Minutes of April 15, 2013 meeting of the Marcellus Shale Safe Drilling Initiative Advisory Commission

Approved July 22, 2013

The Commission held its fourteenth meeting at the Allegany College of Maryland. In attendance were Chairman David Vanko and Commission members Senator George Edwards, Commissioner James Raley, Commissioner William Valentine, Mayor Peggy Jamison, Shawn Bender, Steve Bunker, John Fritts, Jeff Kupfer, Dr. Clifford Mitchell, Paul Roberts, Nick Weber and Harry Weiss. Also in attendance were staff of state agencies and members of the public.

Chairman Vanko called the meeting to order. The minutes of the January 7, 2013 meeting were approved.

Ms. Kenney provided an update on the recently concluded session of the General Assembly. Three bills endorsed by the Commission were introduced by Senator George Edwards: registration of landmen, financial assurance, and a natural gas severance tax. The first two passed. Several other bills relating to Marcellus Shale were introduced but did not pass.

The Governor proposed and the legislature approved an appropriation of $1.5 million as a deficiency appropriation for FY2013 for Marcellus Shale studies. MDE received $1 million, which it will use for additional air monitoring and some of the studies required under the Executive Order. DNR received $500,000, which it will use for additional surface water and groundwater monitoring. Because it is an appropriation for FY 2013, the funds must be encumbered by June 30, 2013. Because contracts with universities and State agencies can be concluded quickly, MDE requested a proposal from the Regional Economic Studies Institute at Towson University for an economic study, from the National Transportation Center (NTC) at Morgan State University for a traffic study, and from the Department of Health and Mental Hygiene for a public health study.

Staff then described the status of the Best Practices work and the path forward. MDE, DNR and the Advisory Commission will review and discuss the best practices recommended by Dr. Keith Eshleman and Dr. Andrew Elmore. The agencies are free to accept, reject, modify or add to the recommendations. The agencies will prepare a report, in consultation with the Advisory Commission and post a draft for public comment.

There was discussion about various aspects of the future work. Dr. Mitchell stated that he would like to engage the public to get input on the public health study. Mr. Roberts suggested involving Dr. David Brown, a physician in southwest Pennsylvania and Rodney Glotfelty of the Garrett County Health Department. The Environmental Health Network and Physicians for Social Responsibility were also mentioned. Dr. Mitchell has already been in touch with those groups.

Mr. Weber brought up the topic of a risk assessment and wants to consider the meaning of "unacceptable risk." Mr. Fritts mentioned the report by Resources for the Future and asked if it could be appended to the best practices report. Mr. Roberts asked if the Departments have considered the report by the European Union on risks. Mr. Weber recommended that we get expert advice on risk assessment.

Mr. Kupfer expressed concern that MDE and DNR are "reinventing the wheel" if they collect data. Ms. Kenney said that MDE was going to use data collected by other states and would not duplicate efforts. Mr. Kupfer also noted that many companies employ practices that are better than the proposed best practices. Commissioner Valentine suggested that dry fracking be considered. Staff said that MDE and DNR were discussing this, but that there was some question whether it had been proven to be feasible.

Mr. Kupfer and Mr. Roberts asked about the promulgation of regulations. Staff answered that the regulations would be published for public comment before being adopted, and that they could be adopted before August 2014. Mr. Roberts asked whether, if the Commission recommended against Marcellus shale drilling, it could be stopped even if the regulations are adopted. Ms. Kenney indicated that promulgation of the regulations would mean that fracking would be allowed. Mr. Bunker noted that whoever is Governor will probably be the one to decide whether fracking should be allowed, and that it would be prudent to get strong regulations in place. Senator Edwards noted that governors change, technologies change, and that each permit should be evaluated on its own merit.

Mr. Weber noted that there is a chance, which he put at 5% to 8%, that casing would fail during the lifetime of the well. Mr. Fritts noted that enforcement was the weak link. Chairman Vanko mentioned a recent report from Ohio that a trucker had intentionally discharged wastewater from a fracking site to a storm sewer.

Dr. Eshleman then presented a summary of his recommended best practices. (A copy of his presentation has been posted on MDE's website with these minutes.) He noted that he was not making a recommendation whether drilling should be allowed; he was merely recommending practices that should be employed if drilling is allowed. He noted that there are few data-driven studies of the impacts of Marcellus shale drilling. Monitoring would be important to help plug those gaps.

In the question and answer discussion following the presentation, the following points were made:

- The two-year baseline monitoring proposed would have to be completed before the permit could be issued, but the application could be processed during the monitoring.
- Dr. Eshleman recommended that the Comprehensive Development Plan (CDP) be voluntary because it is not mandatory anywhere in the United States.
- If it is voluntary, it is not a standard.

