. **Adopt rules specifically on enforcement**, including comprehensive and binding inspection protocols; in-depth training and competitive pay for inspectors; and increased fines and enforcement actions.
5. **Collect comprehensive data on complaints,** including how and when DEP responded and whether the problem was resolved, and make this information publicly available.
6. **Improve public access to information** on facilities and incidents, the basis for agency determinations on causes of contamination, and complete water and air testing results.

In sum, the DEP must change its current direction if it is to reestablish public trust. Transparency, communication, and action must be the cornerstones of the agency charged with protecting the environment—Pennsylvania's citizens deserve no less.

Thank you for your time and attention to these critical concerns.