

ALTAMONT ENVIRONMENTAL, INC.

ENGINEERING & HYDROGEOLOGY

231 HAYWOOD STREET, ASHEVILLE, NC 28801

TEL. 828.281.3350 FAC. 828.281.3351

WWW.ALTAMONTENVIRONMENTAL.COM

July 29, 2011

North Carolina Department of Environment and Natural Resources
Division of Waste Management, Solid Waste Section
Attention: Mr. C. T. Gerstell
Mooresville Regional Office
610 East Center Avenue
Mooresville, North Carolina 28115

Subject: Industrial Waste Landfill—Facility Annual Report
Allen Steam Station Retired Ash Basin (RAB) Ash Landfill, Phase 1
Permit # 36-12
Duke Energy Carolinas—Allen Steam Station
Gaston County, North Carolina

Dear Mr. Gerstell,

Attached is the completed Industrial Waste Landfill Facility Annual Report form for Duke Energy's Allen Steam Retired Ash Basin (RAB) Ash Landfill, Phase 1, Cell 1, and Cell 2 (Permit# 36-12) for the period July 1, 2010 through June 30, 2011.

The landfill only accepts waste from the Plant Allen Steam Station. A total of approximately 312,750.96 tons of waste was received by the landfill during the twelve-month period. As required by the Permit to Operate, Attachment 3, Part 1, 13.c, a measurement of volume utilized in the landfill cells was performed during the second quarter of the calendar year. The results of the volume survey are included in Attachment A.

A copy of this Annual Report will be provided to the County Manager for Gaston County.

Please feel free to call or respond with any questions or comments related to this project.

Sincerely,

ALTAMONT ENVIRONMENTAL, INC.

William M. Miller

William M. Miller, P.E.



Engineering Firm # C-2185

Enclosures: Industrial Waste Landfill—Facility Annual Report, including Figure 1
Annual Waste Volume Measurement

Mr. C. T. Gerstell
July 29, 2011
Page 2 of 2

cc: Duke Energy Carolinas—Allen Steam Station
253 Plant Allen Road
Belmont, North Carolina 28012
Attn: Don Scruggs

Duke Energy Carolinas
Post Office Box 1006
Charlotte, NC 28201-1006
Attn: Ed Sullivan, P.E. Mail Code EC13K

Duke Energy Carolinas
Post Office Box 1006
Charlotte, NC 28201-1006
Attn: Chris Ussery Mail Code EC10C



According to (G.S. 130A-309.09D(b)) completed forms must be returned by August 1, 2011 and a copy of this report must be sent to the County Manager of each county from which waste was received. If you have questions or require assistance in completing this report, contact your Regional Environmental Senior Specialist.

Facility Name: Duke Energy-Allen Steam Station RAB Ash Landfill Permit: 3612-INDUS-2008 ID: P1172

Facility Website (URL): http://www.duke-energy.com/power-plants/coal-fired/allen.asp

Physical Address	Mailing Address
Street 1: <u>253 Plant Allen Road</u>	Street 1: <u>253 Plant Allen Road</u>
Street 2: _____	Street 2: _____
City: <u>Belmont</u> County: <u>Gaston</u>	City: <u>Belmont</u>
State: <u>North Carolina</u> Zip: <u>28012</u>	State: <u>North Carolina</u> Zip: <u>28012</u>

Primary Facility Contact Person	Billing Contact Person
Name: <u>Don Scruggs</u>	Name: <u>Don Scruggs</u>
Phone: <u>(704) 829-2423</u> Fax: <u>(704) 829-2385</u>	Phone: <u>(704) 829-2423</u> Fax: <u>(704) 829-2385</u>
Email: <u>Don.Scruggs@duke-energy.com</u>	Email: <u>Don.Scruggs@duke-energy.com</u>

1. Tipping Fee: \$ 0.00 per Ton (Attach a schedule of tipping fees if appropriate.)

2. Indicate types of disposal activity occurring at this facility (Check all that apply).

- Landfilling of industrial waste (specify waste): Ash, Sludge, Gypsum
- Landfilling of construction and demolition waste
- Landfilling of asbestos
- Landfilling of ash
- Landfilling of sludge
- Landfilling of other waste (specify): Non-hazardous Sandblast Waste

3. What other activities occur at this facility? (check all that apply)

- Recycling/Reuse Collection Scrap Tire Collection White Goods Collection Household Hazardous Waste Collection

If you checked Recycling/Reuse Collection, please indicate the materials accepted: (check all that apply)

- Paper Wood Concrete/rubble/asphalt Gypsum/drywall
- Cardboard Glass Aluminum Cans Steel Cans
- PETE (#1) Plastic HDPE (#2) Plastic Computer Equipment Televisions
- Fluorescent lightbulbs Used oil/oil filters Other Metal Other Plastic
- Other (specify) _____

Airspace (Capacity): Questions in this section relate to all cells/units of the facility operated under the current 4-digit permit number regardless of whether the cells/units are closed or are not contiguous at the time of this report. Tonnage questions must be based on scale records and cover the period between the opening date and the date of the last survey unless another time period is approved. Airspace measurements include weekly, intermediate and final cover.

