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SOLID WASTE SECTION  
ASHEVILLE REGIONAL OFFICE

June 6, 2011

Mr. Allen Gaither, PE  
Regional Engineer  
Solid Waste Permitting Section  
Division of Waste Management  
North Carolina Department of Environment and Natural Resources  
2090 U.S. Highway 70  
Swannanoa, North Carolina 28778

RE: Closure and Post-Closure Cost Estimates  
Permit Renewal Application  
Madison County Landfill Facility  
Permit No. 58-03  
Madison County, North Carolina

Dear Mr. Gaither:

On behalf of Madison County, McGill Associates is submitting the revised Closure and Post-Closure Cost Estimates in support of the permit renewal request for the Madison County Landfill Facility, Permit No. 58-03. The original Closure and Post-Closure were included in Chapter 6, Closure and Post-Closure Cost Estimates of the Closure and Post-Closure Plan, Madison County Landfill, Construction and Demolition Landfill, Unit 2, Revised April 2011. The following cost estimates have been revised to include the potential assessment and corrective action costs umbrella.

- 6.1 Closure Cost Estimate
- 6.2 Post-Closure Cost Estimate
- 6.3 Potential Assessment and Corrective Action Cost Estimate

Once these cost estimates are approved, the financial assurance mechanism will be prepared by the County and submitted to the Solid Waste Section for acceptance.

Engineering • Planning • Finance

McGill Associates, P.A. • P.O. Box 2259, Asheville, NC 28802 • 55 Broad Street, Asheville, NC 28801

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Mr. Allen Gaither, PE  
June 6, 2011  
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We appreciate your assistance with this minor revision to the Closure and Post-Closure Plan and look forward to working with you to obtain the permit renewal for the Madison County Solid Waste Facility. Please do not hesitate to call me or Jeff Bishop should you have any questions or need any additional information relative to this submittal.

Sincerely,  
McGILL ASSOCIATES, P.A.



WILLIAM H. SPERRY, PE  
Project Manager

Enclosures

cc: Mr. Jim Huff, Director, Madison County Solid Waste Department, w/enclosures  
Mr. Jeff Bishop, PE, McGill Associates, w/o enclosures

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**Chapter 6**  
**Closure and Post-Closure Cost Estimates**  
**Unit 2, C&D Landfill**

**6.0 Closure and Post Closure Cost Analysis and Summary**

**6.1 Closure Cost Estimate**

**Unit 2 (4.3 Acres) - Closure**

**June 2011**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Costs
<b>1</b>	<b><u>Earthwork</u></b>				
	a. 18" Vegetative Cover	10,340	C.Y.	\$6.00	\$62,040
	b. 18" Low Permeability Layer	10,340	C.Y.	\$8.00	\$82,720
<b>2</b>	<b><u>Sedimentation and Erosion Control</u></b>				
	a. Grassing	4.3	AC	\$1,800.00	\$7,740
	b. Rip Rap	750	Tons	\$51.00	\$38,250
	c. Synthetic Lined Channels	1,000	L.F.	\$15.30	\$15,300
<b>3</b>	<b><u>Methane Gas Vents</u></b>				
	a. Gas Vents	17	EA	\$2,000.00	\$34,000
<b>4</b>	<b><u>Engineering</u></b>				
	a. Design	1	LS	\$35,000.00	\$35,000
	b. Construction Quality Assurance	1	LS	\$30,000.00	\$30,000
<b>5</b>	<b><u>Permit Fee</u></b>	1	LS	\$1,500.00	\$1,500
<b>6</b>	<b><u>Contingency (10%)</u></b>				<u>\$31,000</u>
<b>TOTAL - Closure Costs - Unit 2, C&amp;D Landfill - Approved March 19, 2010</b>					<b>\$337,550</b>
NCDENR - DWM - SWS - Financial Assurance - Multiplier for local government - fiscal year July1, 2010 - June 30, 2011					<b>1.01</b>
<b>ADJUSTED TOTAL - CLOSURE COSTS</b>					<b>\$340,926</b>

**Chapter 6**  
**Closure and Post-Closure Cost Estimates**  
**Unit 2, C&D Landfill**

**6.0 Closure and Post Closure Cost Analysis and Summary**

**6.2 Post-Closure Cost Estimate**

**Unit 2 (4.3 Acres) - Post-Closure**

**June 2011**

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Costs
<b>1</b>	<b><u>Routine Annual Maintenance</u></b>				
a.	Grass Mowing (1 cut/year)	4.3	AC	\$50.00	\$215
b.	Repair of Cap (0.25 acre repair @ 1 foot deep)	1	EA	\$2,500.00	\$2,500
c.	Reseeding	4.3	AC	\$1,000.00	\$4,300
<b>2</b>	<b><u>Annual Permit Fee</u></b>	1	LS	\$500.00	\$500
<b>3</b>	<b><u>Contingency (10%)</u></b>				<u>\$760</u>
<b>TOTAL - Yearly Post-Closure Costs - Unit 2, C&amp;D Landfill - Approved March 19, 2010</b>					<b>\$8,275</b>
NCDENR - DWM - SWS - Financial Assurance - Multiplier for local government - fiscal year July1, 2010 - June 30, 2011					<b>1.01</b>
<b>ADJUSTED TOTAL - Yearly Post-Closure Costs</b>					<b>\$8,358</b>
<b>Post-Closure Monitoring Period:</b>					<b>30 Years</b>
<b>TOTAL POST-CLOSURE MONITORING COSTS</b>					<b>\$250,740</b>

**Chapter 6**  
**Closure and Post-Closure Cost Estimates**  
**Unit 2, C&D Landfill**

**6.0 Closure and Post Closure Cost Analysis and Summary**

**6.3 Potential Assessment and Corrective Action Cost Estimate**

June 2011

Description	Estimated Quantity	Unit	Unit Price	Total Costs
<b><u>Potential Assessment and Corrective Action:</u></b>				<b>\$3,000,000</b>
Per NCGS 130A 295.2 (h)				
<b><u>Environmental Monitoring</u></b>				
a. Groundwater Monitoring - (2 wells x 2 events/year with Report)	4	Samples	\$500.00	\$2,000.00
b. Surface Water Monitoring (2 points x 2 events/year with Report)	4	Samples	\$500.00	\$2,000.00
			\$4,000.00	

<b>TOTAL - POTENTIAL ASSESSMENT AND CORRECTIVE ACTION COSTS</b>	<b>\$3,000,000</b>
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