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North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor
William G. Ross, Jr. Secretary

January 8, 2009

Mr. Tom Miller
Director, Solid Waste Department
P. O. Box 3289
130 S. Queen Street
Kinston, North Carolina 28501

RE: Application for Continued Operation
Lenoir County Construction and Demolition Landfill (C&DLF)
Lenoir County, Permit No. 54-03, Doc ID No. 6567

Dear Mr. Miller:

The Division of Waste Management, Solid Waste Section (Section) has completed an initial technical review of the application submitted by Municipal Engineering Services Company for the continued operation of the Lenoir County C&DLF. The Lenoir County C&DLF is a C&DLF unit on top of a closed Municipal Solid Waste Landfill (MSWLF) and the criteria for the submittal was set forth in Rule 15A NCAC 13B .0547(4).

The criteria included the application be prepared in accordance with Rule .0535 (b) and include local government approval in accordance with Rule .0536(c)(11), an operations plan in accordance with Rule .0543 including a five-year phase of development and waste acceptance plan, a corrective action plan for the closed MSWLF prepared in accordance with Rules .1636 and .1637, a closure and post-closure plan prepared in accordance with Rule .1627, and financial assurance in accordance with Rule .1628. Requirements from other rules are incorporated by reference and are noted in the comments and requests below.

General Application Requirements and Processing for C&DLF Facilities [15A NCAC 13B .0533]

15A NCAC 13B .0533 (b) provides guidelines for the preparation of all applications and plans required by Rules .0531 through .0547.

1. The cover sheet for the application did not include the location (address) of the facility.
2. The cover sheet for the application did not include the applicant's address.
3. The application did not include a statement of the purpose of the submittal signed and dated by the applicant.
4. The cover sheet for the drawings of the Operation and Closure Plans did not include the applicant's name. Please put "County of Lenoir" at the top of the sheet and above the names of

the officials that you have listed on the left side of the sheet. It would also be helpful to include the permit number in the title.

Application Requirements for C&DLF Facilities [15A NCAC 13B .0535]

15A NCAC 13B .0547 (4) states the permit amendment should be prepared in accordance with Rule .0535(b). Rule .0535(b) specifies that a complete application must include an updated engineering plan prepared in accordance with Rule .0539, an updated construction quality assurance plan prepared in accordance with Rule .0541, an updated operation plan prepared in accordance with Rule .0542, an updated closure and post-closure plan prepared in accordance with Rule .0543, and an updated monitoring plan prepared in accordance with Rule .0544. Therefore, these sections were included in the review as appropriate.

Site Study for C&DLF Facilities [15A NCAC 13B .0536]

15A NCAC 13B .0547 (4) (a) states that the application must contain local government approval in accordance with Rule .0536(c) (11).

5. The information provided did not document that the required public notice of the public meeting was given. The ads provided were blurred or difficult to read. There was no indication of the newspapers in which they appeared or the date of publication. Please obtain an affidavit of publication with a readable copy of the ad attached from the newspaper(s) that published the required advertisements.
6. The application did not contain information for us to verify that all property owners sharing a common border were sent registered letters or that the letters were sent to the appropriate property owners. Please include a parcel map with adjacent property owners and addresses.
7. The application did not provide documentation of the content of the letters sent to property owners. Please include a copy of the letter so that it can be verified that the required information was included.

Engineering Plan for C&DLF Facilities [15A NCAC 13B .0539]

8. The application should include an engineering report supporting the final cap design. Requirements are listed in .0539(d). The engineering report must include a discussion of the analytical methods used to evaluate the design, definition of the critical conditions evaluated and assumptions made, and a list of technical references used in the evaluation. The information and calculations should demonstrate that the proposed cover will be stable and safe during the post-closure period. The previously approved closure plan did contain a stability analysis. You may include a copy of any information from a previously approved plan to support your design if nothing has changed.
9. Drawing CL1 does not illustrate existing conditions. [.0539 (e) (1)]. Please review the requirements for drawings shown in .0539 (e) and revise.

Construction Requirements for C&DLF Facilities [15A NCAC 13B .540]

15A NCAC 13B .0543 (b) (1) states standards must be established for the scheduling and documenting of closure of all C&DLF unit and design or the cap system. Construction requirements for the cap system must incorporate requirements from Rules .0540 and .0541 of this Section.

10. Please address the requirements for survey control and location coordinates which would be important for construction during closure.

11. Are there or will there be any erosion and sedimentation control measures? How does this meet the requirements listed in .0540(7).