4. Date Facility Last Surveyed: 06/21/2011

5. Airspace Used (cubic yards): 263,300

6. Total Tons Disposed in Airspace Used (tons): 506,982.97

Facility Name: Duke Energy-Allen Steam Station RAB Ash Landfill Permit: 3612-INDUS-2008

Address: 253 Plant Allen Road

City: Belmont State: North Carolina Zip: 28012

Person completing Assessment: William M. Miller Date: Jul 29, 2011

Phone Number: (828) 281-3350 Fax: (828) 281-3351 Email: bmillier@altamontenvironmental.com

Instructions: Please indicate either *Yes* or *No* for each Receptor and Post Closure Maintenance question. Then please determine the distance or distances for each Receptor from the *Edge of Waste* (using range finders and/or GIS maps) and type that information into the form. Please attach additional information including GIS maps, lists of potable well locations, etc.

Receptors

1. Are there Residential Dwellings Within 1,500 feet of the Edge of Waste? Yes No
 If Yes, how many? _____
 What are the three closest distances from the *Edge of Waste*? _____ Feet _____ Feet _____ Feet
2. Are there Potable Wells Within 1,500 feet of the Edge of Waste? Yes No
 If Yes, how many? _____
 What are the three closest distances from the *Edge of Waste*? _____ Feet _____ Feet _____ Feet
3. Are there Community/Municipal Wells Within 1,500 feet of the Edge of Waste? Yes No
 If Yes, how many? _____
 What are the three closest distances from the *Edge of Waste*? _____ Feet _____ Feet _____ Feet
4. Are there Surface Water Bodies Within 1,500 feet of the Edge of Waste? Yes No
 If Yes, how many? 1
 What are the three closest distances from the *Edge of Waste*? 330 Feet _____ Feet _____ Feet
 Please list the names of the water bodies: Lake Wylie
5. Is Public Water Available Within 1,500 feet of the Edge of Waste? Yes No
 If Yes, how many of the Residential Dwellings noted above are connected? _____

Corrective Measures

6. Is there an active methane extraction system (blower, flare, etc.)? Yes No
7. Is there a passive methane extraction system (trench, vents in cap, flare, etc.)? Yes No
8. Is there groundwater remediation taking place on site? Yes No
 If Yes, what is the specific remedial technology used? UST related groundwater remediation at plant site

Comments

Information verified by Duke Energy Carolinas



NOTES:

1. ORTHOPHOTOGRAPHY WAS OBTAINED FROM NC ONEMAP GIS WEB SITE FOR GASTON COUNTY (DATED 2009).
2. SURFACE WATER BODIES GIS DATA OBTAINED FROM NC DENR DWQ WEBSITE DATED 2007 AND 2010.
3. ALL EDGE OF WASTE BOUNDARIES AND PROPERTY INFORMATION PROVIDED BY DUKE ENERGY CAROLINAS.

ALTAMONT ENVIRONMENTAL, INC.

231 HAYWOOD STREET, ASHEVILLE, NC 28801
 TEL. 828.281.3350 FAC. 828.281.3351
 WWW.ALTAMONTENVIRONMENTAL.COM

DRAWN BY: MARTA A. VANDUSSEN
 PROJECT MANAGER: BILL MILLER
 CLIENT: DUKE ENERGY CAROLINAS
 DATE: 07/14/2011

SCALE (FEET)
 300' 0 300' 600'
 1" = 600'

RETIRED ASH BASIN (RAB)
 LANDFILL
 PERMIT # 36-12

DUKE ENERGY CAROLINAS
 ALLEN STEAM STATION
 GASTON COUNTY, NORTH CAROLINA

FIGURE

1

ATTACHMENT A
ANNUAL WASTE VOLUME MEASUREMENT



July 21, 2011

Duke Energy
526 South Church Street
Charlotte, North Carolina 28201

Attention: Mr. Jeff Newell, P.G.

**Reference: Landfill Operations – Annual Landfill Report Volume Estimate
July 1, 2010 – June 30, 2011**
Retired Ash Basin (RAB) Ash Landfill – Phase 1
Duke Energy - Allen Steam Station, Belmont, North Carolina
S&ME Project No. 1356-10-009A, Task 3
S&ME Engineering License No. F-0176

Dear Mr. Newell:

S&ME Inc., (S&ME) is pleased to submit this letter report summarizing waste placement for 2011 annual landfill reporting for the above referenced project at Duke Energy's Allen Steam Station. These services were performed in general accordance with the Task 3 Scope of Services summarized in S&ME Proposal No. 1356-23765-11 dated February 4, 2011.

