

**MEETING MINUTES OF THE
NORTH CAROLINA MINING AND ENERGY COMMISSION
September 27, 2013
GROUND FLOOR HEARING ROOM, ARCHDALE BUILDING, RALEIGH, NC**

The North Carolina Mining and Energy Commission (MEC) met in regular session on Friday, September 27, 2013 beginning at 9:05 am in the Ground Floor Hearing Room of the Archdale Building, Raleigh, North Carolina. Commission Chairman James Womack presided over the meeting.

1. Preliminary Matters

Chairman Womack called for a moment of silence, followed by the Pledge of Allegiance. He welcomed Commission members and others attending the meeting. Chairman Womack read the excerpt of the State Government Ethics Act, and asked Commission members to consider whether or not they had conflicts of interest with respect to any action items on the agenda. No conflicts were raised.

Chairman Womack called the roll for Commission members as follows:

Commission Members Present

Mr. James Womack (Chairman)
Dr. Ray Covington (Vice Chairman)
Mr. George Howard
Dr. Robert Mensah-Biney
Mr. Charles Holbrook
Dr. Kenneth Taylor
Dr. Marva Price
Ms. Jane Lewis-Raymond
Ms. Amy Pickle
Dr. Vikram Rao
Mr. Ivan "Tex" Gilmore

Commission Members Absent

Ms. Charlotte Mitchell
Mr. Charles Taylor

DENR Members Present

Ms. Trina Matta
Ms. Layla Cummings
Mr. Tracy Davis
Ms. Katherine Marciniak
Mr. Ryan Channell
Ms. Rosalind Harris

Attorney General's Office

Ms. Jennie Hauser

Others in Attendance

See attached sign in sheets.

2. Approval of Minutes from September 6, 2013 Meeting

Dr. Vikram Rao made a motion, seconded by Mr. Charles Holbrook, to approve the minutes as presented. The motion passed.

3. DENR Update on EPA Grant- Mr. Tom Reeder, DWR (see attached presentation)

Mr. Reeder presented on the EPA grant for studying water quality in the Triassic basin and noted that DWR had received the grant, but subsequently declined the grant funding. He explained that the grant was for a two year study in the Lee County area to study surface water. He briefly explained that for a baseline study to be effective one would need to know the timeline for the onset of the industry, where the activity is likely to initially occur, and the constituents of concern for both pre

and post-industry activity. He also noted that a useful study must also include groundwater research. Mr. Reeder noted that the EPA grant that the Department returned did not adequately address any of those points and that neither DEMLR nor the MEC were mentioned, consulted, or considered within the grant. Mr. Reeder noted that based on those reasons it would have been inappropriate to accept the grant. Finally, he noted that if the MEC wanted a study to be done in the area, that DWR can and will perform baseline research on constituents of concern in both surface and groundwater.

The Commission asked a number of questions surrounding the details of the grant, concerning when it was applied for, if future consultation could be provided to the MEC, if another study grant opportunity might come about, and if a copy of any grant proposals related to oil and gas exploration and development could be provided to the MEC for input prior to submission. Mr. Reeder explained that the grant was submitted under DWQ before it was merged with DWR. Specifically, the grant was submitted to the EPA in April 2013. Mr. Reeder said that, in the future, the DWR will coordinate with the MEC on any baseline study conducted and that he would get a copy of the approved grant to staff.

4. Committee Reports

Water and Waste Management Committee

Dr. Vikram Rao, Committee Chairman, reviewed the following items related to the Water and Waste Management Committee:

- a. The Committee had reviewed the updated white paper on final fluids treatment. A number of questions were raised concerning the standards for NPDES permitting for this industry and if the MEC would have any jurisdiction in the area;
- b. The Committee plans to look into this further and is not concerned with the timeline for completion of the rule; and
- c. The Committee will be writing a rule on the prohibition of UIC-II wells in North Carolina.

