



North Carolina Department of Environment and Natural Resources

Division of Water Quality
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Director

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Governor

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Secretary

June 17, 2011

MEMORANDUM

To: Aquifer Protection Section Staff
Interested Parties

From: Ted L. Bush, Chief
Aquifer Protection Section

Subject: Policy for Compliance Evaluation of Long-Term Permitted Facilities with No Prior Groundwater Monitoring Requirements

Adherence to state regulations is fundamental to the protection of the waters of the state and is mandated in permits issued by the Division of Water Quality (DWQ). Evaluating permit conformity can be challenging, and oftentimes regulatory staff will add permit conditions to a permit to help determine if a facility is in compliance with state requirements. When groundwater monitoring requirements are added to a permitted facility that has operated for some period of time, it may be necessary to place wells at or near the compliance boundary (defined by 15A NCAC 2L .0107), rather than the review boundary (defined by 15A NCAC 2L .0108). This is determined by considering, at minimum, the following factors:

- 1) *Type of Permitted Activity.* Some permitted activities are more conducive to potential contamination than others. For instance, an unlined lagoon has a higher probability of contaminating the subsurface than a lined lagoon due to infiltration of the permitted waste into the underlying soil.
- 2) *Subsurface Geology.* Groundwater flow in the subsurface is controlled by the local geology. Some geological formations due to their structure and composition, such as unconsolidated sand or fractured bedrock, allow for greater groundwater flow rates. These formations have open pathways that can allow contaminants to easily migrate throughout the subsurface.
- 3) *Duration of Permitted Activity.* The longer a permitted activity takes place, the more opportunity there is for potential contamination to migrate away from the source. If the subsurface geology allows for greater groundwater flow, the amount of time it takes for potential contaminants to move away from the source is decreased. For the purpose of this document, a "Long-Term Permitted Facility" is a facility that has operated long enough that resulting contamination from the permitted source has a high probability of having reached or passed the compliance boundary.
- 4) *Location of the Review and Compliance Boundaries.* The distance of the review and compliance boundaries from the source is determined by rule. However, in some instances these boundaries can be closer to the source based on the location of the property boundaries.

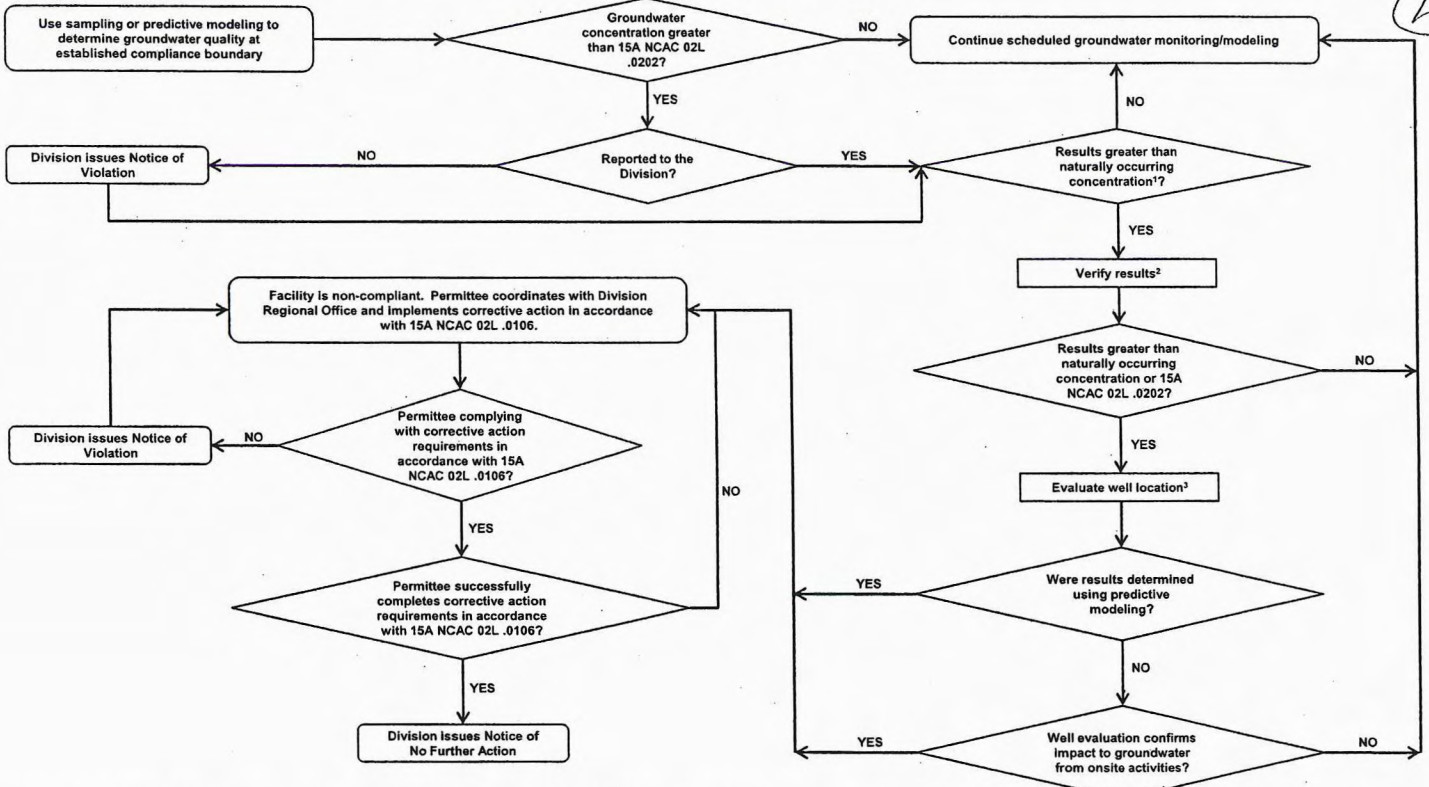
Once the factors above have been considered and wells have been installed and sampled, the attached flowchart will be used to determine facility compliance. The flowchart outlines the steps to be taken to assess whether or not groundwater standards have been exceeded at the compliance boundary, and only apply to long-term permitted facilities as defined above. The flowchart is designed to apply to any DWQ permitted facility where groundwater monitoring requirements have recently been added to the permit.

If the permitted facility is determined to be in non-compliance after following the steps outlined on the attached flowchart, adherence to the corrective action requirements specified in 15A NCAC 2L .0106 will be required. However, as long as the permittee is cooperative with the Division in taking all necessary steps to bring the facility into compliance, a notice of violation may not be necessary. The overall determination of whether or not a notice of violation is necessary will largely be based on the overall compliance history of the facility and the potential for impacts to human health and the environment.

cc: Surface Water Protection (Matt Matthews)

Compliance Evaluation of Long-Term Permitted Facilities with No Prior Groundwater Monitoring Requirements
(Refer to Policy Dated 6/17/11)

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6/17/11



¹Per 15A NCAC 2L .0202 (b)(3). Naturally occurring, site-specific concentration to be evaluated by permit holder and approved by DWQ.

²Verification may include re-sampling, further well development, consideration of other analytical methods, comparison to split-sample results, review of model parameters (if determined using predictive modeling), etc.

³Evaluation will include a review of an array of hydrogeologic, site-specific features, related well location and construction specifications, groundwater flow direction, compliance boundaries, other contaminant sources, etc.