

**ENVIRONMENTAL MANAGEMENT COMMISSION  
GROUNDWATER COMMITTEE MEETING  
SUMMARY**

**July 11, 2012  
11:00 A.M.**

**BRIEF**

The Groundwater Committee (GWC) of the North Carolina Environmental Management Commission (EMC) did the following at its July meeting:

- Heard information item regarding establishment of Groundwater Interim Maximum Allowable Concentration (IMAC) for propylene glycol.

On July 11, 2012, the GWC met in the Ground Floor Hearing Room at the Archdale Building in Raleigh, North Carolina.

**The Chairman's Opening Remarks:** In accordance to North Carolina General Statute § 138A-15, Chairman Martin asked if any GWC member knew of any known conflict of interest or appearance of conflict with respect to any item on the July 11, 2012 GWC agenda. No member indicated that they had any conflict.

**GWC Members in Attendance:**

Chairman Kevin Martin	Ms. Marion Deerhake	Mr. Clyde Smith Jr.
Mr. Stephen Smith	Mr. Steve Keen	Mr. Thomas F. Cecich
Mr. Tom Ellis	Dr. David B. Peden	Mayor Darryl D. Moss

**Attorney General's Staff in Attendance:**

Mr. Frank Crawley, Attorney General's Office

**I. Action Agenda Item: Groundwater Committee Approval of the May 2011 Groundwater Committee Minutes:**

Chairman Martin discussed the potential of not voting to approve the minutes since the committee is not required to do this. The chairman of the committee does provide a summary of what transpired during committee meetings at the full EMC and the meetings are recorded. Chairman Martin asked for members' opinion of not formally adopting and approving minutes as done in the past.

Chairman Smith thought that it is a better practice to allow for corrections, additions and deletions so that the minutes are accurate. Whether an actual vote was required under Robert's Rules of Order, he did not state a preference as long as the members had a chance to correct the minutes as necessary.

Chairman Martin stated that minutes would still be drafted and that the only difference is that he would call for any changes to the minutes at the beginning of the meeting instead of a formal vote taken. The minutes would instead be approved by consensus if there are no changes.

Chairman Martin asked if anyone had any changes to the May 2011 GWC minutes. No one had changes and the minutes were approved by consensus noting that Mr. Steve Keen and Mr. Clyde Smith Jr. were not on the committee in May 2011.

**II. Information Agenda Item: Groundwater Interim Maximum Allowable Concentration (IMAC) established for Propylene Glycol**

**Presentation Description:**

Before the presentation, Chairman Martin gave a brief introduction about IMACs for the new members. He stated that the Director has already approved this IMAC. At the next triennial review it will be part of the rulemaking process for proposed changes. Chairman Martin stated that IMACs allowed for certain cases to be avoided when there needs to be a standard when there is not one and that the Director has the authority to establish that standard.

Ms. Sandra Moore, with the Division of Water Quality (DWQ), gave a presentation about the IMAC for propylene glycol that was recently established by the Director in accordance with the 2L Groundwater Regulations. This IMAC was developed in response to a request from Duncklee & Dunham Environmental & Engineering, on behalf of FLS Energy, Inc. Ms. Moore gave an overview of the regulations and process the division uses to establish IMACs, the propylene glycol IMAC request and the timeline for taking the IMAC forward to rulemaking to become a permanent 2L groundwater standard.

Ms. Moore stated that IMACs are interim enforceable health-based concentrations for contaminants found in groundwater that aids the Department of Environment and Natural Resources (DENR) regulatory programs and regulated parties in evaluating site conditions, prioritizing contaminated sites and determining appropriate remediation strategies when a groundwater standard does not already exist. When there is not a health-based groundwater standard or IMAC for a substance, detection at or above its laboratory Practical Quantitation Limit (PQL) constitutes a 2L violation. The PQL is the concentration of a contaminant in a sample that the lab can detect and quantify. As such, some relatively non-toxic substances may be “overregulated” at the PQL since the PQL is technology-based and not health-based, increasing compliance costs without health benefits.