- The CDP could be mandatory.
- A single company could file a CDP, but companies could join together in a single CDP. If the CDP were mandatory, companies might be forced to work together.
- Pennsylvania imposes something like a CDP in its leases of state forest land.
- In its draft regulations, the Delaware River Basin Commission proposes to require comprehensive drilling plans.
- The CDP could reduce the amount of forest fragmentation by, for example, combining infrastructure.
- Planning is fine, but there are practical issues, and a company needs to be able to react to changes. Planning is very different from applying for a permit.
- CDP may not work without forced pooling.
- Dr. Eshleman envisions the minimum size of a CDP area to be 20 to 50 square miles. The CDP could address clustered multi-well pads, centralized water and wastewater management, pipelines, compressors, etc.
- A CDP could reduce the degree of industrialization of western Maryland, pace the development, and accelerate the reclamation, although there is not much evidence of partial reclamation in Pennsylvania. Once the infrastructure is installed, it seems to remain in place.
- Zoning could designate areas for industrial development and other areas where industrial development is not allowed.
- In Pennsylvania, Act 13 deprived municipalities and townships of the ability to prohibit drilling where the state would allow it. In Maryland, the state cannot trump local zoning.
- Plans change – what is the term of a permit? (Gas well permits have a 5 year term.)
- What incentives could potentially be offered?
    - Lowered permit fees
    - Lowered bonding requirements
    - Streamlined review of well permits
    - Satisfaction of alternatives analysis for wetland impact and stream crossing permits
    - Reduced severance tax
- Companies could buy and sell leases from each other to facilitate regionalization.
- The bases for the recommendation that pre-drilling monitoring be done for 2 years was to begin to capture annual variation and that it was the longest monitoring period imposed elsewhere.
- Is the time period the most important thing? What we need is to characterize the groundwater and look for specific chemical signatures. Dr. Eshleman's report identifies certain chemicals that are associated with gas drilling.
- The monitoring plan could be in the CDP.

- The Coalition for Sustainable Gas Development recommends voluntary monitoring within 2500 feet from a well head for surface water and groundwater, along with monitoring for one year following completion of the well to detect whether water quality and chemistry have been affected by operations. Maryland could make this mandatory.
- When limestone dissolves, it leaves caves, voids, etc. Three reasons not to drill near caves:
    - Voids are hard to case and cement and thus isolate;
    - Caves and voids allow rapid transport of contaminants to groundwater; and
    - Activity around caves can harm bats.
- Voids should also be avoided in coal seams.
- There may be trade-offs where the least environmentally damaging location involves drilling through a void that could be cased and cemented to ensure its integrity.
- Will MDE be able to waive the setback requirements? If so, there would be public notice.
- DNR's constraint analysis demonstrates that the setbacks would not prevent companies from accessing the gas-bearing formations, even with a 4,000 foot lateral instead of an 8,000 foot lateral.
- Dominion argued in a FERC case that there should be a 2,000 foot setback from its gas storage reservoir because fractures could extend that far. We should not accept a lesser setback.
- Is gas drilling an industrial activity and, if so, what regulations apply? Most regulations are specific to the type of industry although, for example, the noise regulations set different standards depending on whether the receiving property is industrial, commercial or residential.
- OSHA and Maryland Occupational Safety and Health Agency regulations would govern worker safety.
- It may not be practical to impose restrictions relating to hunting season because once drilling begins, it usually goes 24/7.
- Active stormwater management would mean treating it onsite and possibly reusing it for fracking.
- Disclosure of chemicals may be necessary to protect emergency response personnel.
- Dr. Eshleman did not investigate the feasibility of deep injection wells for disposal in Maryland. The geology may not be suitable. The wastewater would likely be shipped to Ohio for disposal.
- The industry is moving away from impoundments and toward closed loop systems for drilling mud and fracking fluid, but this means that there are more tanks, valves, and connectors that could fail.
- Sediment and erosion control are essential to protect trout streams; redundant systems should be deployed in sensitive areas.
- Will Maryland have enough inspectors to enforce the standards?

- Water withdrawal for fracking should not be allowed on first and second order streams. Alternative sources, like acid mine drainage, should be considered.
- The fractured rock groundwater study has not been adequately funded; it would be good to have that study completed before we make decisions on fracking.
- Maryland has a good water appropriation permit program that can protect groundwater even if a basin-wide study has not been completed.

During the public comment period, the following points were made:

- The recommendation that impervious surface be limited to 2% applies only to well pads and roads, not pipelines or compressor stations.
- Did the State pressure Dr. Eshleman to change his report? Dr. Eshleman's report was independently prepared; there were no deletions as a result of State comments.
- The additional studies will be completed by the 2014 deadline with the additional funding provided.
- It is backwards to establish the best practice regulations first; the socioeconomic study should have been completed first to determine whether or not to allow drilling. Drilling will adversely affect the tourism industry and the second home market. The Maryland Department of Planning and the heritage program should be involved.
- Clustering of well pads will prevent maximum gas extraction.
- Maryland will regulate the stormwater runoff even if it is exempt under the federal law.
- Having the State do a report after Dr. Eshleman's report seems like "bait and switch."
- The State will be evaluating all of Dr. Eshleman's recommendations to determine what is appropriate for Maryland.