



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

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

May 7, 2010

Mr. Vernon Smith
WCA Regional Vice President
40 Estes Plant Rd.
Piedmont, SC 29673

Re: Comments on the Phase 2A Permit to Construct Application, Material Recovery C&D Landfill, Permit 92-31, Wake County, NC, Doc ID 10561

Dear Mr. Smith:

The North Carolina Solid Waste Section has completed its review of the above referenced application, Doc ID 9979, 9980, 9981, and 9982, submitted on WCA Waste Corp's behalf by your consultant, David Garrett. Please address the following comments to complete the application process:

1. Application should be stamped and sealed by a Professional Engineer licensed in NC. Provide a certification statement in accordance with Rule .0539 (b).
2. In multiple sections of the report, the text references another Section in the report, and many times this Section number (or Drawing or Appendix number) is incorrect. Please check and correct entire report for Section/Drawing/Appendix references. Please provide hyper links for these references in the electronic copy, if possible.
3. Introduction:
 - a. Page 1 – Please reword the statement that Phase 2 has been previously approved. It can be stated that Phase 2 was included in the approved site suitability.
 - b. Page 1 – Final cover closure under the .0510 Rule was not completed for any side slopes in Phase 1. Please update all affected portions of the application.
 - c. Page 1 – Please update the status of the S&EC permit application.
 - d. Page 1 – Please correct the last sentence regarding the Permit to Construct area to be permitted at this time. This application should be for the next 5 year phase volume, and not the remaining larger portion remaining in the northern area. The PTC that will be issued will include the construction of the 5 year volume phase (Phase 2A), while more than one PTO may be issued for cells or portions of Phase 2A if construction is to be in stages.
4. Section 1.0 Background Information:
 - a. Section 1.1 – Please clarify if the “inert debris stockpile” is concrete only. Where is the land clearing and inert debris stockpile? What is the source of the land clearing debris and what is done with it?

- b. Section 1.1 – The franchise approved service area and daily tonnage listed are incorrect. Please check the rest of report for the same error.
 - c. Section 1.1 – The permit issued in January 2008 was not issued for 5 years. It expired October 2008.
 - d. Section 1.3 – Please clarify the calculation of 5.6 million cy. The 1.4 million of Phase 1 includes areas not yet filled. The 4.2 million cy also includes areas of Phase 1 not yet filled.
 - e. Section 1.3 – A Phase should be designed for 5 years volume, as required by .0537 (c). The text describes Phase 2 as lasting 16 years. Each 5 year volume should be defined for both area and height. Please show calculations. The original site suitability identified the northern portion as Phases 1 through 4. It's also acceptable to name the phases Phase 2A, Phase 2B, and Phase 2C, as shown on the revised drawing 8 sent in on April 5.
 - f. Section 1.3 - Please clarify the phrase “including the current cycle just started this year.”
5. Facility Plan:
- a. Section 3 – Facility Plan – The Rules require that the facility plan define the comprehensive development of the property, consistent with the approved site suitability. The facility plan should be prepared to encompass the information for all existing phases and all future phases, including the southern portion. The title should include all phases.
 - b. Drawings should show all long-term phases of development, with each 5-year phase labeled. Drawings should show borrow and stockpile areas. Site drawings should show floodplains, wetlands, unstable areas, and cultural resource areas as defined in Rule .0536.
 - c. Please describe the status of fill operations within Phase 1, cell 3.
 - d. Please provide a survey plat drawing of the property.
 - e. A description of the types of waste should be included.
 - f. Section 3.3.1 - The service area, allowable daily rate, and tons/year should be corrected. Please add the actual annual rate received for the last 2 years.
 - g. A description of equipment requirements should be in the facility plan (Rule .0537 (e)).
 - h. Section 3.2.2 – Please correct the statement that 3:1 interior slopes are in accordance with Division requirements. Slope requirements are 4:1, unless an alternate slope can be demonstrated as acceptable.
 - i. Section 3.3.2 – Please provide a table for landfill capacity, listing each phase (cells are optional), including the long term development of the facility, consistent with site suitability. Gross capacity, acreage, and expected life should be provided for each Phase, including the southern portion. Each Phase should be designed to not exceed approximately 5 years of operating capacity. Gross capacity is defined in the rules as the volume from the bottom of waste to the top of final cover. Net capacity may also be listed. Footnotes should provide definitions of both gross capacity and net capacity (if included). Include the existing filled capacity of Phase 1 and the remaining capacity for Phase 1, with a footnote listing the calculation date.

