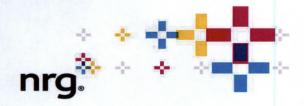
MD Ash Management 25100 Chalk Point Road, Aquasco, Maryland 20608 T (301) 843-4127 C (240) 375-3740



Certified Mail/Return Receipt Requested

Mr. Edward M. Dexter, Administrator Solid Waste Program, Suite 605 Maryland Department of the Environment 1800 Washington Blvd. Baltimore, MD. 21230 RECEIVED
MAR 4 2013

OPERATIONS DIVISION

February 28, 2013

Re: 2012 CCB Tonnage Reports for GenOn's Generating Facilities in Maryland

Dear Mr. Dexter,

Pursuant to COMAR 26.04.10.08, enclosed please find the 2012 CCB tonnage reports for GenOn Mid-Atlantic, LLC's Morgantown and Dickerson Generating Stations, and GenOn Chalk Point, LLC's Chalk Point Generating Station.

If you have any questions regarding these reports, please contact me at 301-843-4127, or at elizabeth.spitzer@nrgenergy.com.

Effective December 14, 2012, NRG Energy, Inc. (NRG) and GenOn Energy, Inc. (GenOn) have combined and will retain the name NRG Energy, Inc. As a result of the merger, all GenOn entities are now wholly owned subsidiaries of NRG. Although the parent corporations, NRG and GenOn, have merged, the entities have not merged or changed names. You can find additional information about NRG and the merger on the website: <a href="https://www.nrgenergy.com">www.nrgenergy.com</a>

Regards,

Elizabeth A. Spitzer

**Environmental Analyst** 

**NRG Energy** 

**Enclosures** 

# MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Suite 605 • Baltimore, Maryland 21230-1719 410-537-3315 • 800-633-6101 x3315 • www.mde.state.md.us

Land Management Administration • Solid Waste Program

# Coal Combustion Byproducts (CCBs) Annual Generator Tonnage Report Instructions for Calendar Year 2012

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 2012. 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 edexter@mde.state.md.us.

<u>I. Background.</u> 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:

MAR 4 2013

PERANDERS NO STANDARD OF THE STANDARD CAROLLA STANDARD CAROLLA STANDARD OF THE STANDARD OF THE

- "(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."

Form Number: MDE/WAS/PER.033 Date of Revision: January 2, 2013 TTY Users: 800-735-2258 Page 1 of 7

Recycled Paper

Facility Name: Chalk Point Generating Station

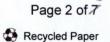
B. Applicability. If you or your company meets the definition of a generator of CCBs as defined above, you must provide the information as required below. For the purposes of this report, "you" shall hereinafter refer to the generator defined above. Please note that COMAR 26.04.10.08 requires generators 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, 2013:

A. Contact information:		
Facility Name: Chalk Point Generating Statio	n	
Name of Permit Holder: GenOn Chalk Point,	LLC	
Facility Address: 25100 Eagle Harbor Road	Street	
Facility Address: Aquasco City	Maryland State	20608 Zip
County: Prince George's County		
Contact Information (Person filing report or E	Environmental Manager)	
Facility Telephone No.: 301-843-4100	Facility Fax No.: 301	-843-4281
Contact Name: Elizabeth A. Spitzer		
Contact Title: Environmental Analyst		
Contact Address: 25100 Eagle Harbor Rd	Street	
Contact Address: Aquasco City	Maryland State	20608 Zip
Contact Email: Elizabeth.Spitzer@nrgenergy		
Contact Telephone No.:301-843-4127	Contact Fax No.: 301	-843-4156

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

Form Number: MDE/WAS/PER.033 Date of Revision: January 2, 2013 TTY Users: 800-735-2258



Facility Name: Chalk Point Generating Station CCB Tonnage Re	Report – 20	012
--	-------------	-----

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 2012, 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.

<u>Table I: Volume and Weight of CCBs Generated for Calendar Year 2012:</u> 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.