Administration of Oil & Gas Committee

Mr. Charles Holbrook, Committee Chairman, reviewed the items addressed within the Administration of Oil and Gas Committee as follows:

- a. The Committee received a presentation on new well pad containment system technology from D.A. Nolt, Inc. Their systems involve a geomembrane-lined well pad containment system that would trap and hold upward of 1.3 million gallons of water for use onsite or hold other fluids in the event of a spill or emergency on the well pad. The company is still in the field-testing phase of the system, but is expecting confirmation from Pennsylvania Department of Environmental Protection (PA-DEP) on the system soon;
- b. Mr. Holbrook briefly explained the "Gas-Oil Ratio" white paper to the Commission and that the Committee had voted to recommend requiring a statutory change to remove the language that would require a ratio to be set as this is not applicable to North Carolina's shale gas resource;
- c. The Well Closure rules were reviewed again by the Committee. The rule set was approved and will be forwarded to the Rules Committee pending staff changes to the document as discussed in the meeting; and
- d. Drilling units and layouts were discussed to show the variability from state to state. Staff has been directed to begin drafting well spacing and drilling block rules with the rules prescribing an area for the drilling unit, but the geometry being up to the operator based on site geology and other conditions. Mr. Womack requested that the terms used in this rule set, such as

drilling units, drilling blocks, and production units be defined in a manner that is consistent with terminology already being used by DEMLR and the MEC in its other work products.

Environmental Standards Committee

Mr. George Howard, Committee Chairman, reviewed the items addressed by the Environmental Standards Committee as follows:

- a. The Committee had good discussion on the setback rules as staff presented some of the stakeholder recommendations to the Committee. The following items were discussed and at least partially addressed:
 - i. Point of measurement;
 - ii. Some distances have been worked out based on stakeholder and industry input;
 - iii. Use Colorado rule for high occupancy buildings to provide greater protection;
 - iv. Use of waivers versus variances and requirement to record them with the register of deeds; and
- b. Mr. Howard will produce a Chairman's Mark document for the next meeting and will have some maps produced showing various setback features and distances for Lee and Stokes County to present to the Committee for review and further discussion.

Rules Committee

Ms. Amy Pickle, Committee Chairwoman, reviewed the items addressed by the Rules Committee as follows:

- a. Began deliberation of the Wellhead Standards rule;
- b. Identified drafting techniques for rules relating to standards versus an action that must be taken:
 - i. If action is required- "The permittee shall...";
 - ii. If a standard is required, with no actor to be named- write what the required standard is; and
- c. Staff is to maintain the master list of necessary statutory changes noted during Committee and MEC deliberations.

5. Completed Study Group Report Highlights

Local Government Regulation Study Group

Chairman Womack provided a review of the Local Government Regulation Report. He noted that the report was complete and had been submitted to staff for finalizing.

Commissioner Rao made a motion to submit the report to the General Assembly; Commissioner Gilmore seconded the motion. All commissioners voted in favor of forwarding the report to the General Assembly.

Compulsory Pooling Study Group

Dr. Ray Covington, Study Group Director, stated that there had been no new content added to the report since he provided the review of it at the September 6, 2013 meeting of the MEC. He noted that the report had been submitted to DENR for review and that DENR will be providing its recommendations on the subject to the General Assembly.

Funding Levels and Potential Funding Sources Study Group

Ms. Jane Lewis-Raymond, Study Group Director, explained that the report was finalized and had addressed all of the requirements as delineated in S.L. 2012-143. Director Lewis-Raymond outlined the major recommendations within the report concerning the following items: impact fee; costs

recovery mechanisms for local jurisdictions through a trust fund application process; severance tax rates; and bonding. Chairman Womack added that the approach of the Study Group for fees and taxes was aimed solely at local- and state-level cost recovery; that the study group was not directed to treat this industry as a source of new tax revenues for the state.

Commissioner Lewis-Raymond made a motion to submit the report to the General Assembly, with Commissioner Rao seconding. All members voted in favor of the motion.