Ms. Moore discussed how the groundwater regulations grant the DWQ Director authority to establish an IMAC when requested if a groundwater standard does not exist and how anyone can petition the Director to establish an IMAC. The petitioner submits the relevant toxicological and epidemiological data, calculations, and studies necessary to establish a standard in accordance with the six criteria in paragraph (d) of the rule. The rules require the Director to initiate action to consider adoption of a permanent standard for an IMAC within three months of its establishment. The general policy is that IMACs are submitted for adoption as permanent standards during the groundwater triennial review following their establishment. Ms. Moore stated that the 2012 groundwater triennial review is currently underway and established IMACs will be submitted for adoption as permanent standards in that rule package.

Ms. Moore then discussed the process of establishing an IMAC. The requests are reviewed by DWQ staff to ensure completeness and compliance with the regulations. The proposed IMAC is then submitted to the Department of Public Health (DPH) state toxicologist and DWM toxicologists for review and concurrence on interim concentration. The recommended IMAC and supporting information is then submitted to DWQ Director for approval. Once approved, the IMAC is sent to the EMC and GWC chairmen by letter, published in North Carolina Register, email notifications are sent out to rulemaking and stakeholder lists, the DWQ groundwater website is update and it is presented as information item to GWC.

Ms. Moore outlined the six criteria in .0202(d) that are used to determine an IMAC. The IMAC is established as the lower of: a level protective of non-cancer effects such as liver and kidney disease; a concentration corresponding to a 1/million cancer risk, if the contaminant is classified as a carcinogen; taste and odor threshold limits available in literature; the federal MCL which is the health based public drinking water standards; or the federal Secondary Drinking Water Standard which addresses aesthetic effects in public drinking water supplies such as taste, odor, color and skin or tooth discoloration. Ms. Moore stated that the only difference between permanent standards and IMACs is that permanent standards have been through the APA rulemaking and are published in the rules.

For propylene glycol, the IMAC has been established as requested, based on the non-cancer threshold concentration of 140,000 ug/L (parts per billion). Ms. Moore continued to state that propylene glycol is not a carcinogen, there is no taste or odor threshold limits available and there are no MCL or secondary drinking

water standards available. Ms. Moore then briefly discussed the petition and that FLS Energy, Inc. develops solar energy systems for businesses and that there have been several releases of propylene glycol during installation of solar panels at a site in St. Pauls, NC. The establishment of this IMAC will save FLS Energy money on assessment and remediation costs.

Ms. Moore then gave a brief update of the groundwater triennial review. She stated that staff has completed its review of all current IMACs and permanent standards listed in .0202(g) and determined what changes need to be made. A summary of the proposed changes is being prepared by staff and the goal is to present it as an information item to the GWC this November. Staff will return to the GWC with a draft rule in January 2013 for GWC approval. After GWC approval staff will then prepare a draft fiscal note and return to the GWC in late summer/fall of 2013 for approval and permission to proceed to full EMC.

### **Questions/Comments:**

Mr. Cecich asked how the concentration of 140,000 ug/L for propylene glycol was determined. Ms. Moore stated that it was based on a reference dose provided by EPA. The only information available was the non cancer threshold concentration (reference dose). The systemic threshold concentration was then calculated by using a formula that used the reference dose, body weight, ingestion rate, and a relative source contribution of 0.20 (15A NCAC 02L .0202 (d)(1)) since propylene glycol is an organic chemical.

Ms. Deerhake had a clarifying question about the units for the IMAC. Ms. Moore stated that the IMAC could be either expressed as 140,000 ug/L (parts per billion) or 140 mg/L (parts per million). Ms. Deerhake stated that this seems like a high number. Ms. Moore stated that it has a relatively low toxicity and is used in various products such as food additive, cosmetic additive and paint thinners. There is not a lot of information that it is toxic at these levels. Ms. Deerhake then asked about the chemical's degradability. Ms. Moore stated that propylene glycol breaks down in water.

### **III. Closing Comments:**

#### **Chairman Martin**

Chairman Martin commented on hydraulic fracturing and how there is a new commission that would be developing most of the rules and that the GWC would not be heavily involved in that process. He then asked Mr. Ted Bush to comment. Mr. Bush stated that DENR would give an update to the full Commission tomorrow regarding the recent legislation. Mr. Bush noted that some level of responsibility will remain with the EMC, and that how that plays out in the end has to be seen. Chairman Smith stated that there are a lot of questions about the new Mining and Energy Commission and the overlapping jurisdiction of the EMC and this commission.

There being no new business and no additional comments by the members or staff, Chairman Martin adjourned the meeting.