Chalk Point Generating Station
25100 Chalk Point Road
Aquasco, MD 20608
W 301-843-4439 C 240-299-3377
timothy.klares@nrgenergy.com

September 5, 2014

CERTIFIED MAIL
7008 1830 0003 6436 1961
Return Receipt Requested

Ms. Martha Hynson, Chief
Solid Waste Program, Suite 605
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, MD 21230-1719

Re: NRG Chalk Point LLC
Chalk Point Generating Station
***Revised Version* - Coal Combustion Byproducts (CCBs), Annual Generator Tonnage Report (RY 2013).**

Dear Ms. Hynson,

Per your request, enclosed please find the revised 2013 CCB tonnage report (with attachments) for NRG Chalk Point LLC's Chalk Point Generating Station.

If you have any questions regarding this report, please contact me at 301-843-4439, or at timothy.klares@nrgenergy.com.

Sincerely,

Tim Klares
Senior Environmental Specialist
Enclosures

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Suite 605 • Baltimore, Maryland 21230-1719
410-537-3315 • 800-633-6101 x3315 • www.mde.maryland.gov
Land Management Administration • Solid Waste Program

Coal Combustion Byproducts (CCBs)
Annual Generator Tonnage Report
Instructions for Calendar Year 2013

The following is general information relating to the requirement for reporting quantities of coal combustion byproducts (CCBs) that were managed in the State of Maryland during calendar year 2013. Please answer the questions on the form provided, attaching additional information and any requested supplemental information to the back of the form. *Note that the form for this year requires both volume and weight of the CCBs produced. If you know one of these parameters but not the others, for example, you have the tonnage produced but not the volume, you may calculate the other parameter; however, please provide the calculations and assumptions that you used in your estimate.* Questions can be directed to the Solid Waste Program at (410) 537-3315 or via email at ed.exter@maryland.gov

I. Background. This requirement that generators of CCBs submit an annual report was instituted in the Code of Maryland Regulations COMAR 26.04.10.08, that was promulgated effective December 1, 2008. The regulation requires that any non-residential generator of CCBs submit a report to the Department by March 1 of each year describing the manner in which CCBs generated within the State were managed during the preceding calendar year. Additional information and specific instructions follow. For more detailed information, please refer to COMAR 26.04.10.08.

II. General Information and Applicability.

A. Definitions. CCBs are defined in COMAR 26.04.10.02B as:

> *"(3) Coal Combustion Byproducts. (a) "Coal combustion byproducts" means the residue generated by or resulting from the burning of coal.*
> *(b) "Coal combustion byproducts" includes fly ash, bottom ash, boiler slag, pozzolan, and other solid residuals removed by air pollution control devices from the flue gas and combustion chambers of coal burning furnaces and boilers, including flue gas desulfurization sludge and other solid residuals recovered from flue gas by wet or dry methods."*

A generator of CCBs is defined in COMAR 26.04.10.02B as:

> *"(9) Generator.*
> *(a) "Generator" means a person whose operations, activities, processes, or actions create coal combustion byproducts.*
> *(b) "Generator" does not include a person who only generates coal combustion byproducts by burning coal at a private residence."*

B. Applicability. **If you or your company meets the definition of a generator of CCBs as defined above, you must provide the information as required below**. For the purposes of this report, "you" shall hereinafter refer to the generator defined above. Please note that COMAR 26.04.10.08 requires generators of CCBs to submit an annual report to the Department concerning the disposition of the CCBs that they generated the previous year. **THIS INCLUDES CCBS THAT WERE NOT SEPARATELY COLLECTED BUT WERE PRODUCED BY THE BURNING OF COAL AND WERE DIRECTLY CONTRIBUTED TO A PRODUCT, such as cement.** Where the amount cannot be directly measured, estimates based on the amount of coal burned can be used. The method of determining the volume of CCBs produced must be described.

III. Required Information. The following information must be provided to the Department by March 1, 2014:

A. Contact information:

Facility Name: Chalk Point Generating Station

Name of Permit Holder: NRG Chalk Point, LLC

Facility Address: 25100 Eagle Harbor Road
Street

Facility Address: Aquasco Maryland 20608
City State Zip

County: Prince George's County

Contact Information (Person filing report or Environmental Manager)

Facility Telephone No.: 301-843-4100 Facility Fax No.: 301-843-4281

Contact Name: Timothy Klares

Contact Title: Senior Environmental Specialist

Contact Address: 25100 Eagle Harbor Rd
Street

Contact Address: Aquasco Maryland 20608
City State Zip

Contact Email: timothy.klares@nrgenergy.com

Contact Telephone No.:301-843-4439 Contact Fax No.: 301-843-4156

For questions on how to complete this form, please contact the Solid Waste Program at 410-537-3315

B. A description of the process that generates the CCBs, including the type of coal or other raw material that generates the CCBs. If the space provided is insufficient, please attach additional pages:

See Attachment A.

C. The volume and weight of CCBs generated during calendar year 2013, including an identification of the different types of CCBs generated and the volume of each type generated. If the space provided is insufficient, please attach additional pages in a similar format. If converting from volume to weight or weight to volume, please provide your calculations and assumptions.

Table I: Volume and Weight of CCBs Generated for Calendar Year 2013: Please note the change to this table from previous years, to include both the volume and weight of the types of CCBs your facility produces.

Volume and Weight of CCBs Generated for Calendar Year 2013				
Flyash	Bottom Ash	On-Spec Gypsum	Off Spec Gypsum	WWTP Fines
Type of CCB	Type of CCB	Type of CCB	Type of CCB	Type of CCB
54,983	6,726	47,917	324	172
Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards
54,983	6,726	93,603	633	336
Weight of CCB, in Tons	Weight of CCB, in Tons	Weight of CCB, in Tons	Weight of CCB, in Tons	Weight of CCB, in Tons

Additional notes:

CCB Tonnages are reported in dry short tons. CCB volumes are reported in dry Cubic Yards.
WWTP Tons represent fines from the Flue Gas Desulfurization's Waste Water Treatment Plant
Volumes of Flyash in Dry Cubic Yards are calculated from dry short tons using a density of 1.0 Tons/Dry CY.
Volumes of Bottom Ash in Dry Cubic Yards are calculated from dry short tons using a density of 1.0 Tons/Dry CY.
Volumes of On-Spec Gypsum, Off-Spec Gypsum and WWTP Fines are calculated from dry short tons using a density of 1.95 Tons/Dry CY.

D. Descriptions of any modeling or risk assessments, or both, conducted relating to the CCBs or their use that were performed by you or your company during the reporting year. Please attach this information to the report.

E. Copies of all laboratory reports of all chemical characterizations of the CCBs. Please attach this information to the report. (See Attachment B).

F. A description of how you disposed of or used your CCBs in calendar year 2013, identifying:

(a) The types and volume of CCBs disposed of or used (if different than described in Paragraph C above) including any CCBs stored during the previous calendar year, the location of disposal, mine reclamation and use sites, and the type and volume of CCBs disposed of or used at each site:

Of the 54,983 tons of **flyash** generated at Chalk Point in 2013, 37,973 tons were sold to SEFA, headquartered in Columbia, S.C., and 17,010 tons were disposed of at the Brandywine Ash Site, located in Brandywine, Md.

