Scanned By	Date	DOC ID	Permit
Backus	04/05/2011	13406	41-12

City of Greensboro
North Carolina

Field Operations Department

April 5, 2011

Ms. Patricia Backus, P.E.
North Carolina Department of
Environment and Natural Resources
401 Oberlin Road
Raleigh, NC 27605

Re: March 31, 2011 HDR Letter Approval
City of Greensboro, White Street Landfill
Phase III – Permit 41-12 Renewal
Guilford County, Permit No. 41-12

Dear Ms. Backus,

This letter is to serve as acknowledgement and approval for the attached March 31, 2011 letter addressed to you from HDR on behalf of the City of Greensboro.

If further is required, please advise.

Sincerely,

Dale Wyrick, P.E.
City of Greensboro
Director of Field Operations

(attachment)

March 31, 2011

Ms. Patricia Backus, P.E.
North Carolina Department of
Environment and Natural Resources
401 Oberlin Rd
Raleigh, NC 27605

Re: Response to your March 15, 2011 email Comments
City of Greensboro, White Street Landfill – Phase III Permit 41-12 Renewal
Guilford County, Permit No. 41-12

Dear Ms. Backus:

HDR Engineering Inc. of the Carolinas (HDR), on behalf of the City of Greensboro Environmental Services Department (City) is hereby submitting the following responses to your email questions on the March 15, 2011 in regards to the Permit Renewal Application submitted by HDR on February 28, 2001. We have structured this response letter to closely match the order of your questions and comments.

I am preparing the draft permit and transferring information from the previous permit dated April 14, 2005 (attached). I notice that items 11, 12, 15, and 16 under the approved documents have notes stating the documents would be placed in Document 10, the certification report dated December 2004. We don't have the individual documents in our scanned files and the construction report has been sent to archives. The construction report sent to archives was dated April 14, 2005. Can you confirm that the documents were added?

Item 11 was superseded by item 15 and item 12 is included as an attachment in item 15. Both items 15 and 16 were included in the Appendix A of the certification report.

Since the approved documents were listed individually, I hesitate to remove their individual listings. Plus, I don't want to mess up the document numbers if you have been labeling the documents. Assuming that there was a "final" construction report, I would like to modify the Document 10 entry to say "as revised through April 14, 2005" and change the "to be placed" in the other items to "included in". This depends on your answer to 1.

We have not been using the numbering system and since two of the documents were either superseded or repeated in item 15 I would suggest deleting items 11 and 12 then renumbering items 13 through 16 for less confusion in the future. We agree with the item 10 changes.

I want to have the explanation of the capacity in a letter or email that I can reference in the permit. That is important.

There is confusion on what the permitted capacity is for Phase III. The 2005 NCDENR permit did not reflect the changes in the 2000 permit modification. Here is a brief history on the capacity numbers referenced for Phase III (Permit 41-12).

- 1995 CPA – Total Gross Operating Capacity = 5,140,000 cubic yards (cy) - based on planimeter measurements comparing Top of Operational Cover to Top of Final Cover.
    - Net Capacity for Waste = 3,885,000 cy (Waste only, no daily or intermediate cover)

- 2000 Permit Modification = Total Gross Capacity = 5,643,998 cy (Top of Subgrade to Top of Final Cover)
    - The additional airspace is a result of increasing the landfill footprint in the area of the former Duke Energy substation.
    - Total Gross Capacity of 5,643,998 cy computed by AutoCAD.
- 2011 Permit Amendment = Total Gross Capacity = 5,351,373 cy (Bottom of Waste to Top of Final Cover) – rounded to 5,352,000 cy for reporting
    - Total Operating Capacity = 5,058,000 cy (Top of Operational Cover to Top of Intermediate Cover, excludes 3.5 ft thick base liner and 3.5 ft thick cap liner)

The NCDENR 2005 Permit references the 3,885,000 cy for waste only which is not how we measure consumed airspace. Typically we look at operating airspace which includes waste, daily and intermediate cover. Based on our calculations we suggest either referencing the Total Gross Capacity of 5,352,000 cy or the Total Operating Capacity of 5,058,000 cy. Figure 5-3 has been revised to include the Total Gross Capacity of 5,352,000 cy and has been enclosed with this letter.

Currently the Phase III landfill is only receiving a small, select MSW waste stream from the City's wastewater treatment plant as directed by the City Council. As such, random inspections are not being conducted because the waste is from a known source and is homogeneous. Cover is only applied on days when waste is received. The balance of the MSW is directed to the City's transfer station at this time, but could be redirected to the landfill should the Council vote to do so or in case of an emergency. The City Council may also elect to dispose of C&D material in Phase III at the completion of Phase II. If you have any questions regarding this permit amendment request, please do not hesitate to call me at (704) 338-6843.

