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July 28, 2021

Blake Holden
Alabama Department of Environmental Mgmt.
P.O. Box 301463
1400 Coliseum Boulevard (36110)
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 335-13-4-.20."

CDG has updated the cost estimate prepared in 2020 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 2021 closure cost estimate for the Magnolia Sanitary Landfill is **\$7,303,170.65**.

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:



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Monitoring:

- Groundwater
- Surface Water
- 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 **\$205,356.00**. ADEM requires a 30-year post closure care period, requiring the long-term financial commitment for post-closure to be estimated at **\$6,160,680.00**

[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)."

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

Sincerely,

CDG Engineers & Associates, Inc.

A handwritten signature in blue ink that reads "Laura Kate Young". The signature is written in a cursive, flowing style.

Laura Kate Young
Project Engineer

FINANCIAL ASSURANCE COST ESTIMATE

Date: July 28, 2021

2021 PPI
1.90%

I. GENERAL INFORMATION:

Facility Name: Magonlia Sanitary Landfill

Permit/Application No.: 02-03 Expiration Date: 1/8/2024

Facility Address: 15140 County Road 49 Summerdale, AL 36580

Permitee: Baldwin County Commission

Mailing Address: 312 Courthouse Square, Suite 12 Bay Minette, AL 36507-4809

Solid Waste Disposal Units Included in Estimate:

Cell	Acres	Total Acres Requiring Closure
<u>1</u>	<u>5.99</u>	<u>5.99</u>
<u>2</u>	<u>5.99</u>	<u>11.98</u>
<u>3</u>	<u>5.99</u>	<u>17.97</u>
<u>4</u>	<u>5.99</u>	<u>23.96</u>
<u>5</u>	<u>5.99</u>	<u>29.95</u>
<u>6</u>	<u>5.99</u>	<u>35.94</u>
<u>7</u>	<u>11.98</u>	<u>47.92</u>
<u>8</u>	<u>11.98</u>	<u>59.90</u>
<u> </u>	<u> </u>	<u> </u>

Total Landfill Acreage included in this estimate. 65.89 Closure
59.90 Long-Term Care

II. TYPE OF FINANCIAL ASSURANCE DOCUMENT (Check Type)

<u> </u> Letter of Credit*	<u> </u> Insurance Certificate
<u> </u> Surety Bond*	<u> </u> Escrow Account
<u> </u> Trust Fund Agreement	<u>X</u> Financial Test

III. ESTIMATED CLOSURE COST

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
1. Proposed Monitoring Wells				
	EA	-	\$ -	\$ -
2. Slope and Fill (bedding layer between waste and barrier layer):				
Grading of Waste	LS	1	\$ 13,810.00	\$ 13,810.00
On-Site Foundation Material	CY	100,000	\$ 2.60	\$ 260,000.00
Subtotal Slope and Fill:				\$ 273,810.00
3. Cover Material (Barrier Layer):				
18" Protective Cover (Off-site)	CY	159,454	\$ 10.36	\$ 1,651,943.44
Synthetics-30 mil LLDPE	SF	2,870,168	\$ 0.59	\$ 1,693,399.12
Geocomposite (10 oz/SY)	SF	2,870,168	\$ 0.63	\$ 1,808,205.84
Topsoil (6" thick)	CY	53,151	\$ 6.91	\$ 367,273.41
Subtotal Cover Material:				\$ 5,520,821.81
4. Vegetative Layer				
Seeding / Grassing	AC	66	\$ 1,720.00	\$ 113,520.00
Fertilizer	AC	66	\$ 1,720.00	\$ 113,520.00
Mulching	AC	66	\$ 919.00	\$ 60,654.00
Drainage Matting	SY	23,183	\$ 2.30	\$ 53,320.90
Subtotal Vegetative Layer:				\$ 341,014.90
5. Stormwater Control System:				
Piping (12" PE)	LF	2,000	\$ 36.83	\$ 73,660.00
Control Structures	EA	34	\$ 1,150.51	\$ 39,117.34
Subtotal Stormwater Controls:				\$ 112,777.34
6. Gas Control: Active Extraction				
Wells	EA	8	\$11,505.20	\$92,041.60
Collection System	LF	6000	\$34.51	\$207,060.00
Condensate Control System	LS	2	\$17,200.00	\$34,400.00
Blowers	EA	1	\$17,200.00	\$17,200.00
Flare Station	EA	-	\$115,000.00	\$0.00
Subtotal Active Gas Extraction:				\$350,701.60