All of the 6,726 tons of **bottom ash** generated in 2013 was sent to the Brandywine Ash Site, located in Brandywine, Md for disposal.
On-Spec Gypsum generated at Chalk Point in 2013 was 93,603 tons, and 1,252 tons were stored on-site at the end of 2012. Of this total, 93,312 tons were transported by barge to LaFarge, located in Buchanan, NY, and 1,543 tons were stored on site at the Chalk Point Generating Station at the end of 2013.
Off-Spec Gypsum generated in 2013 was 633 tons, all of which was disposed of at Waste Management's Amelia Landfill located in Jetersville, Va.
WWTP Fines produced in 2013 was 336 tons, all of which was disposed of at Waste Management's Amelia Landfill located in Jetersville, Va.

and (b) The different uses by type and volume of CCBs:

On-Spec Gypsum:
Volume:93,312 tons sold
Use: Wallboard

If the space provided is insufficient, please attach additional pages in a similar format.

G. A description of how you intend to dispose of or use CCBs in the next 5 years, identifying:

(a) The types and volume of CCBs intended to be disposed of or used, the location of intended disposal, mine reclamation and use sites, and the type and volume of CCBs intended to be disposed of or used at each site:

FlyAsh: Approximately 55,000 tons/year to be generated, with about 38,000 tons to be sold to SEFA, headquartered in Columbia, S.C., and 17,000 tons to be sent for disposal at the Brandywine Ash Site, located in Brandywine, Md.
Bottom Ash: Anticipate 6,700 tons/year to be generated and sent to the Brandywine Ash Site, located in Brandywine, Md for disposal.
On-Spec Gypsum: Anticipate 94,000 tons to be generated, with approximately 1,500 tons stored on site at the Chalk Point Generating Station and the remainder being and transported by barge to LaFarge, located in Buchanan, NY.
Off-Spec Gypsum: Approximate 630 tons to be generated and disposed of at Waste Management's Amelia Landfill located in Jetersville, Va.
WWTP Fines: Approximately 336 tons to be generated and disposed of at Waste Management's Amelia Landfill located in Jetersville, Va.

and (b) The different intended uses by type and volume of CCBs.

On-Spec Gypsum:
Volume:93,000 tons sold
Use: Wallboard

If the space provided is insufficient, please attach additional pages in a similar format.

IV. Signature and Certification. An authorized official of the generator must sign the annual report, and certify as to the accuracy and completeness of the information contained in the annual report:

This is to certify that, to the best of my knowledge, the information contained in this report and any attached documents are true, accurate, and complete.		
Signature	Greg Staggers, General Manager, Chalk Point Generating Station 301-843-4121 Name, Title, & Telephone No. (Print or Type) gregory.staggers@nrgenergy.com Your Email Address	Date 8/27/14

V: Attachments (please list):

A)Chalk Point Generating Station Process Description

B)Microbac Analyses for Fly Ash, Bottom Ash, Off- Spec Gypsum and WWTP Fines

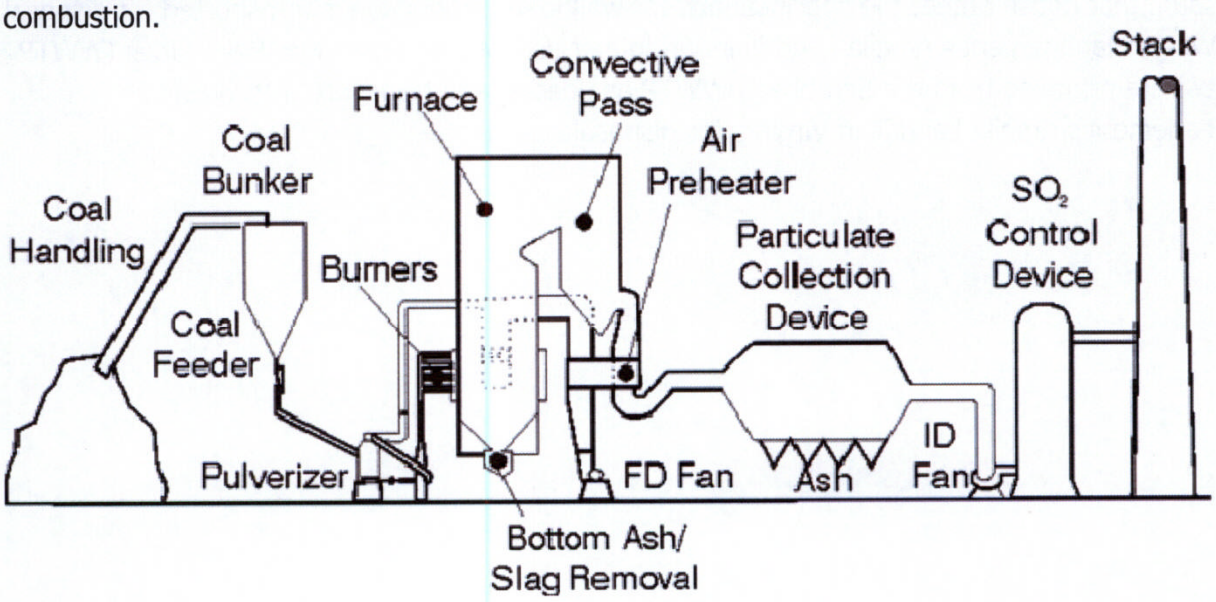
Attachment A

Chalk Point Generating Station
25100 Eagle Harbor Road,
Aquasco, Prince George's County, MD. 20608
301-843-4100

The Chalk Point Generating Station is located on the Patuxent River at Swanson's Creek in Prince George's County, MD. The facility is engaged in the generation of electrical energy for sale. The primary SIC code is 4911. There are two coal burning, opposite wall fired units each with a superheater, double reheat and economizer and each rated at 365 MWs (base loaded). The primary fuel for these boilers is bituminous coal. Pollution control devices on Unit 1 include low NOx burners with Separated Over-Fired Air (SOFA), and Selective Catalytic Reduction (SCR) for control of oxides of nitrogen (NOx); and electrostatic precipitators (ESP) for the control of particulate matter. Pollution control devices on Unit 2 include low NOx burners with Separated Over-Fired Air (SOFA), and Selective Auto-Catalytic Reduction (SACR) for control of oxides of nitrogen (NOx); and electrostatic precipitators (ESP) for the control of particulate matter. A Wet Scrubber (FGD) was installed and went in service on both units in late 2009. Units 1 & 2 exhausts through the scrubber stack or, when the FGD is not in service, through a common single stack.

Coal is currently delivered by rail. The rail cars are emptied using a rotary dumper then transferred by conveyor and dravo to either a storage pile or is fed directly to the units' bunker.

The illustration below shows a simple schematic diagram for a typical pulverized coal combustion system. The coal is prepared by grinding to a very fine consistency for combustion.



Attachment A

The CCBs currently produced and used are a result of the combustion of pulverized coal.

Ash is formed in the boiler while coal combusts. In general, pulverized coal combustion results in approximately 10% ash, of which 65%–85% is fly ash, and the remainder is coarser bottom ash. Bottom ash is a coarse material and falls to the bottom of the boiler. Fly ash is finer than bottom ash and is carried along the combustion process with flue gas. Particulate collection devices remove fly ash from the flue gas and the collected ash is transferred to one of two ash silos. Flyash that is not marketed is sent to the Brandywine Ash Site, located in Prince George's County, MD. The bottom ash is conveyed out of the bottom of the boiler via a wet sluice system to hydrobins, where the water is then decanted and the bottom ash sent to the Brandywine Ash Site.

