Minutes, November 15, 2011, meeting of the Marcellus Shale Advisory Commission
Approved December 12, 2011

The Commission held its third meeting on November 15, 2011, at Garrett College in McHenry, MD. In attendance were Chairman David Vanko and Commission members Shawn Bender, Steve Bunker, George Edwards, John Fritts, Peggy Jamison, Jeff Kupfer, Heather Mizeur, Jim Raley, Paul Roberts, Bill Valentine, Nick Weber, and Harry Weiss; Hannah Byron attended for Dominick Murray. Also in attendance were Secretary Bob Summers (Maryland Department of the Environment, "MDE") and Secretary John Griffin (Department of Natural Resources, "DNR"), as well as staff of state agencies and members of the public.

Dr. Vanko called the meeting to order at 10:00 am. The minutes of the October 7 meeting were approved.

Dr. Vanko moderated a discussion of the draft report, which had been circulated in advance of the meeting. With regard to the Introduction, the Commissioners noted that Marcellus shale is not the only gas-bearing shale formation, and that there are well-stimulation techniques other than hydraulic fracturing. Some Commissioners suggested that the study not exclude these. Instead, it was suggested that the overview section mention shale gas development in general, to make clear that the final report can also be used in the future to consider development of other formations and through other stimulation techniques. Jeffrey Kupfer noted that not only is research ongoing, but a significant amount of research has been completed. He also noted that Section I.A of the draft lists damaging results of Marcellus shale development in other states, but gives no indication of the relative infrequency of these damaging events, nor does it mention any of the benefits of gas exploration and production. He asked that the introduction be more balanced. Paul Roberts and Heather Mizeur countered that the focus of the Commission is on safety, and that there is no need to talk about the benefits of gas production. Moreover, Roberts and Mizeur noted that the Commission has not studied the economic benefits of production. George Edwards stated that economic benefits go hand-in-hand with the issues addressed in this first phase of the report, since revenues and specifically a severance tax, are addressed in the report.

During the discussion of Section I.B, Harry Weiss noted that we are writing on a clean slate with regard to the law on oil and gas, because there are so few Maryland cases on the topic. He knew of only one case on the subject.

In Section I.C, it is stated that the Commission convened on August 6, 2011. It was noted that the date of the first meeting was August 4, 2011.

There was an extended discussion of the Advisory Commission Goals that appeared in Section I.D of the draft. Jeffrey Kupfer suggested an additional goal: that the Commission supports safe and responsible natural gas development in Maryland. Some Commissioners felt that adopting such a goal would be premature because it assumes that drilling can be done safely, and the Maryland Marcellus Shale Safe Drilling Initiative

study is charged with determining whether and how it could be done safely. Others thought that a goal to support safe drilling does not presuppose that drilling can be done safely. George Edwards commented that the Goal 5, which addresses the acquisition of baseline information, should state that processes already in place and experience in Maryland with previous hydraulic fracturing will be used in obtaining this information. Some Commissioners mentioned that many of the goals seem to presuppose that drilling will go forward. It was also noted that certain objectives were absent in the goals, such transportation issues, and that if some issues are omitted it may be perceived that the Commission has deemed them not to be goals. Several people also agreed that many of the goals are redundant with the Executive Order and unnecessary. A motion was made to remove the list of goals from the draft, and the motion passed 9 to 5.

Joe Gill gave an overview of Section II – Revenue. He noted that the draft laid out costs that would be associated with both on-site and off-site impacts, should they occur, and regional as well as local impacts. He noted that, using USGS estimates of recoverable gas, and assuming a constant price for gas and a 50 year lifetime for the Marcellus play would yield approximately $1 million per year for each 1% severance tax.

Costs associated with on-site activities would be the responsibility of the permittee, and would either be incorporated into the State's permit fee or paid directly by the permittee. Collecting data to establish background would be paid for by a fee for each leased-acre. Off-site impacts not related to a specific company should be paid by a State-wide severance tax. The local severance tax should be used to address local impacts. The amount of the severance tax was not suggested, but it should take into account the funds available and the cost of remediation.

