

Chao, Ming-tai

From: Herndon, Donald
Sent: Tuesday, April 12, 2011 2:30 PM
To: Mussler, Ed; Chao, Ming-tai
Subject: RE: Dare County

Dare county submitted their updated financial assurance mechanism. It is now in place, and covers all of their approved cost estimates.

Sorry for being unclear.

Permit No.	Date	Document ID No.
28-03	April 13, 2011	13614

Donald Herndon
Compliance Officer
NC Department of Environment and Natural Resources
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RECEIVED
April 12, 2011 via an e-mail
Solid Waste Section
Raleigh Central Office

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From: Mussler, Ed
Sent: Tuesday, April 12, 2011 2:28 PM
To: Chao, Ming-tai
Cc: Herndon, Donald
Subject: RE: Dare County

Does this mean we have a FA instrument filed, or just that the numbers are ok?

From: Chao, Ming-tai
Sent: Tuesday, April 12, 2011 2:22 PM
To: Mussler, Ed
Subject: FW: Dare County

Ed: CDM on behalf of Dare County has submitted a new FA & post-closure plan on last Wednesday, 04/06/2011 and approved by Donald today (see the forward e-mail below). When you get time please review and approve the PTO & cover letter for Dare County C&DLF – Cell 4. Thanks.

Ming

From: Herndon, Donald
Sent: Tuesday, April 12, 2011 2:18 PM
To: Chao, Ming-tai
Subject: Dare County

Ming,
Dare County's Financial Assurance is acceptable.
Donald

Donald Herndon
Compliance Officer
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Post-Closure Plan

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Post-Closure Plan

Section 1

The North Carolina Solid Waste Regulation Section Rule 15A NCAC 13B .0543(a) requires owners/operators of C&DLFs to prepare a post-closure plan. The purpose of the plan is to provide the necessary information for preserving the integrity of the landfill facility in its post-closure life. This post-closure plan specifically addresses maintenance activities for the closure cap, landfill gas monitoring system, groundwater monitoring wells, and erosion and sedimentation control system to be installed at the C&DLF. This plan also addresses certification and financial assurance requirements.

Post-closure care will begin immediately following final closure of the landfill. Post-closure care may be decreased from the minimum time period of 30 years specified in the regulations if the County can demonstrate that the reduced period will pose no threat to human health or the environment. However, the SWS reserves the right to increase the post-closure care period if it is deemed necessary to protect human health and the environment.

1.1 Maintenance and Monitoring Activities

Post-closure maintenance and monitoring activities for the C&DLF are described in the following sections. Post-Closure Inspection form is provided as Figure 1-1.

1.1.1 Final Cover System

Inspection of the final cover system will take place quarterly and encompass the entire landfill. Items of concern to be noted by the inspector include but are not limited to: signs of erosion (ruts, sediment deposits, etc.), patches of stressed or dead vegetation, animal burrows, recessed areas or ponding, upheaving, leachate seepage stains and/or flowing leachate, cracks in the cap, damaged gas vents and tree saplings (especially species with tap roots). Following each inspection, a summary report of the condition of the cover and the items of concern should be recorded in the post-closure log book of the facility. Areas that require further attention should be photographed and delineated on a map of the facility. These items should also be entered in the log book. Since post-closure inspection personnel will most likely change during the post-closure period, the post-closure log book should be kept in a standardized format that allows for new inspection personnel to easily review the results of past post-closure inspections of the site.

Action should be taken immediately to address any items of concern identified during the inspection. Obvious repair items should be performed under the supervision of the post-closure maintenance manager. If an item of concern requires further study to determine a course of action, the engineering firm responsible for closure design should be contacted for consultation.