BACKGROUND

The North Carolina Department of Environment and Natural Resources (NCDENR) issued a revised Phase 1 Permit to Operate (PTO) on June 16, 2011 at the RAB Ash Landfill under Permit No. 36-12. Attachment 3 to the PTO provides conditions of the operating permit. This letter report summarizes and fulfills the monitoring and reporting requirements under Attachment 3, Part I, Section 12.c, which states that a volume estimate must be provided with the annual facility report.

The annual landfill reporting for the previous year includes waste placement for only Cell 1. No waste was placed in Cell 2.

SUMMARY

The landfill operator, The SEFA Group (SEFA), generally operated the landfill by placing approximate 10-foot thick operational lifts. WSP Sells was contracted and performed a topographic survey of Cells 1 and 2 on June 21, 2011. The topographic survey is provided as Attachment 1 to this letter report. The topographic survey was compared to the Cell 1 topographic survey performed on June 17, 2010. The Cell 1 topographic survey performed on June 17, 2010 is provided as Attachment 2 to this letter report.

CONCLUSIONS

Based on the comparison of the June 17, 2010 topographic survey to the June 21, 2011 topographic survey, approximately 263,300 cubic yards of material was placed in Cell 1. The volume estimate was performed using the computer software, AutoCAD Civil 3D 2011. The comparison is provided as Attachment 3 to this letter report, and it provides fill thicknesses based on the comparison of the topographic surveys.

CLOSING

We appreciate the continued opportunity to be of service to you and Duke Energy. If you have any questions or comments, please call us at (704) 523-4726.

Sincerely,

S&ME, Inc.



Kyle Baucom, E.I.
Staff Professional II

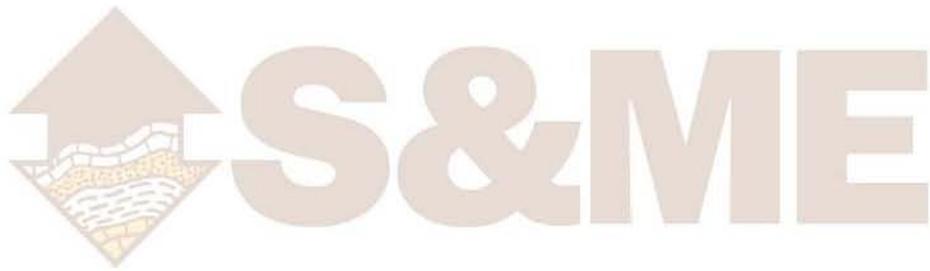


Kenneth R. Daly
Kenneth R. Daly, E.I.
Project Engineer II

Cc: Chris Ussery, Duke Energy
Don Scruggs, Duke Energy

Attachments: 1: Cells 1 & 2 Topographic Survey (June 21, 2011)
2: Cell 1 Topographic Survey (June 17, 2010)
3: Figure 1: Cell 1 Volume Estimate – 6/17/10 to 6/21/11

