

# THE PREVENTION OF HEALTH RESEARCH RELATED TO UNCONVENTIONAL GAS DRILLING

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# Usual Progression of Environmental and Occupational Issues Related to Human Health

- 1) Potentially harmful societal/industrial activities occur before all health and safety information is available
- 2) Report of adverse health outcomes potentially associated with activity
- 3) Major public concern
- 4) Inability to establish cause and effect relationships in large part because of inadequate exposure and toxicity information (including biomarkers)

# MARCELLUS SHALE ACTIVITIES: THREE CERTAINTIES

## 1) Surprises

Unforeseen threats to human health will be detected.

## 2) Disease Clusters

Clusters of adverse health effects will occur in communities in which UGD activity has occurred, whether causally related or not

## 3) Less Pollution Over Time

Industry will find ways to recycle fracking chemicals (which they buy); and emit less of their product (which they sell)

# CONTROLLING THE MESSAGE

## **Is hydrofracking old or new?**

- 1) New hydrofracking technology now permits extraction of gas trapped in shale
- 2) We have been doing hydrofracking for decades so there is nothing to worry about

## **Does hydrofracking cause groundwater contamination?**

- 1) There is no proven incident in which hydrofracturing has caused groundwater contamination
- 2) Major water contamination with hydrofracturing agents has occurred as a result of UGD drilling activities

# Language of the Executive Orders Creating Unconventional Natural Gas Drilling Advisory Committees

“...task the Secretary of Energy Advisory Board (SEAB) with establishing a subcommittee...to develop, within six months, consensus recommended advice to the agencies on practices for shale extraction **to ensure the protection of public health** and the environment” (emphasis added)

-President Barak Obama in  
*Blueprint for a Secure Energy Future* (March 2011)

The Marcellus Shale Safe Drilling Initiative will assist State policymakers and regulators in determining how gas production from the Marcellus shale in Maryland can be accomplished **without unacceptable risks of adverse impacts to public health, safety,** the environment and natural resources” (emphasis added)

-Maryland Governor Martin O’Malley in  
*Executive Order 01.01.2011.11: The Marcellus Shale Safe Drilling Initiative* (June 2011)

“WHEREAS, the Commonwealth takes seriously its responsibility to ensure the development of natural gas in a manner that protects the environment and **safeguards the health and welfare of its citizens**” (emphasis added)

-Pennsylvania Governor Tom Corbett in  
*Executive Order 2011-011: Creation of Governor’s Marcellus Shale Advisory Commission* (March 2011)

# Agencies, Sub-Agencies, and Commissions specified to receive funding from PA impact fee **(BUT NOT THE DEPARTMENT OF HEALTH)**

1. County Conservation Districts
2. State Conservation Commission
3. Pennsylvania Fish and Boat Commission
4. Public Utility Commission
5. Department of Environmental Protection of the Commonwealth
6. Pennsylvania Emergency Management Agency
7. Office of State Fire Commissioner
8. Department of Transportation
9. Natural Gas Energy Development Program (DEP)
10. Counties and municipalities
11. Housing Affordability and Rehabilitation Enhancement Fund
12. Commonwealth Financing Authority
13. Environmental Stewardship Fund
14. Motor License Fund (DOT)
15. Pennsylvania Infrastructure Investment Authority
16. Department of Community and Economic Development
17. Hazardous Sites Cleanup Fund

# Disclosures Not Required Under the New PA Law

Notwithstanding any other provision of this chapter, a vendor, service provider or operator shall not be required to do any of the following:

- (1) Disclose chemicals that are not disclosed to it by the manufacturer, vendor or service provider.
- (2) Disclose chemicals that were not intentionally added to the stimulation fluid.
- (3) Disclose chemicals that occur incidentally or are otherwise unintentionally present in trace amounts, may be the incidental result of a chemical reaction or chemical process or may be constituents of naturally occurring materials that become part of a stimulation fluid.

# UGD HEALTH STUDIES REQUIRE ADVANCES IN MIXTURES RESEARCH

Four mixtures of chemical and physical agents

- Hydrofracturing agents
- Natural gas hydrocarbons
- Agents brought to surface in flowback water  
(e.g., arsenic, brine components, radionuclides)
- All of the above, including results of reactions among agents