

HAND DELIVERED

February 22, 2008

Ms. Donna J. Wilson
Environmental Engineer
Solid Waste Section
**North Carolina Department of Environment
and Natural Resources**
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Re: Application for Service Area Expansion, Red Rock Disposal C&D Landfill
Permit No. 92-28, Wake County, Doc ID 3951

Dear Ms. Wilson,

Richardson Smith Gardner & Associates, Inc. (RSG) has received the North Carolina Department of Environment and Natural Resources (DENR) letter dated February 14, 2008 (**copy attached**). On behalf of Red Rock Disposal, LLC, (Red Rock) the following presents responses to DENR's comments. Each comment listed in the Department's letter is restated (**bold**) immediately followed by Red Rock's response.

- 1. The copy of the annual compliance submittal contains social security numbers for the principle officers and federal employer identification numbers for several of the business entities, which are private and confidential information that we do not want in our public files. This was in response to our comment requesting relationship information between Red Rock, LLC and Waste Industries, Inc. The organizational chart submitted is all that is needed for this comment. The pages containing the confidential information will be removed from your November 2007 submittal. We request that someone with your office or with Waste Industries come to our offices and pick up these pages and the copy of the report on CD. The Compliance Section also does not want this information submitted in response to their compliance review.**

RESPONSE:

Attached to this response is a (**revised**) CD which contains all of the same information provided in the November 2007 submittal with the exception that it omits the confidential personal information and includes only the organization chart which presents the relationship between Red Rock and Waste

Industries USA, Inc. Additionally, and as requested from the DENR, RSG plans to retrieve, in person, the previous hard copy and CD which included the confidential information so that it is not included with the DENR application files.

Also as requested by the DENR, we have **enclosed a CD** which includes the March 16, 2007 application in its entirety.

- 2. Please provide a copy of the facility plan, dated 2008, to meet the requirements for this permit issuance. The facility plan is a required portion of a submittal amendment application, in accordance with 15A NCAC 13B .0535 (c).**

RESPONSE:

Attached to this response is a CD which contains a 2008 Facility Plan narrative and drawings that meet the requirements of 15A NCAC 13B .0535 (c) and .0537. A hard copy of these Facility Plans is also **attached**.

- 3. Please clarify if there were any written comments received, or any handouts in the public meeting for the franchise, in accordance with 15A NCAC 13B .0536 (c)(11).**

RESPONSE:

There were no written comments or "hand-outs" submitted or received in the public meeting by either Red Rock or others in attendance.

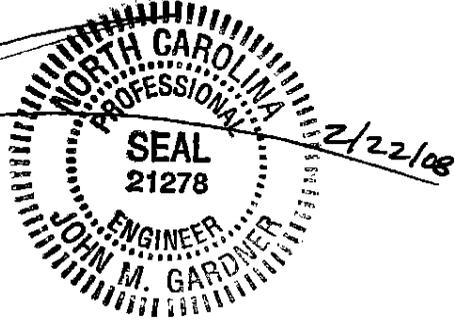
In summary, and at the request of the Department, the attached CD contains the following items related to the subject application:

- ❖ March 16, 2007 Request For Service Area Expansion application;
- ❖ November 19, 2007 Response to NCDENR comments (omitting the confidential information and copy of previous Permit To Construct drawings); and,
- ❖ This response including the attached Facility Plan drawings (2 sheets) and Facility Plan narrative, both dated 2008.

We trust that this adequately addresses the Departments comments and concerns regarding the application and responses previously submitted.

Ms. Donna Wilson
February 22, 2008
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Sincerely,
Richardson Smith Gardner & Associates, Inc.



John M. Gardner, P.E.
Sr. Project Manager

Attachments

Cc: D. Pepper
Tom Worth Jr.

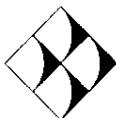
Facility Report

**Red Rock Disposal, L.L.C.
C&D Landfill
Wake County, North Carolina**

Prepared for:
**Red Rock Disposal, L.L.C.
Holly Springs, North Carolina**

**October 2003
Revised February 2008**

PERMIT ISSUE DOCUMENTS



Richardson Smith Gardner & Associates, Inc.
Engineering and Geological Services
14 N. Boylan Avenue
Raleigh, North Carolina 27603

**RED ROCK DISPOSAL, L.L.C.
C&D LANDFILL**

FACILITY REPORT

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**RED ROCK DISPOSAL, LLC
C&D LANDFILL**