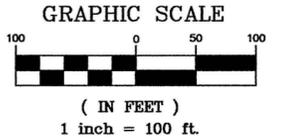
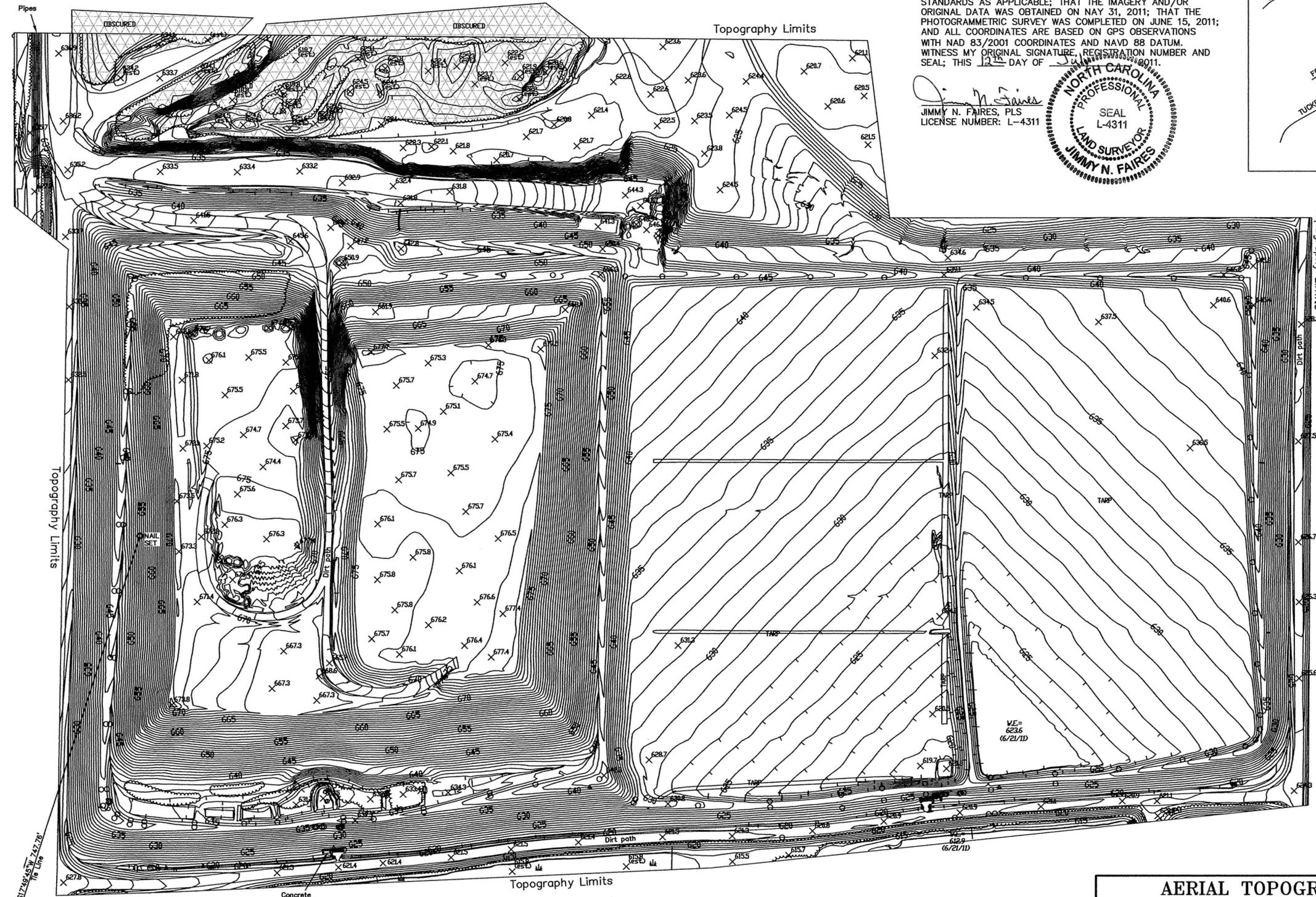
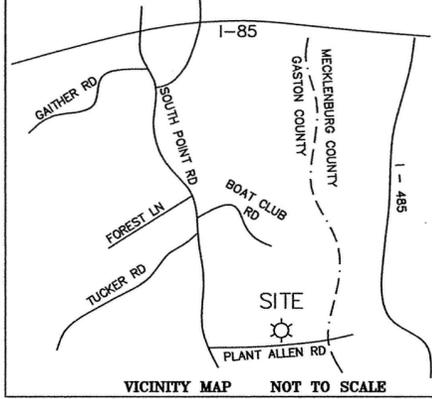
**ATTACHMENT 1 – Cells 1 & 2 Topographic
Survey (June 21, 2011)**



NC GRID NAD 83/2001

I, JIMMY N. FAIRES, CERTIFY THAT THIS PROJECT WAS DRAWN UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL PHOTOGRAMMETRIC SURVEY MADE UNDER MY SUPERVISION; THAT THIS PHOTOGRAMMETRIC SURVEY WAS PERFORMED TO MEET FEDERAL GEOGRAPHIC DATA COMMITTEE STANDARDS AS APPLICABLE; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON MAY 31, 2011; THAT THE PHOTOGRAMMETRIC SURVEY WAS COMPLETED ON JUNE 15, 2011; AND ALL COORDINATES ARE BASED ON GPS OBSERVATIONS WITH NAD 83/2001 COORDINATES AND NAVD 88 DATUM. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL; THIS 12TH DAY OF JULY 2011.

JIMMY N. FAIRES, PLS
LICENSE NUMBER: L-4311



NAIL SET (TBM)
N 526847.260 ft.
E 1398650.572 ft.
ELEV.: 643.49
See Note #3

FOUND MAG NAIL
N 525836.658 ft.
E 1397837.942 ft.
ELEV.: 647.50
See Note #3

- LEGEND**
- = NOT TO SCALE
 - = TREE LINE
 - TBM = TEMPORARY BENCHMARK
 - ELEV. = ELEVATION
 - 802.4 X = SPOT ELEVATION
 - = INDICATES OBSCURED AREAS (SEE NOTE #12)
 - = SWAMP/MARSH AREA
 - = POST

GENERAL NOTES:

- 1) ALL DIMENSIONS SHOWN ARE IN US SURVEY FEET AND DECIMALS THEREOF AND ARE HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE INDICATED. AREA BY COORDINATE METHOD.
- 2) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE EXAMINATION BY AN ATTORNEY. THE PROPERTY MAY BE SUBJECT TO RECORDED OR UNRECORDED RIGHTS-OF-WAY, EASEMENTS, RESTRICTIVE COVENANTS OR CONDITIONS NOT OBSERVED OR SHOWN HEREON.
- 3) NORTH ORIENTATION AND GROUND COORDINATES SHOWN HEREON ARE BASED ON THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM NAD 83/2001. THE AVERAGE COMBINED FACTOR USED FOR THE PROJECT IS 0.999845509, USING NCGS MONUMENT REESE (N 523121.126 ft., E 1396207.177 ft.) AS A BASE POINT.
- 4) BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, NAD 83/2001.
- 5) ELEVATIONS BASED ON NAVD 88.
- 6) NO FIELD WORK WAS PERFORMED BY WSP SELLS TO DETERMINE OR VERIFY ANY BOUNDARY LINES.
- 7) THIS SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET.
- 8) THE LOCATION OF UTILITIES AS SHOWN HEREON, WHETHER PUBLIC OR PRIVATE, ARE BASED ON THE LOCATION OF VISIBLE ABOVE GROUND APPURTENANCES FROM AERIAL PHOTOGRAPHY ON 6/21/11 ONLY. OTHER UTILITIES WHICH WERE NOT OBSERVED AND NOT SHOWN HEREON MAY EXIST. IT IS THE OWNERS/TENANTS RESPONSIBILITY TO VERIFY THE LOCATION PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. WSP-SELLS CANNOT ASSUME RESPONSIBILITY FOR MISIDENTIFICATION OR OMISSION OF UNDERGROUND UTILITIES.
- 9) THE PURPOSE OF THIS SURVEY IS TO PROVIDE AERIAL TOPOGRAPHIC INFORMATION FOR A PORTION OF THE ALLEN STEAM STATION, A PORTION OF GASTON COUNTY TAX ID #3592-89-2497.
- 10) ALTITUDE OF SENSOR: 1800' ABOVE MEAN TERRAIN
- 11) SENSOR FOCAL LENGTH: 153.38 MM
- 12) CONTOURS IN THESE AREAS MAY NOT MEET ACCURACY STANDARDS.
- 13) THIS IS AN ACTIVE ASH CELL WITH FILL BEING PLACED DAILY AND THE PURPOSE OF THIS SURVEY IS TO PROVIDE TOPOGRAPHIC INFORMATION FOR ASH BASIN CELL 1 AS OF THE DATE OF THIS FIELD SURVEY, JUNE 21, 2011.

**AERIAL TOPOGRAPHIC SURVEY
ALLEN STEAM STATION
ASH BASIN CELLS 1 & 2
SOUTHPOINT TOWNSHIP, GASTON COUNTY, N.C.**

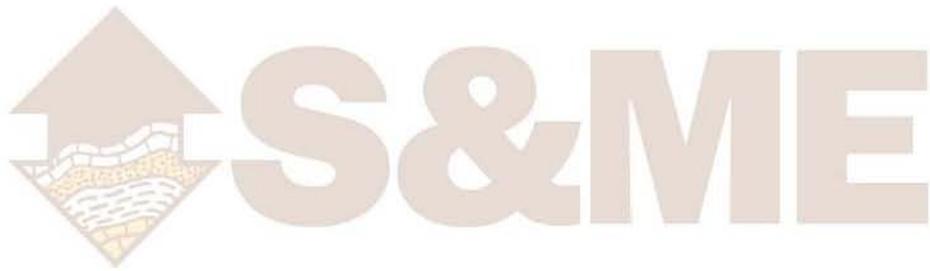
PREPARED FOR: S&ME, INC. 9751 SOUTHERN PINE BOULEVARD CHARLOTTE, NC 28273 PHONE: 704.523.4726 FAX: 704.525.3953	OWNER: DUKE ENERGY CORPORATION 526 SOUTH CHURCH STREET CHARLOTTE, NC 28201
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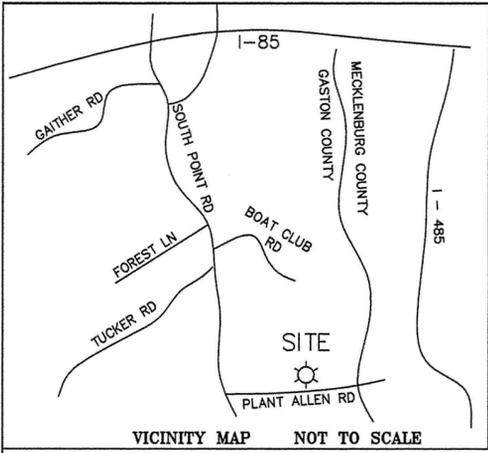
WSP-SELLS
Transportation & Infrastructure
128 Overhill Drive Suite 105 • Mooresville, NC 28117 • 704.662.0100
www.wsp-sells.com