After the summary by Joe Gill, the Commission discussed and made comment on the revenue section. There were no comments to Section II.A. During the discussion of II.B, the question was raised of how regional surface and groundwater monitoring would be undertaken by the State. It was mentioned that volunteers called "stream waders" currently do some baseline monitoring and that there is a need for training of volunteers, since more monitoring would need to be done if Marcellus shale development went forward.

There was a discussion of the list on page 9 of the site-specific impacts for which the applicant could be responsible for monitoring, reporting, and correcting. Commissioners questioned how the agencies would decide which of those impacts would fall on the applicant. Joe Gill clarified that this is just a list of examples of things that could be required of the applicant, and that a more definitive list will be fleshed out in the BMPs. The items on the list are illustrative and represent typical items in other jurisdictions. It was noted that MDE has the authority to impose any condition to the permit that is necessary to protect the public. It was suggested that language be added to this section to make clear that more details would be coming later and that these items are only examples.

There was a short discussion of the existing bond requirement, which may not exceed a $500,000 blanket bond for the operator's wells. It was noted by several Commissioners that $500,000 may not be sufficient considering the expense of restoration and that in comparison with the revenue from production, $500,000 is very small. The agencies clarified that if there was damage to a stream and it could be traced to a particular party, that party would be responsible. If that party's $500,000 bond was tapped and the party did not pay the rest of the cost for remediation, the money would come out of the special fund. If the damage could not be traced to a party, the money would come out of the special fund.

Next there was a discussion of the draft recommendations for activities, funded by the applicant, that may be required in the permit provisions (page 15). One Commissioner questioned whether the requirement of on-site presence of a State inspector meant that the inspector would need to be present constantly throughout the operations. It was suggested that the wording be changed to clarify this point. Representatives from the agencies noted that the legislation does not dictate the frequency or duration of presence and this would need to be fleshed out in the BMPs. Permit fees are authorized to pay inspectors, and the agency is permitted to fully recover costs for these activities.

Under "Non-Site Specific (General or Regional) Impacts," on page 9, it was suggested that the first sentence be changed to read "shale gas development activities" rather than "hydraulic fracturing operation." It was also suggested that during the pre-drilling phase, burdens on other functions such as roads and emergency services should be evaluated. Finally, it was suggested that it should be mentioned that as it relates to the baseline studies required in this section, some baseline information already exists and should be used. On page 10, under "Drilling, Fracking, Production and Post-Production," it was suggested that the language should be changed so as not to imply that States would incur extra costs for road repair that is already undertaken by drilling companies.

Several comments were made in response to the hypothetical situation presented on page 10 to show the expense of addressing potential adverse impacts. First, it was suggested that it be clarified in the text that the hypothetical situation has never actually occurred due to gas production. Second, it was stated that perhaps this hypothetical should be placed in an attachment because this level of detail is not necessary in the body of the report. Finally, it was noted that there has been contamination by salts in Garrett County by other activities. To avoid comparison to those events, it might be better to use contamination by flowback, methane, or just "contamination" for the hypothetical.

The Commission moved on to a discussion of Section II.C, "Sources of Revenue." It was suggested that income taxes and sales taxes be added to the list of potential sources of revenue to offset impacts of Marcellus shale drilling. A Commissioner questioned the veracity of the Headwaters Economics study cited on page 12 of the report, which found that different severance tax rates among states did not impact the amount of energy investment in the states. Finally, it was questioned whether there is any precedent for a study fee in other jurisdictions. Staff to the Commission indicated that she knew of none.

In response to the projected amount of revenue from a severance tax (page 14), one Commissioner noted that the amount seems insignificant compared to potential impacts, especially in early years.

