

Closure & Post Closure Liability Calculation Fund 510

FY16

Closure Cost 2016	6,489,619.73
Post Closure Cost 2016	5,367,384.00
Total 2016	11,857,003.73

Total Capacity = 12,137,439 cubic yards
 Revised per letter dated 08/19/15 from CDG Engineers & Associates, Inc.

2010 Capacity Used 223,568.71 cubic yards
 2011 Capacity Used 225,258.44 cubic yards
 2012 Capacity Used 216,405.80 cubic yards
 2013 Capacity Used 216,989.97 cubic yards
 2014 Capacity Used 215,473.90 cubic yards
 2015 Capacity Used 107,089.10 cubic yards
 from 12/14/14 to 09/30/15
 2016 Capacity Used 199,798.06 cubic yards

2013 Increase by CPI (0%)		NOT USED FOR FY16
2010 Toatal Cost	#VALUE!	
2014 Increase by CPI (0%)	#VALUE!	
2011 Total Cost	#VALUE!	

Formula:

$$\frac{\text{Estimated Total Current Cost X Cummulative Capacity Used}}{\text{Total Estimated Capacity}} - \text{Amount Previously Recognized} = \text{Amount to Record in FY}$$

Calculation:

$$\frac{\$11,857,003.73 \times (199,798.06 \text{ cubic yards} + 3,224,362.1 \text{ cubic yards})}{12,137,439 \text{ cubic yards}} - \$3,137,314.03 = \underline{\underline{\$207,730.98}}$$

See attached letters for supporting documentation of amounts used in the calculations.

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Trial Balance Inquiry by BU - Trial Balance / Ledger Comparison

Query: [Report Name] [Icons]

[Icons] Row [Tools]

Skip to Account * Select / Skip To

Ledger Type 1 Budget Amount Level Of Detail Period / I

Ledger Type 2 General Ledger LT 1 Thru Date

Type/Subledger LT 2 Thru Date

Records 1 - 116 [Icons] Customize Grid BUDGET vs ACTUAL [Icons]

Account Number	Level Of Detail	Account Description	General Ledger Balance	Budget Amount Balance	Variance Balance
	2	Solid Waste			
510.26802	4	Closure & Post-Closure	3,137,314.03		3,137,314.03
510.26802.01	5	Current Closure & Post-Closure			
510.26802	4	Closure & Post-Closure	3,137,314.03		3,137,314.03
510.27001	4	Advance From Gen Fund			
510.29905	4	Accrued Wages	59,642.24		59,642.24

Open Applications Favorites COA Setup Accounts Payable Recent Reports General Accounting Fixed Assets

Journal Journal General General General Account Account In Trial Balance T/A by Response GL Inquiries Financial Monthly & Integrity Allocations Account



Baldwin County Solid Waste

15140 County Road 49

Summerdale, AL 36580

251-972-6878

MEMO

To: John Marino
From: Terri Graham
Date: October 7, 2016
Subject: Cubic Yards in Lined Cell

We received 199,798.06 cubic yards of material that went into the lined cell for the period October 1, 2015 to September 30, 2016.

If you have any questions, please let me know.

Baldwin County Solid Waste Department	15140 County Road 49	
Report:	Lined Subtitle D Cell	
Period:	10/1/2015 to 9/30/2016	
Facility:	BCC-MAGNOLIA	
Materials:	L9,L7,L6,L5 - SAND,L5 - OIL,L5,L4,L3,L2,L1P,L10,L1-ELBERTA,L1,L0	
<u>Material</u>	<u>Description</u>	<u>Tons</u>
L1	RESIDENTIAL	85,837.50
L1-ELBERTA	RESIDENTIAL	486.24
L10	ASBESTOS	2.85
L1P	RESIDENTIAL GARBAGE PERMITTED	6.32
L2	COMMERCIAL	79,852.24
L3	TREATED LUMBER	384.53
L4	INERT/GARBAGE MIX	1,516.55
L5	SPECIAL HANDLING	3,958.40
L6	CARRION	424.12
L9	INBOUND FROM MCB	418.54
Grand Totals		170,707.47
Compaction Ratio 1,708.8 lbs/cy per CDG 1/20/2015		2,000.00
		1,708.80
		1.170411985
		199,798.06.
Generated by: BCC\TGraham on 10/7/2016 at 3:29:25PM		
C:\Program Files\CCSI\Reports_LTF\Scaling\ADEM Reports\ADEM Lined subtitle D Cell.rpt		
Page -1 of 1		