FACILITY REPORT

1.0 OVERVIEW

This section presents a plan for development of Red Rock Disposal's construction and demolition (C&D) debris landfill. This report presents revision of the Facility Plan to: expand the service area to the subject facility. Specifically, it is proposed to expand the service area from eight counties (Wake County and all contiguous counties including Chatham, Durham, Franklin, Granville, Harnett, Johnston, and Nash) to 59 counties which generally represents all counties within an approximate 100-mile radius distance from the Red Rock C&D Landfill. A list of all counties proposed for the expanded service area is provided as **Table 3** to this report. *All other aspects of the previously approved Facility Plan and attachments (dated October 2003) are unchanged.* Consequently, only the following sections have been modified: Section (1.0 Overview), Section 2.1 Facility Services, Section 2.3 Disposal Rate, and Section 2.4 Service Area. All other elements of the site including site capacity, engineering and design calculations, operations, maintenance, etc. are unchanged and the previous appendices are therefore not included in this report.

2.0 FACILITY SERVICES AND WASTE STREAM

2.1 Facility Services

Currently, Red Rock Disposal, LLC operates a C&D landfill. The former LCID facility was converted to a C&D landfill and expanded from its former size (approximately 23 acres over 6 cells) up to approximately 117.7 acres (waste footprint) in five major phases.

2.2 Types of Waste

The Red Rock Disposal Landfill facility will accept C&D waste and LCID waste. Other wastes may also be accepted for disposal at the proposed C&D site, as specifically approved by the North Carolina Department of Environment and Natural Resources (NCDENR).

2.3 Disposal Rate

Following some waste "ramp-up", a typical year will include approximately 286 operations days (averaging about 5-1/2 days/week). Thus, based on a maximum of 2,000 tons per day, approximately 572,000 tons per year of waste could be disposed at the facility. Note that actual daily amounts of waste are expected to vary considerably.

2.4 Service Area

As recently approved by Wake County, this site may provide service to counties generally within a 100-mile radius to the site which includes the 59 counties presented in **Table 3** of this report. Based on the updated Census of 2005, as compiled by the United States Census Bureau, the population of these 59 counties is approximately 6,830,000 people.

2.5 Procedures for Waste Segregation

Employees at the landfill are trained in the safety procedures for the handling and detection of unapproved waste. The screening of unacceptable waste is done through the random checking of incoming loads by a landfill employee at the scalehouse and at the active working (tipping) area. When unacceptable waste is detected at the scalehouse, the load is rejected and not permitted into the landfill. If unapproved waste is found at the tipping area, identification of the truck or persons is made (if possible) and documented. The waste is then identified and placed into an appropriate container and taken to a facility specifically approved to accept that type of waste for proper disposal. When this occurs, the event is reported to the appropriate authorities.

2.6 Equipment Requirements

Red Rock Disposal will maintain on-site equipment required to perform the necessary landfill activities. Periodic maintenance of all landfilling equipment will either be performed on-site or at designated maintenance facilities outside of the landfill.

3.0 LANDFILL CAPACITY

3.1 Total Operating Capacity and Life Expectancy

Drawing E3 (Facility Plan - Final Cover Grades), identifies the final configuration for Phases 1 through 5 of the C&D landfill. The top elevation of the final grades is at approximately 516 feet. The exterior side slopes will be at a 3H to 1V slope.

The estimated total gross operating capacity, net capacity (accounts for periodic and final cover), disposal area, and life expectancy for Phases 1 through 5 are shown in **Table 1**.

3.2 In-Place Ratio of Waste to Soil and Compaction Factor

The capacities obtained above were based on a 5 percent periodic cover ratio and a waste + soil cover density of about 1,250 pounds per cubic yard (0.625 tons/CY). The assumed periodic cover ratio and density is typical for C&D waste

4.0 AVAILABLE SOIL RESOURCES AND REQUIRED SOIL QUANTITIES

The soils required to construct and operate the proposed landfill will be obtained from both on-site as well as off-site borrow sources. The soils removed during excavation of Phases 1 through 5 will likely be used for structural fill, unclassified fill, periodic cover, and/or final cover.

4.1 Earthwork Quantities

The anticipated quantity of soil to be excavated to achieve base grades and the anticipated quantity to be required as structural fill for foundation soils and berms is shown in **Table 2**. These quantities do not account for the fact that some areas that will be graded more than once due to phased construction.

4.2 Periodic Cover

Assuming the previously mentioned periodic cover ratio of 5 percent, the estimated quantity of soil that will be required for use as periodic cover during C&D landfill operations is shown in **Table 2**.

4.3 Vegetative Soil Layer

On the basis of the 2-foot-thick vegetative soil layer of the C&D landfill final cover, the estimated in-place volume required is shown in **Table 2**. For this preliminary estimate, no slope correction factor was used.