6. Ongoing Study Group Reports

Coordinates Permitting Study Group-

Dr. Kenneth Taylor, Study Group Director, stated that the Study Group met after the September 6, 2013 meeting of the MEC to outline Division specific requirements that would need to be taken into account when drafting the permitting rules and developing permitting forms. He noted that the Study Group would also be convening after the MEC meeting of September 27 and would be going over the compiled permitting requirements as defined during the Group's September 6, meeting. Dr. Taylor also explained that Study Group discussions would also focus on permit denial criteria. He also reported that the deadline for this Study Group to have a finalized report would be December 5, 2013.

Protection of Trade Secret and Proprietary Information Study Group-

Chairman Womack, Study Group Director, stated that the Study Group had discussed the report formatting and content at the last meeting on September 6, 2013. The Group also discussed Dr. Levine's report to the Alaska Oil and Gas Commission concerning the public's right to know related to the industry. Unlike the other Study Group reports, when complete, this report will be brought to the full Commission for deliberation. The Study Group will meet again in November.

7. The Commission recessed from 10:50 am until 11:05 am.

8. Public Comment

- George Mathis, River Guardian Foundation-

Mr. Mathis expressed his disappointment that the EPA grants had been returned and stated that having more data would be worth the study. He also offered his concerns regarding intent to eliminate the unit that applied for the grant from within DENR, and that those respective positions had been targeted. He stated that the MEC and citizens should call for a review of DENR management procedures by an independent party.

- Therese Vick, BREDL-

Ms. Vick stated that the return of the EPA grant appeared to have been highly political and with a lot of behind the scenes actions that will never come to light. The current perception of DENR and reality are very different under the current administration. She wanted to know if the MEC was ever asked or aware of the EPA study. Ms. Vick also felt that any data and results are a good thing and did not see any issues with the timeline in the grant. She commented on Mr. Reeder's statement that DWR has the staff and the funding to conduct the study. She then asked that if this statement were true, then why has DENR been cut by 1,000 positions and funding over recent years. Ms. Vick also stated that she would like to hear from DWR staff that applied for the grant and why they did so and from EPA on NC declining the grant.

9. MEC Discussion and Action on the Baseline Testing Rule Set- George Howard

Mr. Howard provided a review of the timeline associated with the rule set. The rule set was approved by the Environmental Standards Committee in June 2013, approved by the Rules Committee in September 2013, and initially reviewed by the full MEC on September 6, 2013. He outlined three items that have come up related to the rule since the last meeting that would be discussed:

- i. Report from Commission Counsel on sharing of baseline analytical data between operators if their baseline testing radii overlap.
- ii. Ms. Hauser reported on research conducted, that the statutes are separate from the ones regarding presumptive liability, and that the MEC could possibly approve shared data due to that separation. She also noted that the MEC has no authority over the rebuttal of presumptive liability. The Commission discussed that this would be a company decision and may never really occur due to the time constraints for the initial round of water sampling associated with a new oil or gas well. The Commission also noted that companies may not want to use shared data in order to protect their own interests.
- iii. Commissioner Holbrook provided a review of the white paper he wrote concerning the 5,000 foot baseline sampling radius:
 - The required sampling radius should be based on precedent or other standard practice. This is not the origin of the 5,000 feet;
 - It is greater than any other state's sampling radius;
 - There has not been any critically documented case of contamination due to hydraulic fracturing fluids migrating from the fracture zone and into a potable water supply well. Leaks were more likely to occur due to faulty well construction or cementation at the vertical portion of the wellbore;
 - If a problem were to occur while fracturing, the company would know it immediately due to the carefully engineered, modeling, and monitoring that occurs before and during a hydraulic fracturing operation;
 - Two potential problems that could arise would be:
 - Drop in pressure while "pressuring up"; and
 - Use of more water, additives, or proppant.

Commissioner Howard asked whether the entire wellbore was pressurized while fracturing and if that could cause a rupture or breach in the vertical wellbore. Commissioner Holbrook explained that the horizontal wellbore is fractured in stages starting from the terminus of the wellbore. Due to the staged technique, only specific sections are pressurized at a time, and not within the vertical wellbore. Commissioner Holbrook further explained that if a rupture were to occur along any portion of the wellbore that the resultant pressure release would induce released fluids to migrate back into the well bore, due to surrounding lithostatic pressure.

