

**Meeting Minutes of the Environmental Standards Committee of the
North Carolina Mining and Energy Commission
January 24, 2013
1:00 pm – 3:00 pm**

1. Preliminary Matters

Chairman George Howard called the meeting of the Environmental Standards Committee to order at 1:00 pm in the Ground Floor Hearing Room of the Archdale Building in Raleigh, N.C. Chairman Howard read the relevant excerpt of the State Government Ethics Act, and asked Committee Members to consider whether or not they had conflicts of interest with respect to any items on the agenda. No conflicts of interest were reported.

The following personnel were in attendance for all or part of the meeting:

Committee Members

George Howard (Chair)
Amy Pickle
Dr. Kenneth Taylor
Charlotte Mitchell
Dr. Vikram Rao
Dr. Marva Price
Dr. Ray Covington

DENR Staff Members

Trina Ozer
Tracy Davis
Mell Nevils
Katherine Marciniak
Walt Haven

Attorney's General Office

Jennie Wilhelm Hauser (legal counsel)

Others in Attendance

Refer to the attached meeting sign in sheets

2. Review and approval of minutes from the December 2013 meeting.

Chairman Howard asked the Committee to review the minutes from the December 18, 2012 meeting. After reviewing, the Committee voted to unanimously approve the minutes.

3. Background (regional) sampling and testing – Melinda Chapman, U.S. Geological Survey and Dr. Rob Jackson, Duke University (see attached presentations).

Ms. Chapman explained the overall mission of the U.S. Geological Survey (USGS), which included a description of her agency's groundwater sampling work. She then presented information concerning her office's recent background sampling in the

Sanford Triassic Sub-Basin. In addition to describing overall Basin geology and sampling fieldwork strategy, Ms. Chapman also addressed the following items:

- a. Typical domestic water supply wells within the Basin study area are generally around 300 feet in depth;
- b. The USGS study inventoried a total of 305 wells, ranging in depth from 26 to 720 feet below land surface. This study also included one spring;
- c. Total USGS sampling involved 56 wells and one spring. Duke University later sampled 29 wells for another study. However, 17 of the wells sampled by Duke had already been tested by USGS;
- d. USGS sampling involved a tiered approach, where eight private wells, two public supply wells, and one spring were tested for Dissolved methane (and other gases), methane/ethane gas isotopes, major ions/metals, volatile organic compounds, Diesel Range Organics/Gasoline Range Organics, glycols, radium isotopes, strontium isotopes, dissolved inorganic carbon, dissolved organic carbon, and dissolved stable isotopes. The other 46 wells were tested for dissolved methane (and other gases) and major ions;
- e. Background concentrations for methane are low, ranging from “Below Laboratory Detection Limit” to 0.49 mg/l. These concentrations are comparable to groundwater samples collected in crystalline (non-oil/gas bearing) rocks;
- f. No legal standard for methane in water currently exists;
- g. Only eight of the sampled wells revealed concentrations of substances exceeding Maximum Contaminant Levels (MCLs). However, these anomalies were mainly due to naturally occurring metals, as well as nitrates.

Ms. Chapman also indicated the need for additional research, due to the limited historical data concerning Basin hydrogeology. She stated that future studies could include the geophysical logging of unused wells and placing the resulting data into current or other study results. The Committee then asked Ms. Chapman to provide an example of a previous USGS report, which would serve as a framework for a future USGS study based on her research proposals.

Dr. Rob Jackson presented his recommendations for pre-drilling testing. He also offered testing contracting services through Duke University. Additionally, he addressed the following:

- a. Recommended sampling for Benzene, diesel constituents, methane, bromide, arsenic, barium, radioactivity, and hydrocarbon residuals;
- b. Benefits of pre-drilling testing, including homeowner protection, oil and gas operator protection; environmental protection and management; and the predictive ability to determine where future contamination might occur;
- c. Recommendation of a 3,000 foot presumptive liability radius from a given wellhead for baseline sampling.

Dr. Jackson, Assistant DENR Secretary Mitch Gillespie, and the Committee also discussed the presumptive liability distances of West Virginia (1,500 feet), Pennsylvania (2,500 feet), and the internal oil and gas business standard of 4,000 feet or more.

4. Baseline (permit or initial action) sampling and testing – Evan Kane, Division of Water Quality (DWQ), Ellen Lorscheider, Division of Waste Management, and Mike Abraczinskas, Division of Air Quality (DAQ) (see attached presentations).

Mr. Kane explained the use of baseline sampling with in DWQ's Underground Injection Control (UIC) program and how the Mining and Energy Commission might benefit from similar testing. He stated that UIC has permit mandates which require an operator to establish current water quality conditions, identify conduits for contaminant releases, and identify potential receptors of a given release. He also described site characterization requirements which require the operator to provide the following:

- a. Locations of existing or abandoned wells;
- b. Site geology/hydrogeology characterization;
- c. Existing sources of potential or known contamination;
- d. Groundwater sampling plan;
- e. Recharge water sampling plan;
- f. Evaluation of the injection fluid and its compatibility with the site environment.

