



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

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

Solid Waste Section

October 23, 2009

Mr. David Jones, Director
Greene County Public Works
P.O. Box 543
Snow Hill, North Carolina 28580

Re: Additional Comments on Permit Application for Continued Operation (Application)
Greene County Construction and Demolition Debris Landfill (C&DLF)
Greene County, North Carolina
Permit No. 40-02, Document ID No. (Doc Id) 8828

Dear Mr. Jones:

The Division of Waste Management (DWM), Solid Waste Section has reviewed the 24 September 2009 letter and attached Application (Doc Id 8825), submitted by Municipal Engineering Services Co., Inc. (MESCO), on behalf of Greene County, to respond the DWM's comments (Doc Id 6842) dated February 19, 2009. Based on the review Solid Waste Section has additional comments on the new submittal, and your responses to the following comments will expedite the review of the Application:

General

1. Please provide information of the facility property deed document. This information will be incorporated to the facility operation permit condition as below.

Property	Book	Page	Acreage	Grantor	Grantee
Total Site Acreage:					

Section 1 – Operation Plan

2. Please briefly describe the facility history (for both MSW and C&D units) including, but not limited to:
- Dates for the original permits (MSW and C&D units) issuance and closure date of MSW unit,
 - Permitted gross capacities for MSW and C&D units, the remaining capacity of C&D unit
- This information will be incorporated to the facility operation permit condition as below:

Unit	Acres (waste footprint)	Total Gross Capacity (cubic yards)
Closed unlined MSW Unit		
C&D unit on top of closed MSW Unit (filled)		
C&D unit on top of closed MSW Unit (remaining as of the <u>Month Year</u>)		

survey date)		
Total		

Note: Total gross capacity for the C&D landfill unit is defined as the volume measured from the bottom of C&D waste (e.g. the top of the cover system of the MSW landfill) through the top of final cover.

- Approved waste disposal rate (ton per year or ton per day) and projected service life of the C&D unit.
- Permitted acreage for the landfill facility and acreages for both MSW & C&D waste footprints.
- Service areas.

The above requested info can be incorporated in the requested Facility Plan [please see Comments 3 & 25]. This information will be used for preparing the fact sheet and the facility operation permit condition.

- Greene County needs to further clarify the response to DWM's Comment 17 dated February 19, 2009. Based on the review of the Greene County's response dated September 22, 2009, Solid Waste Section interprets that operations of C&D unit will be consistent with the final contours as shown on Drawing CL1/Sheet 3 of 5 and Drawing PROF1/Sheet 5A for operating capacity to approximate elevation 144 feet at mean seal level. After the capacity is consumed in the end of the estimated service life by 2014, the C&D unit must stop receiving wastes at that date followed by a final site closure within 180 days after that date. If the C&D unit reaches the approved 144 feet final grade and closes down, in the future, any landfill construction, operation, and development at this facility will be considered as a new facility and subjected to applicable statutes and rules in effect on that date and the DWM's approval.

If the above-mentioned interpretation is incorrect, Greene County must submit an updated facility plan with scaled drawings to address the landfill incremental phased development according to Rule .0537.

This information will be incorporated to the facility operation permit condition as below:

C&D Unit	Acres	Gross Capacity (cubic yards)	Projected Service Life
Phase I			
Phase II			
Phase III			

- (Section 1.1, second paragraph on page 4) Please add the **reference** (document title and date) that the quarterly landfill gas monitoring activities will be conducted by Greene County in accordance with the DWM-approved methane gas monitoring plan.
- (Section 1.1, first or second paragraph on page 5) Please add the **reference** (document title and date) that the water quality monitoring activities and corrective action program will be conducted by Greene County in accordance with the DWM-approved plan (s).
- (Section 1.1, fifth paragraph on page 4 & Section 1.2, Paragraph 10 on page 9) Pursuant to Rule .0542(n), please add the following document to the operating record:
 - Notation of approval date and the name of the DWM personnel who approval the type of the open burning
 - Approved monitoring plans and corrective action plans.
- (Section 1.2) According to the DWM Facility Compliance Audit Report dated May 15, 2007, a pad to store white goods was proposing to construct at the landfill property. Please show the proposed or as-built pad location on the facility drawing - Drawing No. CD1/ Sheet 3 of 8.

