



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

Beverly Eaves Perdue  
Governor

Dexter R. Matthews  
Director

Dee Freeman  
Secretary

March 9, 2009

Mr. Judson Whitehurst  
802 Recycling Lane  
Greenville, NC 27834

Re: Comments on the Application for Permit to Construct, Phase 2, and Closure/post-closure plan for 547 requirements, C&D Landfill, Inc., Permit No. 74-07, Pitt County, Doc ID No. 6985

Dear Mr. Whitehurst:

The North Carolina Solid Waste Section has reviewed the response to comments submitted February 12, 2009 on your behalf by your consultant, David Garrett. Please address the following comments to complete the application process:

1. Please add the applicant signature page to the report text.
2. Page 2 – Proposed Conditions – Total CDLF Footprint Acreage – It appears that the acreage should be 38 acres instead of 48 acres.
3. The following pages should be signed and sealed - Last page, page 33 of Design Hydro, Volume 1, last page of the Monitoring plan, and last page of Volume 2, Certification.
4. Please provide copies of the land deeds for the landfill properties, and identify the parcel identification numbers for each landfill property parcel, with parcel maps (online copy is acceptable). Because a portion of the adjacent parcels east and west of Phase 2 have been added to the landfill property boundary to meet the 200 foot property line buffer, the landfill property should be recombined. Please provide recombination documentation.
5. Please provide documentation of the new wetlands survey that excludes the two wetland areas that were previously shown in Phase 2.
6. Please show onsite surface water streams on drawings E1, E2, and MP-1.
7. On the drawings please show the location and boundary of the land clearing and yard waste processing area (as indicated in Section 8.1.1).
8. Section 1.4 (1) – Please correct the status of the final cover for Phase 1.
9. The Closure/post-closure plan should describe the installation of the gas venting system. Closure costs should include gas vents.
10. C/PC plan – Section 9.3.1.3 and the 547 submittal - The C&D rules require gas monitoring for Phase 1 and 2 during the entire 30 year post closure period (instead of 5 years). Monitoring should be conducted at the gas monitoring points in addition to the headspace of the groundwater monitoring wells. The post-closure schedule should reflect that gas monitoring will continue through the 30 year monitoring period. Sections 9 and

- 10 - Rules require quarterly sampling for methane gas, unless otherwise approved by the Dept. Please provide reason/justification for proposing semi-annual sampling.
11. Please modify Table 1B in the Water Quality Monitoring Plan to include monitoring well MW-9A.
  12. Post closure costs – The number of monitoring wells and surface water samples, and the number of samples per year should correspond with the number of wells and samples per year listed in the Water Quality Monitoring Plan for Phase 1 and 2.
  13. 547 submittal – Drawing C1 – Please label or provide key for the bold and dashed lines shown on the final cap, and the line southeast of the landfill.
  14. Please submit a revised Closure/post-closure plan to meet rule 547, that is consistent with the C/PC plan in the PTC application.
  15. The side slope bench drains and piping should be shown on a plan final cover drawing. A discussion of the below grade design of the stormwater system should be provided, along with a discussion of installation. Regular maintenance and inspection of the drains and piping should be described.
  16. Drawings – Please show direction of stormwater flow around the landfill base.
  17. Please submit an electronic copy of the February and November submittals.
  18. Does the cost estimate for closure factor in the following cost items: Survey, as-built drawings, Recordation/ notation fee, Machine/equipment costs, Fuel costs, Construction administrative fee, 10% contingency reserve, Surface preparation, Construction document and bidding, CQA field monitoring and lab testing, CQA reporting and certification.

For your reference, a copy of the Section's last review comments, dated February 9, 2009, are enclosed.

If you have any questions please contact me by email [donna.wilson@ncmail.net](mailto:donna.wilson@ncmail.net) or phone (919) 508-8510.

Sincerely,



Donna J. Wilson  
Environmental Engineer  
Solid Waste Section

c: David Garrett  
John Tucker  
Agyemang Adu-Poku  
Ben Barnes

Comments on C&D Landfill, Inc.

74-07

PTC Application for Phase 2A and 547 Closure/post-closure plan

Feb. 9, 2009

Donna Wilson

1. Please provide copies of the land deeds for the landfill properties, and identify the parcel identification numbers for each landfill property parcel, with parcel maps (online copy is acceptable). Because a portion of the adjacent parcels east and west of Phase 2 have been added to the landfill property boundary to meet the 200 foot property line buffer, the landfill property should be recombined. Please provide recombination documentation.
2. Please provide documentation of the new wetlands survey that excludes the two wetland areas that were previously shown in Phase 2.
3. The Volume 2 copy submitted is missing some pages, while some pages were duplicated. We were unable to review Sections 5.5.1 through 6.0 for comments, and unable to review the text for comments #19, #21, #22, and #23.
4. Non-attainment area – The report text should note that the Greenville area is on the proposed list for a State Implementation Plan for Section 110 of the Clean Air Act, note the status, and any impact of the proposed plan for the landfill.
5. Section 3.2.2 – The landfill must be developed in Phases of approx. 5 years each. The drawings indicate that the first 5 year phase is Phase 2A. This is not described in the facility plan. The Facility Plan should describe each 5 year capacity volume and identify the volume filling increments on the drawings. Drawing E-4, as described in previous comment #15, was not provided in the last submittal. The phase drawings should indicate the fill elevations and fill areas corresponding to each 5 year capacity.
6. Section 1.3 – Application should say this is a Permit to Construct application for Phase 2A and provide size and volume info for Phase 2A, that provides 5 year capacity. The other phases, sizes, and volume should be described in the facility plan. The facility plan should also list the volume and acreages for Phase 1.
7. Drawings and volume calculation – The final extreme top elevations can not be constructed as shown. The calculation of landfill capacity including the extreme top elevations results in the numbers larger than it should be.
8. Section 3.2.2 – Final cover should be placed within the times specified in .0543 (c)(5), instead of 6 months.
9. Section 3.3.2 - Report should provide landfill gross capacity as defined in rules to be from the bottom of waste to the top of final cover.
10. The discussion on the settlement should include the variables entered into the model, a description of each run, and a discussion of the specific results. Also needed is a discussion of the slope stability calculations for the 3 to 1 side slopes.
11. CQA – Tables 7A, 7B, and 7C – For each test, include criteria for pass/fail.
12. Section 7.1.5.2 – Please provide Appendix A to the CQA report that contains a list of the ASTM test procedures.
13. Please modify Section 7.1.1.1 to indicate that the CQA is not just for final cover installation. Section 7.2.1.3 should include soil material type testing to meet the upper two feet requirement consisting of SC, SM, ML, CL, or CH soils.
14. CQA final report – Please clarify that the report will contain the projects engineer's certification and seal that the construction was completed in accordance with the CQA plan, the conditions of the permit to construct, the requirements of the North Carolina C&D rules, and acceptable engineering practices.