**Dare County
Construction and Demolition Debris Landfill
Post-Closure Inspection Form (Figure 1-1)**

Inspector: _____
Date/Time: _____

Weather: _____

Inspection List	Last Date of Inspection	Frequency of Inspection	Condition GC/MC/NR ¹	Photographs	Map ID's	Corrective Action/Comments
1. Site Maintenance						
1.1 Final Cover System						
1.1.1 Signs of erosion (ruts, sediment deposits, etc.)		Quarterly				
1.1.2 Patches of stressed or dead vegetation		Quarterly				
1.1.3 Animal burrows		Quarterly				
1.1.4 Recessed areas or ponding		Quarterly				
1.1.5 Leachate seepage stains and/or flowing leachate		Quarterly				
1.1.6 Upheaval or Cracks in the cap		Quarterly				
1.1.7 Tree saplings (especially species with tap roots)		Quarterly				
1.1.8 Semi-Annually mowed (Y/N)		Quarterly				
1.2 Site Security and Access						
1.2.1 Access Road		Quarterly				
1.2.2 Security Fencing and Gates		Quarterly				
1.2.3 Signage		Quarterly				
2. Erosion and Sedimentation Control System						
2.1 Drainage Ditches						
2.1.1 Obstructions		Semi-annually ²				
2.1.2 Erosion of side slopes		Semi-annually ²				
2.1.3 Loss of vegetative cover		Semi-annually ²				
2.1.4 Excessive build-up of sediment		Semi-annually ²				
2.2 Drainage Pipes						
2.2.1 Obstructions		Semi-annually ²				

**Dare County
Construction and Demolition Debris Landfill
Post-Closure Inspection Form (Figure 1-1)**

Inspection List	Last Date of Inspection	Frequency of Inspection	Condition GC/MC/NR ¹	Photographs	Map ID's	Corrective Action/Comments
2.2.2 Undercutting and rutting of inlets & outlets		Semi-annually ²				
2.3 Sedimentation Devices						
2.3.1 Sediment Level		Semi-annually ²				
2.3.2 Outlet Control Device		Semi-annually ²				
2.3.3 Berm Stability		Semi-annually ²				
3. Monitoring						
3.1 Groundwater and Gas Monitoring Wells						
3.1.1 Casing Condition (cracks, corrosion, etc...)		Semi-annually				
3.1.2 Condition of locking system and cover		Semi-annually				
3.1.3 Presence of surface seal damage		Semi-annually				
3.1.4 Debris near cap		Semi-annually				
3.1.5 Sampling performed		Semi-annually				
3.2 Landfill Gas Monitoring System						
3.2.1 Gas vent blockages		Quarterly				
3.2.2 Gas vent condition		Quarterly				
3.2.3 Gas vent air pump test		Annually				

1 Description of Condition
 GC = Good condition
 MC= Monitor condition to determine course of action
 NR = Needs repair

2 Inspection should be conducted after major storm events.

As part of general maintenance, the vegetative cover should be mowed at least twice a year to suppress weed and brush growth. If vegetative cover is not adequate in any particular area, soil amendments should be applied as necessary and the area re-seeded in order to re-establish vegetation. Insecticides may be used to eliminate insect populations that are detrimental to the vegetation. Animal burrows and eroded or depressed areas should be filled in with compacted soil and reseeded.

1.1.2 Site Access and Security

In addition to the final cover cap, quarterly inspection shall be performed on all site access roads and all security features; including but not limited to fencing, gates, signage, etc.

1.1.3 Groundwater Monitoring Wells

Inspection of the groundwater monitoring wells will take place semi-annually during sampling events. The inspection will consist of verifying the condition of the monitoring wells to ensure that they are providing representative samples of the ground water being collected. The inspector should note the following:

- 1) The total depth of the well should be recorded every time a water sample is collected or a water level reading is taken to check if sediment has accumulated at the bottom. If sediment build-up has occurred, the sediment should be removed by pumping or bailing.
- 2) If turbid samples are collected from a well, redevelopment of the well will be necessary.
- 3) The above-ground protective casing should be inspected for damage. The protective casing should be of good structural integrity and free of any cracks or corrosion. The lockable cover and lock should also be checked at this time.
- 4) The surface seals should be inspected for settling and cracking. If the seal is damaged in any way, the seal should be replaced.
- 5) The well casing and cap should be inspected. The casing and cap should be of good structural integrity and free of any cracks or corrosion. Any debris should be removed from around the cap to prevent it from entering the well.

