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Raleigh, North Carolina 27612
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Permit No.	Date	DIN
11-07	June 2, 2011	14073

RECEIVED
June 2, 2011
Solid Waste Section
Asheville Regional Office

June 2, 2011

Mr. Allen Gaither
North Carolina Department of Environment and Natural Resources
Solid Waste Section
Division of Waste Management
Asheville Regional Office
2090 US Highway 70
Swannanoa, North Carolina 28778

Subject: Buncombe County Solid Waste Management Facility
Buncombe County, North Carolina
Permit No. 11-07
Subtitle D Landfill - Phase III (Cell 6)
Financial Assurance Cost Estimates

Dear Mr. Gaither:

On behalf of Buncombe County (County), Camp Dresser & McKee (CDM) is pleased to submit for your review financial assurance cost estimates for Phase III (Cell 6) of the Subtitle D Landfill. The financial assurance cost estimates, which include closure, post-closure, and potential assessment and corrective action costs, are provided in response to your letter titled Completeness & Technical Review dated May 25, 2011 (see Appendix A).

As requested in the letter, the following are provided:

- Closure and post-closure cost estimates, \$13,514,340 (\$241,328 per acre) and \$2,981,750 (\$99,392 annually), respectively, are provided in Appendix B; and
- Potential assessment and corrective action cost estimate, \$2,834,520, is provided in Appendix B.

As previously discussed, the potential assessment and corrective action cost estimate includes only estimates for water quality, landfill gas monitoring systems and system maintenance. Currently, there are no corrective action plans in place. Per statute, a minimum of \$3,000,000 is required.

The total financial assurance cost estimate is \$19,496,090.





Mr. Allen Gaither
June 2, 2011
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The intent of this submittal is to provide the requested financial assurance documentation in order to receive a PTO for Phase III of the Subtitle D Landfill.

If you have any questions or comments, or need any additional information during your review, please do not hesitate to contact me at (919) 325-3574.

Very truly yours,

A handwritten signature in blue ink, appearing to read 'K. J. Yang'.

Kenton J. Yang, P.E.
Camp Dresser & McKee

cc: E. Mussler, NCDENR SWS
J. Creighton, Buncombe
J. Mears, Buncombe
K. Smith, Buncombe
J. Wiseman, CDM
C. Gabel, CDM

Appendix A
Solid Waste Section
Financial Assurance Request



North Carolina Department of Environment and Natural Resources

Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

May 25, 2011

Mr. Jerry Mears
Buncombe County - Solid Waste Manager
85 Panther Branch Road
Alexander, North Carolina 28701

Subject: Completeness & Technical Review
Buncombe County MSW Landfill Facility
Buncombe County, Permit #11-07, Document ID No. 14013

Mr. Mears:

The Division of Waste Management, Solid Waste Section (Section) has completed the review of the document titled *Phase III (Cell 6) Permit Application Renewal* (DIN 13037). The document was submitted on your behalf by Camp Dresser & McKee and was received in the Asheville Regional Office on February 25, 2011.

The submittal has been reviewed for completeness in accordance with General Statute 130A-295.8(e). A determination of completeness means that the application includes all required components but does not mean that the required components provide all of the information that is required for the Section to make a decision on the application. All of the components required by 15A NCAC 13B.1617(e) have been submitted. However, I have no indication the permitting activity fee has been received so the application is deemed incomplete.

In order to continue the application review, the Section requires submittal of additional information as indicated below:

1. Per the attached memorandum, which was sent to all landfill facilities, Financial Assurance cost estimates, including closure, post-closure and potential assessment and corrective action costs, must be submitted as part of the application for a new permit or permit amendment. The Phase III (Cell 6) Permit Renewal submittal (DIN 13037) contained the closure and post-closure cost estimates, but did not include the potential assessment and corrective action costs. It should be noted, post-closure costs related to water quality and landfill gas monitoring systems and system maintenance can be moved under the potential assessment and corrective action costs umbrella (contact me if you need further clarification). All costs should be itemized in each of the three Financial Assurance cost estimate categories. Please submit revised Financial Assurance cost estimates in accordance with the attached memorandum.