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Andalusia, AL 36420
Tel (334) 222-9431
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January 20, 2015

Mr. Ed Fox
Magnolia Sanitary Landfill
Baldwin County Commission
15140 County Road 49
Summerdale, Alabama 36580

**RE: Landfill Airspace Report
Magnolia Sanitary Landfill**

Dear Mr. Fox,

It is a pleasure for CDG Engineers and Associates to submit the requested Landfill Airspace Report for the Magnolia Sanitary Landfill. The report focuses on the MSW disposal operations during a study period defined as April 2007 through December 2014. The report includes methodology, results, and Figures depicting fill sequencing as defined during report development.

Capacity Analysis

Aerial Topography of the MSW waste disposal footprint was performed by Southern Resource Mapping, Inc. on December 13, 2014. To determine the capacity utilized during the study period the December 2014 Aerial Topo was compared to a previously completed topographic survey completed in April 2007. The gross capacity utilized during the period of analysis was determined to be **1,491,533 cubic yards (CY)**.

CDG determined remaining capacity of the constructed footprint (Cells 1-8) to current height by comparing the December 2014 Aerial topography with an Intermediate Fill plan representing current operational height (134' MSL). This comparison yielded a remaining capacity of **1,678,136 cubic yards (CY)**.

CDG utilized the software program InRoads v.8i, by Bentley Systems, to compute the gross airspace volume. InRoads compares triangulated irregular network models (TINs) representing the scenario to compute the gross volumetric cut/fill volumes.

Compaction Analysis

To determine operational efficiency of the Magnolia MSW disposal operations, CDG compared the tonnage disposed in the MSW area during the study period with the capacity utilized over the same period to determine the Compaction Ratio. The Compaction Ratio was calculated to be **1,708.8 lbs/cy**, or approximately **1.20 cy/ton**.

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Estimate of Remaining Life

Using the Compaction Ratio, Intermediate Fill Plans, and 2014 disposal tonnage, CDG calculated the remaining lifespan for the facility. The remaining lifespan at current disposal tonnages (no growth) indicates approximately **8.3 years** of remaining life.

Should you have any questions regarding this report, feel free to give me a call, 334-222-9431.

Sincerely,

CDG Engineers & Associates, Inc.

Sarah Sightler
Project Manager

Enc.