4.4 Soil Summary

The above-referenced soil quantities are summarized in **Table 2**. Note that, based on the current base and final cover grades shown on **Drawings E2 and E3**, respectively, there is expected to be a deficit of on-site soil. Consequently, additional soil will be needed from off-site borrow sources outside of the C&D landfill property. In this regard, there is currently an agreement between Red Rock Disposal and the adjacent rock quarry (owned/operated by Hanson Aggregates) stating that the quarry will supply soil (overburden) to the landfill as needed. **Refer to the agreement between Red Rock Disposal and Hanson Aggregates included in Appendix A to this Facility Report.**

5.0 FACILITY DESIGN CRITERIA

The Red Rock Disposal C&D landfill is designed and will operate in accordance with Sections .0503 and .0505 of the North Carolina Administrative Code, Title 15A, Chapter 13, Subchapter 13B including the following requirements.

5.1 Horizontal Separation Requirements

The horizontal separation requirement between the disposal boundary (edge of waste) and the property lines is a minimum of 200 feet (per Solid Waste Section policy), the minimum buffer between private residences and wells and the disposal boundary is 500 feet, and the minimum buffer between any surface water (stream, river, creek) and the disposal boundary is 50 feet.

5.2 Vertical Separation Requirements

The bottom elevation of the waste in Phase 1 (and subsequent phases) will meet the minimum requirement of four feet above the seasonal high groundwater table.

6.0 CONTAINMENT AND ENVIRONMENTAL CONTROL SYSTEMS

Technical specifications and a project construction quality assurance (CQA) manual for the following materials can be found in **Attachments B and C**, respectively.

6.1 Landfill Subgrade and Perimeter Berms

The subgrade elevations will generally be achieved by excavation or placement of compacted structural fill (embankment). During excavation, a determination of unsuitable soils (i.e. soils which are too soft, wet, organic or otherwise not desirable) will be made. Where unsuitable soils are found, the soils will be undercut, removed, and backfilled with structural fill.

In addition to providing the landfill subgrade in fill areas, structural fill will be used for berm and roadway construction. Structural fill will consist of on-site soils removed during excavation of each phase or imported borrow soils, except that no CH, OL, or OH soils will be allowed.

It is noted that within the first cell of the Phase 1 area (Phase 1A covering about 6.4 acres), the current LCID site occupies about 2.9 acres. The design includes incorporating leaving this existing LCID waste in-place and providing a layover of C&D waste onto the LCID slopes. **A letter from Sullivan Surveying (Leonard H. Sullivan, Jr., PLS-2821) referencing previous bottom elevations within the existing LCID area is included in Appendix A to this attachment.**

6.2 Final Cover System

In accordance with 15A NCAC 13B.0543, the final cover system will consist of the following components (top-down) or approved alternative:

- an 18-inch thick vegetative soil layer; and,
- an 18-inch thick soil barrier layer ($k \leq 1 \times 10^{-5}$ cm/sec).

6.3 Erosion and Sedimentation Control

The Erosion and Sedimentation Control structures provided will be designed and maintained to manage the run-off generated by the 24-hour, 25-year storm event, and conform to the requirements of the Sedimentation Pollution Control Law (15A, NCAC, 4). A detailed discussion of site erosion and sedimentation control for Phase 1 can be found in the Project Erosion And Sedimentation Control Plan (**Attachment E**).

6.4 Landfill Gas Control

Due to the nature of the C&D waste disposed in this landfill, landfill gas control is neither required nor anticipated to be of concern.

6.5 Access and Roadways

Access is currently along an existing driveway easement (New Landfill Drive) shared by Hanson Quarry and the existing LCID facility per a variance granted by the Wake County Board of Commissioners. The driveway easements connect from SR1127 (Rex Road) to the landfill and quarry sites. Access agreements exist with owners of properties through which the driveways cross. The proposed C&D landfill development also includes provisions for future, alternative driveway access directly from SR1127 which would be located entirely within property controlled by the landfill owner (Red Rock Disposal, LLC). At a future date when constructed, this alternate access will be designed to meet all NCDOT standards with respect to ingress/egress from SR1127, as determined to be necessary to ensure public health and safety.

Site operations will provide for all-weather access to active areas.

7.0 SLOPE STABILITY

The slope stability of the waste mass is addressed in **Appendix B**. The results of the slope stability analysis indicates that the proposed C&D landfill configuration is stable.