The Commission discussed Section II.E, the draft recommendations for the revenue section. It was clarified by the agencies that the recommendations will be the Departments' recommendations, arrived at in consultation with the Advisory Commission. There was considerable discussion of the statement on pages 16-17 that Garrett and Alleghany Counties should deposit revenue from their existing severance taxes into a special fund. Jim Raley and Bill Valentine objected to this language, arguing that the counties should be able to use revenue from their severance taxes as needed as part of their general funds and that the State should establish its own "superfund" to deal with impacts of drilling. The Departments explained that this sentence was meant to convey the results of research that showed that counties generally saw more positive results when they deposited severance tax revenue into special funds to be used specifically to address local impacts of drilling. Several Commissioners asked that this portion of the recommendation be rephrased. It was also suggested that the first objective in the recommendations section (page 15) be reworded to avoid a presumption that drilling would occur.

Brigid Kenney gave an overview of the liability portion of the report. She noted that the current liability scheme is limited and underdeveloped. She outlined some of the shortcomings of the current system and listed the potential solutions considered in the report. Finally, she stated the draft recommendations.

The discussion began with the section on the current liability structure in Maryland. A Commissioner suggested that self-insurance be defined in the report and mentioned as an option for complying with the liability insurance requirement under current law. It was also suggested that it be mentioned that in most states the mineral estate is the dominant estate because extraction is considered to be in the best interest of the state.

Next there was discussion of the possible solutions listed in the report. Various aspects of the presumption of causation were discussed. Some Commissioners questioned whether 3,000 feet from the vertical borehole would be far enough to extend the presumption, especially when there are existing wells in the area. 3,000 feet was the example provided in the draft report. The Departments clarified that this example was based on Pennsylvania studies, but that those studies did not look specifically at where there are multiple close wells. Harry Weiss noted that in Pennsylvania, there is currently a presumption of causation that extends 1,000 feet from the vertical borehole, but that proposals are underway to extend this to 2,500 – 3,000 feet. It was also suggested that a zone of influence could be established on a permit-by-permit basis, but other Commissioners were concerned about the loss of certainty that would occur in that situation. A Commissioner noted that damage to structures from vibrations was listed as an example of the damage that would be covered by the presumption and questioned whether was necessary. The question was also raised whether the distance of the presumption would be established in the statute or the regulations. It was noted that the

presumption of damage for dewatering in Karst regions under current law (an analogous situation that could be used as a model for a presumption in this context) establishes the distance in the regulations. It was suggested that there could be a minimum distance and additional criteria for extending it, but the issue of uncertainty was again raised. A Commissioner asked how health issues caused by drilling would be addressed by the presumption and it was clarified that if a presumption of causation were created, health impacts would probably not be within the damages covered. This was because of the complexity of the question of causation for certain types of health impacts. It was suggested that the distance for the presumption could be extended horizontally from where the hydraulic fracturing takes place. Other Commissioners noted that the operations would be unlikely to interfere with water for consumption at the level of the horizontal drilling because it would be too low. It was also noted that in Pennsylvania, the distance is from the vertical borehole. A Commissioner raised the suggestion that perhaps air impacts should be among the harms for which causation would be presumed. However, other Commissioners stated that a presumption may not be necessary for air impacts because there is better information for these damages that would make determining causation easier. A Commissioner asked how the presumption could deal with damages to water bodies within 3,000 feet of the borehole where the impacts travel downstream. Others stated that the presumption is not necessary for damage that is likely to be caused by an accident that is easy to trace back to a specific cause.

Finally, the rationale for the one year time limit on the presumption was discussed. It was noted that perhaps one year would be sufficient because the most likely source of contamination is an improperly cased borehole, which would likely cause damage within the first year. If the time period were too long, it would make the concept of a presumption less defensible because there are more intervening causes that could be responsible for the damage.

George Edwards requested information on bonding, liability insurance, presumptions of causation, royalties, and severance tax rates for New York, West Virginia, Ohio, Kentucky, Virginia, Pennsylvania, and Tennessee.

Next the Commissioners discussed Surface Owners Protection Acts (SOPA). The question was raised of whether the SOPA would apply to all oil and gas drilling or just shale drilling. It was noted that existing acts apply to all oil and gas drilling. A Commissioner asked the Departments whether the State would be covered by surface owner protection, to which the Departments answered yes.