Gypsum is a byproduct of SO2 removal by the Flue Gas Desulfurization (FGD) system, commonly known as a scrubber. Chalk Point uses wet scrubbers for SO2 removal. Wet scrubbing uses a slurry of limestone alkaline sorbent to remove SO2 from the air stream. The byproduct - gypsum - is conveyed to a storage dome temporarily where it is then delivered by rail to the Morgantown Station and sent to Buchannan, New York to be made into wallboard. Gyspum that doesn't meet the specifications for wallboard production is transported for disposal to Waste Management's Amelia Landfill in Virginia. Waste Water Treatment Plant Fines (WWTP Fines) are removed from the Scrubber's WWTP as needed and transported to Waste Management's Amelia Landfill in Virginia for disposal.

Attachment B – CCB Analyses

MICROBAC®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

COVER LETTER

Glenn St. Clair
NRG Energy - Chalk Point Gen. Sta.
25100 Chalk Point Road
Aquasco, MD 20608

December 03, 2013
Report No.: 13K0499

RE: Chalk Point-FGD Special Yearly

The report of analyses contains test results for samples received at Microbac Laboratories, Inc., Baltimore Division on 11/05/2013 13:20.

The enclosed results were obtained from and applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report has been reviewed and meet the applicable project and certification specific requirements, unless otherwise noted.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories, Inc.

We appreciate the opportunity to service your analytical needs. If you have any questions, please feel free to contact us.

This Data Package contains the following:

- This Cover Page
- Sample Summary
- Test Results
- Certifications/Notes and Definitions
- Cooler Receipt Log
- Chain of Custody

Final report reviewed by:	Mark B. Horan/Laboratory Director	12/3/2013 Report issue date

All samples received in proper condition and results conform to ISO 17025 and TNI NELAC standards unless otherwise noted.

If we have not met or exceeded your expectations, please contact Mark Horan, Managing Director, at 410-633-1800 You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President james.nokes@microbac.com

MICROBAC®

Microbac Laboratories, Inc.
Baltimore Division
2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13K0499
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 12/03/2013 11:21
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

SAMPLE SUMMARY

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
089-103113-Bottom Ash	13K0499-01	Solid	Grab	10/31/2013 08:00	11/05/2013 13:20

MICROBAC®

Microbac Laboratories, Inc.
Baltimore Division
2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13K0499
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 12/03/2013 11:21
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

089-103113-Bottom Ash

13K0499-01 (Solid) Sampled: 10/31/2013 08:00; Type: Grab

Microbac Laboratories, Inc., Baltimore Division

Analyte	Result	Reporting Limit	Units	Limits	Prepared	Analyzed	Analyst	Method	Notes
Wet Chemistry									
% Solids	**81.06**	0.05	% by Weight		111113 1529	111213 0900	EWM	SM (20) 2540G	
Chloride	**760**	27	mg/kg dry		110813 1511	110813 1530	BLL	SM(20)4500Cl-C(M)	D
pH	**8.78**	0.100	pH Units		111413 1000	111413 1436	LCR	EPA 9045D	Z10a
Sulfate as SO4	**590**	62	mg/kg dry		111413 1158	111413 1340	LCR	ASTM D516-02(M)	D
Mercury, Total by EPA 7000 Series Methods									
Mercury	ND	0.028	mg/kg dry		112113 1216	112213 1803	APS	EPA 7471A	
Metals, Total by EPA 6000/7000 Series Methods									
Silver	ND	1.5	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Aluminum	**4100**	7.4	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Arsenic	**5.8**	2.9	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Barium	**23**	1.5	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Beryllium	ND	0.59	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Calcium	**2100**	15	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Cadmium	ND	0.29	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Cobalt	ND	1.5	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Chromium	**6.1**	1.5	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Copper	ND	1.5	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Iron	**10000**	5.9	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Potassium	**350**	15	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Magnesium	**440**	15	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Manganese	**16**	1.5	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Sodium	**830**	290	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Nickel	ND	2.9	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Lead	ND	2.9	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Antimony	ND	5.9	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	

Microbac Laboratories, Inc., Baltimore Division

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mark B. Horan, Laboratory Director

Original Report

MICROBAC®

Microbac Laboratories, Inc.
Baltimore Division
2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13K0499
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 12/03/2013 11:21
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

089-103113-Bottom Ash

13K0499-01 (Solid) Sampled: 10/31/2013 08:00; Type: Grab

Microbac Laboratories, Inc., Baltimore Division

Analyte	Result	Reporting Limit	Units	Limits	Prepared	Analyzed	Analyst	Method	Notes
Metals, Total by EPA 6000/7000 Series Methods									
Selenium	ND	2.9	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Thallium	ND	5.9	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Vanadium	**13**	1.5	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
Zinc	**6.1**	1.5	mg/kg dry		111613 1319	111813 1539	APS	EPA 6010B	
TCLP Extraction by EPA 1311									
TCLP Extraction	**COMPLETED**		N/A		112113 1736	112213 1206	APS	EPA 1311	
TCLP Metals by 6000/7000 Series Methods									
Silver	ND	0.20	mg/L	5.0	112513 1048	112713 1403	APS	EPA 6010B	D
Arsenic	ND	0.20	mg/L	5.0	112513 1048	112713 1403	APS	EPA 6010B	D
Barium	ND	0.50	mg/L	100	112513 1048	112713 1403	APS	EPA 6010B	D
Cadmium	ND	0.20	mg/L	1.0	112513 1048	112713 1403	APS	EPA 6010B	D
Chromium	ND	0.20	mg/L	5.0	112513 1048	112713 1403	APS	EPA 6010B	D
Mercury	ND	0.0020	mg/L	0.20	112513 1156	112613 1857	APS	EPA 7470A	D
Lead	ND	0.20	mg/L	5.0	112513 1048	112713 1403	APS	EPA 6010B	D
Selenium	ND	0.20	mg/L	1.0	112513 1048	112713 1403	APS	EPA 6010B	D

Microbac Laboratories, Inc., Baltimore Division

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mark B. Horan, Laboratory Director

Original Report

MICROBAC®

Microbac Laboratories, Inc.
Baltimore Division
2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13K0499
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 12/03/2013 11:21
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

Project Requested Certification(s):

A2LA (Environmental)

Analyte Certification Exception Summary

Microbac Laboratories, Inc., Baltimore Division
Matrix: Solid
ASTM D516-02(M)
Sulfate as SO4: No Certification

SM (20) 2540G
% Solids: No Certification

All analysis performed were analyzed under the required certification unless otherwise noted in the above summary.

Certification List

Below is a list of certifications maintained by Microbac Laboratories, Inc. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. A complete list of individual analytes pursuant to each certification below is available upon request.