**TABLE 1
SUMMARY OF LANDFILL CAPACITY AND LIFE EXPECTANCY**

Phase	Disposal Area (Ac.) (Waste Footprint)	Operating Capacity (CY)		Life Expectancy
		Gross	Net	
1	44.2	3,758,814	3,435,386	4.5 Years
2 - 5	73.5	15,233,985	14,246,984	15.6 Years
Total:	117.7	18,992,799	17,682,370	20.1 Years

**TABLE 2
SOIL SUMMARY**

Material	Quantity (CY)		
	Phase 1	Phases 2 - 5	Total
Excavation	299,138	726,761	1,025,899
Structural Fill	(203,829)	(55,688)	(259,517)
Periodic Cover	(180,810)	(749,228)	(930,038)
Vegetative Soil Layer	(142,619) based on 44.2 ac.	(237,160) based on 73.5 ac.	(379,779)
Total:	(228,120)	(315,315)	(543,435)

TABLE 3			
PROPOSED SERVICE AREA - RED ROCK DISPOSAL, LLC			
NO.	COUNTY	NO.	COUNTY
		30	LENIOR
1	ALAMANCE	31	MARTIN
2	ANSON	32	MECKLENBURG
3	BEAUFORT	33	MONTGOMERY
4	BERTIE	34	MOORE
5	BLADEN	35	NASH
6	BRUNSWICK	36	NEW HANOVER
7	CABARRUS	37	NORTHAMPTON
8	CASWELL	38	ONSLow
9	CHATHAM	39	ORANGE
10	COLUMBUS	40	PENDER
11	CRAVEN	41	PERSON
12	CUMBERLAND	42	PITT
13	DAVIDSON	43	RANDOLPH
14	DAVIE	44	RICHMOND
15	DUPLIN	45	ROBESON
16	DURHAM	46	ROCKINGHAM
17	EDGEcombe	47	ROWAN
18	FORSYTH	48	SAMPSON
19	FRANKLIN	49	SCOTLAND
20	GRANVILLE	50	STANLY
21	GREENE	51	STOKES
22	GUILFORD	52	SURRY
23	HALIFAX	53	UNION
24	HARNETT	54	VANCE
25	HOKE	55	WAKE
26	IREDELL	56	WARREN
27	JOHNSTON	57	WAYNE
28	JONES	58	WILSON
29	LEE	59	YADKIN

Appendix A

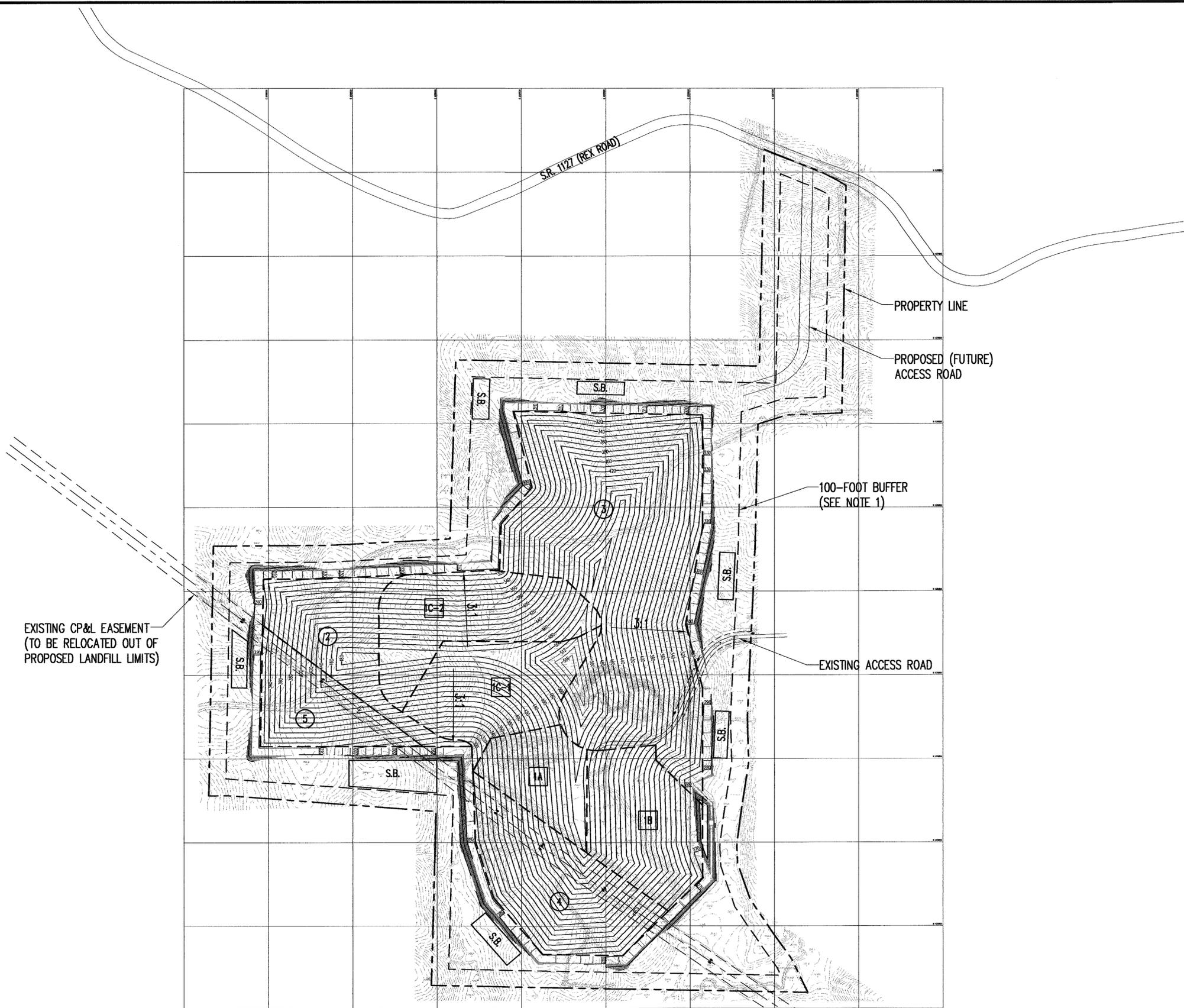
Correspondence (2 Letters)