Construction Quality Assurance for C&DLF Facilities (15A NCAC 13B .0541)

15A NCAC 13B .0543 (b) (1) states standards must be established for the scheduling and documenting of closure of all C&DLF unit and design or the cap system. Construction requirements for the cap system must incorporate requirements from Rules .0540 and .0541 of this Section.

12. Items 2.1 – 2.5 of the closure plan discuss the procedures and tests that will be used in the construction of the cap. The closure plan does not include a Construction Quality Assurance (CQA) plan as described in .0541 (b). The requirements of a CQA plan go beyond listing the tests and results. The responsibilities and authorities, inspection activities, sampling strategies and documentation that should be addressed in a CQA plan are needed in order to ensure that the work is done properly and to provide the data for CQA report to finalize the closure. [.0541(a) – (b)]
13. There was no mention of a CQA report after the cap construction is completed. The purpose and requirements for the CQA report are in .0541 (c). The closure plan should state what information will be included in the report and the certification of the report.

Operation Plan and Requirements for C&DLF Facilities (15A NCAC 13B .0542)

14. Please add cross sections to the phasing plan drawings. Please include projected waste disposal rates, cover, and airspace remaining.
15. These drawings are supposed to be consistent with the engineering plan. No engineering plan was provided in this submittal. When you revise your application, please insure they are consistent.
16. In many places, your Operation Plan simply repeats the requirements word-for-word from the Solid Waste Rules. Knowing the rules is good, however, the Operation Plan should also describe how you will maintain and operate the facility such that you will meet the requirements. For example, 6.e. describes the need for signs with the hours of operation, permit, etc. is almost exactly word-for-word as stated in .0542 (j) (5). Your operation plan should include your information on the days and times you are open to the public, etc.
17. The Operation Plan is poorly organized and difficult to follow. Most of the 1.1 Introduction should be shown in existing or new sections. For example, it would seem more appropriate to list the types of waste you will receive in the waste acceptance section. I cannot review the plan in its current form. Please review the requirements and rewrite the operation plan in a useable format.

Closure and Post-Closure Requirement for MSWLF Facilities (15A NCAC 13B .1627) and Closure and Post-Closure Requirement for C&DLF Facilities (15A NCAC 13B .0543)

18. The cap system must be designed and constructed to have a permeability less than or equal to the soils underlying the landfill, or the permeability specified for the final cover in the effective permit, or a permeability no greater than 1.0×10^{-5} cm/sec, whichever is less. Please include a discussion of the basis for your design assumptions in the engineering report.
19. Item 2.2 is exactly the same as the first paragraph of Item 2.3 which follows it.
20. Post-settlement surface slopes were not addressed.
21. The plan states that native vegetation will be used as approved by the Erosion Control Plan. A plan was not included nor was any reference given to a plan.

22. All closure activities must be with 180 days. The first sentence in the third paragraph agrees with this. The first sentence in the first paragraph could be misinterpreted.
23. The closure plan did not include an estimate of the maximum inventory of wastes onsite over the active life of the landfill facility.
24. More detail is needed for the cost estimate of the closure activities. For example, in item 1 the unit cost for soil is \$9 per cubic yard versus \$4 in item 2. What makes the unit costs different? Provide basis for all the costs assumed.
25. Please include in the post-closure plan the use restrictions listed in .0543(f) (3) and the need for approval by the Division for a change in use.
26. Do you plan to mow the grass? Are there gates, roads, signs etc. that will need to be monitored and/or maintained? Please include in plan and estimate.
27. The description of monitoring activities should provide details. For example, what are the locations that will be sampled? What analyses will be run? Have these locations and analyses been approved by the Division? If so, include that information. This supporting information is needed in order to evaluate the post-closure cost estimate.
28. Please note that at the end of the post-closure care a professional engineer will need to certify that the post-closure care was completed in accordance with the post-closure plan. Unless he has been there the whole post-closure period, he will probably need documentation of the care to make his certification. Do you plan to keep records of the maintenance and monitoring activities in the landfill records? Will they be adequate for a PE certify? If so, please describe.
29. More detail is needed for the costs in the post-closure estimate similar to comment 24.

Due to the number of corrections needed throughout the document, I would suggest that you revise the entire submittal. Please note on the title page that it is a revised submittal. Two paper copies plus one electronic copy are needed. Please proofread your submittal carefully.

These comments are intended to expedite the review of the referenced application, and in no way do they restrict the Section's right to request additional information during the continuance of the technical review process. If you should have any questions regarding this matter please contact me at (919) 508-8542, or by email at pat.backus@ncmail.net.

Sincerely,



Patricia Backus, P.E.
Environmental Engineer

cc: Jimmie Woodie, MESCO
Dennis Shackelford, DWM
Ed Mussler, DWM
Wes Hare, DWM