Code	Description	Certification Number	Expires
Microbac Laboratories, Inc., Baltimore Division			
A2LA1	A2LA (Biology)	410.02	04/30/2015
A2LA2	A2LA (Environmental)	410.01	04/30/2015
CPSC	CPSC Testing of Childrens Products and Jewelry	1115	04/30/2015
Pb	Environmental Lead (ELLAP)	410.01	04/30/2015
MD	State of Maryland (Drinking Water)	109	06/30/2014
Microbac Laboratories, Inc., Richmond Division			
VA-R	Commonwealth of Virginia (NELAC) - Richmond	460022-2348	06/14/2014

MICROBAC®

Microbac Laboratories, Inc.
Baltimore Division
2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13K0499
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 12/03/2013 11:21
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

Qualifiers/Notes and Definitions

General Definitions:

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Analysis Qualifiers/Notes:

Microbac Laboratories, Inc., Baltimore Division

Z10a	pH@20.9°C
D	Sample Diluted

MICROBAC®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

Cooler Receipt Log

Cooler ID: Default Cooler **Cooler Temp:** 0.50°C **Work Order:** 13K0499

Custody Seals Intact:	Yes	COC/Containers Agree:	Yes
Containers Intact:	Yes	Correct Preservation:	Yes
Received On Ice:	Yes	Correct Number of Containers Received:	Yes
Radiation Scan Acceptable:	Yes	Sufficient Sample Volume for Testing:	Yes
COC Present:	Yes	Samples Received in Proper Condition:	Yes

Comments:

Microbac Laboratories Inc., Baltimore Division
2101 Van Deman St, Baltimore, MD 21224
Tel: 410-633-1800
Fax: 410-633-6553
www.microbac.com

Chain of Custody Record

Work Order Number:

Page 1 of 1

Instructions for completing the Chain of Custody Record on back.

Client Name: NRG-Energy-Chalk Point FGD	Project: FGD Special yearly	Turnaround Time	QC and EDD Type (Required)
Address: 25100 Chalk Pt. Rd.	Location: CP-FGD	[ ] Standard (7 Business Days)	[ ] Level I (NAC) [ ] EDD
City, State, Zip: Aquasco MD 20616	PO #	[ ] RUSH* Needed By:	[ ] Level II** Format:
Contact: Glenn St Clair	Compliance Monitoring? [ ] Yes [ ] No	* Please notify lab prior to drop off.	[ ] Level III** Comments:
Telephone #: 301-843-4173	(1)Agency/Program		[ ] Level IV**

Sampled by (PRINT): Marcin Miller Sampler Signature: Marcin Miller Sampler Phone #: 301-843-4170 Sampler (DW)Cert#:

Send Report via [ ] e-mail (address): glenn.stclair@nrgenergy.com [ ] Mail [ ] Telephone [X] Fax (fax #): 301-843-4475

*** Matrix Types: Air(A), Childrens Product(CP), Food(F), Paint(P), Soil/Solid (S), Oil(O), Wipe(WI), Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

Client Sample ID	Matrix***	Grab	Composite	Filtered	Date Collected	Time Collected	No. of Containers	Requested Analysis: Chloride	Sulfates, SO4	pH (Lab received)	TCLP: Ag, As, Ba, Cd, Cr, Pb, Se, Hg	TAL Metals	Comments
089-103113-Bottom Ash	S	✓			10-31-13	0800	1	✓	✓	✓	✓	✓	SM(20)4500Cl-C ASTM D516-02 EPA 9056 EPA-6010B SW 846 7471A

Possible Hazard Identification [ ] Hazardous [ ] Non-Hazardous [ ] Radioactive Sample Disposition [ ] Dispose as appropriate [ ] Return [ ] Archive

	Relinquished By (signature)	Printed Name/Affiliation	Date/Time	Received By (signature)	Printed Name/Affiliation
Number of Containers:	Marcin Miller	Marcin Miller	11-1-13/1230	Kyle Kenney	Kyle Kenney 1130
Cooler Number: 0.5°					
Temp upon receipt(°C):	Kyle Kenney	Kyle Kenney	11/5/13 1320		
Sample Received on Ice or Refrigerated from Client: Yes / No					
Radiation Scan Acceptable Yes / No	Relinquished By (signature)	Printed Name/Affiliation	Date/Time	Received for Lab By (signature)	Printed Name/Affiliation

501 12.11 ** Surcharge May Apply to add'l QC Packages** WHITE - ORIGINAL LAB YELLOW - RECEIPT

Page 1 of 2

13K0499

Page 8 of 8

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

COVER LETTER

Glenn St. Clair
NRG Energy - Chalk Point Gen. Sta.
25100 Chalk Point Road
Aquasco, MD 20608

November 21, 2013
Report No.: 13J1347

RE: Chalk Point-FGD Special Yearly

The report of analyses contains test results for samples received at Microbac Laboratories, Inc., Baltimore Division on 10/22/2013 13:50.

The enclosed results were obtained from and applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

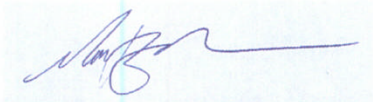
All data included in this report has been reviewed and meet the applicable project and certification specific requirements, unless otherwise noted.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories, Inc.

We appreciate the opportunity to service your analytical needs. If you have any questions, please feel free to contact us.

This Data Package contains the following:

- This Cover Page
- Sample Summary
- Test Results
- Certifications/Notes and Definitions
- Cooler Receipt Log
- Chain of Custody



Final report reviewed by:	Mark B. Horan/Laboratory Director	11/21/2013 Report issue date

All samples received in proper condition and results conform to ISO 17025 and TNI NELAC standards unless otherwise noted.

If we have not met or exceeded your expectations, please contact Mark Horan, Managing Director, at 410-633-1800 You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President james.nokes@microbac.com

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13J1347
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 11/21/2013 08:45
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

SAMPLE SUMMARY

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
089-101713-Gypsum	13J1347-01	Solid	Grab	10/17/2013 11:30	10/22/2013 13:50
089-101813-Flyash	13J1347-02	Solid	Grab	10/18/2013 09:30	10/22/2013 13:50
089-101713-WWTP-Fines	13J1347-03	Water	Grab	10/07/2013 11:30	10/22/2013 13:50

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta. 25100 Chalk Point Road Aquasco, MD 20608	Project: Chalk Point-FGD Special Yearly Project Number: Chalk Pt-FGD Special Yearly Project Manager: Glenn St. Clair	Report: 13J1347 Reported: 11/21/2013 08:45

089-101713-Gypsum

13J1347-01 (Solid) Sampled: 10/17/2013 11:30; Type: Grab

Microbac Laboratories, Inc., Baltimore Division

Metals, Total by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
Silver	ND	3.0	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Aluminum	**240**	15	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Arsenic	ND	6.0	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Barium	**17**	3.0	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Beryllium	ND	1.2	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Calcium	**250000**	150	mg/kg dry	111113 1106	111513 1232	APS	EPA 6010B	
Cadmium	ND	0.60	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Cobalt	ND	3.0	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Chromium	ND	3.0	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Copper	ND	3.0	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Iron	**300**	12	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Potassium	**160**	30	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Magnesium	ND	30	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Manganese	ND	3.0	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Sodium	**1100**	600	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	B17, B18
Nickel	ND	6.0	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Lead	ND	6.0	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Antimony	ND	12	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Selenium	ND	6.0	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Thallium	ND	12	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Vanadium	ND	3.0	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	
Zinc	**8.2**	3.0	mg/kg dry	111113 1106	111513 1132	APS	EPA 6010B	

Microbac Laboratories, Inc., Baltimore Division

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mark B. Horan, Laboratory Director

Original Lab Report

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13J1347
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 11/21/2013 08:45
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

