

### **15A NCAC 13B .1633 DETECTION MONITORING PROGRAM**

(a) Detection monitoring shall be conducted at MSWLF units at all groundwater monitoring wells that are part of the detection monitoring system as established in the approved water quality monitoring plan. As provided for in 40 CFR 258, the detection monitoring program shall include monitoring for the constituents listed in Appendix I of 40 CFR 258.

(b) The monitoring frequency for all Appendix I detection monitoring constituents shall be no less than semiannual during the active life of the facility and during closure and the post-closure period. To establish the baseline, no less than four independent samples from each background and downgradient monitoring well shall be collected within a six-month period and analyzed for constituents listed in Appendix I of 40 CFR 258, with no less than one sample collected from each new monitoring well before waste placement in each new cell or phase. No less than one sample from each background and downgradient monitoring well shall be collected and analyzed during subsequent semiannual sampling events.

(c) The Division may approve an alternate frequency, no less than annually, for repeated sampling and analysis for constituents required by Paragraph (b) of this Rule, during the active life and post-closure care of the unit considering the following factors:

- (1) lithology of the aquifer and unsaturated zone;
- (2) hydraulic conductivity of the aquifer and unsaturated zone;
- (3) groundwater flow rates;
- (4) minimum distance between the upgradient edge of the MSWLF unit and the downgradient monitoring well screened interval;
- (5) resource value of the aquifer; and
- (6) nature, fate, and transport of any detected constituents.

(d) If the owner or operator determines that there is an exceedance of the groundwater quality standards established in accordance with 15A NCAC 02L .0202, or the groundwater protection standards established in accordance with Rule .1634(b) of this Section for one or more of the constituents required to be monitored in Paragraph (a) of this Rule at any monitoring well, the owner or operator:

- (1) shall, within 14 days of this determination, report to the Division and place a notice in the operating record indicating which constituents have exceeded groundwater quality standards established in accordance with 15A NCAC 02L .0202, or the groundwater protection standards established in accordance with Rule .1634(b) of this Section;
- (2) shall establish an assessment monitoring program meeting the requirements of Rule .1634 of this Section within 90 days except as provided for in Subparagraph (3) of this Paragraph; and
- (3) may demonstrate that a source other than a MSWLF unit caused the exceedance, or the exceedance resulted from an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. A report documenting this demonstration shall be submitted to the Division for approval. If required by G.S. 89C or G.S. 89E, a licensed professional engineer or licensed geologist shall prepare these documents. [Note: The North Carolina Board of Examiners for Engineers and Surveyors and the Board of Licensing of Geologist has determined, via letters dated July 16, 2010 and November 30, 2010 respectively, that preparation of documents pursuant to this Paragraph constitutes practicing engineering or geology under G.S. 89C and G.S. 89E.] A copy of this report shall also be placed in the operating record. If a successful demonstration is made, documented, and approved by the Division, the owner or operator may continue detection monitoring. If after 90 days, a successful demonstration is not made, the owner or operator shall initiate an assessment monitoring program as required by Rule .1634 of this Section.

*History Note:* Authority G.S. 130A-294;  
Eff. October 9, 1993;  
Amended Eff. April 1, 2011;  
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