- j. Note - The capacity of Phase 1 has been listed in previous permits as approx. 1,429,000 cubic yards. The Section should clarify that this volume represents waste only volume, as listed in the first permit application, Doc ID 10463, Table 1. The gross volume for Phase 1 should be 1,632,050 cubic yards.
 - k. What is the approximate interim elevation of fill in Phase 1 (across cells A, B, and C) before Phase 2A will begin to be filled? What is the remaining capacity in Phase 1 (volume and estimated life) before this interim elevation is reached? Is the interim elevation shown as Stage 1 on Drawing 8?
 - l. Section 3 – Address whether there are additional solid waste management activities conducted at the facility (yard waste processing, recycling, etc.).
 - m. Section 3.3.2 – The second paragraph is confusing. Was the Feb. 2008 surface model compared to the March 2005 surface model? In March 2005, cell 1A was the only cell approved.
 - n. Section 3.3.3 – Please update the description of the plan to blast.
6. Engineering Plan:
- a. Provide a discussion and map of the wetlands delineation for the Phase 2A area.
 - b. Please discuss the settlement calculations and results, and state in text whether the required four foot separation distance to seasonal high groundwater table will be maintained with the calculated settlement. Discuss in text the assumptions used in the calculations, and describe the parameters entered into the calculations. Clarify if boring B4 or G4 was used, and how data for G13 was used. Provide a reference for the equation.
 - c. Section 4.4.5 – The text states that temporary S&EC measures are shown on drawing E1, but I couldn't find it on any drawing.
 - d. Engineering Plan is missing calculations to demonstrate that the proposed 3:1 slope is stable. Provide slope stability calculations. The slope stability calculations should represent both the Phase 2A area as filled, and also the complete northern area filled (Phases 1, 2A through 2C).
 - e. In multiple sections of the application, describe the design, materials, installation, operation, and maintenance of the below ground piping stormwater control system on the final cover. How will it be designed to keep soil and debris from entering the below ground piping? How will leaks and breaks be detected and repaired?
 - f. In multiple sections of the application, describe the design, materials, installation, operation, and maintenance of the final cover methane vents and piping. Discussion of installation should address the excavation of waste below the final cover.
7. Construction Plan Requirements:
- a. Section 5.3 – Where is the onsite permanent benchmark located?
 - b. Section 5.5.1 – “Phase 1A” should be “Phase 2A”.
 - c. Section 5.5.1 – Please correct the Rules reference.
 - d. Section 5.7 – Please update the status of the sedimentation and erosion control permit.
 - e. Will the drinking water well at the former dwelling in the center of the phase 2 area be abandoned with the construction of Phase 2A or Phase 2B?
8. CQA Plan:

- a. In multiple sections, the text should state that the CQA covers both cell construction and final cover construction, instead of final cover construction alone.
 - b. Section 6.1.1.3 – Correct reference to South Carolina Solid Waste Section.
 - c. Section 6.1.2.4 – Please clarify the statement regarding paper mill residuals used in structural fills.
 - d. Section 6.1.4 – Modifications to the CQA Plan should also be approved by the Solid Waste Section, as appropriate to meet Solid Waste Rules and Statutes, and for input regarding quality of construction.
 - e. CQA testing frequencies should include inspection of subgrade materials to meet requirements.
 - f. Specify the thickness of each lift.
 - g. Include lab moisture-density-permeability relationship test frequency.
 - h. CQA Plan and Operating Plan - Describe the procedures to ensure that the integrity of the landfill systems will be maintained prior to waste placement in a newly constructed cell.
 - i. Section 6.5 – It should be stated when a CQA report will be submitted to the Section, following Rule .0541 (d) (1) and (2).
9. Operations Plan:
- a. Section 7.1 – Please remove statement that it is assumed that the Operating Plan will be followed as written. The Operating Plan should describe how the landfill will be operated.
 - b. Section 7.1.1 – Please clarify what is accepted at the facility. It is stated that inert debris is accepted, and it is stated that LCID (land clearing and inert debris) is not accepted. Section 7.4.1 states that land clearing and inert debris will be accepted.
 - c. Section 7.2.3 – Please correct DENR email extensions to @ncdenr.gov. Dennis Shackelford's phone number is 910-433-3349. Donna Wilson's phone number is 919-508-8510. Brad Bailey's phone number is 919-508-8565. Brad Bailey's email is Bradley.bailey@ncdenr.gov.
 - d. Section 7.4.2 and other sections in the application - It is our understanding that the landfill is not taking asbestos for disposal. Please clarify.
 - e. Section 7.5 – Please correct the Rule reference.
 - f. Section 7.6.2 – Small quantities of garbage (food containers) are not acceptable for disposal at a C&D landfill.
 - g. Section 7.7 – It should be noted that areas which will not have additional wastes placed on them for three months or more, but where final termination of disposal operations has not occurred, must be covered and stabilized with vegetative ground cover or other stabilizing material.
 - h. Section 7.7.1 – Please reword sentence regarding alternative periodic cover to indicate that any alternative cover must be approved by the Division.
 - i. Section 7.7.2 and 8.2.1.4 – Lift thickness should be maximum 9 inches loose, 6 inches compacted.
 - j. Section 7.7.2 - Specify the maximum thickness of mulch used as slope stabilization.

- k. It should be stated that the owner or operator will notify the Section within 24 hours of attempted disposal of a waste that is not permitted to receive, in accordance with Rule .0542 (c)(1).
 - l. Section 7.10 – It should be noted that prior to any burning of land clearing debris generated onsite or from emergency clean-up operations, a request must be submitted to the Section for approval.
 - m. Section 7.11.1 – Please clarify first sentence regarding access that is required.
 - n. Section 7.15 – The operating record should also include methane monitoring data and documentation, financial assurance documentation, notation of date and time of placement of cover material, a copy of the approved engineering plan, a copy of the current Permit to Construct and Operate, and the water quality and landfill gas monitoring plan in accordance with Rule .0544.
 - o. Describe the placement and maintenance of the permanent markers used to delineate the edge of waste boundary.
 - p. In a couple of sections the incorrect landfill is referenced, C&D Landfill, Inc. Please correct the report to refer to the Material Recovery Landfill.
10. Closure and Post-Closure Plan:
- a. The title should indicate that the plan is for Phases 1 and 2A. Also, other sections throughout the Closure and Post-closure plan should indicate that the requirements and plan apply to both Phase 1 and 2A, not just Phase 2A.
 - b. Section 8.1.2 states that the final cover slope will not exceed 4:1. The rest of the application illustrates a 3:1 slope. Please correct.
 - c. Section 8.1.6 – Typo – “Deep” should be “deed.”
 - d. Section 8.2.1.4 – If mulch is proposed for the vegetative layer, specify the percentage of soil to mulch.
 - e. Section 8.2.2 – The largest area requiring final cover should be Phase 1 (20 acres) plus the acreage of the next 5 year portion (Phase 2A) that is to be permitted at this time. Please strike the sentence referring to closure of a portion under the .0510 Rules.
 - f. Section 8.2.4 – The last sentence is unfinished.
 - g. Table 8A should include Phase 1 in the title. Cost estimates should be based on Phase 1, 20 acres, plus the next 5 year portion, Phase 2A. Please update the cost of the storm water piping. Please correct errors in multiplication, addition. Costs should include gas vents and installation. List the number of vents, and cost per vent. Costs should include surveying and contingency. After total cost, include closure cost per acre.
 - h. Section 8.3.1.3 and Table 8B – This section should be modified to be consistent with the Rules regarding the duration of methane monitoring during the post-closure period. This section should also be consistent with the Landfill Gas Monitoring Plan of volume 2. Please correct “Phase 1A.”
 - i. Post-closure plan and Table 8B – Describe inspection and maintenance of groundwater and landfill gas monitoring wells, below grade stormwater piping, final cover gas vents, and frequency of inspection, and include on Table 8B.
 - j. Section 8.3.2 – Please correct the address and/or name of the responsible party contact. The phone number is also incorrect.