089-101713-Gypsum

13J1347-01 (Solid) Sampled: 10/17/2013 11:30; Type: Grab

Analyte	Result	Reporting Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
Microbac Laboratories, Inc., Baltimore Division								
Wet Chemistry								
% Solids	**74.81**	0.05	% by Weight	110113 1446	110413 0930	EWM	SM (20) 2540G	
Chloride	ND	31	mg/kg dry	110813 1511	110813 1530	BLL	SM(20)4500Cl-C(M)	D
pH	**6.14**	0.100	pH Units	103013 0815	103013 1425	LCR	EPA 9045D	Z10a
Sulfate as SO4	**38000**	2700	mg/kg dry	110513 0921	110513 1047	LCR	ASTM D516-02(M)	D
Microbac Laboratories, Inc. - Chicagoland								
Metals								
Mercury	**0.56**	0.075	mg/Kg	102913 0819	102913 1538	SA	SW-846 7471A	
Mercury	ND	0.0010	mg/L	102913 0828	102913 1352	SA	1311/7470A	
TCLP Metals								
Arsenic	**0.0142**	0.0100	mg/L	102913 0829	103013 1037	SA	1311/6010B	
Barium	ND	0.500	mg/L	102913 0829	103013 1037	SA	1311/6010B	
Cadmium	ND	0.00200	mg/L	102913 0829	103013 1037	SA	1311/6010B	
Chromium	**0.00350**	0.00300	mg/L	102913 0829	103013 1037	SA	1311/6010B	
Lead	ND	0.00750	mg/L	102913 0829	103013 1037	SA	1311/6010B	
Selenium	**0.0603**	0.0300	mg/L	102913 0829	103013 1037	SA	1311/6010B	
Silver	ND	0.0100	mg/L	102913 0829	103013 1037	SA	1311/6010B	

Microbac Laboratories, Inc., Baltimore Division

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mark B. Horan, Laboratory Director

Original Lab Report

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta. 25100 Chalk Point Road Aquasco, MD 20608	Project: Chalk Point-FGD Special Yearly Project Number: Chalk Pt-FGD Special Yearly Project Manager: Glenn St. Clair	Report: 13J1347 Reported: 11/21/2013 08:45

089-101813-Flyash

13J1347-02 (Solid) Sampled: 10/18/2013 09:30; Type: Grab

Microbac Laboratories, Inc., Baltimore Division

Metals, Total by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
Silver	ND	2.3	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Aluminum	**24000**	12	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Arsenic	**240**	4.7	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Barium	**290**	2.3	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Beryllium	**6.8**	0.93	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Calcium	**13000**	23	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Cadmium	**1.2**	0.47	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Cobalt	**7.4**	2.3	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Chromium	**75**	2.3	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Copper	**56**	2.3	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Iron	**32000**	9.3	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Potassium	**3900**	23	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Magnesium	**1700**	23	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Manganese	**86**	2.3	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Sodium	**2000**	470	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	B17, B18
Nickel	**39**	4.7	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Lead	**44**	4.7	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Antimony	ND	9.3	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Selenium	**18**	4.7	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Thallium	ND	9.3	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Vanadium	**230**	2.3	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	
Zinc	**130**	2.3	mg/kg dry	111113 1106	111513 1136	APS	EPA 6010B	

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13J1347
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 11/21/2013 08:45
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

089-101813-Flyash

13J1347-02 (Solid) Sampled: 10/18/2013 09:30; Type: Grab

Analyte	Result	Reporting Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
Microbac Laboratories, Inc., Baltimore Division								
Wet Chemistry								
% Solids	**99.76**	0.05	% by Weight	110113 1446	110413 0930	EWM	SM (20) 2540G	
Chloride	ND	21	mg/kg dry	110813 1511	110813 1530	BLL	SM(20)4500Cl-C(M)	D
pH	**2.55**	0.100	pH Units	103013 0815	103013 1425	LCR	EPA 9045D	Z10b
Sulfate as SO4	**36000**	2000	mg/kg dry	110513 0921	110513 1047	LCR	ASTM D516-02(M)	D
Microbac Laboratories, Inc. - Chicagoland								
Metals								
Mercury	**0.29**	0.041	mg/Kg	102913 0819	102913 1457	SA	SW-846 7471A	
Mercury	ND	0.0010	mg/L	102913 0828	102913 1356	SA	1311/7470A	
TCLP Metals								
Arsenic	**5.47**	0.0100	mg/L	102913 0829	103013 1051	SA	1311/6010B	
Barium	ND	0.500	mg/L	102913 0829	103013 1051	SA	1311/6010B	
Cadmium	**0.0371**	0.00200	mg/L	102913 0829	103013 1051	SA	1311/6010B	
Chromium	**1.31**	0.00300	mg/L	102913 0829	103013 1051	SA	1311/6010B	
Lead	**0.204**	0.00750	mg/L	102913 0829	103013 1051	SA	1311/6010B	
Selenium	**0.535**	0.0300	mg/L	102913 0829	103013 1051	SA	1311/6010B	
Silver	ND	0.0100	mg/L	102913 0829	103013 1051	SA	1311/6010B	

Microbac Laboratories, Inc., Baltimore Division

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mark B. Horan, Laboratory Director

Original Lab Report

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta. 25100 Chalk Point Road Aquasco, MD 20608	Project: Chalk Point-FGD Special Yearly Project Number: Chalk Pt-FGD Special Yearly Project Manager: Glenn St. Clair	Report: 13J1347 Reported: 11/21/2013 08:45

089-101713-WWTP-Fines

13J1347-03 (Water) Sampled: 10/07/2013 11:30; Type: Grab

Microbac Laboratories, Inc., Baltimore Division

Metals, Total by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
Silver	ND	0.050	mg/L	102513 1303	102913 0917	APS	EPA 200.7	
Aluminum	**6.9**	0.025	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Arsenic	ND	0.020	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Barium	**1.3**	0.0050	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Beryllium	ND	0.0010	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Calcium	**1500**	2.5	mg/L	102513 1303	102913 0917	APS	EPA 200.7	
Cadmium	**0.0035**	0.00050	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Cobalt	**0.020**	0.0050	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Chromium	**0.045**	0.0050	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Copper	**0.046**	0.0050	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Iron	**17**	0.0050	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Potassium	**23**	0.050	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Magnesium	**680**	2.5	mg/L	102513 1303	102913 0917	APS	EPA 200.7	
Manganese	**3.7**	0.0050	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Sodium	**860**	50	mg/L	102513 1303	102913 0917	APS	EPA 200.7	
Nickel	**0.36**	0.010	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Lead	ND	0.010	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Antimony	ND	0.040	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Selenium	ND	0.040	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Thallium	ND	0.020	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Vanadium	ND	0.0050	mg/L	102513 1303	102813 1925	APS	EPA 200.7	
Zinc	**0.095**	0.0050	mg/L	102513 1303	102813 1925	APS	EPA 200.7	B1

Microbac Laboratories, Inc., Baltimore Division

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mark B. Horan, Laboratory Director

Original Lab Report

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta. 25100 Chalk Point Road Aquasco, MD 20608	Project: Chalk Point-FGD Special Yearly Project Number: Chalk Pt-FGD Special Yearly Project Manager: Glenn St. Clair	Report: 13J1347 Reported: 11/21/2013 08:45

