

**Meeting Minutes of the Water and Waste Management Committee of the
North Carolina Mining and Energy Commission
October 24, 2013**

1. Preliminary Matters

Committee Chairman Dr. Vik Rao called the meeting to order at 8:36 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, DENR
Tracy Davis, DEMLR Director
W.E. "Toby" Vinson, DEMLR
Walt Haven, DEMLR
Katherine Marciniak, DEMLR
Ryan Channell, DEMLR
Rosalind Harris, DEMLR
Evan Kane, Division of Water Resources (DWR)
Don Rayno, DWR
Ellen Lorscheider, Division of Waste Management

Others in Attendance

Refer to the meeting sign in sheets (attached to these minutes).

2. Approval of Minutes from Last Meeting

Dr. Kenneth Taylor made a motion to adopt the minutes from the last meeting. The motion was seconded by Ms. Amy Pickle and passed by unanimous vote.

3. Committee Discussion of Draft Wastewater Management Rule Set

Chairman Dr. Rao led Committee discussion regarding potential strategies of fluid waste disposal. The following matters were discussed:

- a. Underground injection disposal of waste fluids from oil and gas operations should be prohibited;
- b. Available treatment options could involve re-use or disposal using a publically owned treatment works (POTW);
- c. Total dissolved solids concentration within the waste fluids should be low enough to allow reverse osmosis (RO) to be a viable treatment option;
- d. Division of Water Resources already deals with RO permitting operations, as well as concentrate disposal; and
- e. The waste management rule should have a provision requiring all flowback and produced water be analyzed prior to disposal. Analysis would include standard NPDES required parameters, as well as bromide and barium.

Ms. Pickle explained that the MEC had no jurisdiction over the transport of waste, POTWs, land application dispersal, or other waste disposal standards. She explained that the MEC did have the authority to know the constituents of a given waste stream before it leaves the site. Additionally, Ms. Pickle noted that other states have not had “positive experiences” using POTWs for disposal and that some of these states have “moved toward” underground injection disposal. Ms. Pickle mentioned that DWR would regulate the land application discharge of waste and such application would not be prohibited as long as the discharge met the current standards of the application rules.

Ms. Charlotte Mitchell expressed concern about using POTWs as a disposal option and that land application should be limited.

Chairman Dr. Rao noted that fluids containing high concentrations of total dissolved solids (TDS) may not be appropriate for POTW without pre-treatment. However, he stated that fluids with low TDS concentrations should be adequate for POTW treatment.

Ms. Katherine Marciniak led Committee discussion regarding the specifics of the draft wastewater management rules (attached to these minutes). The following matters were discussed:

- a. Secondary containment for waste pits;
- b. Use of tank batteries and requirements for secondary containment;
- c. Testing of produced and flowback water prior to treatment and disposal, which would be independent of the coordinated permitting process;

- d. Requiring Professional Engineer licensure for the design of waste pits (amendment to 05H .XXX4(b)(2)(i));
- e. Establishing a timeline of 30 days for submittal of fluid waste sampling results under 05H .XXX6(a);
- f. Requiring certified lab analysis under 05H .XXX6(a);
- g. Ensuring that the term “treatment facility” is consistent with other applicable rules or statutes (i.e. General Statute 143-215);
- h. Requirements for wastewater treatment residuals;
- i. Update 05H .XXX6(b) to allow an option for on-site treatment in compliance with General Statute 143-215.1;
- j. Update 05H .XXX6(b)(c) to address treatment residuals; and
- k. Staff was assigned to develop language allowing transport to and disposal in other states, which would be inserted into 05H .XXX6(b)(c).

Chairman Dr. Rao asked Ms. Marciniak to provide an updated draft on or before November 7th, 2013 to the Committee members; Committee members were asked to provide written comments to Ms. Marciniak by November 14th, 2013.

4. Public Speaker Comment

Ms. Sharon Garbutt (Chatham County resident) expressed her concern regarding the disposal of salts and the use of those salts for the de-icing of roads. She explained that her prior reading of this disposal use could result in potential environmental or human health risks. She asked that the Committee not allow this sort of disposal. Chairman Dr. Rao explained that resultant salts would be considered as a solid waste and handled under the jurisdiction of the Division of Waste Management.

The meeting adjourned at 10:00 am.

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