CH ENGINEERING

July 29, 2010

Donna Maskill, PE
City of Durham
General Services Department
2011 Fay Street
Durham, NC 27704

Re: LCID Phase I
Closure- Letter of Certification

This letter is to certify that the closure for the Land Clearing and Inert Debris Landfill Phase I was constructed in accordance with the rules regarding soil and vegetation requirements.

If there are any questions regarding this, please call me at 919-788-0224.

Certified by:

NORTH CAROLINA
PROFESSIONAL
EA I
10359
ENGINEER
THOMAS R. HEPLER

Date 7/29/2010

Thomas R. Hepler, PE
CH Engineering, PLLC

PO Box 30128, Raleigh, NC 27622 • TEL 919.788.0224 • FAX 919.788.0232 Civil Engineering

CH ENGINEERING

July 26, 2010

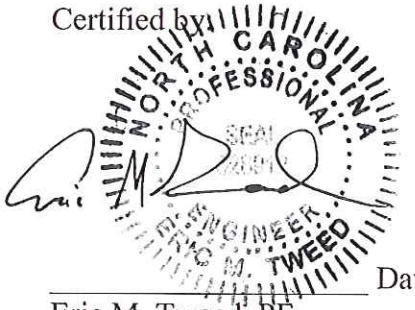
Donna Maskill, PE
City of Durham
General Services Department
2011 Fay Street
Durham, NC 27704

Re: LCID Phase II
Closure- Letter of Certification

This letter is to certify that the closure for the Land Clearing and Inert Debris Landfill Phase II was constructed in accordance with the rules regarding soil and vegetation requirements. Upon a final inspection performed this date, the site is permanently stabilized and provided with more that sufficient cover.

If there are any questions regarding this, please call me at 919-788-0224.

Certified by:



Date 7-26-10

Eric M. Tweed, PE
CH Engineering, PLLC

PO Box 30128, Raleigh, NC 27622 • TEL 919.788.0224 • FAX 919.788.0232 Civil Engineering

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

UNIT TYPE:											
Lined MSWLF		LCID	X	YW		Transfer		Compost		SLAS	
Closed MSWLF		HHW		White goods		Incin		T&P		FIRM	
CDLF		Tire T&P / Collection		Tire Monofill		Industrial Landfill		DEMO		SDTF	

COUNTY: **Durham**
PERMIT NO.: **32-B**
FILE TYPE: COMPLIANCE

Date of Site Inspection: February 14, 2012 **Date of Last Inspection:** April 7, 2009

FACILITY NAME AND ADDRESS:
City of Durham LCID Landfill
1833 Camden Avenue
Durham, NC 27704

GPS COORDINATES: **N**: 36.02429 **E**: -78.86568 (Phase I) and **N**: 36.02268 **E**: -78.86795 (Phase II)

FACILITY CONTACT NAME AND PHONE NUMBER:
Chris Marriott, City of Durham – Waste Disposal Manager

w. 919-560-4186 x32253
f. 919-560-1197
c. 919-452-2804
chris.marriott@durhamnc.gov

FACILITY CONTACT ADDRESS:
Chris Marriott, Waste Disposal Manager
City of Durham Solid Waste Management Department
1833 Camden Avenue
Durham, NC 27704

PARTICIPANTS
John Patrone, NCDENR – Solid Waste Section (SWS)
Chris Marriott, City of Durham – Waste Disposal Manager

STATUS OF PERMIT:
Closed

PURPOSE OF SITE VISIT:
Post Closure Audit

STATUS OF PAST NOTED VIOLATIONS:
None

OBSERVED VIOLATIONS

None

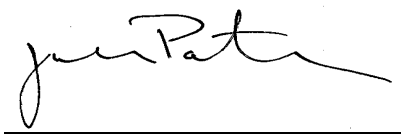
The item(s) listed above were observed by Section staff and require action on behalf of the facility in order to come into or maintain compliance with the Statutes, Rules, and/or other regulatory requirements applicable to this facility. Be advised that pursuant to N.C.G.S. 130A-22, an administrative penalty of up to $15,000 per day may be assessed for each violation of the Solid Waste Laws, Regulations, Conditions of a Permit, or Order under Article 9 of Chapter 130A of the N.C. General Statutes. Further, the facility and/or all responsible parties may be subject to enforcement actions including penalties, injunction from operation of a solid waste management facility or a solid waste collection service and any such further relief as may be necessary to achieve compliance with the North Carolina Solid Waste Management Act and Rules.

ADDITIONAL COMMENTS

On February 14, 2012, John Patrone met with Chris Marriott to conduct a post closure audit of the City of Durham LCID Landfill located on Camden Avenue in Durham, Durham County.

1. The facility is a land clearing and inert debris (LCID) landfill over a pre-1983 sanitary landfill (Inactive Hazardous Sites Branch, No. NOCCD0000291). The sanitary landfill totals 42 acres and operated from 1964 to 1974. The LCID landfill totals ~ 6 acres (two phases, non-contiguous) and ceased operation in 2006.
2. The facility is located adjacent to the City of Durham Solid Waste Management Department (office building).
3. The landfill cap is covered with native vegetation and mowed twice a year, in the spring and fall. Ensure the LCID landfill side slopes are routinely mowed.
4. The LCID landfill cap does not contain large diameter woody vegetation. The side slopes of the sanitary landfill contain trees and large diameter woody vegetation.
5. The LCID landfill side slopes appeared to be graded to a 3:1 ratio.
6. The facility annual report (FAR) received by the SWS is dated 07/25/11. The facility did not operate.
7. The City of Durham is in the process of seeking closure of the LCID landfill with the SWS. Mr. Marriott stated that the facility closure report for Phases I and II has been submitted to the SWS. The SWS received closure certification from the City of Durham for Phase I (letter dated 07/29/10) and for Phase II (letter dated 07/26/10).
8. The facility is encouraged to install edge of waste markers. Edge of waste markers will likely be a requirement of post closure conditions.
9. Mr. Marriott stated that post closure use of the LCID landfill may consist of an employee picnic area, with tables, gazebo, etc. Ensure that planned post closure use of the landfill is approved by the SWS.
10. The City of Durham Fire Department will respond to an emergency at the facility.
11. There was no indication of erosion or runoff.
12. Access roads are of all-weather construction.
13. Ensure that the facility identification number is posted at the entrance.
14. The site is secured by a locked metal gate. The gate is kept open during workdays for City of Durham personnel to access the property for its container storage area, etc. Mr. Marriott stated that the gate is closed each night and on weekends.