15. On the drawings please show the locations and boundaries of the recycling area (material recovery facility), the white goods recycling/storage area, the tire recycling area, the land clearing and yard waste processing area, and any other waste handling and recycling areas. Section 1.2 stated that tires are not accepted, and Section 8.1.1 stated that tires are accepted; please clarify.
16. Section 8.16 – Recordkeeping should also include the engineering plan, a copy of the current Permit to Construct and Permit to Operate, and the monitoring plan.
17. Section 1.4 and closure/post-closure plan - Please clarify in both PTC application and in the Closure/post-closure plans the status of the final cover placed over Phase 1 as of June 30, 2008. Please provide documentation for closure of any areas prior to June 30, 2008, including dates of closure and drawings showing boundaries.
18. Closure/post-closure plan should include CQA for final cover installation in the 547 application.
19. Section 9.2.2 and the 547 report – For Phase 2, the largest area that will require final closure should be larger than 2 acres. It would be the largest area requiring final cover during this 5 year permitting phase. For Phase 1, it is stated that the maximum area requiring final cover in Phase 1 is 7.5 acres. Since the final cover for Phase 1 has not been established/documented for any portion, it appears the maximum should be 15 acres.
20. 547 submittal – It is possible to have separate closure/post-closure plans for Phase 1 and 2, but it would be difficult. The largest area requiring final cover would most likely include portions of Phase 1 and 2. Also separating closure and post-closure costs for each phase is difficult, when many of the costs overlap. It is recommended to have one closure/post-closure plan for both Phases 1 and 2 - the same plan in both the 547 submittal and the Phase 2 PTC application.
21. Closure/post-closure plan – costs should include both Phase 1 and 2. Costs should be based on the largest area requiring final cover, which would probably include both sections of Phase 1 and 2. The closure plan should address when Phase 1 is expected to reach final elevations and close.
22. C/PC plan should describe installation of the gas venting system. Closure costs should include gas vents. C/PC costs should be in 2009 dollars. Please clarify costs that are subject to verification.
23. Closure costs – It appears that there isn't adequate soil types onsite to provide the low permeability layer. Costs should be based on an offsite source for this layer.
24. C/PC plan – Section 9.3.1.3 and the 547 submittal - The C&D rules require gas monitoring for Phase 1 and 2 during the entire 30 year post closure period (instead of 5 years). Monitoring should be conducted at the gas monitoring points in addition to the headspace of the groundwater monitoring wells. The post-closure schedule should reflect that gas monitoring will continue through the 30 year monitoring period.
25. PC costs – List number of each water sample and cost per sample/analysis. PC costs should include gas monitoring. Costs should be totaled. Costs should include Phases 1 and 2.
26. 547 submittal – Drawing C1 – Please label or provide key for the bold and dashed lines shown on the final cap, and the line southeast of the landfill.
27. 547 submittal – Please correct the sentence in Section 1.2.2 that states that a portion of Phase 1 has received final cover under Rule .0510.
28. The side slope bench drains and piping should be shown on a plan final cover drawing. A discussion of the below grade design of the stormwater system should be provided, along with a discussion of installation. Regular maintenance and inspection of the drains and piping should be described.
29. Please label/identify the surface water streams on a drawing.
30. Drawing E-1 should indicate that the groundwater elevations shown are the seasonal high groundwater table.
31. Drawings – Please show direction of stormwater flow around the landfill base.
32. Please correct the following typos:
  - a. Section 9.1.6 of C/PC plan and Section 1.1.6 of 547 submittal – “deep.”

- b. Section 8.7.2 – “This practice does alleviate the Owner’s responsibility for establishing vegetative cover. . .”
  - c. Financial assurance – page 57 indicates that the local government test will be used.
33. Please submit an electronic copy of the February and November submittals.
34. Vol. 2 Page 8 Section 7.1.1.3 - This section quotes SC DHEC as the regulatory authority. Please correct that.
35. Does the cost estimate for closure factor in the following cost items:
- Survey, as-built drawings
  - Recordation/ notation fee
  - Machine/equipment costs
  - Fuel costs
  - Construction administrative fee
  - 10% contingency reserve
  - Surface preparation
  - Construction document and bidding
  - CQA field monitoring and lab testing
  - CQA reporting and certification