Mr. Kane also explained permit-required environmental monitoring, which includes location and construction characteristics of monitoring wells, monitoring schedule, and a list of contaminants targeted in the monitoring plan.

Ms. Lorscheider explained the use of baseline sampling and rules describing permitting requirements related to landfills. Her presentation provided insight into how sampling and permit requirements could be implemented within an oil and gas program. She addressed these specific baseline items:

- a. Installation and use of monitoring wells;
- b. Survey of well locations;
- c. Development of a groundwater elevation and flow maps;
- d. Establishment of a receptor distance of 1,500 ft from the landfill site;
- e. Development of a groundwater monitoring plan, which samples for specific contaminants of concern.

Ms. Lorscheider added that her program does not require baseline testing of soil.

Mr. Abraczinskas provided an overview of typical air pollution sources, as well as his Division's air monitoring program. He stated that DAQ typically issues permits to cover three categories of pollutant sources: "Title V" (major source); "minor source"; and a "small source." He added that an oil or gas operation would probably not require a Title V permit. Mr. Abraczinskas also explained the monitoring strategies which are currently used:

- a. Ambient monitoring, via the established ambient monitoring network, to assess regional background air quality;
- b. Ambient monitoring, via newly established stations at needed locations, to address the impact of a local source on the ambient air quality;

- c. Emissions testing, to measure the discharge from a specific source (i.e. smoke stack);
- d. Operational monitoring, which measures temperatures, pressure differences, and other physical parameters within equipment. This monitoring does not directly measure air quality, but instead helps to ensure that machinery and processes are working properly to mitigate pollution.

Mr. Abraczinskas also added that the current set of air quality rules should already address oil and gas operations. Thus, respective rule revisions may not be needed.

5. Draft Rules: Chemical Disclosure and Reporting Requirements – Katherine Marciniak, Division of Energy, Mineral, and Land Resources

Ms. Marciniak explained her development of the draft disclosure rules related to hydraulic fracturing fluids. The major elements of this rule provide for the following:

- a. Requirement of the vendor providing the fluids to disclose to the operator the fluid constituents within 30 days of a hydraulic fracturing event;
- b. Requirement of the operator to disclose to the MEC information concerning fluid constituents, fluid volumes, and well construction characteristics within 60 days of well completion or within 120 days after a hydraulic fracturing event has begun. An equivalent disclosure of fluid constituents is also required to “FracFocus.”
- c. Despite the above listed reporting requirements, trade secret information is not required to be disclosed for routine reporting. However, should trade secret disclosure be required to respond to an uncontrolled or accidental release of fluid to the environment, the vendor or operator must provide respective information to the DEMLR Director (or his designee). This information could then be passed to emergency management officials;
- d. Trade secret disclosure would also be required when requested by medical officials, to provide information for patient treatment.

Ms. Marciniak also explained that the draft rule provisions for a trade secret challenge is written to establish a 24 month time limit within which a third party individual (i.e. land owner) may request a challenge. Additionally, the MEC would direct such challenges to the North Carolina Business Court system.

Ms. Hauser advised that Session Law 2012-143 did not provide the MEC with the authority to refer cases to the Business Court. She explained that under current law, such cases would be directly heard through the Superior Court system. Nevertheless, if the MEC desired to have referral ability, legislative action would be needed to provide respective statutory authority.

Dr. Taylor mentioned that the current disclosure requirements would not allow for adequate emergency response. He expressed a desire to include a provision which would require direct disclosure to response planners.

6. Review of Stakeholder Input – Assistant Secretary Mitch Gillespie and Trina Ozer. Asst. Sec. Gillespie and Ms. Ozer reviewed the list of recommendations provided by the Stakeholder Group, which convened on January 22, 2013 (see attached Stakeholder Group document). The Stakeholder Group developed a list of 17 items which they have asked the MEC to consider. However, Asst. Sec. Gillespie explained that the following items would not be written into the disclosure rule at this time: Item #6; Item #12; Item #13; Item #14; Item #15; and Item #16.

Asst. Sec. Gillespie added that he supported Stakeholder item #17, which would broaden the trade secret challenge to provide property renters with a similar legal standing as property owners, to request challenges.

6. Discussion – Chairman Howard

The Committee discussed strategies to review, update, and publically discuss draft disclosure rule language. All members agreed that a final draft could be produced if everyone returned to the next meeting ready to discuss his or her suggestions for revisions.

10. Concluding Remarks – Chairman Howard

The Committee directed DENR to update the disclosure rules as discussed and to post the revised document on the MEC website. Committee members will then provide comments and edits to DENR staff for revisions. DENR will provide edited copies reflecting these revisions for the Committee to consider during its next meeting.

11. The Committee adjourned at 3:55 pm.

DEMLR Staff Contact for this Committee: Mell Nevils, Chief, Land Quality Section.