Please contact me if you have any questions or concerns regarding this inspection report.



John Patrone
Environmental Senior Specialist
Regional Representative

Phone: 336-771-5095 Fax: 336-771-4631

Sent on: February 23, 2012	X	Email		Hand delivery		US Mail		Certified No. [ ]

Copies: Dennis Shackelford, Eastern District Supervisor
Shawn McKee, Environmental Senior Specialist
Donna Wilson, Environmental Engineer
Donald Long, City of Durham - Solid Waste Director (donald.long@durhamnc.gov)

Digital pictures taken February 14, 2012
by John Patrone, DWM-SWS

Phase II – view across top portion of landfill cap

Phase II – view typical of side slope

Phase I – view across top portion of landfill cap

Entrance to facility, portion of landfill property actively used by City personnel

June 1, 2009

City of Durham
General Services Department
101 City Hall Plaza
Durham, North Carolina 27701

Attn: Ms. Donna Maskill, PE

Re: Durham Solid Waste LCID
Durham, North Carolina
Terracon Project No. 70095022

Dear Ms. Maskill,

Terracon Consultants, Inc. (Terracon) has completed the requested geotechnical services at the above referenced property. These services were performed in accordance with Terracon Proposal No. P70090109 dated April 6, 2009.

PROJECT INFORMATION

Approximately two acres of the Durham Solid Waste LCID Facility has recently received a closure cover of soil. We understand that the design soil cover thickness is approximately two feet. The primary objective of the geotechnical services was to determine the in-place thickness of the soil cover and provide a general characterization of the soils used as cover material.

SITE EXPLORATION PROCEDURES

The scope of the services performed for this project included site reconnaissance by a geotechnical engineer, a hand auger exploration program, laboratory testing and reporting. All depths listed below are referenced from existing site grades.

Field Exploration

A total of 32 hand auger test borings (B-1 through B-32) were performed on May 7, 2009 to hand-auger refusal depths of about 4 to 28 inches. We interpret hand-auger refusal as the depth to the soil cover / solid waste interface. GPS coordinates were also collected at an additional 18 locations (P-1 through P-18) where no soil cover or boulder-sized debris was observed at the surface. The locations are shown on the Boring Location Diagram, Figure 1. The borings were located in the field using a Garmin eTrex Legend hand-held GPS receiver with WAAS technology. Subsequent to the field exploration, CH Engineering surveyed the boring locations and provided a base map with these locations. The locations of the borings should be considered accurate only to the degree implied by the means and methods used.

Visual classifications of the materials encountered in each boring were recorded by the project geotechnical engineer during the field operations. At selected locations, samples of the soil cover material were obtained for additional laboratory observation and Atterberg limits testing.

SITE CONDITIONS

The site is generally a raised plateau with 1:1 to 2:1 side slopes. At the time of the field exploration, the majority of the site had been recently covered with a thin veneer of sandy clay cover soil with varying amounts of gravel. However, there were some areas around the edges of the site and on the side slopes where exposed concrete, brick and asphalt debris were observed, which indicated that no cover had been placed in these areas. The areas where no soil cover was observed were predominantly on the west and north slopes of the plateau. Exposed boulders were also observed in some areas where a thin veneer of soil cover was present. Vegetation consists of weeds and grasses in areas not recently disturbed or covered.

SUMMARY OF RESULTS

The results of the hand auger test borings are detailed in Table 1 in the appendix. The cover soil, where present, generally consisted of orange-brown sandy clay (CL/CH) and ranged in thickness from 4 inches to approximately 28 inches. Laboratory test results on selected samples indicate that the sandy clay fill materials have liquid limits (LL) ranging from 42 to 62 with plasticity indices (PI) ranging from 23 to 39. Test results are provided in the appendix (Table 2).

The cover thickness contour diagram (Figure 2 in the appendix) can be used to determine the locations where additional soil cover will be required and to estimate the volume of soil needed.

CLOSURE

We appreciate the opportunity to work with you on this project. Please contact us if you have any questions concerning the information contained in this letter or the attachments.