Mr. Jerry Mears
Completeness & Engineering Review
May 25, 2011
Page 2 of 2

If you should have any questions regarding this matter please contact me at (828) 296-4703, or by email at allen.gaither@ncdenr.gov .

Sincerely,



Allen Gaither
Environmental Engineer

Attachment: Financial Assurance Process for Solid Waste Management Facilities Memorandum dated October 12, 2010

Cc: Mr. Kenton Yang – CDM
Ms. Kristy Smith – Buncombe County
Ms. Andrea Keller – SWS/ARO
Mr. Donald Herndon – SWS/RCO



North Carolina Department of Environment and Natural Resources
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

October 12, 2010

MEMORANDUM

To: Solid Waste Directors, Finance Directors and Landfill Owners and Operators

From: North Carolina Division of Waste Management, Solid Waste Section

Re: **Financial Assurance Process for Solid Waste Management Facilities**

The purpose of this memo is to clarify the process of providing financial assurance for solid waste management facilities. According to N.C.G.S. 130A-295.2 (f): "The applicant and permit holder for a solid waste management facility shall establish financial assurance..." The acceptable financial assurance mechanisms are outlined in 15A NCAC 13B .1628.

The process for securing and updating financial assurance should be as follows:

- During the application for a new permit or the amendment (five year review cycle) of an existing permit, the applicant shall submit cost estimates for any closure, post closure or corrective action costs associated with the facility.
- The cost estimates shall be reviewed and approved by a Solid Waste Section Permitting Engineer. Please note that for a landfill, the approved cost estimates relate to the "largest area" that the active permit allows.
- The facility shall secure a financial assurance mechanism and submit the original documentation to the Compliance Officer with the Solid Waste Section. It is highly recommended that the facility submit a draft copy for any **NEW** financial assurance mechanisms (excluding the Local Government Financial Test) to the Compliance Officer for review before the mechanism is finalized.
- On the anniversary date of a financial assurance mechanism, the facility shall send an updated financial assurance mechanism that has been adjusted for inflation (using the current inflation factor located on our website <http://portal.ncdenr.org/web/wm/sw/financialassurance>) from the previous year. Please note that for each year until new cost estimates are reviewed and approved by a Solid Waste Section engineer during the permit amendment process, the **ONLY** adjustment to



the cost estimates should be for inflation. If the facility has increased costs due to environmental assessment or corrective action activities, the facility shall petition the Section for cost estimate adjustment. If the facility petitions the Section for cost estimates to be adjusted for any reason other than inflation, they may be subject to a permitting fee.

Reminders

- The Solid Waste Section will no longer be sending out “approval letters” on an annual basis to facilities after they have submitted their initial or updated financial assurance mechanism. If there is a problem with the financial assurance mechanism, the Solid Waste Section Compliance Officer will contact the facility at that point.
- For facilities that are using the Local Government Financial Test, the deadline for annual submittals is October 29th. All requests for an extension of this deadline must be received by that date.
- In Accordance with NCGS 130A 295.2 (h), all sanitary landfills must provide financial assurance for potential assessment and corrective action in the minimum amount of \$3,000,000. This is required when the permit is next subject to renewal after August 1, 2009.
- It is allowable for a facility to secure financial assurance for an amount higher than the cost estimates such that an adjustment does not need to be made for inflation until the mechanism no longer accounts for the inflation adjusted amount. This must be arranged with the Solid Waste Section Compliance Officer prior to implementation.
- For all facilities that use a Surety Bond or Letter of Credit for a financial assurance mechanism, they must also establish a Standby Trust Fund.
- Our website address has changed, and currently, the Financial Assurance page with all relevant information including template language for mechanisms, inflation factors, Solid Waste Rules and general guidance is located at:
<http://portal.ncdenr.org/web/wm/sw/financialassurance>

If you have any questions or concerns, please feel free to contact Donald Herndon (donald.herndon@ncdenr.gov or 919-508-8502) or Shawn McKee (shawn.mckee@ncdenr.gov or 919-508-5812).

Thank you for your continued cooperation with these matters.