The condition of the groundwater monitoring system should be recorded in the post-closure log book following each sampling event. Monitoring of the groundwater wells shall be conducted as described in the groundwater monitoring plan.

1.1.4 Landfill Gas Monitoring System

Inspection of the landfill gas monitoring system should take place at least quarterly. The inspection should consist of verifying the condition and operation of the passive gas vents and gas monitoring wells. The full depth of all vents and monitoring wells

should be checked for blockage that may be caused by settlement or cracks in the casing. At least once a year, all vents and wells should be tested with an air pump to ensure they are free-flowing. The summary of each inspection of the landfill gas monitoring system should be recorded in the post-closure log book along with photographs of any items of concern.

Testing of the gas monitoring wells shall be conducted quarterly, or as otherwise approved by the SWS.

If any vents or wells are not properly working, they should be flushed and pressure cleaned. If all attempts to repair a vent or well are unsuccessful, a replacement will be installed.

1.2 Erosion and Sedimentation Control System

Inspection of the erosion and sedimentation control system should occur semi-annually and after major storm events. During each inspection, the elements of the system including drainage ditches, drainage pipes, sedimentation devices, and inlet/outlet structures should be checked for obstructions and damage. The drainage ditches should be inspected for obstructions, erosion of side slopes, loss of vegetative cover, shifting of riprap, excessive buildup of sediment, or any other item that may prevent the proper functioning of the ditch. Drainage piping should be checked for blockages and the inlets/outlets should be inspected for undercutting and rutting. The sediment level in the sedimentation devices should be measured to determine if removal is required. The condition of the outfall structure should be checked to ensure proper functioning. The berms should be inspected for stability. Following each inspection, a summary report should be entered in the post-closure log book along with photographs of any items of concern.

Maintenance and/or repairs should be performed immediately as prescribed by the inspectors review.

1.3 Certification of Post-Closure

Following completion of the post-closure care period, a certification verifying that post-closure care was performed in accordance with the post-closure plan and signed by a registered professional engineer licensed in the State of North Carolina will be made part of the operating record. The County will notify the SWS that the certification has been placed in the operating record.

1.4 Name of Individual Responsible for Post-Closure Maintenance of the Site

Mr. Edward Mann of Dare County is currently responsible for operations and maintenance of the site. Mr. Mann can be reached at the following address:

Mr. Edward Mann
Public Works Director, Dare County
P.O. Box 100
Manteo, North Carolina 27954

Mr. Mann most likely will not be employed with Dare County throughout the entire 30 year post-closure period. A new individual will be appointed at the time Mr. Mann's employment with the County ends.

1.5 Planned Use of Landfill after Closure

There are no current planned uses for the landfill site after closure. The property will remain County property, maintained by the County, with public access prohibited.

1.6 Financial Assurance

Dare County will submit a financial assurance package to SWS in accordance with the criteria set forth under Rule .0546. A detailed cost estimate for post-closure care has been prepared and is provided herein (Table 1-1) and a copy has been placed in the operating record. The cost estimate is based on 30 years of post-closure care.

In addition, a corrective action cost estimate has been prepared and is provided herein (Table 1-2). The corrective action cost estimate includes groundwater monitoring, maintenance of monitoring devices and additional contingency to cover the minimum required amount of three million dollars (\$3,000,000.00) for potential assessment and corrective action at the facility in accordance with the NCGS 130A-295.2(h), which became effective August 1, 2009

Per Rule .0546(c)(3)(B), the County will annually adjust the cost estimates for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument. Dare County anticipates using the local financial government test, and therefore will be required to update the post-closure cost estimate for inflation within 30 days after the close of the fiscal year and before submission of updated information to the SWS.