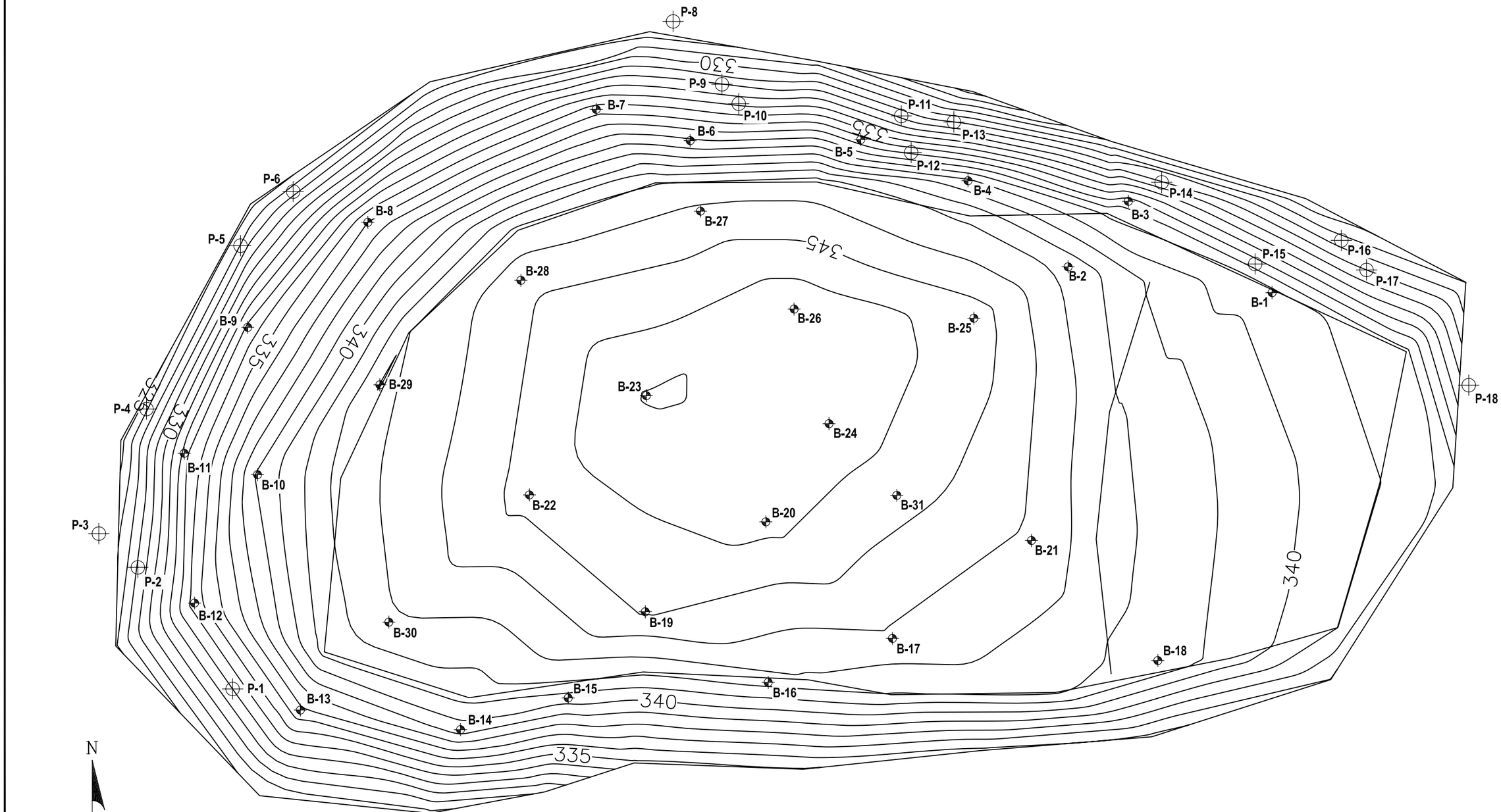
Sincerely,
Terracon Consultants, Inc.

R. "Levi" Denton, II, PE
Geotechnical Services Manager
North Carolina No. 034749

Barney C. Hale, PE
Senior Principal

Attachments: Figure 1 – Boring Location Diagram with Existing Topographic Contours
Figure 2 – Cover Thickness Contour Diagram
Table 1 – Hand Auger Results
Table 2 – Laboratory Test Results
Unified Soil Classification System

Copies to: *Addressee (2)*
CH Engineering – Mr. Tom Hepler, PE (1)



LEGEND

(B-1) - APPROXIMATE BORING LOCATION

(P-1) - APPROXIMATE BORING LOCATION

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

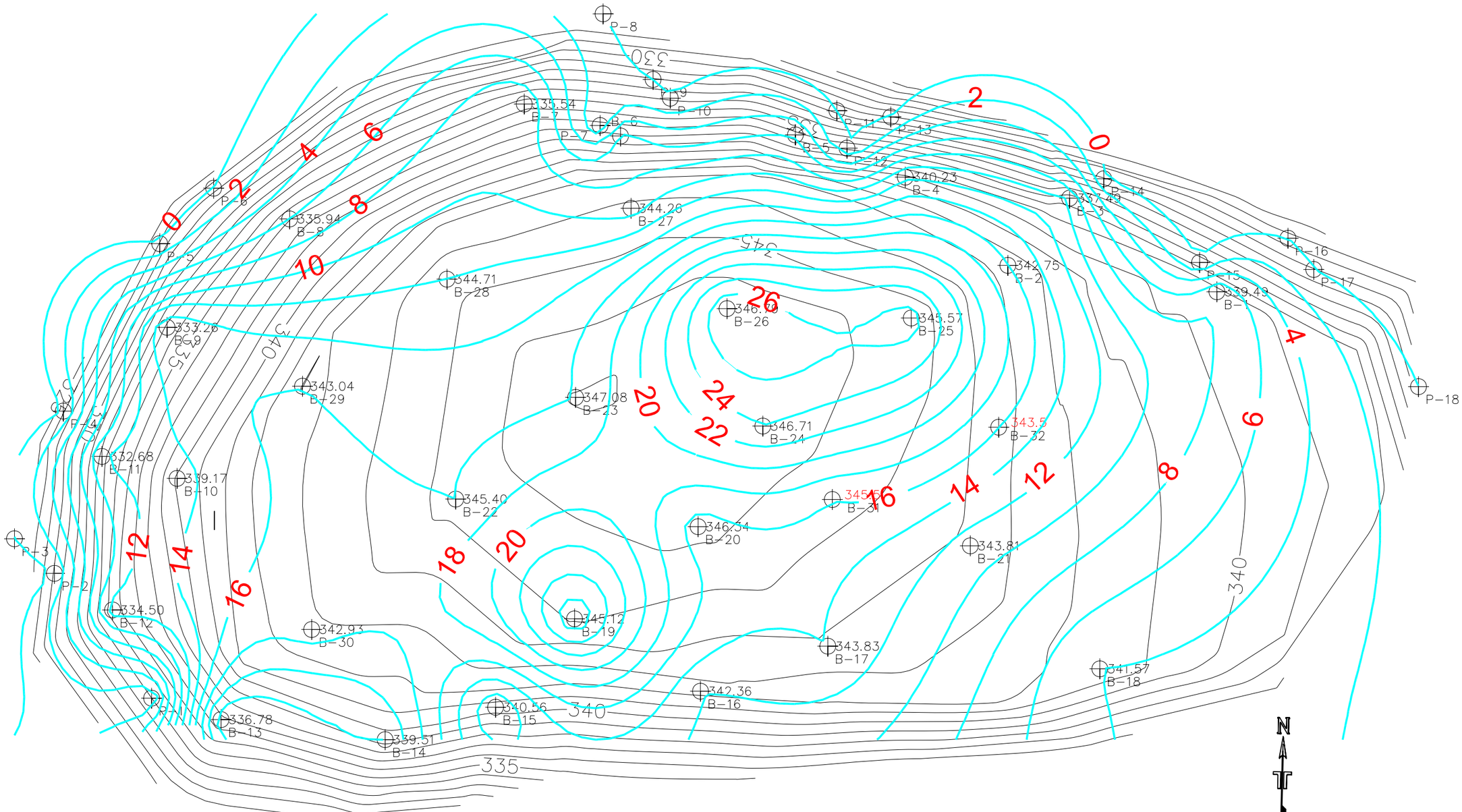
Project Mngr:	PJR
Drawn By:	TLY
Checked By:	PJR/MRF
Approved By:	RC
Project No.	70095022
Scale:	AS SHOWN
File No.	GEO70095022-1
Date:	JUNE 2009