- k. Section 8.3.3 – Section should state that any proposed use of the landfill property after closure requires approval of the Solid Waste Section.
 - l. Table 8C – Title should list Phase 1 and 2A. Calculations should be based on the Phase 1, 20 acres, plus the next 5 year portion. Please correct errors in multiplication, addition. List the number of groundwater wells, cost per well, and the number of samples per year. Include maintenance/repair of groundwater and gas monitoring wells, fence, gate, sign, and roads, and maintenance repair of the below grade final cover stormwater piping and final cover gas vents. Include landfill gas monitoring, surface water monitoring (number of samples per year, cost per sample), and contingency. The unit cost for reseeded, mulching, and erosion repair seems low. After total cost, include cost per acre per year.
11. Financial Assurance - Section 9.0 – Text should indicate that the financial assurance amount applies to the Phase 1 and 2A area. The cost estimates should be updated to be based on 2010 dollars.
 12. The capacity and volume numbers from the July 2008 and July 2009 facility annual reports provide conflicting and confusing information. Please provide clarification for these numbers, consistent with the capacity and volume numbers prepared for this report.
 - a. In the July 2008 report, it was reported that the amount of waste disposed according to scale records since the opening date through the date of survey (Feb. 2008) was 623,788 tons. In the July 2009 report, it was reported that the amount of waste disposed according to scale records since the opening date through the date of survey (Feb. 2009) was 1,093,504 tons. The difference is nearly 400,000 tons but the amount of waste received annually is less than 200,000 tons.
 - b. In the July 2008 report, since opening of the landfill how much volume has been used as determined by aerial or survey was reported to be 887,445 cy. In the July 2009 report, since opening of the landfill how much volume has been used as determined by aerial or survey was reported to be 1,822,500 cy. The total gross capacity of Phase 1 is 1,632,050 cy.
 13. Drawings:
 - a. Drawings 3, 5, 6, and 7 – Please update the existing contour topographic contours.
 - b. Gas vents should be added to a final cover plan drawing.
 - c. Drawing 10 shows a few places in which the separation distance between base and groundwater is 4 feet. The separation distance should account for settlement.
 - d. Please show on a drawing the location of the onsite survey benchmark(s).
 - e. Please show existing contours on a base grade and final grade drawing.
 - f. Please provide directional flow arrows for surface water to the sedimentation basins.
 - g. Where will detail F/EC2 be used? I couldn't find it referenced on the drawings.
 14. Section 4.1, Section 6.4.21, Section 7.7.2, Section 7.7.4.2, Section 7.9, Section 7.13, Section 8.2.1.4, - Please change “should” to “will.”
 15. App. 1 – The earthwork balance calculations should specify numbers for Phase 2A, in addition to the total numbers for Phase 2A, 2B, and 2C. Please clarify the gross capacity volume (from bottom of waste to top of final cover).
 16. Appendix 3 – Please update the Hazardous Waste contacts, as the information is from 2007.
 17. Please check the entire application for various typos.

Please submit responses to comments as replacement pages to the application. Replacement pages should list the date the submittal was prepared, the revision number, and page number. Please provide two paper copies of the replacement pages, and one electronic copy of the complete application with the revised pages.

We request that the electronic copy of the response submittals be provided as one pdf document file, if possible. In the electronic copy, chapters or sections, figures, tables and appendices should be marked with bookmarks within the document and hyperlinked in the table of contents and within the text as appropriate.

When the staff review and application is complete, the report cover sheet should be modified to include revision or final dates, and the table of contents should be modified, as necessary.

If you have any questions on the above comments, please contact me at (919) 508-8510 or by email at donna.wilson@ncdenr.gov.

Sincerely,



Donna J. Wilson
Environmental Engineer
Solid Waste Section

cc: David Garrett
Dennis Gehle
Brad Bailey
Jason Watkins