



NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

Division of Waste Management

Pat McCrory
Governor

John E. Skvarla, III
Secretary

Solid Waste Section

October 17, 2014

Mr. Mike Cummings
Edgecombe County Solid Waste Manager
Edgecombe County Solid Waste Management Department
P.O. Box 10
Tarboro, North Carolina 27886

Subject: Comments on the Permit Amendment Application for a Five-year Permit Review
Edgecombe County Construction and Demolition Debris Landfill (C&DLF)
Edgecombe County, North Carolina,
Permit No. 33-01, Document ID No. (DIN) 21982

Dear Mr. Cummings:

The Division of Waste Management (DWM), Solid Waste Section (SWS) completed a review of the permit amendment application of continuing operations of the above-referenced landfill facility. The permit amendment application is titled:

- *Permit Application Edgecombe County C&D Landfill, (Permit # 33-01) Tarboro, North Carolina.* Prepared by: S&ME, Inc., Raleigh, NC. August, 2014 and received by the SWS on September 15, 2014. S&ME Project No. 1054-13-277A. (DIN 21802).

The permit application fee in the amount of \$9,000.00 was received by the SWS on September 29, 2014.

Based on the review, the SWS made comments on the engineering portions of the permit application for continuing operation of the C&DLF – Phases 1, 2, & 3. The comments are stated below:

General

1. For the sake of consistency throughout the permit application, please verify and confirm the following information in the documents:
 - i. The total waste footprint (in acres) of the C&DLF containing 9-phased developments and the approved gross capacity of 1,700,000 cubic yard.
 - ii. The combination acreage of the C&DLF – Phases 1, 2, & 3.

Section A - Facility Plan

2. (Section 1.2, the third paragraph, on Page 2) Please revise the information the total acreage of the C&DLF and add one paragraph to describe the purpose of this permit application including the waste capacity (829,000 CY) and acreage of the development and operation of the Phases 1, 2, & 3 (should be more than 21.2 acres).
3. (Section 2.4) Please add the miscellaneous waste management units - Mercury Containing Products Facility & Concrete Disposal Area to the Drawing 2 of 8.
4. (Section 3) Table 1 shown that the C&DLF - Phase 3 contained in-place waste of 18,487 cubic yards (CY) which is inconsistent with that (735,487 CY) in the Section 2.5 of the Operation Plan. Please clarify.
5. (Section 3.3) Please provide the acreage of the final closure cap/cover which must be differentiated from the acreage of “the largest area” subjected to an interim cover, encompassing Phases 1, 2, & 3 as requested in the Closure Plan.
6. (Drawing 6 of 8) Please provide the correct extent/outline and acreage of “Area Requiring Closure” on the drawing.

Section B Local Government Approval

7. Pursuant to the verbal agreement made between the SWS & SME over telephone conversations on October 03, 2014, S&ME, on behalf of the County, will obtain a letter from the Edgecombe County Board of Commissioners to clarify that the total acreage of C&DLF – 21.6 acres, that is shown in the May 5, 2014 public meeting document, is the existing (as of April 1, 2014) waste footprint of the C&DLF. The total acreage of the 9-phased development of the C&DLF as shown on Figure No. 1, which will be developed in next 29.2-year service life (as of June 2013) was inadvertently left out in the public meeting document. This clarification letter approved by the Board of Commissioners will provide **the total acreage of proposed waste footprint**, which encompasses the 9-phased development of the C&DLF with the total gross capacity of 858,479 tons or 1,700,000 cubic yard and be appended to the Section B – Local Government Approval.

Section C - Operations Plan

8. (Section 1.2) Please address the following concerns:
 - i. The Concrete Disposal Area is not shown on drawings. Please add the unit to the operation plan Drawing 2 of 13.
 - ii. Mercury Containing Products Facility shall be added to the list of waste operation units and to the operation plan Drawing 2 of 13.
9. (Section 2.5) Please see Comment No. 4.
10. (Section 6.2) For approval of open burning, please add the following new requirement (in italic format) to the end of second sentence. “Prior to any burning which meets the above criteria, ... *In*

addition, the Division of Air Quality and local fire department must approve the activity prior to burning.”