Terracon
Consulting Engineers and Scientists
5240 Green's Dairy Road Raleigh, NC 27616
(919) 873-2211 (919) 873-9555

BORING LOCATION DIAGRAM WITH EXISTING TOPOGRAPHIC CONTOURS

GEOTECHNICAL ENGINEERING REPORT
DURHAM SOLID WASTE LCID

FIG. No. 1



LEGEND

6 - SOIL COVER THICKNESS IN INCHES.

Terracon
Consulting Engineers and Scientists
5240 Green's Dairy Road Raleigh, North Carolina 27616
PH. (919) 873-2211 FAX. (919) 873-9555

FIGURE 2: COVER THICKNESS CONTOUR DIAGRAM

DURHAM COUNTY LCID

DURHAM, NORTH CAROLINA

N:\Projects\2009\70095022\70095022-2.DWG

FIGURE #2	
DESIGNED BY:	RLD
DRAWN BY:	DJS
APPVD. BY:	RLD
SCALE:	1:30
DATE:	05/29/09
JOB NO.	70095022
ACAD NO.	001
SHEET NO.:	2 OF 2

Table 1 – Hand Auger Results			
Boring Location	**Soil Cover Thickness (inches)**	**Point**	**Soil Cover Thickness (inches)**
B-1	8	P-1	No cover
B-2	16	P-2	No cover
B-3	10	P-3	No cover
B-4	12	P-4	No cover
B-5	6	P-5	No cover
B-6	7	P-6	No cover
B-7	10	P-7	No cover
B-8	6	P-8	No cover
B-9	16	P-9	No cover
B-10	13	P-10	No cover
B-11	12	P-11	No cover
B-12	13	P-12	No cover
B-13	24	P-13	No cover
B-14	22	P-14	No cover
B-15	10	P-15	No cover
B-16	12	P-16	No cover
B-17	14	P-17	No cover
B-18	4	P-18	No cover
B-19	28	—	—
B-20	15	—	—
B-21	11	—	—
B-22	16	—	—
B-23	16	—	—
B-24	24	—	—
B-25	27	—	—
B-26	28	—	—
B-27	9	—	—
B-28	12	—	—
B-29	16	—	—
B-30	17	—	—
B-31	16	—	—
B-32	16	—	—

Table 2 – Laboratory Test Results			
Boring Location	**Depth (feet)**	**Liquid Limit (LL) / Plasticity Index (PI)**	**USCS Classification**
2	0 – 1	42 / 23	Lean Clay (CL)
17	0 – 1	47 / 28	Lean Clay (CL)
28	1 – 1.5	62 / 39	Fat Clay (CH)
29	0 – 1	50 / 30	Fat Clay (CH)

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests[A]					Soil Classification	
					Group Symbol	Group Name[B]
Coarse Grained Soils More than 50% retained on No. 200 sieve	Gravels More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines[C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$[E]		GW	Well-graded gravel[F]
			$Cu < 4$ and/or $1 > Cc > 3$[E]		GP	Poorly graded gravel[F]
		Gravels with Fines More than 12% fines[C]	Fines classify as ML or MH		GM	Silty gravel[F,G,H]
			Fines classify as CL or CH		GC	Clayey gravel[F,G,H]
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines[D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$[E]		SW	Well-graded sand[I]
			$Cu < 6$ and/or $1 > Cc > 3$[E]		SP	Poorly graded sand[I]
		Sands with Fines More than 12% fines[D]	Fines classify as ML or MH		SM	Silty sand[G,H,I]
			Fines Classify as CL or CH		SC	Clayey sand[G,H,I]
Fine-Grained Soils 50% or more passes the No. 200 sieve	Silts and Clays Liquid limit less than 50	inorganic	PI > 7 and plots on or above "A" line[J]		CL	Lean clay[K,L,M]
			PI < 4 or plots below "A" line[J]		ML	Silt[K,L,M]
		organic	Liquid limit - oven dried	< 0.75	OL	Organic clay[K,L,M,N]
			Liquid limit - not dried			Organic silt[K,L,M,O]
	Silts and Clays Liquid limit 50 or more	inorganic	PI plots on or above "A" line		CH	Fat clay[K,L,M]
			PI plots below "A" line		MH	Elastic Silt[K,L,M]
		organic	Liquid limit - oven dried	< 0.75	OH	Organic clay[K,L,M,P]
			Liquid limit - not dried			Organic silt[K,L,M,Q]
Highly organic soils	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-in. (75-mm) sieve

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

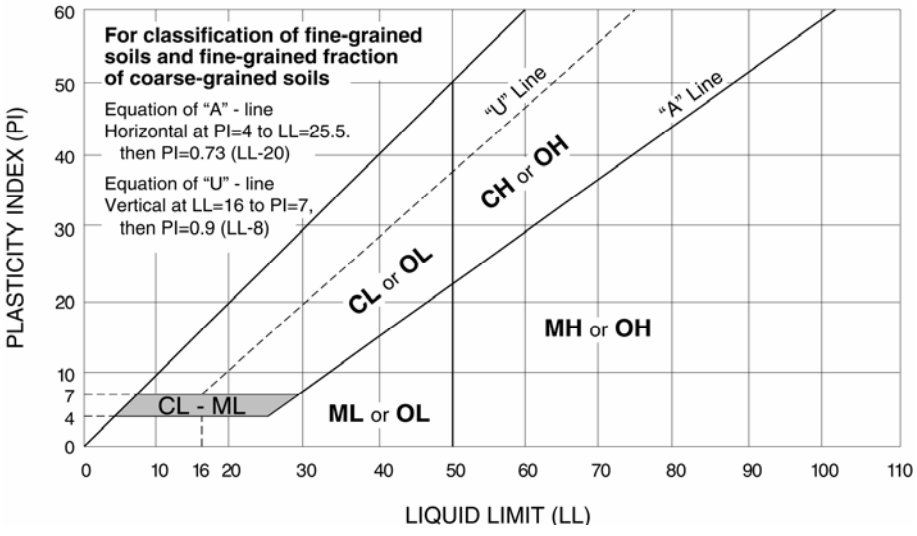
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.