Tax Parcel Number PORTION OF 3592-89-2497	Drawn By GHL	Date of Aerial Survey JUNE 21, 2011	Field Book N/A	Job Number 116021
Scale 1" = 100'	Checked By JNF	Date JULY 12, 2011	Drwg. No. 1 of 1	File Name 116021-AERIAL

LICENSE NO.: F-0891

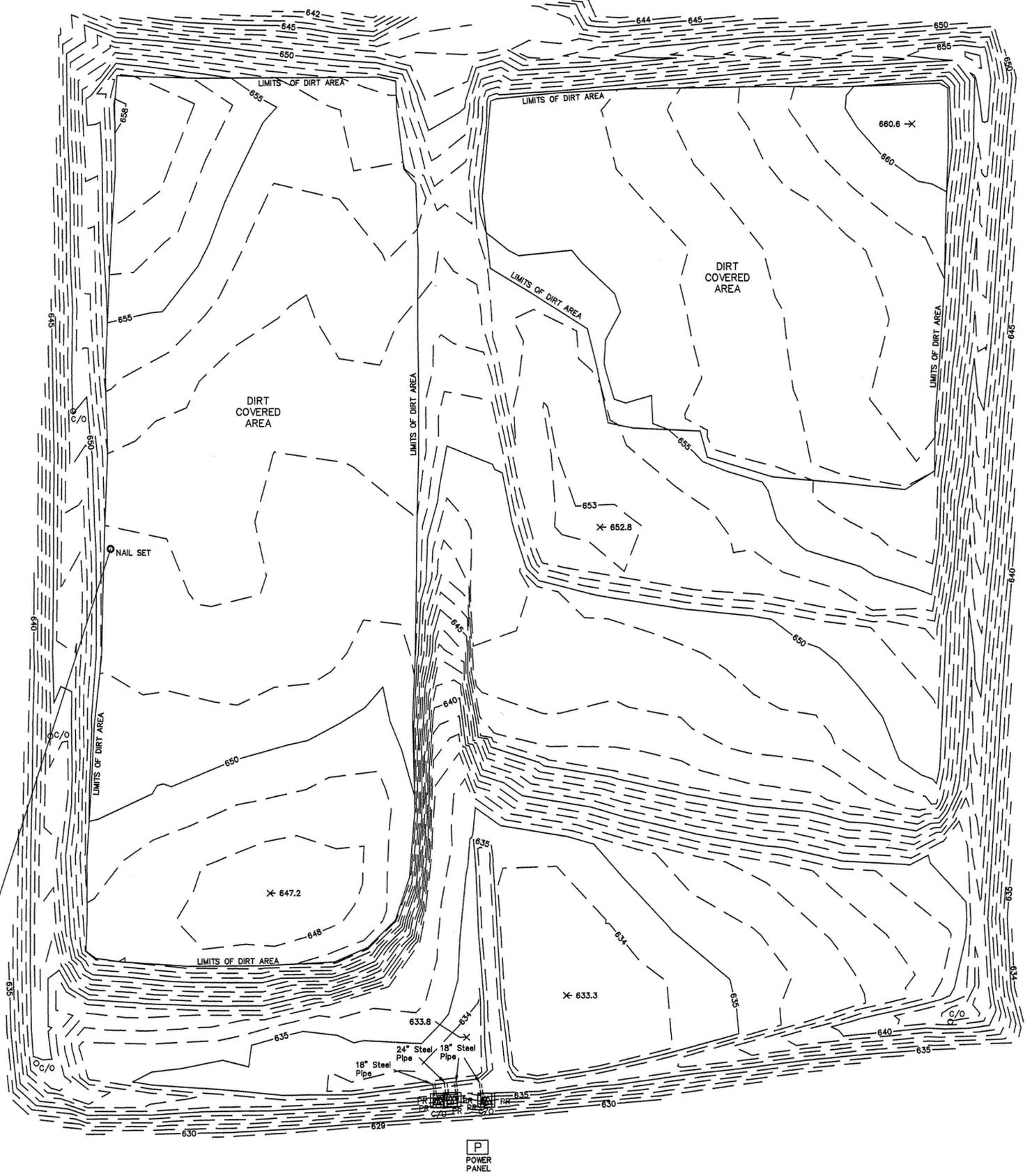
**ATTACHMENT 2 – Cell 1 Topographic
Survey (June 17, 2010)**





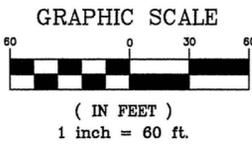
- LEGEND
- = Not to scale
 - PR Δ = Power Riser
 - c/o \circ = Clean Out
 - ELEV. = Elevation