cc: file

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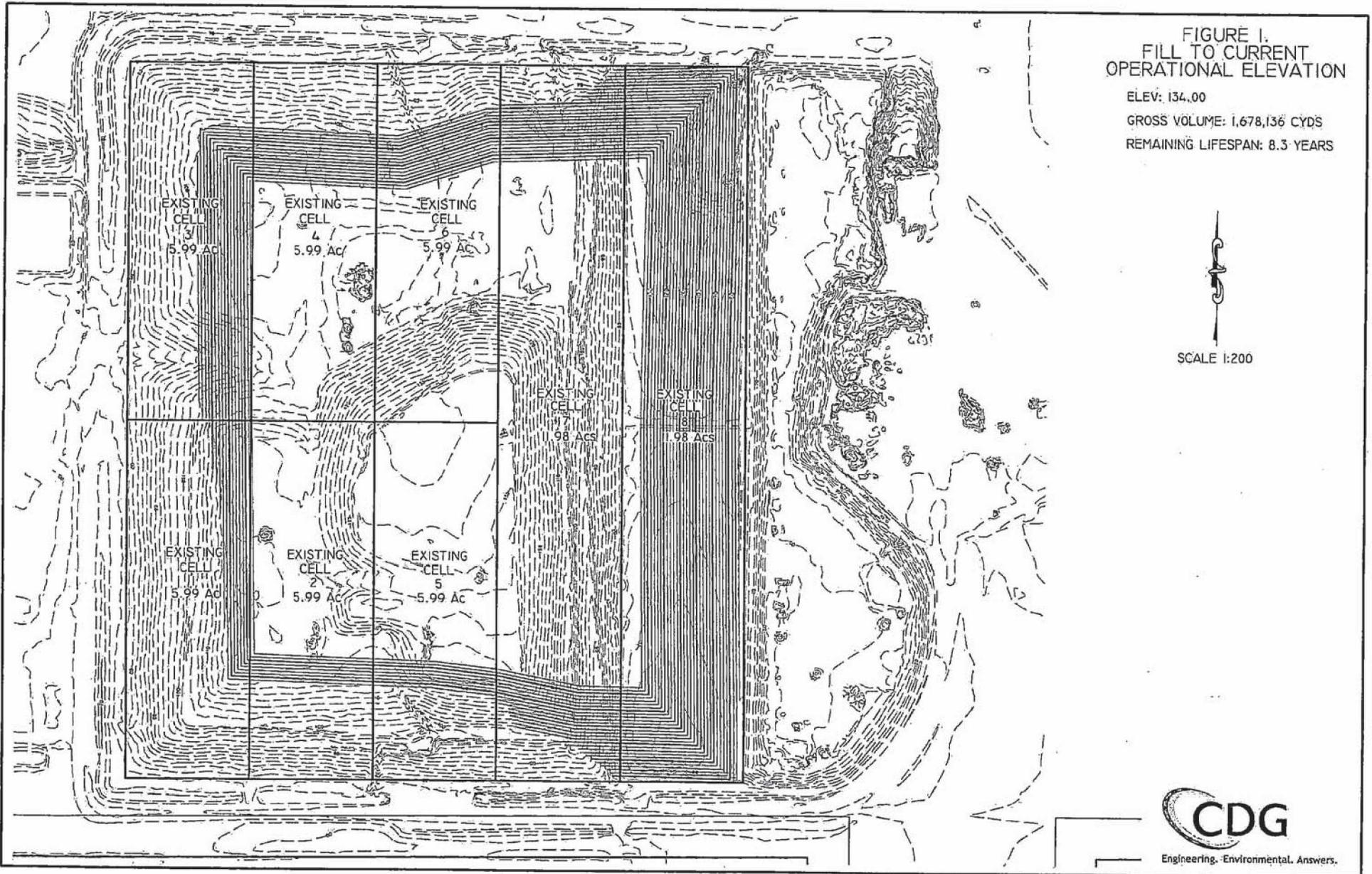
HUNTSVILLE

FIGURE I.
FILL TO CURRENT
OPERATIONAL ELEVATION

ELEV: 134.00

GROSS VOLUME: 1,678,136 CYDS

REMAINING LIFESPAN: 8.3 YEARS





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August 22, 2016

Mr. Blake Holden
Alabama Dept of Environmental Management
1400 Coliseum Blvd.
Montgomery, AL 36130

**Re: Magnolia Sanitary Landfill, Permit No. 02-03
Financial Assurance Update**

Dear Mr. Holden,

Please find attached the updated Financial Assurance cost estimate for the Magnolia Sanitary Landfill. CDG has also included a summary of the Financial Assurance requirements and the County's commitment for each.

Closure

As required by ADEM regulations 335-13-4-.28(2)(a) "the owner or operator shall have a detailed written estimate, in current dollars, of the cost of hiring a third party to close the largest area of all landfill cells at the MSWLF ever requiring final cover as required in 335-134-.20."

CDG has updated the cost estimate prepared in 2015 of the constructed footprint at the Magnolia Sanitary Landfill, which includes Cells 1-8 using the current Producer Price Index and will do so annually. The 2016 closure cost estimate for the Magnolia Sanitary Landfill is **\$6,489,619.73**.

Post-Closure

As required by ADEM regulations 335-13-4-.28(3)(a) "The owner or operator shall have a detailed written estimate, in current dollars, of the cost of hiring a third party to conduct post-closure care for the MSWLF in compliance with the post-closure requirements in 335-13-4-.20(3). The post-closure cost estimate used to demonstrate financial assurance in 335-13-4-.28(3)(b) shall account for the total costs of conducting post-closure care, including annual and periodic costs as described in the post-closure plan over the entire post-closure care period."