Sincerely,

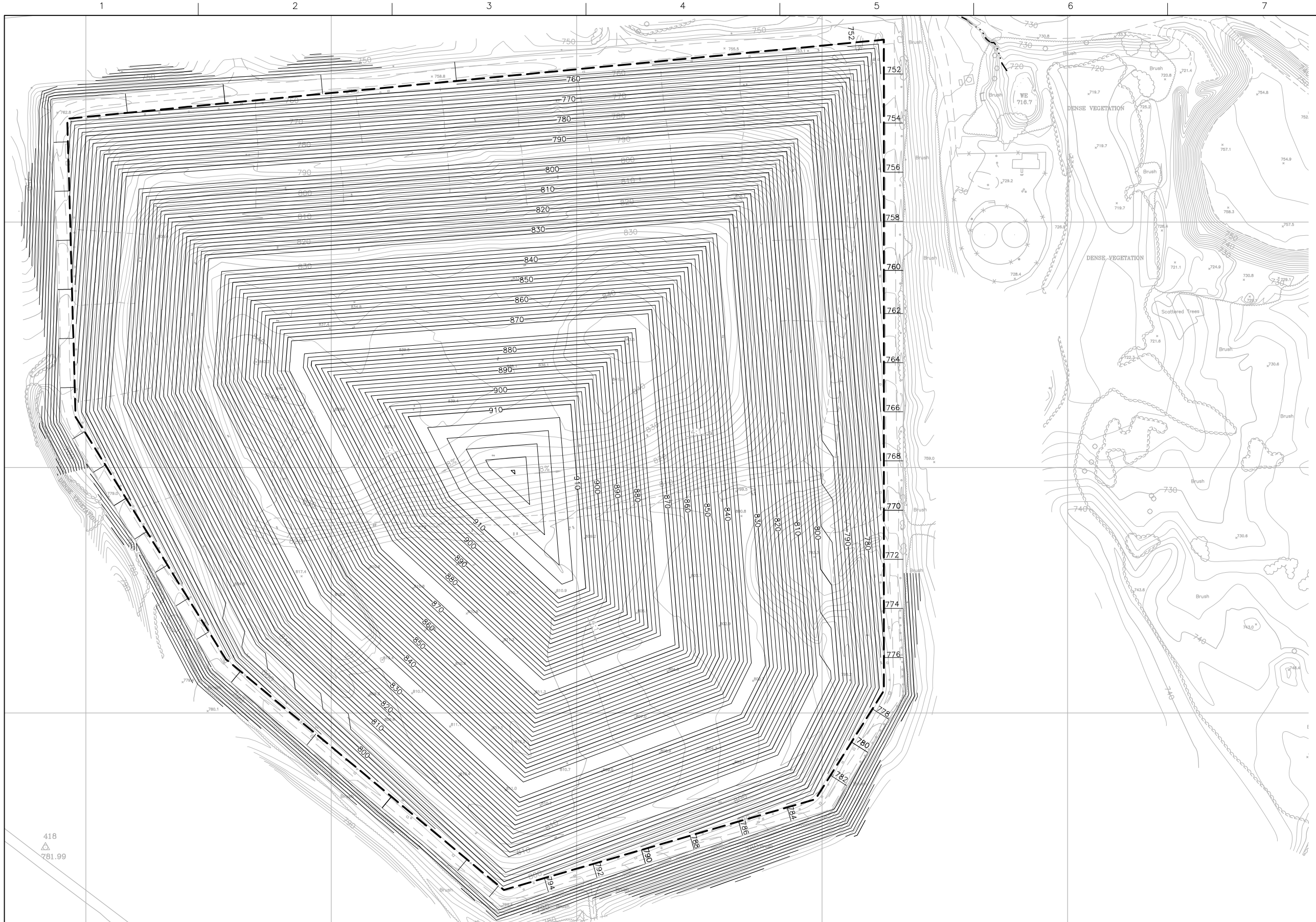
HDR Engineering, Inc. of the Carolinas

Michael D. Plummer, P.E.
Project Engineer

MDP/elh/apb

Enclosures: Figure 5-3

cc: Dale Wyrick, P.E., City of Greensboro (with enclosures)
Gail Hay, P.E., City of Greensboro (with enclosures)
Joe Readling, P.E., HDR Engineering (w/o enclosures)



N

GENERAL NOTES:

1. JUNE 27, 2010 AERIAL SURVEY OBTAINED FROM BRADY SURVEYING CO., P.A.
2. FINAL GRADES DEPICT 4 HORIZONTAL TO 1 VERTICAL (4:1) UP TO ELEVATION 910 AND 8% TO PEAK.

PHASE III CAPACITY

GROSS AREA = 52 ACRES
TOTAL GROSS CAPACITY = 5,352,000 CY*
TOTAL OPERATING CAPACITY = 5,058,000 CY**

* THE VOLUME MEASURED FROM THE BOTTOM OF WASTE THROUGH THE TOP OF FINAL COVER.

** VOLUME EXCLUDES 3.5 FT THICK BASE LINER AND 3.5 FT THICK CAP LINER.

LEGEND

- EXISTING CONTOURS (JUNE 27, 2010 AERIAL SURVEY)
- PROPOSED FINAL CONTOURS
- LINER LIMITS
- CELL BOUNDARY
- TREELINE
- FENCE
- SLOPE DRAIN

HDR

HDR Engineering, Inc. of the Carolinas

N.C.B.E.L.S. License Number: F-0116
440 S Church Street, Suite 1000 | Charlotte, NC 28202

ISSUE	DATE	DESCRIPTION
1	03/2011	REVISED TOTAL GROSS CAPACITY
0	02/2011	ISSUED FOR APPROVAL

PROJECT MANAGER	M.D. PLUMMER, P.E.
	E.L. HARTWICK, E.I.
PROJECT NUMBER	06770–137686–018

WHITE STREET LANDFILL
PERMIT 41-12
PHASE III
PERMIT AMENDMENT

CITY OF GREENSBORO **NORTH CAROLINA**

CELLS 1, 2, AND 3
DEVELOPMENT PLAN
(4H:1V TO 8% AT 910')

0 1" 2"

FILENAME	FIGURE 5–3.dwg
SCALE	1" = 100'

SHEET
FIGURE 5-3

C:\pwworking\tpa\d0275539\FIGURE 5-3.dwg, Plot, 3/30/2011 9:17:47 AM, ehartwic