Table 1-1
Post-Closure Cost Estimate
Dare County C&DLF
Dare County, North Carolina
Revised April 2011

	Quantity	Unit	Cost	Total
Administration¹	30	yr	\$5,000	\$150,000
Engineering²	30	yr	\$10,000	\$300,000
Maintenance				
Fencing, Gates, Signs, etc.	30	yr	\$1,000	\$30,000
Access Roads	30	yr	\$3,000	\$90,000
Mowing	30	yr	\$12,000	\$360,000
Stormwater Structures	30	yr	\$9,000	\$270,000
Final Cover System Inspection & Repair	30	yr	\$25,000	\$750,000
Subtotal				\$1,950,000
Contingency (15%)				\$292,500

TOTAL \$2,242,500

ANNUAL COST \$74,750

2010 Inflation Adjustment @ 1.012 \$2,269,410

1. Administration costs include contract selection and procurement of firms to perform inspection, monitoring and repairs.
2. Engineering costs include general site inspection activities.
3. The post closure costs were reduced by removing corrective action cost estimate items including monitoring and maintenance of monitoring devices.

Table 1-2
Corrective Action Cost Estimate
Dare County C&DLF
Dare County, North Carolina
Revised April 2011

	Quantity	Unit	Cost	Total
Monitoring				
15 Groundwater Monitoring Well and QA/QC Samples Analyzed Semi-Annually for 30 years	60	events	\$2,475	\$148,500
3 Surface Water Sample Analyzed Semi-Annually for 30 years	60	events	\$325	\$19,500
Maintenance				
Groundwater Monitoring Wells	30	yr	\$8,000	\$240,000
Surface Water Monitoring Points	30	yr	\$2,500	\$75,000
Landfill Gas Wells	30	yr	\$5,000	\$150,000
Subtotal				\$633,000
Contingency (15%)				\$94,950

Subtotal	<u><u>\$727,950</u></u>
Additional Corrective Action Funding	<u><u>\$2,272,050</u></u>
Total	<u><u>\$3,000,000</u></u>



COUNTY OF DARE

Department of Finance

P.O. Box 1000, Manteo, North Carolina 27954

J. David Clawson, CPA
Director / Assistant to the County Manager

Sally O. DeFosse, CPA, CLGFO Assistant
Director

(252) 475-5730
fax (252) 475-5818

December 22, 2010

Mr. Donald Herndon
Solid Waste Section
DENR - Division of Waste Management
1646 Mail Service Center
Raleigh, NC 27699-1646

Dear Mr. Herndon,

I am the chief financial officer of the County of Dare, NC. This letter is in support of this unit of local government's use of the financial test to demonstrate financial assurance, as specified in 15A NCAC 13B .1628 (e)(1)(F).

The County of Dare is the owner or operator of the following facilities for which financial assurance for closure, post-closure, or corrective action is demonstrated through the financial test specified in 15A NCAC 13B .1628 (e)(1)(F). The current closure, post-closure, or corrective action cost estimates covered by the test are shown for each facility:

Facility Name: Dare County Construction and Demolition Landfill
Facility Address: 1603 Cub Road, Manns Harbor, NC 27953
Permit Number: 28-03
Closure Cost Estimate: \$5,599,715
Post-Closure Cost Estimate: \$2,269,410
Corrective Action Cost Estimate: \$3,000,000
Total Costs to be Assured: \$10,869,125

The fiscal year of the County of dare ends on June 30th. The figures for the following items marked with an asterisk are derived from this unit of local government's Annual Financial Information Report (AFIR) for the latest completed fiscal year, ended June 30, 2010.

RATIO INDICATORS OF FINANCIAL STRENGTH

1. Sum of current closure, post-closure and corrective action cost estimates	\$10,869,125
*2. Sum of cash and investments (AFIR Part 7)	\$77,456,405
*3. Total expenditures (AFIR Part 4 Columns a & b and Part 5 for municipalities or Part 5 excluding educational capital outlays for counties)	\$119,009,326
*4 Annual debt service (AFIR Part 4 Section I)	\$20,425,245
5. Assured environmental costs to demonstrate financial responsibility in the following amounts under Division rules:	
MSWLF under 15A NCAC 13B .1600	\$0
Hazardous waste treatment, storage and disposal facilities under 15A NCAC 13A .0009 and .0010	\$0
Petroleum underground storage tanks under 15A NCAC 2N .0100 - .0800	\$0
Underground Injection Control System facilities under 15A NCAC 2D .0400 and 15A NCAC 2C .0200	\$0
PCB commercial storage facilities under 15A NCAC 2O .0100 and 15A NCAC 2N .0100	\$0
Total assured environmental costs	\$0
*6. Total Annual Revenue (AFIR Part 2)	\$105,937,836
7. Is line 5 divided by line 6 less than or equal to 0.43?	yes
8. Is line 2 divided by line 3 greater than or equal to 0.05?	yes
9. Is line 4 divided by line 3 less than or equal to 0.20?	yes