Jeffrey Kupfer stated that in regard to the SOPA option, any law may not change materially certain companies' existing practices. Many companies are already working with surface owners. He stated that as proposed, the SOPA might suffer from a lack of certainty. For example, the requirement that the company "reach out to the surface owners" does not provide information about specific actions that must be taken and when these efforts are deemed to be sufficient. It was asked whether all surface owners (both those that leased their mineral rights and those that never owned them) would be treated the same under the SOPA, and the Departments answered yes. The issue was raised that

the SOPA could constitute interference with existing contracts, especially if the lease were to address any of the issues addressed in the SOPA. There was some discussion of the possibility of including "consumer protection" type restrictions on the content or structure of leases to protect surface owners from more experienced companies. Harry Weiss stated that he did not believe such restrictions would pass, since people are generally free to make their own deals. He mentioned problems with some of the leases that have been offered in Pennsylvania that are not within existing consumer protection laws and expressed a need to develop a baseline level of surface owner protection. He stated that the oil and gas companies should be involved in developing that baseline. It was mentioned that there could be a standard lease that includes the provision, "subject to the SOPA." However, that would require mandating certain lease language and would be undesirable or unlikely to pass. In the alternative, the State could provide some guidance for surface owners to consult before leasing their mineral rights, or the law could require that SOPA protections be expressly waived. Several Commissioners supported the "consumer protection" issue being an ongoing consideration of the Commission and potentially being discussed within the BMPs.

The issue was raised of what would occur if legislative interventions fail to pass. It was discussed that the Commission can only make recommendations. If SOPA or other legislation did not pass, MDE could go ahead with permitting. The Commissioners stated that if the legislation does not go through, MDE should at least impose conditions on the permits to achieve some of the same protections, if possible. The Departments noted that consensus within the Commission may help the legislation go through.

There was brief discussion of the potential for a law that would protect parties, other than the surface owners, who were injured by gas production. This was not recommended within the report. It was noted that while there are examples of ways that "innocent bystanders" can be injured in the process of gas development, this is true of many industries and there is a lack of precedent for this kind of law.

Community benefits agreements and mediation were discussed as methods to deal with community-wide impacts. Some Commissioners expressed a desire for more examples and information in this section. It was stated that there should be a timetable set for mediation. Mediation would be offered as an option and if it failed the normal legal remedies would remain. It was suggested that more structure and details be provided, such as whether companies would be expected to hold public meetings. A Commissioner mentioned that in some states NGOs serve as arbitrators for community-scale disputes and states could encourage this with funding from severance taxes.

Increased financial assurances were discussed. A Commissioner again commented that the existing blanket bond of $500,000 seems low considering that a single permittee might have dozens of wells. A Commissioner asked what standards would be used by MDE in promulgating new bond regulations and noted that higher bonds could drive small operators out of business. It was noted that the State has relatively little control over pipelines.

The next draft will be made available within the next few week and further comments can be made electronically.

The following points and questions were raised by members of the public in attendance at the meeting:

1. Thomas Kozikowski, a teacher of an AP Environmental Science class at Mountain Ridge School discussed a paper his students had done and offered to do research for the Commission.
2. Should samples be tested for fracking chemicals during the background testing?
3. What happens when the well finally falls apart and geologic changes occur?
4. Could there be a tracer chemical for each company?
5. Could Maryland license landmen? The fee could help support the program.
6. There is a need for a public registry of leases so they can be tracked.
7. Should Maryland require certain disclosures in a lease, similar to what is required in the Custom Home Builders Act?
8. The experience in Pennsylvania has shown that there are safe methods of drilling, but that accidents are inevitable.
9. Some Pennsylvania lessors have received the royalties they are entitled to, but the amounts have been less than they were told.
10. How many acres have been leased? What will happen when these leases expire?

Chairman Vanko adjourned the meeting at 3:30 pm.