The post-closure estimate for the Magnolia Sanitary Landfill takes into account the following monitoring and maintenance items:

Monitoring:

- Groundwater
- Surface Water

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- Perimeter Gas
- New Source Performance Standards (NSPS)

Maintenance:

- Leachate Systems
- Groundwater Wells
- LFG Collection and Conveyance System
- Stormwater Conveyance
- Erosion Repair

The annual cost of post-closure care is \$178,912.80 ADEM requires a 30 year post closure care period, requiring the long term financial commitment for post-closure to be estimated at \$5,367,384.00.

Financial Assurance Instrument

As stated by ADEM regulations 335-13-4-.28(5) "Allowable mechanisms used to demonstrate financial assurance under 335-13-4-.28 shall ensure that the funds necessary to meet the costs of closure, post-closure care, and corrective action for known releases will be available whenever they are needed. Owners and operators shall choose from the options specified in 334-13-4-.28(5)(a) through (j)."

Baldwin County has chosen to use the Local Government Financial Test, as outlined in 335-13-4-.28(5)(f), to satisfy the requirements of 335-13-4-.28(5). As of 6/30/2016, the Financial Assurance Trust (used for Closure Costs) contained \$5,134,349.57 and the Solid Waste Trust (used for Post-Closure Costs) contained \$1,604,679.38.

Should you have any questions regarding this Financial Assurance cost estimate, please feel free to give me a call.

Sincerely,

CDG Engineers & Associates, Inc.

R. Daniel Wells, PE
Sr. Project Manager

cc: Terri Graham
file

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August 23, 2016

Mrs. Terri Graham, Dev. And Environmental Director
Magnolia Sanitary Landfill
Baldwin County Commission
15140 County Road 49
Summerdale, AL 36580

Re: 2016 Lifespan Analysis
Magnolia Sanitary Landfill

Mrs. Graham,

In response to your request, CDG has evaluated the gross capacity consumed within the MSW disposal area of the Magnolia Sanitary Landfill.

In determining the gross airspace consumed, CDG compared the permitted top of sand drainage layer for Cells 1 through 8 with an aerial topographic survey performed by CDG on July 19, 2016. The existing airspace consumed through that date was found to be 3,460,372 CY.

Per the *Financial Assurance Report Update October 2000*, prepared by ESA, Inc., the total gross capacity of the Magnolia Sanitary Landfill is reported as 12,137,439 CY. The remaining airspace available as of July 19, 2016 for all permitted MSW disposal areas is 8,677,067 CY.

A comparative analysis of the gross capacity consumed as of July 19, 2016 with the gross capacity reported by ESA in 2000, approximately 28.5% of the total gross capacity of the permitted disposal area has been consumed.

Should you have any questions, please feel free to call.

Sincerely,

CDG Engineers & Associates, Inc.