089-101713-WWTP-Fines

13J1347-03 (Water) Sampled: 10/07/2013 11:30; Type: Grab

Analyte	Result	Reporting Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
Microbac Laboratories, Inc., Baltimore Division								
Wet Chemistry								
Chloride	**5200**	100	mg/L	103113 1604	103113 1700	BLL	SM (20) 4500Cl-C	D
pH	**7.45**	0.100	pH Units	102913 1234	102913 1425	LCR	SM (20) 4500H B	H6, Z10
Sulfate as SO4	**1500**	50	mg/L	102913 0804	102913 1145	LCR	ASTM D516-02	D
Microbac Laboratories, Inc. - Chicagoland								
Metals								
Mercury	**0.053**	0.0020	mg/L	102913 0828	102913 1508	SA	EPA 245.1 Rev 3.0	
Mercury	ND	0.0010	mg/L	102913 0828	102913 1412	SA	1311/7470A	
TCLP Metals								
Arsenic	ND	0.0100	mg/L	102913 0829	103013 1711	SA	1311/6010B	
Barium	ND	0.500	mg/L	102913 0829	103013 1711	SA	1311/6010B	
Cadmium	ND	0.00200	mg/L	102913 0829	103013 1711	SA	1311/6010B	
Chromium	ND	0.00300	mg/L	102913 0829	103013 1711	SA	1311/6010B	
Lead	**0.0214**	0.00750	mg/L	102913 0829	103013 1711	SA	1311/6010B	
Selenium	**0.0524**	0.0300	mg/L	102913 0829	103013 1711	SA	1311/6010B	
Silver	ND	0.0100	mg/L	102913 0829	103013 1711	SA	1311/6010B	

Microbac Laboratories, Inc., Baltimore Division

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mark B. Horan, Laboratory Director

Original Lab Report

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13J1347
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 11/21/2013 08:45
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

Project Requested Certification(s):

A2LA (Environmental)

Analyte Certification Exception Summary

Microbac Laboratories, Inc., Baltimore Division
Matrix: Solid

ASTM D516-02(M)
Sulfate as SO4: No Certification

SM (20) 2540G
% Solids: No Certification

Matrix: Water

ASTM D516-02
Sulfate as SO4: No Certification

SM (20) 4500Cl-C
Chloride: No Certification

All analysis performed were analyzed under the required certification unless otherwise noted in the above summary.

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

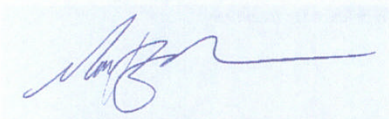
NRG Energy - Chalk Point Gen. Sta. 25100 Chalk Point Road Aquasco, MD 20608	Project: Chalk Point-FGD Special Yearly Project Number: Chalk Pt-FGD Special Yearly Project Manager: Glenn St. Clair	Report: 13J1347 Reported: 11/21/2013 08:45

Certification List

Below is a list of certifications maintained by Microbac Laboratories, Inc. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. A complete list of individual analytes pursuant to each certification below is available upon request.

Code	Description	Certification Number	Expires
Microbac Laboratories, Inc. - Chicagoland			
A2LA_	A2LA ISO/IEC 17025 Biological Testing	3045.01	09/30/2014
A2LA	A2LA ISO/IEC 17025 Env. DoD Testing	3045.02	09/30/2014
ILDPH	Illinois DOPH Micro analysis of drinking water	1755266	12/14/2013
ILEPA	Illinois EPA wastewater and solid waste analysis	200064	01/30/2014
INDEM	Indiana DEM support lab wastewater and solid waste	A305-9-292	12/31/2013
INSDH	Indiana SDH chemical analysis of drinking water	C-45-03	08/14/2016
INDH	Indiana SDH Micro analysis of drinking water	M-45-8	12/31/2013
KSDOH	Kansas Dept Health & Env. NELAP	E-10397	01/31/2014
KYEPP	Kentucky EPPC analysis Underground Storage Tanks	75	01/23/2014
NYDOH-1	New York State Department of Health Wadsworth	49386	04/01/2014
NYDOH	New York State Department of Health Wadsworth	49179	04/01/2014
NCDEN	North Carolina DENR NPDES effluent, surface water	597	12/31/2013
PEDEP	Pennsylvania DEP Registration for Air analysis	68-04863	
PADEP	Pennsylvania Department of Environmental Protect	68-04863	07/31/2014
USDAS	USDA Permit To Receive Soil	P330-12-00174	06/20/2015
WADOE	Washington State Department of Ecology	C992	10/22/2013
WSDNR	Wisconsin DRN chemical analysis wastewater, solids	998036710	08/31/2014
Microbac Laboratories, Inc., Baltimore Division			
A2LA1	A2LA (Biology)	410.02	04/30/2015
A2LA2	A2LA (Environmental)	410.01	04/30/2015
CPSC	CPSC Testing of Childrens Products and Jewelry	1115	04/30/2015
Pb	Environmental Lead (ELLAP)	410.01	04/30/2015
MD	State of Maryland (Drinking Water)	109	06/30/2014
Microbac Laboratories, Inc., Richmond Division			
VA-R	Commonwealth of Virginia (NELAC) - Richmond	460022-2348	06/14/2014

Microbac Laboratories, Inc., Baltimore Division



Mark B. Horan, Laboratory Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta. 25100 Chalk Point Road Aquasco, MD 20608	Project: Chalk Point-FGD Special Yearly Project Number: Chalk Pt-FGD Special Yearly Project Manager: Glenn St. Clair	Report: 13J1347 Reported: 11/21/2013 08:45

Qualifiers/Notes and Definitions

General Definitions:

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Analysis Qualifiers/Notes:

Microbac Laboratories, Inc., Baltimore Division

Z10b	pH@22.1°C
Z10a	pH@21.0°C
Z10	pH@20.5°C
H6	Sample received past holding time; analysis best performed at time of collection.
D	Sample Diluted
B18	Target analyte detected in the initial calibration blank >2.2 times the MDL but less than the reporting limit.
B17	Target analyte detected in continuing calibration blank >2.2 times the MDL but less than the reporting limit.
B1	Target analyte detected in method blank at or above reporting limit.

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

Cooler Receipt Log

Cooler ID: Default Cooler **Cooler Temp:** -0.90 °C **Work Order:** 13J1347

Custody Seals Intact:	Yes	COC/Containers Agree:	Yes
Containers Intact:	Yes	Correct Preservation:	Yes
Received On Ice:	Yes	Correct Number of Containers Received:	Yes
Radiation Scan Acceptable:	Yes	Sufficient Sample Volume for Testing:	Yes
COC Present:	Yes	Samples Received in Proper Condition:	Yes

Comments:

NRG Energy

Microbac Laboratories Inc., Baltimore Division
2101 Van Deman St, Baltimore, MD 21224
Tel: 410-633-1800
Fax: 410-633-6553
www.microbac.com

Chain of Custody Record

Work Order Number:

Page 1 of 1

Instructions for completing the Chain of Custody Record on back.

