



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

February 3, 2015

Mr. David Brigman, Director
Buncombe County Air Quality & Solid Waste
81 Panther Branch Road
Alexander, NC 28701

Ref: Design Hydrogeological Report Review (DIN 22488)
Buncombe County MSW Landfill
Permit to Construct Application: Phase IV (Cell 7)
Buncombe County, Permit #1107-MSWLF-1996

Mr. Brigman:

The Division of Waste Management, Solid Waste Section (SWS) has completed the review of the Design Hydrogeological Report (Appendix D) submitted as part of the Subtitle D Landfill, Phase IV (Cell 7) Permit To Construct Application (DIN 13037). The application was submitted on your behalf by CDM-Smith to the SWS on April 29, 2014.

Based on our review, the SWS requests information and/or responses on a few items concerning the Design Hydro report and Monitoring Plan. The design hydro report describes the subsurface characterization of Phase IV (Cell 7) and also proposes an update to the groundwater monitoring plan. Additional comments on Operations Plan Water Quality Monitoring Plan (Appendix 5E of the permit application), as it relates to the Design Hydro report comments, are included as well. These comments and questions are discussed as follows:

Site Hydrology (Part 3, Engineering Plan Appendix D - Design Hydro Report)

- Direct groundwater elevation measurements for Cell 7 reported in Design Hydro report span a 3-month period in 2012. In order to further evaluate and support seasonal high water table estimates (specifically for Cell 7), please provide any water level measurements collected in the time since October 2012, if available.

Ref: 15A NCAC 13B .1623(b)(2)(E).

Proposed Groundwater Monitoring (Part 5, Operations Plan, Appendix 5E - WQ Monitoring Plan)

- As stated in the Design Hydro report, groundwater flow direction is predominantly to the north toward Blevins Creek. Also, it's noted that the potentiometric surface at the site is generally a subdued reflection of surface topography. The footprint of Cell 7 sits along the tail end of a ridge that slopes toward the north (and Blevins Creek) and toward the east-northeast toward a small drainage feature, which flows north into Blevins Creek. This small drainage feature is shown on plan sheets as a tributary with hillside wetland seeps. The plan sheets also show a spring house within approximately 200 feet of waste boundary. In the site geology description (*Design Hydro Report Section 3.1, page 3-2*), the report describes northeast-trending bedrock fractures providing consistent pathways for groundwater flow. This area could be a shallow bedrock or saprolite discharge point for the upper aquifer near Cell 7.

Given these observations, it would appear that the hillside seeps/springhouse are an area of groundwater discharge down gradient of Cell 7 that would require monitoring either through a shallow groundwater monitoring well or surface water monitoring at the point of discharge. In addition to the proposed monitoring well cluster north of Cell 7 (Part 5, Appendix 5E of the application), this would fill an apparent gap in the proposed monitoring. Please address or provide justification for no action.
Ref: 15A NCAC 13B .1623(b)(3) Water Quality Monitoring Plan.

Other

- One final note: it appears as if the wetland/hillside seeps would be impacted by fill as shown on numerous site development plan sheets (SD-1 and others). This may or may not be the case, but please comment on this as well.

I believe these comments are fairly straight forward and can be worked out to meet final approval of the design hydro portion of the permit. If you would care to discuss prior to responding, please do not hesitate to contact me at (919) 707.8258 or by email at perry.sugg@ncdenr.gov. In the meantime, I await your response.

Sincerely,



W Perry Sugg, PG
Permitting Hydrogeologist
Solid Waste Section

Cc: Ed Mussler, SWS Permitting Branch Head
Allen Gaither, SWS Permitting Engineer
Andrea Keller, SWS Environmental Specialist