Appendix B

Financial Assurance Cost Estimates

Table 1
Closure Cost Estimate
Buncombe County Subtitle D Landfill
Buncombe County, North Carolina
June 2011

	Quantity	Unit	Cost	Total
Final Cover System (Phases I through III)				
Grade Intermediate Cover	56	ac	\$2,000.00	\$112,000
Cap System Components:				
a. 6" Vegetative Layer	45,173	cy	\$15.50	\$700,187
b. 18" Protective Cover	135,520	cy	\$15.50	\$2,100,560
c. Drainage Net	271,040	sy	\$7.00	\$1,897,280
d. 40-mil text. LLDPE Geomembrane	271,040	sy	\$6.00	\$1,626,240
Seeding, Fertilizing & Mulching	271,040	sy	\$0.45	\$121,968
Temporary Erosion Control	56	ac	\$1,000.00	\$56,000
Permanent Erosion Control				
Diversion Berms/Downdrains	56	ac	\$30,000.00	\$1,680,000
Landfill Gas Management				
Vertical Gas Wells (56 @ Avg. Depth of 75')	4,200	vf	\$125.00	\$525,000
Horizontal Gas Collection Trenches	6	ea	\$50,000.00	\$300,000
Surveys	56	ac	\$500.00	\$28,000
Final Landscaping				
Seeding, Fertilizing & Mulching	56	ac	\$3,000.00	\$168,000
Indemnification	1	ls	\$5,000.00	\$5,000
Subtotal				\$9,320,235
Bonds and Mobilization/Demobilization (5% of Subtotal)				\$466,012
Engineering Services, CQA/CQC (12% of Subtotal)				\$1,398,035
Contingency (25% of Subtotal)				\$2,330,059

TOTAL \$13,514,340

COST PER ACRE \$241,328

Table 2
Post Closure Cost Estimate
Buncombe County Subtitle D Landfill
Buncombe County, North Carolina
June 2011

	Quantity	Unit	Cost	Total
Administration/Inspection/Recordkeeping				
Project Engineer (84 hrs/yr @ \$100/hr)	30	yr	\$8,400	\$252,000
Technician (68 hrs/yr @ \$60/hr)	30	yr	\$4,080	\$122,400
Clerical (48 hrs/yr @ \$50/hr)	30	yr	\$2,400	\$72,000
Maintenance				
Fencing, Gates, Signs, etc.	30	yr	\$500	\$15,000
Access Roads	30	yr	\$2,000	\$60,000
Mowing (\$100 per acre, 56 acres)	30	yr	\$5,600	\$168,000
Stormwater Structures	30	yr	\$3,000	\$90,000
Leachate Collection and Storage	30	yr	N/A	\$0
Final Cover System Maintenance (\$700 per acre)	30	yr	\$39,200	\$1,176,000
Leachate Closeout				
Cleanout and Demo Leachate Pond	1	ls	\$400,000	\$400,000
Fees				
Annual Permit Fee	30	yr	\$1,000	\$30,000
Subtotal				\$2,385,400
Contingency (25%)				\$596,350

TOTAL \$2,981,750

ANNUAL COST \$99,392

Table 3

**Potential Assessment and Correction Action Costs
 Buncombe County Subtitle D Landfill
 Buncombe County, North Carolina
 June 2011**

	Quantity	Unit	Cost	Total
Compliance Monitoring - Semi-Annual				
Professional (64 hrs/yr @ \$100/hr)	30	yr	\$6,400	\$192,000
Technician (16 hrs/yr @ \$60/hr)	30	yr	\$960	\$28,800
Clerical (8 hrs/yr @ \$50/hr)	30	yr	\$2,000	\$60,000
Monitoring				
20 Groundwater Monitoring Wells Sampled and Analyzed Semi-Annually for 30 years	60	events	\$20,000	\$1,200,000
1 Surface Water Locations Sampled and Analyzed Semi-Annually for 30 years	60	events	\$500	\$30,000
12 Landfill Gas Wells Sampled and Analyzed Quarterly for 30 years	120	events	\$7,200	\$864,000
Maintenance				
Leachate Collection System - Annual Cleaning	30	yr	N/A	\$0
Groundwater and Gas Monitoring Wells	30	yr	\$3,000	\$90,000
Subtotal				\$2,464,800
Contingency (15%)				\$369,720

SUBTOTAL \$2,834,520

ADDITIONAL CORRECTION ACTION FUNDING \$165,480

TOTAL \$3,000,000

ANNUAL COST \$100,000