BOND RATING INDICATOR OF FINANCIAL STRENGTH

1. Sum of current closure, post-closure and corrective action cost estimates	\$10,869,125
Current bond rating of most recent issuance and name of rating service	
2. Moody's Aa3 2/12/2007	
Standard & Poor's AA 6/3/2009	
Fitch ratings AA- 1/29/2009	
Date of issuance bond	
3. Series 2003 General Obligation 7/15/2003	
Series 2006 General Obligation 6/27/2006	
Date of maturity of bond	
4. Series 2003 General Obligation 5/1/2011	
Series 2006 General Obligation 6/1/2016	
5. Assured environmental costs to demonstrate financial responsibility in the following amounts under Division rules:	
MSWLF under 15A NCAC 13B .1600	\$0
Hazardous waste treatment, storage and disposal facilities under 15A NCAC 13A .0009 and .0010	\$0
Petroleum underground storage tanks under 15A NCAC 2N .0100 -.0800	\$0
Underground Injection Control System facilities under 15A NCAC 2D .0400 and 15A NCAC 2C .0200	\$0
PCB commercial storage facilities under 15A NCAC 2O .0100 and 15A NCAC 2N .0100	\$0
Total assured environmental costs	\$0
*6. Total Annual Revenue (AFIR Part 2)	\$105,937,836
7. Is line 5 divided by line 6 less than or equal to 0.43?	yes

Mr. Donald Herndon
Solid Waste Section
DENR - Division of Waste Management
Page 4
December 22, 2010

I hereby certify that the wording of this letter is identical to the wording specified in 15A NCAC 13B .1628 (e)(2)(G) as such rules were constituted on the date shown immediately below. I further certify the following: (1) that the unit of local government has not operated at a total operating fund deficit equal to five percent or more of total annual revenue in either of the past two fiscal years, (2) that the unit of local government is not in default on any outstanding general obligations bonds or long-term obligations, and (3) does not have any outstanding general obligation bonds rated lower than Baa as issued by Moody's, BBB as issued by Standard & Poor's, BBB as issued by Fitch's, or 75 as issued by the Municipal Council.

Sincerely,

A handwritten signature in black ink, appearing to read 'David Clawson', with a horizontal line extending to the right.

David Clawson

Finance Director

Chao, Ming-tai

From: Brinchek, W. Michael (Mike) [BrinchekWM@cdm.com]
Sent: Thursday, April 07, 2011 7:53 AM
To: Chao, Ming-tai; Herndon, Donald
Cc: Edward L. Mann Sr. (EdwardLee@co.dare.nc.us); Shanna Fullmer
Subject: Dare County Financial Assurance
Attachments: img-406153736-0001.pdf; Post Closure Plan-4.07.2011.pdf

Categories: Red Category

Ming,

Attached is the County's financial assurance documentation, which includes \$3,000,000 for corrective actions. In addition to adding the \$3,000,000 for corrective actions, per my conversations with Mr. Herndon, CDM removed monitoring and maintenance of monitoring devices from the post closure costs and included these costs in the corrective action cost estimate, thus reducing the post-closure cost estimate.

In addition to the County's FA documentation, attached is the revised post closure plan, including:

- Revised section 1.6;
- Revised post closure cost estimate; and
- Revised corrective action cost estimate.

On behalf of Dare County, we believe this should complete the requirements for the PTO.

Thank you for your expeditious review of the CQA document materials and please do not hesitate to contact me should you have any additional questions.

Regards,

Mike

W. Michael Brinchek, P.E., BCEE | CDM | 5400 Glenwood Avenue, Suite 300
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