8. If the recyclable wastes including yard wastes, white goods, used tires, and etc. are receiving for recycling, processing and/or temporarily stockpiled within the permitted landfill property. The Operations Plan must describe how the above-mentioned wastes be managed on-site including, but not limited to:
 - Waste segregation (need to be incorporated to the waste screening and segregation plan)
 - Estimated waste amount per week or month,
 - Temporary stockpile and storage locations shown on Drawing No. CD1/ Sheet 3 of 8
 - Schedule for off-site removal of the recyclable wastes
 - Measures and BMPs for prevention surface water from contacting wastes
 - The maximum tonnage will be allowed to store at any time at the facility
 - The information of the companies that have contracted to Greene County to haul and process the recyclable wastes off-facility
 - The total amount of each of the recyclable wastes must be documented in the operating record. Scales shall be used to weigh the amount of recyclable waste.

9. (Section 1.2) Please rewrite the Paragraph 1.f of C&D wastes in according to the definition in NCGS 130A-290 (a)(4).

10. (Section 1.2, Paragraph 1.f) The recently effective Rule 15A NCAC 13B.0532 defines “C&D solid wastes” as solid wastes generated solely from the construction, remodeling, repair, or demolition operations on pavement and buildings or structures. C&D waste does not include municipal and industrial wastes that may be generated by the on-going operations at buildings or structures. The new rule prohibits the disposal of roof shingle waste from manufacturers, lumber from lumber yards, scrap materials from cabinet manufacturing facilities, and waste building materials from mobile home / modular home manufacturers, except under certain circumstances. The industrial waste normally must be disposed in a MSWLF or an industrial landfill, not a C&DLF. Provisions of the C&DLF rules could allow the waste to continue to be disposed of in the landfill if Greene County and the manufacturers agree to adhere to disposal criteria as outlined below:

“Solid waste that is generated by mobile or modular home manufacturers and asphalt shingle manufacturers in Greene County. The waste must be source separated at the manufacturing site and must exclude municipal solid waste, hazardous wastes, and other wastes prohibited from disposal in a C&DLF. It must be transported to the Greene County C&DLF in a shipment or container that consists solely of the separated waste to be disposed. Greene County C&DLF will not accept this waste if it has not been separated and transported as specified.”

If Greene County agrees with this suggestion, please replace the wastes described in the second line, starting with “from...,” to the end of this paragraph with the above-referenced description.

11. (Section 1.2, Paragraph 1.g) Wooden pallets are banned from disposal as defined in the NCGS Article 9, Chapter 130A-290(44a), effective October 1, 2009. Only pallets generated in C&D activities may be disposed of in a C&DLF, not pallets generated in industrial or commercial activities. All pallets are recyclable. Therefore, please remove wooden pallets from the list of waste stream for disposal and add this waste to the list of waste prohibited for disposal in Paragraph 1.h. Wooden pallets that are ground for mulch or boiler fuel or other such uses may be added to the waste streams to the on-site yard waste compost unit, if exists. Please incorporate the above-mentioned requests to the revised Operations Plan.

12. (Section 1.2, Paragraph 5.c) Please provide the written agreement or proof of arrangement for the fire-fighting services at the C&DLF from a local fire department. The document shall be appended to the Operation Plan.

13. (Section 1.2) The Paragraph 5.c needs to address the following fire fighting concerns:
 - List the types of fire fighting equipment available on site.
 - Stockpile piles of dirt near the working faces which will be used for putting off hot loads or fires

- Indicate where the water sources are located if water is using for fire fighting.
 - Confirm that the compactors and other facility machinery are equipped with proper fire extinguishers.
14. (Section 1.2) The Rule .0542(j)(3) requires the access road to monitoring locations must be all-weather construction and maintained in good condition. Please revise Paragraph 6.c accordingly.
15. (Section 1.2) The Paragraph 6.d needs to describe water sources – water wells or sediment basins. Please clarify.
16. According to the DWM Facility Compliance Audit Report dated May 15, 2007, leachate was occasionally seeping out of the side slopes of the closed unlined MSW unit, which is underlain by the C&D unit. Therefore, the provisions of management of leachate breakout need to be discussed in the Operations Plan. The Plan needs to discuss the leachate handling and disposal, the final cover repair methods, methods to stop seepage, record keeping, and notification requirements (report to County and DWM with a pre-determine time frame and report contents).