Client Name NRG-Chalk Point Gen. Sta	Project FGD Special Yearly	**Turnaround Time**	**QC and EDD Type (Required)**
Address 25100 Chalk Pt. Road	Location CP-FGD	[X] Standard (7 Business Days)	[ ] Level I (NAC) [ ] EDD
City, State, Zip Aquasco MD 20608	PO #	[ ] RUSH* Needed By: _____	[ ] Level II** Format: _____
Contact Glenn St Clair	Compliance Monitoring? [X] Yes [ ] No	* *Please notify lab prior to drop off.*	[ ] Level III** Comments:
Telephone # 301-843-4172	(1)Agency/Program		[ ] Level IV**

Sampled by (PRINT) Marian Miller Sampler Signature Marian Miller Sampler Phone # 301-843-4170 Sampler (DW)Cert# —

Send Report via [X] e-mail (address) glenn.stclair@nrgenergy.com [X] Mail [X] Telephone [X] Fax (fax #) 301-843-4475

*** Matrix Types: Air(A), Childrens Product(CP), Food(F), Paint(P), Soil/Solid (S), Oil(O), Wipe(WI), Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other

Client Sample ID	Matrix***	Grab	Composite	Filtered	Date Collected	Time Collected	No. of Containers	Requested Analysis: Chloride	Sulfate as SO4	pH as received lab	TCLP: Ag, As, Ba, Cd, Cr, Pb, Se, Hg	TAL Metals					Comments
089-101713-Gypsum	S	✓			10-17-13	1130	1	✓	✓	✓	✓	✓					SM(20)4500 Cl-C
089-10N13 - Fly Ash	S	✓			10-18-13	0930	1	✓	✓	✓	✓	✓					ASTM D516-02 (M)
~~089-10-13-Bottom Ash~~	S	✓					1	✓	✓	✓	✓	✓	ALM				~~EPA 9045~~ 6010B
089-10N13-WWTP Fines	SW	✓			10-17-13	1130	1	✓	✓	✓	✓	✓					SW846 7471A

13J1347

Possible Hazard Identification [ ] Hazardous [ ] Non-Hazardous [ ] Radioactive **Sample Disposition** [ ] Dispose as appropriate [ ] Return [ ] Archive

	Relinquished By (signature)	Printed Name/Affiliation	Date/Time	Received By (signature)	Printed Name/Affiliation
Number of Containers:	Marian Miller	M. Miller NRG	10-17-13/1300	Rick Kenney 10/22/13	Rick Kenney 1210
Cooler Number: -0.9°	Relinquished By (signature)	Printed Name/Affiliation	Date/Time	Received By (signature)	Printed Name/Affiliation
Temp upon receipt(°C):	Rick Kenney	Rick Kenney	10/22/13 1350	H.N. Willinger	H.N. Willinger
Sample Received on Ice or Refrigerated from Client: Yes / No	Relinquished By (signature)	Printed Name/Affiliation	Date/Time	Received for Lab By (signature)	Printed Name/Affiliation
Radiation Scan Acceptable Yes / No					

501 12.11 ** Surcharge May Apply to add'l QC Packages** WHITE - ORIGINAL LAB YELLOW - RECEIPT

Microbac Laboratories, Inc.
Baltimore Division
2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

COVER LETTER

Glenn St. Clair
NRG Energy - Chalk Point Gen. Sta.
25100 Chalk Point Road
Aquasco, MD 20608

November 15, 2013
Report No.: 13K0500

RE: Chalk Point-FGD Special Yearly

The report of analyses contains test results for samples received at Microbac Laboratories, Inc., Baltimore Division on 11/05/2013 13:20.

The enclosed results were obtained from and applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report has been reviewed and meet the applicable project and certification specific requirements, unless otherwise noted.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories, Inc.

We appreciate the opportunity to service your analytical needs. If you have any questions, please feel free to contact us.

This Data Package contains the following:

- This Cover Page
- Sample Summary
- Test Results
- Certifications/Notes and Definitions
- Cooler Receipt Log
- Chain of Custody

Final report reviewed by:	Mark B. Horan/Laboratory Director	11/15/2013 Report issue date

All samples received in proper condition and results conform to ISO 17025 and TNI NELAC standards unless otherwise noted.

If we have not met or exceeded your expectations, please contact Mark Horan, Managing Director, at 410-633-1800 You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President james.nokes@microbac.com

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13K0500
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 11/15/2013 14:00
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

SAMPLE SUMMARY

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
089-103013-Gypsum	13K0500-01	Solid	Grab	10/30/2013 13:30	11/05/2013 13:20
089-103013-Fines	13K0500-02	Solid	Grab	10/30/2013 14:00	11/05/2013 13:20
089-103113-Bottom Ash	13K0500-03	Solid	Grab	10/31/2013 08:00	11/05/2013 13:20

Mark B. Horan, Laboratory Director

Original Lab Report

Microbac Laboratories, Inc.
Baltimore Division
2101 Van Deman Street • Baltimore, MD 21224
Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta. 25100 Chalk Point Road Aquasco, MD 20608	Project: Chalk Point-FGD Special Yearly Project Number: Chalk Pt-FGD Special Yearly Project Manager: Glenn St. Clair	Report: 13K0500 Reported: 11/15/2013 14:00

089-103013-Gypsum

13K0500-01 (Solid) Sampled: 10/30/2013 13:30; Type: Grab

Analyte	Result	Reporting Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
Microbac Laboratories, Inc., Baltimore Division								
Wet Chemistry								
% Solids	**72.08**	0.05	% by Weight	111113 1529	111213 0900	EWM	SM (20) 2540G	
pH	**7.82**	0.100	pH Units	111413 1000	111413 1436	LCR	EPA 9045D	Z10a
Sulfate as SO4	**58000**	3500	mg/kg dry	111413 1158	111413 1340	LCR	ASTM D516-02(M)	D
Microbac Laboratories, Inc. - Chicagoland								
Wet Chemistry								
Paint Filter	**Pass**	0.0	Pass/Fail	111313 1345	111313 1350	EB	SW-846 9095B	

Microbac Laboratories, Inc., Baltimore Division

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mark B. Horan, Laboratory Director

Original Lab Report

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13K0500
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 11/15/2013 14:00
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

089-103013-Fines

13K0500-02 (Solid) Sampled: 10/30/2013 14:00; Type: Grab

Analyte	Result	Reporting Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
Microbac Laboratories, Inc., Baltimore Division								
Wet Chemistry								
% Solids	**27.54**	0.05	% by Weight	111113 1529	111213 0900	EWM	SM (20) 2540G	
pH	**6.67**	0.100	pH Units	111413 1000	111413 1436	LCR	EPA 9045D	Z10
Sulfate as SO4	**160000**	7500	mg/kg dry	111413 1158	111413 1340	LCR	ASTM D516-02(M)	D
Microbac Laboratories, Inc. - Chicagoland								
Wet Chemistry								
Paint Filter	**Fail**	0.0	Pass/Fail	111313 1345	111313 1350	EB	SW-846 9095B	

Microbac Laboratories, Inc., Baltimore Division

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mark B. Horan, Laboratory Director

Original Lab Report

Microbac Laboratories, Inc.
Baltimore Division
2101 Van Deman Street • Baltimore, MD 21224
Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13K0500
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 11/15/2013 14:00
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

089-103113-Bottom Ash

13K0500-03 (Solid) Sampled: 10/31/2013 08:00; Type: Grab

Analyte	Result	Reporting Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
Microbac Laboratories, Inc., Baltimore Division								
Wet Chemistry								
% Solids	**79.54**	0.05	% by Weight	111113 1529	111213 0900	EWM	SM (20) 2540G	
pH	**8.05**	0.100	pH Units	111413 1000	111413 1436	LCR	EPA 9045D	Z10a
Sulfate as SO4	**330**	63	mg/kg dry	111413 1158	111413 1340	LCR	ASTM D516-02(M)	D
Microbac Laboratories, Inc. - Chicagoland								
Wet Chemistry								
Paint Filter	**Pass**	0.0	Pass/Fail	111313 1345	111313 1350	EB	SW-846 9095B	

Microbac Laboratories, Inc., Baltimore Division

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mark B. Horan, Laboratory Director

Original Lab Report

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta. 25100 Chalk Point Road Aquasco, MD 20608	Project: Chalk Point-FGD Special Yearly Project Number: Chalk Pt-FGD Special Yearly Project Manager: Glenn St. Clair	Report: 13K0500 Reported: 11/15/2013 14:00

Project Requested Certification(s):

A2LA (Environmental)

Analyte Certification Exception Summary

Microbac Laboratories, Inc., Baltimore Division
Matrix: Solid

ASTM D516-02(M)
Sulfate as SO4: No Certification

SM (20) 2540G
% Solids: No Certification

All analysis performed were analyzed under the required certification unless otherwise noted in the above summary.