Terracon

EXPLORATORY DRILLING REPORT

CITY OF DURHAM

DEMOLITION LCID LANDFILL CLOSURE

Permit No. 32-B, Durham County
DURHAM, NORTH CAROLINA

TEG PROJECT NO. Z–05-031

Prepared By:

RAYMOND S. COLLINS, P.E.
Senior Engineer

And

JONATHAN J. PULLIN
Principal Environmental Scientist

The Environmental Group of the Carolinas, Inc.

15720 John J. Delaney Drive, Suite 300
Charlotte, North Carolina 28277
Phone: 704.944.3244 Fax: 704.536.3398

The Environmental Group of the Carolinas, Inc.

October 21, 2005

Mr. Roosevelt Carter
Manager
Solid Waste Disposal Division
City of Durham
1833 Camden Avenue
Durham, North Carolina 27704

Subject: **Final Report of Exploratory Drilling**
City of Durham
Demolition LCID Landfill Closure
Permit Number 32-B
Durham, Durham County, North Carolina
TEG Project Number Z-05-031

Dear Mr. Carter:

The Environmental Group of the Carolinas, Inc. (TEG) (d/b/a The Environmental Group) is pleased to submit our Final Report of Exploratory Drilling for the City of Durham's Demolition LCID Landfill, Permit Number 32-B, located in Durham, Durham County, North Carolina.

TEG was contracted by the City of Durham Solid Waste Division to perform exploratory drilling to determine what appropriate action, if any, would be required to properly close the aforementioned landfill in accordance with North Carolina regulatory guidelines. The City of Durham GIS Department provided TEG with Figure 1 which is a 2005 Aerial Topographic Map of the landfill. Reportedly, this specific landfill area had not been used for approximately 10 years. During its operational lifetime, this site had only been used for roadway and building debris.

On July 21, 2005 Ms. Anita Daniels and Mr. Roosevelt Carter (Solid Waste Disposal Division), Ms. Maha Chambliss, P.E. (CH Engineering), Mr. Dennis Shackleford (NCDENR Solid Waste) and Mr. Raymond Collins, P.E. and Jonathan Pullin (TEG) met at the landfill site to determine the proper Scope of Work for immediate closure procedures. Mr. Shackleford stated that proof was needed that the landfill, including the side slopes, had at least an 18-inch soil cover. He established that approximately 50 borings, 18-inches in depth, having approximate 50-foot spacing would suffice as proof. TEG was then given the responsibility to perform the necessary drilling and promptly report our findings, conclusions and recommendations to Mr. Roosevelt Carter of the Solid Waste Disposal Division. The slopes were of concern during this meeting because erosion was visible on the Northern and Eastern portions of the landfill.

FINDINGS

While conducting an initial visual review of the site on Wednesday, October 12, 2005, TEG observed that the top of the site was capped with dirt which was compacted and had stabilized over time with varying local atmospheric conditions. However, there was also visual evidence of serious erosion on the slopes of the entire landfill. These erosion patterns created gullies that were measured by TEG staff to be at least 12-inches in depth. TEG and our drilling team then accessed the site and drilled 46 borings, at 18 + inches in depth as shown on Figure 2.

The drill team did encounter several places which apparently contained concrete slab which required replacement of the boring. Several of these locations are also indicated on Figure 2. Table 1 describes the location of borings (Boring I.D. Number) on Figure 2, boring depth and provides the lithology of each boring. At a boring depth of 18-inches or greater, the landfill top was dry and consisted of a clayey/sandy/silty/gravel cover that appeared to be impermeable. The side slopes were a different matter; soil erosion was evident as deep as 12-20-inches in a multitude of areas.

CONCLUSIONS

1. The landfill is full and had not been utilized for more than ten years.
2. The top cover consists of a clayey/sandy/silty/gravel cover that appears impermeable.
3. The sloping sides showed signs of serious erosion, caused by runoff from the top surface of the landfill over many years.
4. The slopes were covered with brush and deep gullies were present on the slopes of the landfill.
5. After closure, the landfill will not be further utilized by the Solid Waste Division for disposal activity.

RECOMMENDATIONS

1. The cover of the landfill appears to be in an impermeable condition.
2. No further utilization and traffic will be the case on the site.
3. The cover should be sufficiently graded to a 2% slope (for rapid runoff) without damaging the existing clayey/sandy/silty/gravel layer.
4. The sloping sides need to cleared of brush and compacted with a clay cover of up to 18-inches.
5. The sides should have a sloping ratio of 1:3.

LIMITATIONS

This report has been prepared for the exclusive use of the City of Durham Solid Waste Disposal Division, in Durham, Durham County, North Carolina. This assessment was conducted based on the scope of work and level of effort desired by the client and with resources adequate only for that scope of work. Our findings have been developed in accordance with generally accepted standards of geology and hydrogeology practices in the State of North Carolina, available information, and our professional judgment. No other warranty is expressed or implied.

The data that is presented in this report are indicative of conditions that existed at the precise locations sampled and at the time the samples were collected. Additionally, the data obtained from any samples would be interpreted as being meaningful with respect to parameters indicated in a laboratory report. No additional information can logically be inferred from this report.

CLOSING

TEG appreciates the opportunity to provide these services to the City of Durham Solid Waste Disposal Division. Should you have any questions or comments, please feel free to contact us at (704) 944-3244.

Sincerely,

THE ENVIRONMENTAL GROUP OF THE CAROLINAS, INC.

Raymond S. Collins, P.E.