NC GRID NAD 83/2001



I, Jimmy N. Faires, certify that this plot was drawn under my supervision from an actual survey made under my supervision, deed description and/or Map Book N/A, Page N/A; that the boundaries not surveyed are clearly indicated as drawn from information found in Book N/A, Page N/A; that the ratio of precision as calculated is 1:10,000+; that this plot is of another category, such as a recombination of existing parcels, a court-ordered survey or other exception to the definition of subdivision, and that this plot was prepared in accordance with G.S. 89-C. The survey was made on the original signature, registration number 1254 on the 17 day of June, 2010.

JIMMY N. FAIRES, PLS
LICENSE NUMBER: L-4311



GENERAL NOTES:

- 1) ALL DIMENSIONS SHOWN ARE IN US SURVEY FEET AND DECIMALS THEREOF AND ARE HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE INDICATED.
- 2) NORTH ORIENTATION AND GROUND COORDINATES SHOWN HEREON ARE BASED ON THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM NAD 83/2001. THE AVERAGE COMBINED FACTOR USED FOR THE PROJECT IS 0.999845509, USING NCGS MONUMENT REESE (N 523121.126 ft., E 1396207.177 ft.) AS A BASE POINT.
- 3) BASIS OF BEARINGS: BEARINGS ARE BASED ON THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, NAD 83/2001.
- 4) NO WORK WAS PERFORMED BY WSP-SELLS TO VERIFY ANY BOUNDARY LINES.
- 5) THIS IS AN ACTIVE ASH CELL WITH FILL BEING PLACED DAILY AND THE PURPOSE OF THIS SURVEY IS TO PROVIDE TOPOGRAPHIC INFORMATION FOR ASH BASIN CELL 1 AS OF THE DATE OF THIS FIELD SURVEY, JUNE 17, 2010.
- 6) THIS SURVEY IS OF AN EXISTING PARCEL OF LAND.
- 7) ELEVATIONS BASED ON NAVD 88.
- 8) STEEL PIPES ORIGINATE UNDER CELL 1, ACTUAL LOCATIONS ARE NOT ACCESSIBLE.

TOPOGRAPHIC SURVEY
ALLEN STEAM STATION
ASH BASIN CELL 1
SOUTHPOINT TOWNSHIP, GASTON COUNTY, N.C.