Section 2 – Closure Plan

17. For Comments 11 and 23 dated February 19, 2009, the DWM has two seriously concerns stated below, please address the concerns properly.
- The slope stability of the proposed final soil cover system. According to Rule .0543(c)(2)(A), the maximum post-settlement surface slopes of the final cover system is 25 percent (%). The Drawing CL1 / Sheet 3 of 5 and Drawing PROF1/Sheet 5A indicate the final cover system of the C&D unit having a 33.33% (3 to 1) side slope. The proposed side slope does not comply with the above-referenced rule requirements. Please also be aware that the slope stability analyses conducted in pervious submittals in 1994 and 1997 are not applicable to the proposed cover system in 2009 permit application because the configuration of the final cover systems are different from each other [3 to 1 (in 2009 proposal) vs. 6 to 1 (in 1994 and 1997 approved permit application)].
 - According to Rule .0543(c)(3)(C), however, Solid Waste Section may approve the proposed final side slope, 33.33%, if Greene County submits a slope stability analysis including information (including references, assumptions, and calculations) to demonstrate the proposed final cover will be stable and safe during the 30-year post-closure period. And the soil engineering properties including shear strength, density, and/or internal friction angle used for designing the final soil cover system must be considered as the minimum criteria to select the earthen material and be field tested in according to the requirements specified in the Construction Quality Control and Quality Assurance (CQA) Plan.
 - In June 17, 2005 MESCO, on behalf of Greene County submitted a 5-year Life Expectancy Calculation with a revised Operation Plan. The remaining total gross capacity for the C&D unit is 64,340 cubic yard based on the survey data as of February 15, 2005 and is approved by the DWM on January 25, 2006. The changes of configuration of the final cover system may increase the total gross capacity than the original approved one. Should this change of gross capacity is equal to or more than 10%, the permit application for a substantial amendment, defined in NCGS Article 9, Chapter 130A-294(b1)(1) must be prepared in accordance with Rule .0535(c).
18. (Section 2.3.h) The section proposed that “if after placement of the soil cap it fails the required tests, the material will either be reworked or replaced.” Shall there be another QC testing on the reworked or replaced material to verify and confirm the final products meets the specification? Pleas clarify.
19. (Section 2.4) What is the provision of confirmation of the final thickness of erosive layer? Please clarify.
20. Upon completion the site closure, a CQA Report in compliance with the requirements in Rules .0541(c) & (d) must provide to the DWM for a review and approval. Please address the CQA Report format, contents, and submittal schedule accordingly.

Section 3 – Post-Closure Plan

21. According to the DWM Facility Compliance Audit Report dated May 15, 2007, leachate was occasionally seeping out of the side slopes of the closed unlined MSW unit, which is underlain by the C&D unit. Therefore, the provisions of management of leachate breakout need to be discussed in the Post-Closure Care Plan. The Plan needs to discuss the leachate handling and disposal, the final cover repair methods, methods to stop seepage, record keeping, and notification requirements (report to County and DWM with a pre-determine time frame and report contents).
22. Please add the flowing requirement to the Description of Maintenance Activities:
“*Making repairs as necessary to maintain the integrity and effectiveness of the cap system.*”

Figures

23. (Drawing No. CD1/ Sheet 3 of 8 and Drawing No. CL1/ Sheet 3 of 5) Please add the following features to the drawings:
- Locations of groundwater wells, surface water monitoring points, and landfill gas wells/probes with the identification numbers.
 - Locations of sediment basins and BMPs of the constructed erosion and sediment control measures identified on drawings
 - Drainage features including flow lines and flow directions
 - Waste footprints of both existing C&D and closed MSW units
 - Established buffers with number of distances and identify known wetlands and floodplains with the referenced document.
24. (Drawing No. CD1/ Sheet 3 of 8) If the landfill facility encompasses other waste management units, such as tire storage area, white goods/ scrap metal area, yard waste composting area, other recycling material stockpile area, please add these units to the drawing.

