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June 3, 2010

Ms. Andrea Keller  
Environmental Senior Specialist  
Solid Waste Section  
Division of Waste Management  
North Carolina Department of Environment and Natural Resources  
2090 U.S. Highway 70  
Swannanoa, North Carolina 28778

RE: Facility Compliance Audit Report  
White Oak Municipal Solid Waste Landfill  
Permit # 44-07  
Haywood County, North Carolina

Dear Ms. Keller:

On behalf of Haywood County, North Carolina, we are providing this response to the Facility Compliance Audit Report received May 12, 2010. Based on McGill Associates review of the specific site conditions, we have prepared this response to generally correspond with the identified Noted Violations and Areas of Concern.

**Noted Violations**

***15A NCAC 13B .1626 (1)(g)(ii) for waste placement outside of the base liner system and 15A NCAC 13B .1626 (8)(d) failure to contain leachate on-site, within the base liner system, that was not properly treated prior to discharge.***

As part of the construction of the new Phase 3 waste area, the existing Phase 1 and Phase 2 liner edges had to be exposed to allow connection of the Phase 3 liner system. During the construction, it was discovered that waste was beyond the existing liner limits and, in addition, it appeared that leachate had been discharged outside the liner limits. Upon discovery, the County immediately reported the situation to the Solid Waste Section on August 6, 2009. The Audit Report accurately documents the timeline of events.

The County took the following remediation steps to remedy the above violation:

1. Immediately contracted with Thalle Construction to remove the waste from outside liner limit to an area near the working face. Additional waste material was removed to allow an adequate area for the control of leachate. The waste material was removed by August 25, 2009. Approximately 6,350 cubic yards of waste material was relocated.

Engineering • Planning • Finance

McGill Associates, P.A. • P.O. Box 2259, Asheville, NC 28802 • 55 Broad Street, Asheville, NC 28801

828-252-0575 • Fax: 828-252-2518

2. Haywood County contacted Ervin Lane on August 10, 2010 to discuss suitable mitigation measures for the contaminated soil and an action plan was approved. To determine the extent of leachate contamination, soil testing was completed on soils in the area where waste and leachate were found on outside of liner edge. Soil material was removed until a clean soil sample was obtained. Approximately 2,500 cubic yards of soil material was removed and placed into the permitted waste area. Soil samples of the affected area were obtained on October 7 (Area 1) and October 26 (Area 2), 2009 and results were submitted to the North Carolina Department of Natural Resources (NCDENR), Solid Waste Section. On November 9, 2009, approval was given by the Solid Waste Section to resume Phase 3 construction.
3. In order to control leachate from leaving the existing liner limits, the County instituted the following additional operational measures:
  - Established temporary sumps within the existing liner limits to provide points to pump out excess leachate.
  - Utilized existing landfill gas vents as leachate sumps to remove leachate from the lined waste area.
  - Utilized diesel pump, purchased 2 electric pumps and rented a portable generator to supplement existing leachate system.
  - Rented three "frac" (storage) tanks to increase leachate storage capacity during Phase 3 construction.
  - Pumped out and hauled off-site more than 5.6 million gallons of leachate to an approved wastewater treatment facility from August 2009 through April 2010 (previous highest yearly total was 3.8 million gallons for a 12-month period in 2004/2005).
4. Through the Phase 3 construction contract, established a permanent leachate sump and pump station within the Phase 1 waste area to assist existing leachate collection system.
5. Established new operational and training procedures with landfill staff to prevent waste being placed beyond the liner limits.
  - All existing liner limits have been identified and liner edge markers will be installed by June 30, 2010.
  - Concrete liner edge markers have been installed around new Phase 3 waste area.
  - Additional training with landfill operators will be held during the month June 2010 to show where the liner limits are and stress the importance of proper setbacks of waste placement. A copy of the training record will be included in the Operational Record.

***15A NCAC 13B .1626 (2)(c) for failure to replace the minimum of one foot of cover intermediate soil cover over all exposed waste in Area 1 and Area 2.***

As described above, waste was relocated from the Areas 1 and 2, as depicted in the Audit Report, for the construction of the new Phase 3 waste area. During the waste removal, a portion of the area was not re-covered with the required soil cover. Haywood County has now covered a majority all of the area with soil cover with the exception of the area noted as Area 2 (along the northern limits of Phase 2), as shown on the attached photos.

In area along the Phase 2 limits, a proper soil cover can not be established at this time due to the existing steep slope and inaccessibility to the location by construction equipment. As noted above, waste had to be relocated to construct the Phase 3 waste area tie-in to the Phase 2 liner. Due to the existing condition of the Phase 2 waste fill, it was not feasible to relocate enough waste to establish a slope suitable for placement of soil cover material. Based on the current condition, the County proposes to cover the exposed waste along the northern slope of Phase 2 with a plastic tarp. The plastic tarp will remain in-place until such time as the Phase 3 area is permitted to receive waste and access can be established through Phase 3 to the uncovered waste along Phase 2. Once access is established a proper soil cover can be placed. The Phase 2 soil cover will be established with 60 days of issuance of the Permit to Operate for Phase 3.

***15A NCAC 13B .0203 (d) states that: by receiving solid waste at a permitted facility, the permittee(s) shall be considered to have accepted the conditions of the permit and shall comply with the conditions of the permit.***

As part of the Permit to Construct MSW Phase 3 and 4, several groundwater monitoring wells (MW's) and landfill gas monitoring wells (LFG's) were abandoned in order to construct MSW Phase 3 and its associated grading for access roads and soil stockpiles. New MW's and LFG's were shown on the Permit to Construct drawings and approved by the Permitting Section of the Solid Waste Section. An "Explosive Gas Control Plan" was included in Appendix 3 of the approved Operations Plan. Haywood County will construct the approved MW's and LFG's as shown on the Permit to Construct drawings and in accordance with the approved plans. The County will provide an updated as-built map which shows the location of the MW's and LFG's.

