



North Carolina Department of Environment and Natural Resources
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

April 29, 2011

Ms. Madeline German, P.G.
Mr. Jimmy D. Woodie, P.E.
Municipal Engineering Services Company, P.A.
PO Box 97
Garner, NC 27529

RE: Application for Site Suitability – Steele Property, Expansion
Iredell County Subtitle D Landfill MSWLF
Site Hydrogeologic Study – May 18, 2009 (MESCO Project No. G08002.5)
Site Study Application – September 2010 (MESCO Project No. G08002)
Additional Information Request – ID #13726
Permit No. 49-03

The above referenced applications submitted by MESCO, P.A., on behalf of Iredell County, are being reviewed by the Solid Waste Section (SWS) in-part pertaining to hydrogeologic criteria. The Hydrogeologic Study was submitted on May 18, 2009 and the Site Study Application, written September 22, 2010 was received on March 23, 2011. Review of these applications commenced April 7, 2011. There are several items in both the Site Hydrogeologic Study and the Site Study Application that require clarification and/or revision before the hydrogeologic review can be completed. Please respond to the following questions and comments:

Site Study Application – September 22, 2010
Regional Characterization 2-Mile Perimeter Map

Solid Waste Section's Response: According to the Regional Characterization Map referenced above, there are two (2) existing public water supply wells depicted south of the proposed landfill expansion that are named PSW 3. Please verify the horizontal distance between the proposed southern landfill waste boundary and existing public water supply well PWS 3, just south of the railroad tracks.

Site Hydrogeologic Study – May 18, 2009

Section 2 – Field Investigation

Plate 2 – General Site Map

Plate 3 – Single Day Potentiometric Map with Flow Directions

Plate 4A – Seasonal High Water Table

Plate 4B – Estimated Long-Term Seasonal High Water Table

Plate 7 – Estimated Top of Competent Rock

Site Study Application – September 22, 2010

Section 3.0 – Site Hydrogeologic Summary

Section 3.2 – Site Investigation and Laboratory Tests

**Drawing F1 – Sheet 4 of 10 – Facility Plan – Areal Limits & Existing Conditions*

Drawing F3 – Sheet 5 of 10 – Facility Plan - Leachate Collection System

Solid Waste Section's Response: The Site Study Application, Section 3.2, Page 10 states in-part: *“thirteen borings were completed on the property (approximately one per seven acres) with two of these penetrating at least 20 feet into gneiss rock.”* It is presumed these borings are the same borings also referenced in the Site Hydrogeologic Study, Section 2, Page 2, – Field Investigation. However, Drawing F1, Sheet 4 of 10, labeled “Facility Plan Areal Limits & Existing Conditions” depicts names and locations of piezometers within the proposed site study area that are not depicted on other drawings in the Site Study application and the Site Hydrogeologic Study referenced above. Please explain if these additional piezometers depicted on Drawing No. F1 were from a previous investigation, or were installed recently, etc.

Site Hydrogeologic Study – May 18, 2009

Section 5.4 – Local Precipitation

Section 5.5 – Water Table Fluctuation

Section 5.6 – Seasonal High Groundwater Estimation

Appendix D – Climatic Data

Table 1 – Groundwater Elevation Summary

Plate 4A – Seasonal High Water Table

Plate 8 – Cross Sections

Site Study Application – September 22, 2010

Drawing F2 – Sheet 4 of 10 – Facility Plan Proposed Subgrade

Drawing F3 – Sheet 5 of 10 – Facility Plan Leachate Collection System

Solid Waste Section's Response: Further discussion and additional on-site monitoring well groundwater elevation documentation is warranted pertaining to estimation of seasonal high and long-term seasonal high groundwater elevations. Please contact me for a meeting to discuss this topic.

Site Hydrogeologic Study – May 18, 2009

Appendix A – Boring and Piezometer Information

Log of Boring : P-81, Pages A-8 & A-9, Pages A-42 & A-43

Table 1 – Groundwater Elevation Summary

Solid Waste Section's Response: Data stated on both the “Log of Boring: P-81” and “Table 1 – Groundwater Elevation Summary” consists of a few errors: The “Surface elevation” and “Top of pipe elevation” stated on the “Log of Boring: P-81” is probably incorrect by 100 feet in elevation. The “Well Depth” and “Completion Depth” for P-81 stated on Table 1 are probably incorrect also. Please revise accordingly.

Please note the comments and questions raised above and provide additional information and revisions as needed. If you have any questions, or wish to schedule a meeting to discuss the items referenced in this letter, please call me at 919-508-8524.

Sincerely,



Brian Wootton
Hydrogeologist
Solid Waste Section

cc: David Lambert
Ed Mussler
John Murray
Central File

Iredell County Solid Waste Director
Solid Waste Section
Solid Waste Section