Appendix B – Local Governmental Approvals

25. Please provide the facility plan and related drawings. The facility plan is a conceptual plan for the development of the entire C&DLF facility and shall be prepared in accordance with the Solid Waste Management Rule (Rule) 15A NCAC 13B.0537 (d)(1), (e)(1), (e)(2), and (e)(3). In compliance with the requirements stated in Rules 0547(4)(a) and .0536(c)(11)(C), the facility plan that is approved by the Greene County Commission Board must be a portion of the a local governmental approval document.
26. For Comment 5 dated February 19, 2009, the requested copy of the public notice that should be posted in a legal section of the local newspaper on January 23, 2008 did not submitted with the revised Application. The attached copy of a legal advertisement is related to the 2007 public notice for the groundwater remediation / corrective action. Please provide a copy of the legal advertisement of the 23 January 2008 public notice.

Appendix C – Waste Screening Plan

27. (Paragraph D, on page 31) Below list several typographic errors are found in the section, please make necessary corrections:
- Replace “MSWLF” to C&DLF (Paragraphs 1 & 3).
 - Replace “municipal solid wastes” to “C&D wastes” (Paragraph 4).
 - Replace “The City of Albemarle” to “Greene County C&DLF (pages 31 & 32).
28. (Paragraph D.2 – Inspection) Please add contact information (name, phone number, etc.) of the State Waste Management Office, Local Hazardous Material Response Team, Local Fire Department, Local Sheriff Department to this section. This contact info must be updated periodically and posted in the location can be easily accessed to the on-site personnel in the event any hazardous and prohibited wastes are found in the working faces or inspection areas.

Please timely respond the above-referenced comments and submit the Solid Waste Section a revised portions of the Application (one hard copy and an electronic copy), which incorporates the requested information.

Additionally, the Solid Waste Section approves the cost estimates for closure and post-closure care of the Greene County Landfill. The approved costs, in year 2008 dollar values, are \$1,145,751.00 for the closure of 12.65-acre landfill unit, the estimated largest area of the C&DLF unit requiring the specific cover system at any time during the five-year permitted period, and \$779,200.00 for the 30-year post-closure cares at 12.65-acre landfill unit. Pursuant to Rule .0547(4), within 30 days upon receiving this letter, Greene County must submit the DWM a financial assurance document in accordance with Rule .1628.

In accordance with the NCGS 130A-295.2(h), effective August 1, 2009, Greene County must also provide financial assurance sufficient to cover a minimum required amount of three million dollars (\$3,000,000.00) for potential assessment and corrective action at the facility. This financial assurance requirement is in addition to the financial responsibility requirements for site closure, post-closure cares, and corrective actions. Please submit the requested financial assurance document within 30 days upon receiving this letter. Within the next 12 months, Greene County will be required to evaluate the solid waste management facility to determine the estimated costs of potential assessment and corrective action based on the criteria established in the above-reference statute. Depending on this determination, the required financial assurance amount in the future may be higher than the minimum amount of three million dollars

The Solid Waste Section appreciates your efforts and cooperation in this matter. If you have any permitting questions, please contact me at (919) 508- 8507; and any questions associated with financial responsibility please contact Donald Herndon at (919) 508-8502.

Sincerely,



Ming-Tai Chao, P.E.
Environmental Engineer II
Permitting Branch, Solid Waste Section

cc:

Wayne Sullivan, MESCO
Donna Wilson, DWM
Dennis Shackelford, DWM
Donald Herndon, DWM

Ed Mussler, Permitting Branch Supervisor
Ervin Lane, DWM
Ben Barnes, DWM
Central File