R. Daniel Wells, PE
Sr. Project Manager

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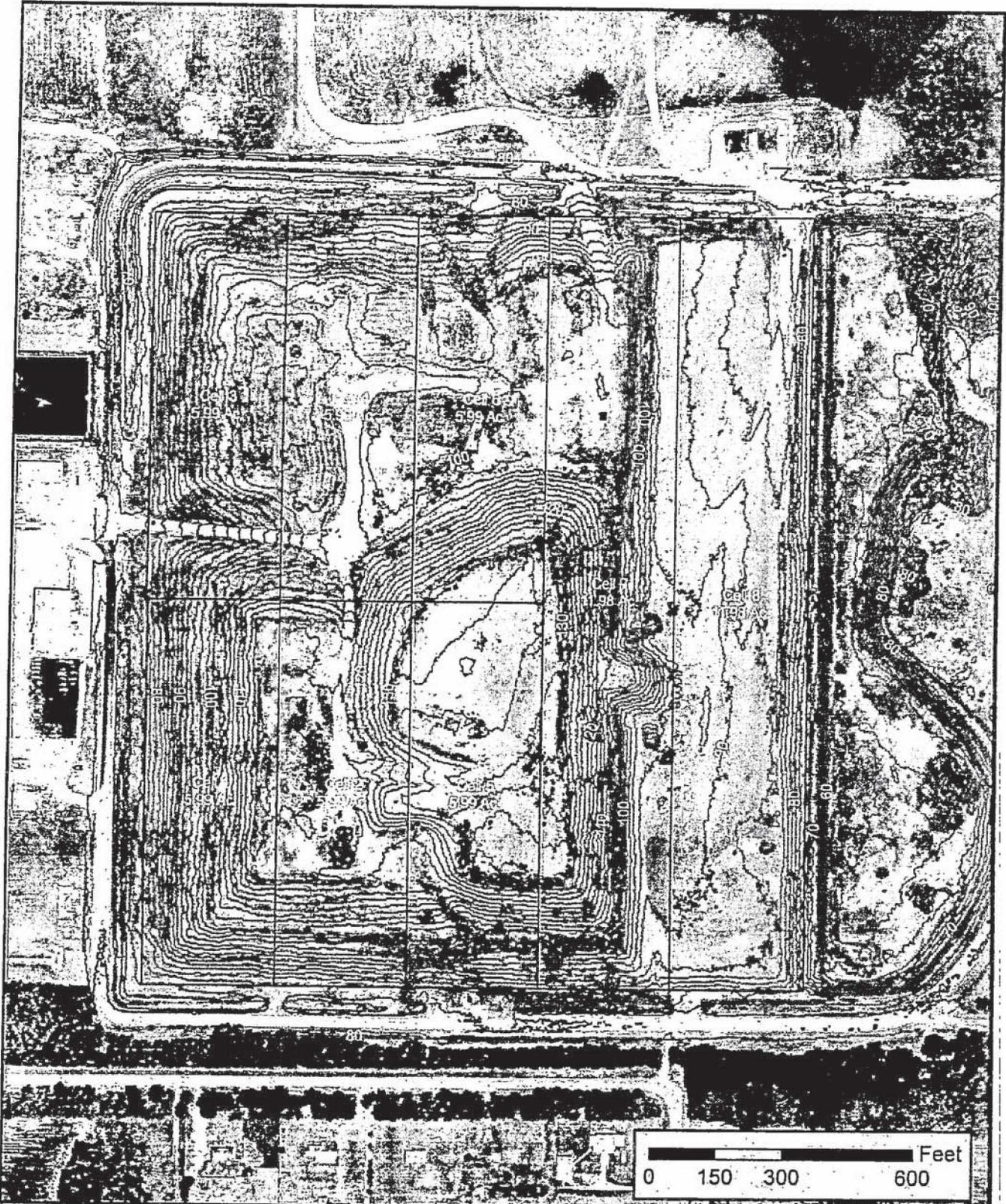


Figure 1 - MSW Disposal Area Map
Magnolia Landfill
Summerdale, AL



Sheet No.
 1

Project No: 061679313
Drawn By: JRA
Checked By: SJS
Date: JULY 2016

John Marino

From: Terri L. Graham
Sent: Friday, October 07, 2016 4:13 PM
To: John Marino
Cc: Kimberly Creech; Eva Cutsinger; Donna Granth. Bryars; Dana M. Austin
Subject: RE: Tear End
Attachments: Cubic Yards to Lined Cell FY2016.pdf



Terri Graham
Baldwin County Solid Waste
251-972-6878 ext 2798

From: John Marino
Sent: Friday, September 16, 2016 1:56 PM
To: Terri L. Graham <TGraham@baldwincountyal.gov>
Cc: Kimberly Creech <KCreech@baldwincountyal.gov>; Eva Cutsinger <ECutsinger@baldwincountyal.gov>; Donna Granth. Bryars <DGBRYARS@baldwincountyal.gov>; Dana M. Austin <DAUSTIN@baldwincountyal.gov>
Subject: Tear End

Please provide to me the total cubic yards of material that went into the lined cell for the period of October 1, 2015 – September 30, 2016 when this information becomes available. This is needed for a year end adjustment. Per the year end schedule, please provide this by 10/28/16.

Thanks,

John J Marino
Chief Compliance Officer
251-937-0282 Ext. 2445 Voice
251-239-4309 FAX
jmarino@baldwincountyal.gov