The County is in the process of working with Bunnell-Lammons Engineering, Inc. (BLE) to finalize the contract for the installation of the proposed MW's and LFG's, as shown in the Permit to Construct. In addition to these proposed wells, the County must replace three MW's (MW 3, MW 3D, and MW 9) and LFG 4, which were inadvertently covered by filling operations during the construction of MSW Phase 3. Zinith Barbee, the reviewing NCDENR Hydrogeologist for this project, was notified on April 30, 2010 of the fact that the wells were covered with fill dirt during construction. A subsequent email to Mr. Barbee pertaining to MW 9 was sent June 3, 2010. Mr. Barbee responded with a letter, dated May 5, 2010, which outlined the steps necessary to remedy the situation. To summarize, MW's 3, 3D, 9 and LFG 4 will be replaced in close proximity to their original location, and shall be renumbered MW 3r, MW 3Dr, MW 9r, and LFG 4r. Mr. Barbee had additional concerns regarding surface water monitoring point SW-2 and MW 4A. The original location of SW-2 was in the area permitted to be filled by

the construction of MSW Phase 3. SW-2 shall be reinstated just north of the original location and beyond the limits of the permitted fill area. Mr. Barbee was concerned that MW 4A may have been damaged during construction, enough to prevent sampling. The County's MW sampling sub-contractor has subsequently sampled from this MW without any difficulty. Additionally, MW 4A was inspected by the Haywood County Landfill Manager and was determined to be in good condition. MW 4A was lowered in association with the Contract for MSW Phase 3 and the top of the plastic pipe was slightly damaged during construction; however, this portion of the casing required removal in order to lower the top of the pipe to meet the new grades in the area.

As previously mentioned, the County is working with BLE, Inc. to develop a schedule for installing the required MW's and LFG's. Due to scheduling conflicts with the well driller, it will take longer than 30 days to install these wells. The new MW's should be in place prior to the regularly scheduled semi-annually monitoring event in October 2010. The County requests an extension on the time frame involved for submitting a map to NCDENR showing the MW's and LFG's so that accurate as-built information can be included. The proposed MW's and LFG's will be installed very close to the location shown on the Permit to Construct drawings.

#### **Areas of Concern**

***The treatment and processing area (grinding of land clearing debris) exhibited a large amount of stockpiled raw material in place during the audit (no grinding had occurred). This area needs to be maintained and operated such that materials are processed and utilized on site.***

Haywood County has hired a contractor to grind the land clearing materials. The Contractor began grinding operations on June 3rd, and it will take approximately 1 week to grind the materials. The County would like to utilize the mulched material as part of a soil/mulch Alternate Daily Cover (ADC). The County is in the process of working with NCDENR to complete the demonstration period for the soil/mulch ADC. Additionally, the County will use the mulched material on site on wet areas of access roads and to stabilize (non-MSW area) slopes. The County would like to begin a composting demonstration period when funding becomes available to staff this position, and the mulched material could be used in this process as well. The County will utilize all of the mulched material on site in accordance with the approved Operations Plan.

***Items 9, 11, and 12 refer to facility requirements which involve manpower/staffing. Rule 15A NCAC 13B.1604 General Requirements for MSWLF Facilities states in Section (b)(2)(I) Proper Operation and Maintenance: proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, an adequate laboratory and process controls, including appropriate quality assurance procedures. The County may wish to review the funding and staffing of this facility in order to insure that adequate staffing is available to properly maintain the facility in compliance with all Division requirements.***

Like most County-operated solid waste disposal facilities, Haywood County is facing funding challenges. The County is restructuring personnel assignments in their Solid Waste Department to accommodate additional positions at the White Oak Landfill. The County continuously seeks applicants for positions at the landfill. The County will continue to provide the necessary resources to ensure that the White Oak Landfill is properly operated and maintained.

The construction of MSW Phase 3 was a challenge to all involved. The discovery of waste outside the liner limits of existing MSW Phase 1 and very close to the liner limits of MSW Phase 2 presented difficulties to the Contractor in connecting to the existing liner edge and to the County in keeping wastes covered and leachate under control. In addition, the extreme amount of rainfall during the construction period and the rock encountered within the Phase 3 limits added to the complexity of the project. But now, the Contractor is working on the final punch list items and we expect to submit the necessary Construction Quality Assurance information to the NCDNER in the coming weeks in order to obtain a Permit to Operate MSW Phase 3. Having MSW Phase 3 on line will allow the County better opportunities for the proper management and disposal of MSW waste and control of leachate at the White Oak Landfill.

Haywood County is committed to addressing the issues raised in the Facility Compliance Audit Report and will work diligently to correct the noted deficiencies. The County appreciates your consideration of their response to the deficiencies noted in the Facility Compliance Audit Report received May 12, 2010, and should you have any questions or require additional information please give us a call.

Sincerely,  
MCGILL ASSOCIATES, P.A.  
  
JEFFREY R. BISHOP, PE  
Senior Project Manager

Enclosure

cc: Mr. Marty Stamey, Haywood County Assistant County Manager, w/enc  
Mr. Stephen King, Haywood County Solid Waste Director, w/enc  
Mr. Paul Crissman, NCDENR, w/enc  
Mr. Ed Mussler, NCDENR, w/enc  
Mr. Zinith Barbee, NCDENR, w/enc  
✓ Mr. Allen Gaither, NCDENR, w/enc  
Ms. Deb Aja, NCDENR, w/enc  
Mr. Donald Herndon, NCDENR, w/enc  
Mr. Mark Poindexter, NCDENR, w/enc





