

**Meeting Minutes of the Water and Waste Management Committee of the
North Carolina Mining and Energy Commission
November 21, 2013**

1. Preliminary Matters

Committee Chairman Dr. Vik Rao called the meeting to order at 8:32 a.m. He read the ethics statement and asked Committee members whether or not they had conflicts of interest with respect to any action items on the agenda. None were expressed.

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

Committee Members

Dr. Vik Rao (Chairman)
Ivan "Tex" Gilmore
Charles Holbrook
Charlotte Mitchell
Dr. Kenneth Taylor
Amy Pickle

Attorney General's Office

Jennie Hauser

DENR Staff Members

Layla Cummings, Office of the Secretary
Walt Haven, DEMLR
Katherine Marciniak, DEMLR
Ryan Channell, DEMLR
Rosalind Harris, DEMLR
Evan Kane, Division of Water Resources (DWR)
Ellen Lorscheider, Division of Waste Management

Others in Attendance

Refer to the meeting sign in sheets

2. Review of Committee Status and Rule Writing Process

Chairman Dr. Rao reviewed the process of rule development and explained the joint efforts of his Committee, DWR, DWM, DEMLR, and stakeholders in writing the draft waste management rule.

3. Approval of Minutes from Last Meeting

Ms. Charlotte Mitchell made a motion to adopt the minutes from the last meeting. The motion was seconded by Mr. Ivan "Tex" Gilmore and passed by unanimous vote.

4. Review of Stakeholder Comments

Ms. Katherine Marciniak reviewed comments from the Stakeholder Group on Oil and Gas Management's meeting of November 12, 2013. The Group discussed the draft wastewater management rule's waste characterization requirements and provided feedback. Ms. Marciniak summarized Stakeholder comments as follows:

- a. Stakeholders agreed that benzene and formaldehyde should be added to the sampling table under 15A NCAC 05H .XXX5. They also recommended that conductivity measurements should be required;
- b. Stakeholders recognized that a treatment facility would require sampling of the waste stream before acceptance;
- c. Draft rule 15A NCAC 05H .XXX5(a)(3) requires an operator to submit sampling results within 30 of receipt of analysis. Stakeholders who attended the November 12 meeting agreed to that this reporting requirement should be 14 days;
- d. The Stakeholders attending the November 12 meeting agreed with current verbiage of 15A NCAC 05H .XXX5 (d), which would leave sampling and analysis requirements with the Director;
- e. Stakeholders disagreed over whether or not the testing of flowback water before each re-use would be necessary;
- f. Stakeholders discussed, but did not provide a recommendation as to whether or not well stimulation fluids should be tested and analyzed prior to being used; and
- g. Stakeholders recommended rewriting 15A NCAC 05H .XXX5 (d) to read, "Solid wastes, including drill cuttings and solidified muds, shall be characterized prior to disposal at a municipal solid waste facility in accordance with Toxicity Characteristic Leaching Procedure (TCLP), on a frequency and schedule determined by the Director. In addition, the Director of the Division of Energy, Mineral, and Land Resources, in consultation with the Director of the Division of Waste Management, can require additional analysis as necessary for the protection of the environment or human health."

5. Committee Discussion of Draft Wastewater Management Rule Set

The Committee discussed stakeholder recommendations and the overall draft rule set. Dr. Taylor expressed his agreement with recommendations of stakeholder comments regarding conductivity. He explained that formaldehyde, if present, might occur in concentrations too small to be detected. Ms. Pickle agreed with adding benzene and formaldehyde to the draft list of sampling parameters. Chairman Rao noted that the purpose of the waste characterization requirements would be to provide information to the State in the event that the wastes were not properly tested and disposed of at a treatment facility. He noted that testing requirements were not being established to meet a specific groundwater or other contaminant standard.

The Committee noted that waste treatment facilities already require testing before performing treatment.

Chairman Rao decided to postpone rule voting and approval until the Committee's December 05 meeting. The Committee agreed to keep the sampling reporting limit to 30 days, with the understanding that the Director could have discretion to change this time limit.

Committee members agreed that operators should not be required to test fluids prior to re-use.

Mr. Holbrook noted that drill cuttings were naturally occurring materials. He explained that unless contaminants were adhering to the cuttings that these materials should be tilled into soil or otherwise disposed of on site. Ms. Pickle stated that current DWM rules already address testing requirements, under which cuttings should be subject. Chairman Rao stated he would look into this subject.

Mr. Holbrook suggested that the Committee use caution and clear language when using the terms "Director", "Department", and "Commission." Chairman Rao asked Dr. Taylor to review Committee rule sets to ensure regulatory conflicts between DENR Divisions do not exist.

The Committee also addressed these matters:

- a. Re-work the definition of the term "residuals." Ms. Mitchell volunteered to assist Ms. Katherine Marciniak with developing this definition;
- b. Removed language under .XXX4(b)(8)(i) regarding liner anchoring;
- c. Corrected abbreviation for the term, "Action Leakage Rate" under XXX4(b)(8)(ii);
- d. Discussion of an amendment provided by Ms. Mitchell regarding the management of flowback fluid and produced water under XXX5(b).

Mr. Evan Kane noted that any water discharged from treated waste, whether or not it meets drinking water standards, would still be subject to N.C. General Statute 143-215.1. Mr. Kane offered to research how a mobile reverse osmosis (RO) might be permitted. Chairman Rao asked Ms. Mitchell to provide respective legal assistance to DWR related to the permitting of mobile RO systems.

6. Public Speaker Comment

No members of the public expressed a desire to address the Committee.

7. Concluding Remarks

The meeting adjourned at 10:05 am.

DENR Staff Contact for this Committee: Katherine Marciniak, P.G., DEMLR