Raymond S. Collins, P.E.
Senior Engineer

NORTH CAROLINA PROFESSIONAL SEAL 020796 ENGINEER RAYMOND S. COLLINS

Jonathan J. Pullin, Jr.
Principal Scientist

North Carolina Department of Environment and Natural Resources
Division of Waste Management
Dexter R. Matthews
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

August 20, 2009

Ms. Josephine Valencia, Solid Waste Disposal Manager
City of Durham, Solid Waste Management Department
101 City Hall Plaza
Durham, NC 27701

Re: Durham Land Disposal Area
Camden Avenue
Durham, Durham County
NONCD0000291

Dear Ms. Valencia:

On July 30, 2009 the above referenced site was inspected by a State contractor (Marshall Miller & Associates, Inc.) to determine if it had previously been used as a landfill and to identify any potential hazards if a landfill was present. That inspection confirmed the presence of a landfill.

A report was submitted to the North Carolina Division of Waste Management by the contractor identifying the property's past use as a landfill and included general information about the property and vicinity. A copy of that report is enclosed. No immediate hazard was observed associated with the landfill area. The property will remain as part of the Division's inventory of unregulated landfills and continue to be part of public record.

To address properties such as this, the General Assembly of North Carolina ratified Senate Bill 1492 that creates a program whereby the State will assess and remedy the environmental hazards at these old pre-regulatory landfills. Under Senate Bill 1492, as long as owners fully cooperate with the state in its performance of this work and monies are available, the owner will not have to conduct the work at their expense. A state-wide disposal tax was established by Senate Bill 1492. Fifty percent of the proceeds go to conducting this work. Cooperation with assessment and implementation of control and mitigation measures may include, but are not limited to, granting access to the site, allowing installation of various monitoring wells (groundwater) and probes (landfill gas), allowing installation and maintenance of improvements to the landfill cap, allowing installation of security measures, agreeing to record and implement land-use restrictions, and providing access to any records regarding the old landfill.

Prior to the passage of this law, owners and operators of the landfill property and other responsible parties were obligated to fund any required assessment and cleanup work to address the public health and environmental hazards posed by these properties.

The City of Durham's cooperation for assessment and remediation activities would be very much appreciated.

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Phone: 919-508-8400 \ FAX: 919-715-4061 \ Internet: www.wastenotnc.org

Thank you for your cooperation this far in allowing access to this property. We ask that our office be notified prior to any redevelopment plans so that public health or the environment is not adversely affected. If you have any questions, please call me at (919) 508-8463.

Sincerely,

Bruce E. Lefler Jr.

Bruce E. Lefler, Jr., Hydrogeologist
Pre-Regulatory Landfill Unit
Inactive Hazardous Sites Branch
Superfund Section

Enclosure

Site Summary Report
DURHAM LAND DISPOSAL AREA
NONCD0000291
Durham County, North Carolina

Senate Bill 1492
State of North Carolina
State Contract 6010S
MM&A Project Number NCUL141

Prepared For:

North Carolina Department of Environment and Natural Resources
Division of Waste Management - Superfund Section
Inactive Hazardous Sites Branch
401 Oberlin Road, Suite 150
Raleigh, NC 27605

Prepared By:

MARSHALL MILLER & ASSOCIATES, INC.
5900 Triangle Drive
Raleigh, NC 27617
(Ph.) 919-786-1414 (Fax) 919-786-1418

August 13, 2009

Prepared By:

Jacob A. Hodges
Project Scientist

Reviewed By:

Christopher Rook
Project Scientist

1.0 SITE INFORMATION

ID NUMBER: NONCD0000291

SITE NAME: Durham Land Disposal Area

LOCATION: East of Ellerbe Creek, extending to the north from the intersection of Midland Terrace (SR-1827) and Camden Avenue (SR-1971) to Moose Creek

COUNTY: Durham

LANDFILL SIZE: 42.0 acres

PROPERTY (SITE) SIZE: 101 acres

DATE OPENED: 1964

DATE CLOSED: 1974

SITE OWNER: City of Durham

OWNER CONTACT: Ms. Josephine Valencia, City of Durham Solid Waste Disposal Manager

OWNER ADDRESS: 1833 Camden Road, Durham, North Carolina 27704

OWNER TELEPHONE NUMBER: (919) 560-4186

PARCEL ID NUMBER: 519788

DEED REFERENCE: Deed Book 134, Page Number 432

COORDINATES (at point of entrance to Site):