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

Phone: 410-633-1800
Fax: 410-633-6553

[redacted]

A2LA_	A2LA ISO/IEC 17025 Biological Testing	3045.01	09/30/2014
A2LA	A2LA ISO/IEC 17025 Env. DoD Testing	3045.02	09/30/2014
ILDPH	Illinois DOPH Micro analysis of drinking water	1755266	12/14/2013
ILEPA	Illinois EPA wastewater and solid waste analysis	200064	01/30/2014
INDEM	Indiana DEM support lab wastewater and solid waste	A305-9-292	12/31/2013
INSDH	Indiana SDH chemical analysis of drinking water	C-45-03	08/14/2016
INDH	Indiana SDH Micro analysis of drinking water	M-45-8	12/31/2013
KSDOH	Kansas Dept Health & Env. NELAP	E-10397	01/31/2014
KYEPP	Kentucky EPPC analysis Underground Storage Tanks	75	01/23/2014
NYDOH-1	New York State Department of Health Wadsworth	49386	04/01/2014
NYDOH	New York State Department of Health Wadsworth	49179	04/01/2014
NCDEN	North Carolina DENR NPDES effluent, surface water	597	12/31/2013
PEDEP	Pennsylvania DEP Registration for Air analysis	68-04863	
PADEP	Pennsylvania Department of Environmental Protect	68-04863	07/31/2014
USDAS	USDA Permit To Receive Soil	P330-12-00174	06/20/2015
WADOE	Washington State Department of Ecology	C992	10/22/2013
WSDNR	Wisconsin DRN chemical analysis wastewater, solids	998036710	08/31/2014
Microbac Laboratories, Inc., Baltimore Division			
A2LA1	A2LA (Biology)	410.02	04/30/2015
A2LA2	A2LA (Environmental)	410.01	04/30/2015
CPSC	CPSC Testing of Childrens Products and Jewelry	1115	04/30/2015
Pb	Environmental Lead (ELLAP)	410.01	04/30/2015
MD	State of Maryland (Drinking Water)	109	06/30/2014
Microbac Laboratories, Inc., Richmond Division			
VA-R	Commonwealth of Virginia (NELAC) - Richmond	460022-2348	06/14/2014

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Mark B. Horan, Laboratory Director

Original Lab Report

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CERTIFICATE OF ANALYSIS

NRG Energy - Chalk Point Gen. Sta.	Project: Chalk Point-FGD Special Yearly	Report: 13K0500
25100 Chalk Point Road	Project Number: Chalk Pt-FGD Special Yearly	Reported: 11/15/2013 14:00
Aquasco, MD 20608	Project Manager: Glenn St. Clair	

Qualifiers/Notes and Definitions

General Definitions:

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Analysis Qualifiers/Notes:

Microbac Laboratories, Inc., Baltimore Division

Z10a	pH@21.8°C
Z10	pH@21.7°C
D	Sample Diluted

Microbac®

Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

Cooler Receipt Log

Cooler ID: Default Cooler **Cooler Temp:** 0.50 °C **Work Order:** 13K0500

Custody Seals Intact:	Yes	COC/Containers Agree:	Yes
Containers Intact:	Yes	Correct Preservation:	Yes
Received On Ice:	Yes	Correct Number of Containers Received:	Yes
Radiation Scan Acceptable:	Yes	Sufficient Sample Volume for Testing:	Yes
COC Present:	Yes	Samples Received in Proper Condition:	Yes

Comments:

Microbac Laboratories Inc., Baltimore Division
2101 Van Deman St, Baltimore, MD 21224
Tel: 410-633-1800
Fax: 410-633-6553
www.microbac.com

Work Order Number:

Chain of Custody Record

Page 1 of 1

Instructions for completing the Chain of Custody Record on back.

Client Name: NRG Energy - Chalk Pt. Gen. Sta.	Project: SPECIAL - YRLY	**Turnaround Time**	**QC and EDD Type (Required)**
Address: 25100 Chalk Pt. Rd.	Location: CP	[ ] Standard (7 Business Days)	[ ] Level I (NAC) [ ] EDD
City, State, Zip: Aquasco, MD 20608	PO #	[ ] RUSH* Needed By:	[ ] Level II** Format:
Contact: Glenn St. Clair	Compliance Monitoring? [ ] Yes [ ] No	* Please notify lab prior to drop off.	[ ] Level III** Comments:
Telephone #: 301-843-4172	(1)Agency/Program		[ ] Level IV**

Sampled by (PRINT): E. Sorensen Sampler Signature: E Sorensen Sampler Phone #: 301-843-4170 Sampler (DW)Cert#:

Send Report via [✓] e-mail (address): glenn.stclair@nrgenergy.com [ ] Mail [ ] Telephone [ ] Fax (fax #): 301-843-4475

*** **Matrix Types:** Air(A), Childrens Product(CP), Food(F), Paint(P), Soil/Solid (S), Oil(O), Wipe(WI), Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

Client Sample ID	Matrix***	Grab	Composite	Filtered	Date Collected	Time Collected	No. of Containers	Requested Analysis: Paint Filter EPA 9095	Requested Analysis: pH EPA 9045	Requested Analysis: Sulfate Method for Coal ASTM D4239	Comments
~~10-1013 089-101813-Flyash~~		✓			10/18/13	0900	1	✓	✓	✓	
089-103013-Gypsum					10/30/13	1330	1	✓	✓	✓	
089-103013-Fines					10/30/13	1400	1	✓	✓	✓	
089-103113--Bottom Ash					10/31/13	0800	1	✓	✓	✓	

13K0500

Possible Hazard Identification [ ] Hazardous [ ] Non-Hazardous [ ] Radioactive **Sample Disposition** [ ] Dispose as appropriate [ ] Return [ ] Archive

Number of Containers: / Cooler Number: 0.5° / Temp upon receipt(°C):	Relinquished By (signature)	Printed Name/Affiliation	Date/Time	Received By (signature)	Printed Name/Affiliation
	E Sorensen	E Sorensen/NRG	11/5/13 @1100	[signature] 11/5/13	Rick Kenney 1131
Sample Received on Ice or Refrigerated from Client: Yes / No	Relinquished By (signature)	Printed Name/Affiliation	Date/Time	Received By (signature)	Printed Name/Affiliation
	[signature]	Rick Kenney	11/5/13 1320	[signature]	[signature]
Radiation Scan Acceptable: Yes / No	Relinquished By (signature)	Printed Name/Affiliation	Date/Time	Received for Lab By (signature)	Printed Name/Affiliation

Page 10 of 10

501 12.11 ** Surcharge May Apply to add'l QC Packages** WHITE - ORIGINAL LAB YELLOW - RECEIPT