The Commission also discussed what would be an appropriate required radius for testing water. Commissioner Holbrook stated that 1,500 feet should be an appropriate distance, but that the MEC may also want to consider a rule that would set the radius at three times the width of the drilling unit/drilling block. A further distinction was also made for collection of samples versus analysis of a subset. Commissioner Rao provided that he thought the baseline recommendation made by Dr. Rob Jackson with Duke University was 2,000 feet, but that he would need to check on that number. Chairman

Womack asked for cost projections to be modeled for both 5,000 feet and 2,000 feet for the MEC to discuss.

- iv. Mr. David Kelly of the Environmental Defense Fund (EDF) was asked by Chairman Womack to present his group's concerns on the limited sampling required in the event that tracers were to be used with fracturing fluids.

Mr. Kelly pointed out that draft rule section (k)(3) assumes that contamination may occur only in the subsurface and from the application of hydraulic fracturing fluids and that it would not address surface contamination and migration detection. He further stated that the "canary list" is appropriate, but EDF is concerned that by allowing for only a tracer to be tested for, any contamination by surface spills or releases would be missed. The Commission discussed keeping the use of tracers as an option, but would also require the "canary list" to be tested for. Commissioner Rao stated he would look into what may spill on the surface versus what is used in the subsurface.

Chairman Womack provided direction to Commissioner Howard to meet with staff to address concerns over the tracer and surface spills. Commissioner Rao volunteered to work with Commissioner Howard to look into how to address and characterize surface spills. This rule set, and additional topics, will be brought back up at the October meeting of the MEC.

10. Lunch Break: 12:25 pm to 1:16 pm.

11. MEC Discussion Regarding the Well Head Standards Rule Set- Charles Holbrook and Amy Pickle According to MEC meeting bylaws, any draft rule which is approved by the Rules Committee must be held for at least 30 days before being heard by the Commission. However, Commission members may choose to waive this rule as long as two-thirds of the MEC vote to do so. The Well Head Standards Rule Set had been approved by the Rules Committee less than 30 days prior to the September 27th MEC meeting. As a result, Commissioner Pickle offered a motion to waive this 30 day rule, which was seconded by Commissioner Mensah-Biney. The motion passed.

The MEC made the following changes to the Well Head Standards rule set as passed out of the Rules Committee on September 26th, 2013:

- Add definition for work-over, bull-plug;
- Remove comma from line 18, page 1;
- Change "may" to "shall" on line 30, page 1;
- Strike "identification" from line 32, page 1 and provide a more thorough description of what is required on the temporary sign;
- Strike "cautionary plastic or other" from line 34, page 1;
- Strike lines 1 and 2 on page 2;
- Change "at" to "within" on line 3, page 2; and
- Change "with three strands of barbed wire" to "restrictive wire to prevent unauthorized intrusion" on line 14 and 15, page 2.

Dr. Taylor made a motion for the MEC to accept the rule as modified to be held by staff. Dr. Price seconded. The motion passed.

12. Update on MEC Meeting Schedule and Timeline- Chairman Womack (see attached handout) Chairman Womack presented a meeting schedule and rule topic timeline to the Commission. The schedule includes meeting dates remaining in 2013 through the end of the 2014 calendar year. He noted specifically dates where the MEC would not be meeting on the standard Thursday/Friday schedule, and dates when specific committees should be completed with all work assigned to them.

Commissioner Gilmore made a motion to approve the meeting schedule as provided on the handout, but to leave flexibility on assignment deadlines. Commissioner Holbrook seconded. The motion passed.

13. Concluding Remarks

Commissioners expressed their appreciation to DENR staff, the public for their attendance and input, and to the other members for productive meetings and discussions.

Commissioner Holbrook made a motion to adjourn, which was seconded by Commissioner Taylor. The motion carried and the meeting adjourned at 2:10 pm.

Respectfully Submitted,



Katherine Marciniak, PG

Division of Energy, Mineral, and Land Resources



Tracy E. Davis, PE, CPM

Director, Division of Energy, Mineral, and Land Resources