STATE PLANE COORDINATES (SPC); NAD83, Meters

X: 621673.428; Y: 251898.570

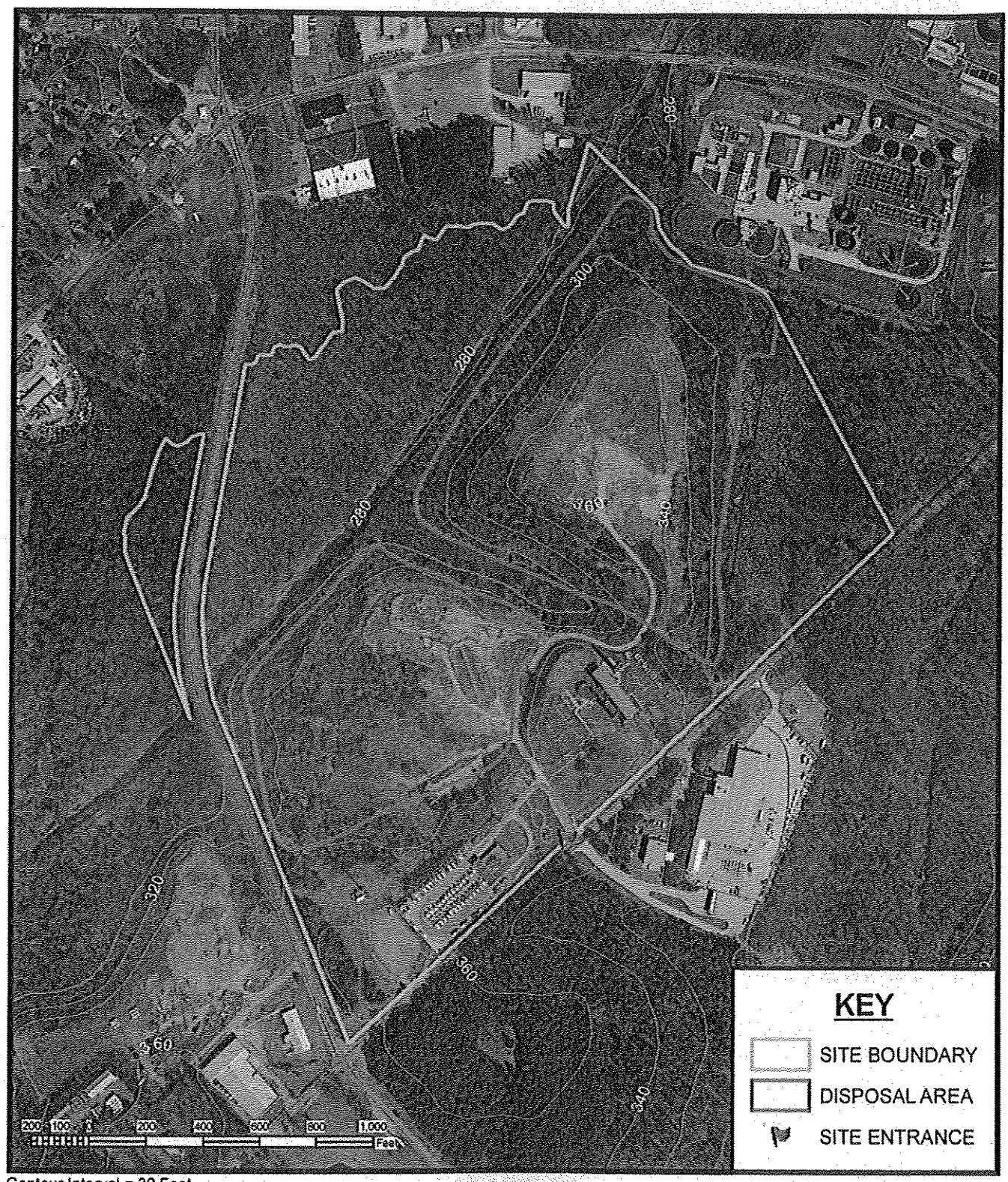
DEGREES, MINUTES, SECONDS (DMS); WGS 84

Lat.: N 36° 01' 14.291; Long.: W 78° 51' 57.844"

2.0 AREAS OF NOTE

The following areas of note were observed during the site inspection:

- Following closure of the Site as an unlined municipal landfill, the public was permitted to deposit land clearing and inert debris (LCID) waste at the Site until approximately 2005 and the City of Durham continued to deposit LCID waste until



Contour Interval = 20 Feet

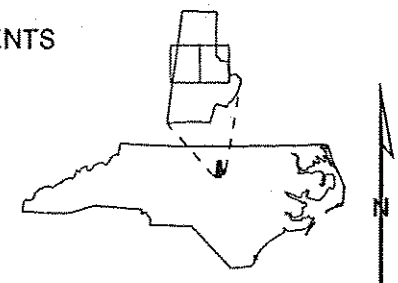
FIGURE 3

NCDENR/OLD UNLINED LANDFILL ASSESSMENTS
DURHAM LAND DISPOSAL AREA
NONCD0000291
DURHAM, DURHAM COUNTY,
NORTH CAROLINA

1 inch = 500 feet

VICINITY MAP

DURHAM COUNTY
DURHAM NORTHWEST &
DURHAM NORTHEAST QUADS



NORTH CAROLINA
QUADRANGLE LOCATION

Prepared by:

MARSHALL MILLER & ASSOCIATES

NCUL141 08/2009

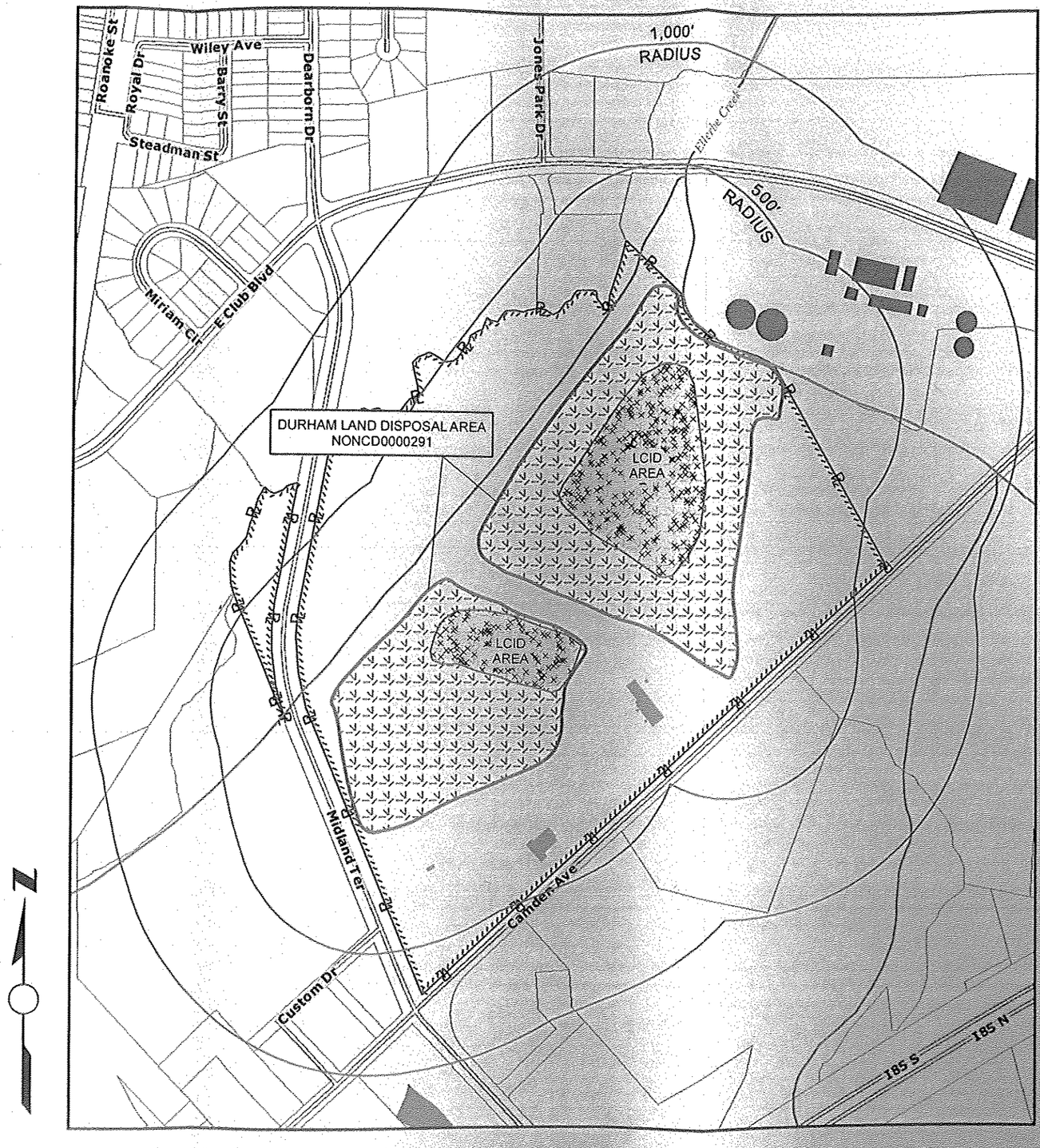
SOURCE:
- Aerial Photograph obtained from Durham County GoMaps Internet Mapping Service, 2005
- Topographic data from North Carolina Department of Transportation Geographic Information Systems Unit