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
7. Security System:				
Fencing	LF	-		\$ -
Gate(s)	EA	-		\$ -
Sign (s)	EA	2	\$ 2,301.00	\$ 4,602.00
Subtotal Security System:				\$ 4,602.00
8. Engineering:				
Closure Plan Report	LS	1	\$ 34,500.00	\$ 34,500.00
QA/QC Construction Management	LS	1	\$ 161,000.00	\$ 161,000.00
Final Survey	LS	1	\$ 25,500.00	\$ 25,500.00
Certification of Closure	LS	1	\$ 9,700.00	\$ 9,700.00
Subtotal Engineering:				\$ 230,700.00
Subtotal of 1-8 Above:				\$6,834,427.65
Contingency (20%)				\$468,743.00
Total Closure Cost				\$7,303,170.65

IV. ANNUAL COST FOR LONG-TERM CARE

Description	Sampling Frequency (events/yr.)	Number of Wells		\$/Event	\$/Year
1. Groundwater Monitoring					
Semi-Annual	2	6	\$	11,190.00	\$ 22,380.00
2. Surface Water Monitoring					
Quarterly	4	1	\$	380.00	\$ 1,520.00
3. Gas Monitoring					
Quarterly	4	115	\$	1,420.00	\$ 5,680.00
4. UIC Monitoring					
Quarterly	4			\$6,740.00	\$ 26,960.00
5. NSPS Monitoring and Reporting					
Surface Emission Monitoring					
Quarterly	4		\$	2,080.00	\$ 8,320.00
Well Field					
Monthly	12		\$	2,550.00	\$ 30,600.00
6. Leachate Collection/Treatment Systems Maintenance					
Maintenance					
Lift Stations		EA	4	\$ 1,720.00	\$ 6,880.00
Cleaning		LS	1	\$ 5,770.00	\$ 5,770.00
Impoundments					
Liner Repair		LS	1	\$ 2,870.00	\$ 2,870.00
Sludge Removal		LS	1	\$ 17,270.00	\$ 17,270.00
* Assumes sludge removed from aeration pond once every 10 years					
Aeration Systems					
Floating Aerators		EA	1	\$ 5,770.00	\$ 5,770.00
* Assumes replacement of 1 aerator every 3 years					
Subtotal Leachate Collection/Treatment System Maintenance					\$ 38,560.00
7. Maintenance of Groundwater Monitoring Wells					
Replacement		EA	1	\$ 5,770.00	\$ 5,770.00
Abandonment		EA	1	\$ 566.00	\$ 566.00
Subtotal Groundwater Monitoring Well Maintenance:					\$ 6,336.00

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
8. Gas System Maintenance				
Gas Well (replacement of 1/year)	LS	<u>1</u>	<u>\$ 1,720.00</u>	<u>\$ 1,720.00</u>
Electrical Costs	LS	<u>1</u>	<u>\$ 34,510.00</u>	<u>\$ 34,510.00</u>
Subtotal Erosion Repair and Cover Maintenance:				<u>\$ 36,230.00</u>
9. Erosion Repair & Cover Maintenance				
	LS	<u>1</u>	<u>\$ 17,270.00</u>	<u>\$ 17,270.00</u>
Subtotal Erosion Repair and Cover Maintenance:				<u>\$ 17,270.00</u>
10. Stormwater Management System Maintenance				
Conveyance Maintenance	LS	<u>1</u>	<u>\$ 11,500.00</u>	<u>\$ 11,500.00</u>
Subtotal Stormwater System Maintenance:				<u>\$ 11,500.00</u>
ANNUAL LONG-TERM CARE COST (\$/Year):				<u>\$ 205,356.00</u>
NUMBER OF YEARS OF LONG-TERM CARE				<u>30</u>
TOTAL LONG-TERM CARE COST (\$)				<u>\$ 6,160,680.00</u>