PREPARED FOR:
S&ME, INC.
301 ZIMA PARK DRIVE
SPARTANBURG, SC 29301
PHONE: 864.574.2360
FAX: 864.576.8730

OWNER:
DUKE ENERGY CORPORATION
526 SOUTH CHURCH STREET
CHARLOTTE, NC 28201



SUBCONTRACT #1254 SITE SURVEY

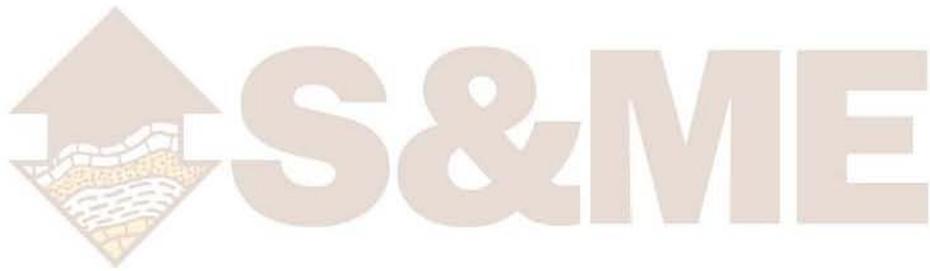
LICENSE NO.: F-0891

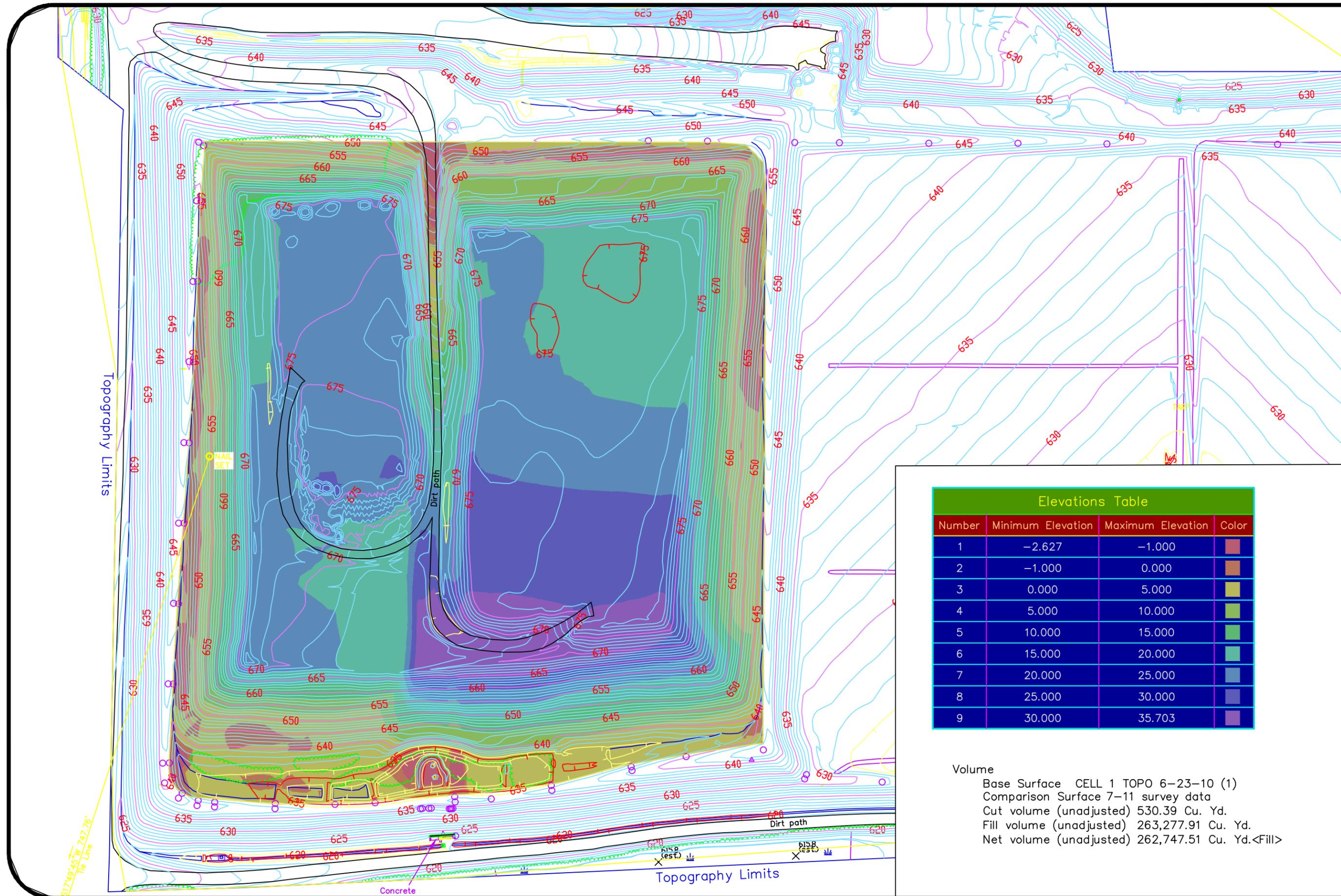
Tax Parcel Number PORTION OF 3592-89-2497	Drawn By GHL	Date of Field Survey JUNE 17, 2010	Field Book 80	Job Number 106016
Scale 1" = 60'	Checked By JNF	Date JUNE 21, 2010	Drwg. No. 1 of 1	File Name CELL 1 TOPO

NAIL SET
N 526847.260 ft.
E 1398680.972 ft.
ELEV.: 643.49

FOUND MAG NAIL
N 525936.658 ft.
E 1397837.942 ft.
ELEV.: 647.50

ATTACHMENT 3 – Figure 1: Cell 1 Volume Estimate – 6/17/10 to 6/21/11





Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-2.627	-1.000	Light Blue
2	-1.000	0.000	Light Green
3	0.000	5.000	Light Yellow
4	5.000	10.000	Light Orange
5	10.000	15.000	Light Red
6	15.000	20.000	Light Purple
7	20.000	25.000	Light Blue
8	25.000	30.000	Light Green
9	30.000	35.703	Light Yellow

Volume
 Base Surface CELL 1 TOPO 6-23-10 (1)
 Comparison Surface 7-11 survey data
 Cut volume (unadjusted) 530.39 Cu. Yd.
 Fill volume (unadjusted) 263,277.91 Cu. Yd.
 Net volume (unadjusted) 262,747.51 Cu. Yd.<Fill>

DATE: 07/21/11
 DRAWN BY: CLD
 CHECKED BY: KB

SCALE: 1" = 100'
 PROJECT NO. 1356-10-009A-03
 ENGINEERING LICENSE NO. F-0176

9751 SOUTHERN PINE BLVD.
 CHARLOTTE, N.C. 28273
 (704)523-4726

S&ME
 WWW.SMEINC.COM

CELL 1 VOLUME ESTIMATE
 6/17/10 TO 6/21/11

PLANT ALLEN RAB ASH LANDFILL
 BELMONT, NORTH CAROLINA

FIGURE NO. **1**