WATER WELL LEGEND

NO WATER SUPPLY WELLS WERE IDENTIFIED WITHIN
1,000 FEET OF THE DISPOSAL AREA

Legend

- Existing Property Line
- Site Boundary
- Disposal Area
- Lake/Pond
- Reservoir
- Perennial Stream
- On-Site Structure



Sources:
Stream and waterbody data obtained from the National Hydrography Dataset - High Resolution.
Property line, road centerline, and building footprint data obtained from Durham County GoMaps Internet Mapping Service.

Marshall Miller & Associates, Inc.
Geology, Environmental Sciences & Engineering, Geophysics
Bluefield, VA · Lexington, KY · Raleigh, NC
Charleston, WV · Owensboro, KY · Harrisburg, PA
Lenoir, NC · Pittsburgh, PA · Morgantown, WV
Baton Rouge, LA

Prepared By: MARSHALL MILLER & ASSOCIATES

FILE NO.: Figure 2 - Water Wells.MXD

No.	Date	Revision

DESIGNED:	JAH	
DRAWN:	JAH	
CHECKED:	LG	
DATE:	08/06/2009	
SCALE:	1" = 500'	
PROJECT NO.:	NCUL141	

NCDENR/OLD UNLINED LANDFILLS
DURHAM LAND DISPOSAL AREA
NONCD0000291
DURHAM, DURHAM COUNTY, N.C.
PROPERTY/WATER WELL LOCATION MAP

FIGURE 2

COUNTY OF DURHAM
DEPARTMENT OF GENERAL SERVICES

MICHAEL O. TURNER
Director

DONALD HASSELBACH
Assistant Director

February 28, 2005

Cheryl Marks
Inactive Hazardous Sites Branch Superfund Section
NC Division of Waste Management Branch
401 Oberlin Road
Raleigh, NC 27605-1350

Re: Sanitary Landfill History in Durham County

Dear Ms. Marks:

I am responding to your request for information dated January 31, 2005, on behalf of Durham County Manager, Michael Ruffin.

Having been a member of Durham County Government staff since 1976, with the responsibility of solid waste management, I have access to historical records, knowledge and past personal experiences with the County's solid waste history.

I have reviewed the database information you forwarded for all known old landfills/dump sites in Durham. As you requested, I have made additional notations to update the six sheets you forwarded. I am also including additional information chronologically on old unlined landfills that are not subject to the Division of Waste Management, Solid Waste section post-closure regulations that were not included in your database.

Until 1984, the City and County of Durham operated two separate waste disposal facilities. I have communicated with City staff and have enclosed their response to three of the sheets you forwarded.

To the best of my knowledge and records, the history of Durham's solid waste facilities is as follows:

DURHAM COUNTY

Pre-1950 Solid waste was disposed of by private collectors on the personal property of Mrs. W.C. Beck of Route # 5, Box 241, Durham, at a charge to the county of $5.00 per month. See the enclosed letter dated January 6, 1946.

1950-1953 The 1st Durham County landfill was located on "the Mitchell farm" off Fish Dam Road (Now Cheek Rd). See enclosed documentation entitled "Solid Waste Disposal Program – April 1947 through October 1969."

1953-1958 The 2nd county landfill was located on the "N. M. Marbery" property on Cheek Road.

1958-1966	The 3rd county landfill was located on the "old Rocky Knolls school site", adjoining the Marbery landfill on Cheek Road.
1966-1966	Temporary arrangements were made with the Town of Chapel Hill from July 1966 until October 1966 for the disposal of Durham County's solid waste.
1966-1970	The 4th county landfill was located on Wren Road, your ID# NONCD0000289.
1970-1984	The 5th and last county landfill was located on Exum Road, off Redwood Road. At this location 3 separate sanitary landfills were permitted on the 100 acre tract of land by the State, your ID #'s NOCCD0000290 and ID # NONCD0000293.

In 1984 when the landfill on Exum Road closed, the County merged with Durham City due to the lack of availability of land and new permitting requirements.

DURHAM CITY

Pre-1964	The City of Durham operated an incinerator for the disposal of residents waste.
1964-1974	The 1st City landfill was located on Camden Avenue, your ID # NOCCD0000291.
1974-1998	The 2nd City landfill was located on Club Boulevard, your ID # NONCD0000294.
1998-Present	The City opened a transfer station for the disposal of all city and county waste, which is transferred out-of-state to Virginia.

I hope this information is helpful. Let me know if you need any additional information.

Sincerely,

Michael Turner
Director of General Services

Cc: Michael Ruffin, County Manager
Carolyn Titus, Deputy County Manager
Don Hasselbach, Assistant General Services
Larry Dixon, Waste Reduction Supervisor

310 South Dillard Street, Durham, North Carolina 27701-3744
Voice (919) 560-0430 EOE FAX (919) 560-0438