11. (Section 6.4) The standardized “Fire Occurrence Report” can be used by the County as a template for a written notification. The form can be downloaded from the website at http://portal.ncdenr.org/c/document_library/get_file?uuid=18760b57-0f71-464e-b89f-cf4790caa65f&groupId=38361 and be appended to the Operations Plan.
12. (Section 9.4) In light of leachate outbreaks repeatedly occurred at the C&DLF and the underlying closed MSWLF in 2014, this Section must clearly instruct the operator (s) by providing waste disposal skills/comment senses to avoid leachate breaks out in the future. Some examples are provided below for your reference:
 - i. Restrict waste placement to the smallest area by define the maximum extent (much less than one-half acres) of working face per day or week by portable signs/markers.
 - ii. Maintain a proper grade (not less than 7% or reasonable percent) of working face at the end of each working day and shall not spread waste to a new working face until a lift (approximately 10-feet high) at some portions of the existing working face has been established.
 - iii. Construct berm around shallow-spread working face by using stockpiled soil cover material.
 - iv. Develop a routine (daily & weekly) and non-schedule inspection plan (such as after a drenching or long-duration rainfall event) which must be appended to the Operations Plan. The inspection plan in the minimum must include personnel responsible for inspection and remedial action, written inspection checklist/report, and actions taken (chain of command). The completed inspection report/checklist must be placed in the operating records.
13. (Section 12) The Appendix H of the Construction Completion Report (Appendix VI-C) doesn’t include the LFGCCs Operations & Maintenance Manual dated May 2013, the inspection forms, and O&M schedule that mentioned in this Section. Please provide the described documents.
14. (Section 12.2) The Appendix I, not Appendix E (Appendix VI-C, the Construction Completion Report) contains the NC Air Permit. Please correct this typo.
15. (Section 14.1) Please add the notation of approved open burning (Section 6.2) and the notification of fire or explosion incident (Section 6.4) to the list of operating record.
16. (Appendix II-C) The approved Sampling & Analysis Plan, dated January 2010 (DIN 9224) proposed to install the well MW-1B and to replace the damaged/abandoned MW-1A. The SWS records shown The well completion log foe well MW-1B can’t be located in the SWS files/records. Has this well MW-1B been installed yet? Please clarify.
17. (Appendix IV-C) Since the Mercury Containing Products Facility is constructed and operational at the C&DLF, the collected mercury-containing devices inside the manufactured /mobile home can be

temporarily stored in the Mercury Containing Products Facility rather than the Convenience Center alone. Please add this info to this plan.

18. (Appendix VI-C, the Construction Completion Report of the Landfill Gas Collection and Control System [LFGCCs]) Please provide the air-tightness test results for air piping, a component of the constructed LFGCCs. The testing results are required by the Paragraph 3.9 of the Appendix H - Technical Specification Section 1505 – Pipe and Pipe Fittings and March 30, 2011 DWM Authorization for Construction a LFGCC (DIN 13394).

Section D – Corrective Action Plan

19. The SWS records show that the Corrective Action Plan (CAP) was amended and modified several times since the CAP, which is placed in the Section D was originally approved on January 06, 2010. For the sake of convenience tracking the chronological changes of the CAP, the SWS suggests the County to conduct the following tasks in the Section D to update the original CAP :
 - i. Please add/tabulate a paragraph or paragraphs to describe the chronological amendments and modifications of the original CAP including the document title and date; the accomplishment/effectiveness of the implementation of the CAP, as required in the Rule 15A NCAC 13B .0547(4)(c).
 - ii. Provide the status of the proposed “Hydraulic/Groundwater Barrier Wall,” a component of the approved corrective measures. If the hydraulic barrier wall is completely constructed, please provide the as-built drawings and all related approval documents issued by the NC Division Water Resources, NC Land Quality Section, US Army Corps of Engineers, etc.
 - iii. Please provide the revised cost estimate for the groundwater corrective action in accordance with the updated CAP for a review and approval. The costs shall be different (or separated) from the costs associated from those in the Post-Closure Cost Estimate (Appendix V-E, Table B: Task 1 – Groundwater and Surface Water Sampling and Analysis).
 - iv. The alphabetic numbers of the tabs (Section D-XX) are different from those contained/referenced documents (Section C-XX). Please clarify.
 - v. (Section D-4) The cross-references of the Operation and Waste Acceptance Plan and Water Quality Monitoring Plan aren’t updated.
 - vi. (Section D-8) Please also provide the latest financial assurance documents.

Section E – Closure & Post-Closure Plan

20. (Section 1.2) The Concrete Disposal Area and Mercury Containing Products Facility are not shown on drawings. Please add the units to the operation plan Drawing 2 of 9.
21. (Section 2.1.3) The descriptions of the construction and status of former passive gas vents/wells are inconsistent with those stated in the Facility Plan, Operations Plan. According to the gas well inventory data sheet in Appendix II-A of the Facility Plan, gas vents V-1, V-3, V-43, & V-49 were capped; V-4, V-43 through V-47 were plugged and abandoned. Please clarify.
22. (Section 2.3) Please address the following concerns:

- i. Since the application is requesting an approval to develop and operate the C&DLF - Phases 1, 2, & 3, the largest area that may be subjected to installing a closure cover in this 5-year permit cycle should be the one – “Phase 3” shown on the Facility Plan Drawing 4 of 8 or the Operations Plan Drawing 5 of 13. Please revise the Closure Plan Drawing 3B of 9 accordingly including the final grades/elevations of the intermediate cover/cap encompassing Phases 1, 2, & 3 and correct acreage of this proposed capped area.
 - ii. Evidently, the combination acreage of Phases 1, 2, & 3 that is subjected to closure is greater than 21.4 acres as described in this subsection. Please provide the correct acreage of the largest area requiring capping in this subsection.
23. (Section 2.6) The largest area to be closed needs to be corrected (referring Comment No. 22). The updated Financial Assurance document (**Section F**) with the correct costs for closure, post-closure cares, current corrective action for groundwater remediation, and potential assessment and corrective actions (PACAs) must be submitted and appended to the Closure/Post-Closure Plan.
24. (Appendix III-E) Please address the following concerns associated with closure cost estimate:
 - i. The largest area that is subjected to closure is greater than 21.4 acres; please update the acreage in the quantity of the cost estimate.
 - ii. Please add the cost for as-built survey and certification.
 - iii. Is there a reason or reasons why the quantity and unit cost for “low permeability layer laboratory testing” are significantly reduced (in comparison to those in previous approved cost estimate for closure)?
25. (Appendix V-E) Please address the following concerns associated with closure cost estimate:
 - i. Please explain why the unit costs for “laboratory analysis” & “project coordination” in Task 1 are significantly reduced than those in previous approved cost estimate for post-closure cares?
 - ii. Please explain why the unit cost “gas vent replacement” in Task 9 is reduced than that in previous approved cost estimate for post-closure cares?
26. (Appendix VI-E) Please address the following concerns related to the Construction Quality Assurance (CQA) Plan:
 - i. (Section 3.2) It is likely that CQA testing on soil samples collected from either stockpiled area or borrow source will be according to with Section 3.4.2. If it is correct, please specify exactly (rather than Section 3.4).
 - ii. (Sections 7 & 8) The record drawings – as-built survey drawings must be prepared, signed, dated, and certificated by a licensed surveyor who is registered in the State of North Carolina. Please add this requirement to the Sections.
27. (Appendix VII-E) Please address the following concerns associated with Technical Specifications:
 - i. (Section 02060 – Aggregate) Due to potentially encountering leachate generated from wastes, the gravel or granular material used to backfill the gas wells must be either non-carbonated

rock origin or be tested (by ASTM D4373 method or equivalent methods) for the calcium carbonate content which is less than 15%. The test results from a quarry must be submitted for approval prior to shipping to the site. Please add these requirements to the Part 2 of the Section.

- ii. (Section 02320 – Structural Fill) The Erosion Layer specified in Part 2.1.B shall be the Fill Type S1, not Fill Type S2 which is for the 6-inch-thick Vegetative Soil Layer, in consistent with Section 02320 & CQA Plan (Section 6). Please correct this typographic error.
- iii. (Section 02611 – Landfill Gas Wells) Please address the following concerns:
 - a. The Edgecombe County Landfill has accepted (closed MSW unit) and is accepting (the C&D unit on top of the closed MSW unit) asbestos containing material or wastes for disposal, County must submit an asbestos work plan to the Health Hazards Control Unit of the Division of Public Health, Department of Health & Human Services for a review and approval. The approved work plan must be one of the submittals specified in the Paragraph 1.6.
 - b. The Paragraph 1.7 must include the gas well completion log and well abandonment log.
 - c. The Part 2.2.A.4 specifies the backfill stone for gas well is NC DOT No.4 stone which is inconsistent with that (NC DOT #57 stone) which is specified in Section 0206 Part 2.1.B – Type A2 coarse aggregate. Please clarify.

28. (Appendix IX-E) The in-placed waste volume of 734,411 CY is inconsistent with data that is present in the Facility Plan & Operations Plan. Please clarify.

The SWS Hydrogeologist is also reviewing the non-engineering portions of the permit application. Upon completion of the review, she or he may or may not issue the County a written comment letter later.

If you have any questions or requests for further clarification of the above-referenced comments on the engineering portions of the permit application, please contact me at (919) 707-8251 or ming.chao@ncdenr.gov or Mr. Ben Barnes, Solid Waste Management Specialist for your area at (252) 236-4453 or ben.barnes@ncdenr.gov.

Sincerely,



Ming-Tai Chao, P.E.
Environmental Engineer
Division of Waste Management, NCDENR

cc:

Samuel P. Watts, P.G., S&ME, Inc.
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Central Files