**(NO REVISIONS - SEE PREVIOUS
FACILITY PLAN - OCTOBER 2003)**

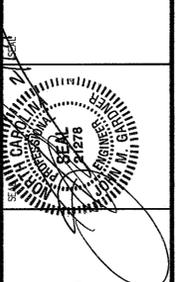
Appendix B

**Landfill Design Calculations
(NO REVISIONS - SEE PREVIOUS
FACILITY PLAN - OCTOBER 2003)**

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 Raleigh, N.C. 27603
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PROJECT TITLE:
**RED ROCK DISPOSAL, LLC
 CONSTRUCTION/DEMOLITION
 LANDFILL PHASE 1
 WAKE COUNTY, NC**

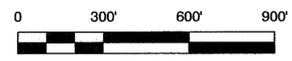
DRAWING TITLE:
**FACILITY PLAN
 FINAL GRADES**

LEGEND

	EXISTING 25' CONTOUR
	EXISTING 5' CONTOUR
	PROPERTY LINE (PER REFERENCE 2)
	PHASE BOUNDARY
	CONCEPTUAL SEDIMENT BASIN LOCATION (FINAL LOCATION TO BE DETERMINED)
	PHASE IDENTIFICATION
	SUBPHASE AND SUB-SUBPHASE IDENTIFICATION

- NOTES:**
- THIS BUFFER REPRESENTS A TYPE A BUFFER YARD AND A TRANSITIONAL BUFFER IN ACCORDANCE WITH WAKE COUNTY ZONING REQUIREMENTS. THIS 100-FOOT BUFFER ALSO INCLUDES, BUT DOES NOT SHOW, A 50-FOOT UNDISTURBED BUFFER ALSO PER WAKE COUNTY ZONING REQUIREMENTS.
 - ELEVATIONS REFERENCE U.S.G.S. VERTICAL DATUM (MSL).
 - GRID COORDINATES REFERENCE NC STATE PLANE SYSTEM (NAD 1983).

- REFERENCES:**
- OVERALL SITE TOPOGRAPHY PREPARED BY SPATIAL DATA CONSULTANTS, INC., BASED ON AERIAL PHOTOGRAPHY DATED FEBRUARY 8, 2003.
 - THE PROPERTY LINE SHOWN REFERENCES DRAWING TITLED, "BOUNDARY SURVEY FOR WASTE INDUSTRIES, INC.", PREPARED BY SURVEY SOLUTIONS, P.C. DATED 12/27/00, SCALE 1"=400'.
 - CP&L POWERLINE/EASEMENT REFERENCES THE BOUNDARY SURVEY.



DESIGNED BY: J.M.G.	DRAWN BY: C.T.J.
CHECKED BY:	PROJECT NO.: RED ROCK 06-5
SCALE: AS SHOWN	DATE: FEB. 2008
FILE NAME: REDROCK-0071	
SHEET NO. 2	DRAWING NO. S2