Flyash	Bottom Ash	On-Spec Gypsum	Off Spec Gypsum	WWTP Fines
Type of CCB				
43,524	5,324	29,064	232	
Volume of CCB, in Cubic Yards				
43,524	5,324	56,774	454	438 Weight of CCB, in
Weight of CCB, in Tons	Weight of CCB, in Tons	Weight of CCB, in Tons	Weight of CCB, in Tons	Tons

Form Number: MDE/WAS/PER.033 Date of Revision: January 2, 2013 TTY Users: 800-735-2258 Page 3 of 7

Facility Name: _Ch	alk Point Generating Station	CCB Tonnage Report - 2012
Additional notes:		
	ted in dry short tons. CCB volumes are represented in dry short tons. CCB volumes are represented in dry short tons.	ported in dry cubic yards. WWTP tons represent
	t tons using a density of 1.0 tons/dry cy,	volumes of my asn in dry cubic yards are
		short tons using a density of 1.0 tons/dry cy.
		are calculated from dry short tons using a density
D. Descriptions of a their use that were pothis information to the	erformed by you or your company	or both, conducted relating to the CCBs or during the reporting year. Please attach
	oratory reports of all chemical character report. (See Attachment B.)	acterizations of the CCBs. Please attach
F. A description of l	now you disposed of or used your	CCBs in calendar year 2012, identifying:
Paragraph C above)	including any CCBs stored during	or used (if different than described in the previous calendar year, the location of nd volume of CCBs disposed of or used
	ly ash generated at Chalk Point in 20 mbia, SC, and 39,229 tons were disposed	12, 4295 tons were sold to SEFA, sed of at the Brandywine Ash site, located in
All of the 5,324 tons of Brandywine, MD. for of	f bottom ash generated in 2012 was s disposal.	ent to the Brandywine Ash Site, located in
end of 2011. Of this an	nerated at Chalk point in 2012 was 56, nount, 55,806 tons were transported bere stored on-site at the Chalk Point G	774 tons. 284 tons were stored on-site at the y barge to La Farge, located in Buchanan, enerating Station.
Off-Spec Gypsum gen	nerated in 2012 was 454 tons, all of w	hich was disposed of at Waste Management's

WWTP Fines produced in 2012 was 438 tons, all of which were disposed of at Waste Management's Amelia Landfill located in Jetersville, VA.

Form Number: MDE/WAS/PER.033 Date of Revision: January 2, 2013 TTY Users: 800-735-2258

Amelia Landfill located in Jetersville, VA.

Facility Name: Chalk Point Generating Station CCB Tonnage Report - 2012
and (b) The different uses by type and volume of CCBs:
Fly Ash:
Volume: 4,295 sold
Uses: 535 tons used for Portland Cement in MD.
3,760 tons used as supplemental cementious material for concrete and concrete products.
On-Spec Gypsum:
Volume: 55,806 tons sold
Uses: 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:
of disposed of or asea at each site.
Fly Ash: Approximately 47,000 tons/year to be generated at Chalk Point, with about 4,000 tons to be
sold to SEFA, headquartered in Columbia, SC, and 43,000 tons were disposed of at the Brandywine Ash
site, located in Brandywine, MD.
Bottom Ash: Anticipate 5,000 tons/year to be generated and sent to the Brandywine Ash Site, located in Brandywine, MD. for disposal.
On-Spec Gypsum: Anticipate 57,000 tons/year to be generated, with approximately 1,000 tons stored
on-site at the Chalk Point Generating Station and the remainder being transported by barge to La Farge,
located in Buchanan, NY,
Off-Spec Gypsum: Approximate 500 tons to be generated and disposed of at Waste Management's
Amelia Landfill located in Jetersville, VA.
WWTD Fings. Approximately 400 tong to be good and discuss a first W. J. M. C. S.
WWTP Fines: Approximately 400 tons to be generated and disposed of at Waste Management's Amelia Landfill located in Jetersville, VA.
Landini located in Jetersville, VA.
and (b) The different intended uses by type and volume of CCBs.
Fly Ash:
Volume: 4000 tons sold.
Uses: 600 tons used for Portland Cement
3,400 tons to be used as supplementary cementious material for concrete and concrete products.
On-Spec Gypsum:
Volume: 56,000 sold
Uses: Wallboard.

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

Form Number: MDE/WAS/PER.033 Date of Revision: January 2, 2013 TTY Users: 800-735-2258





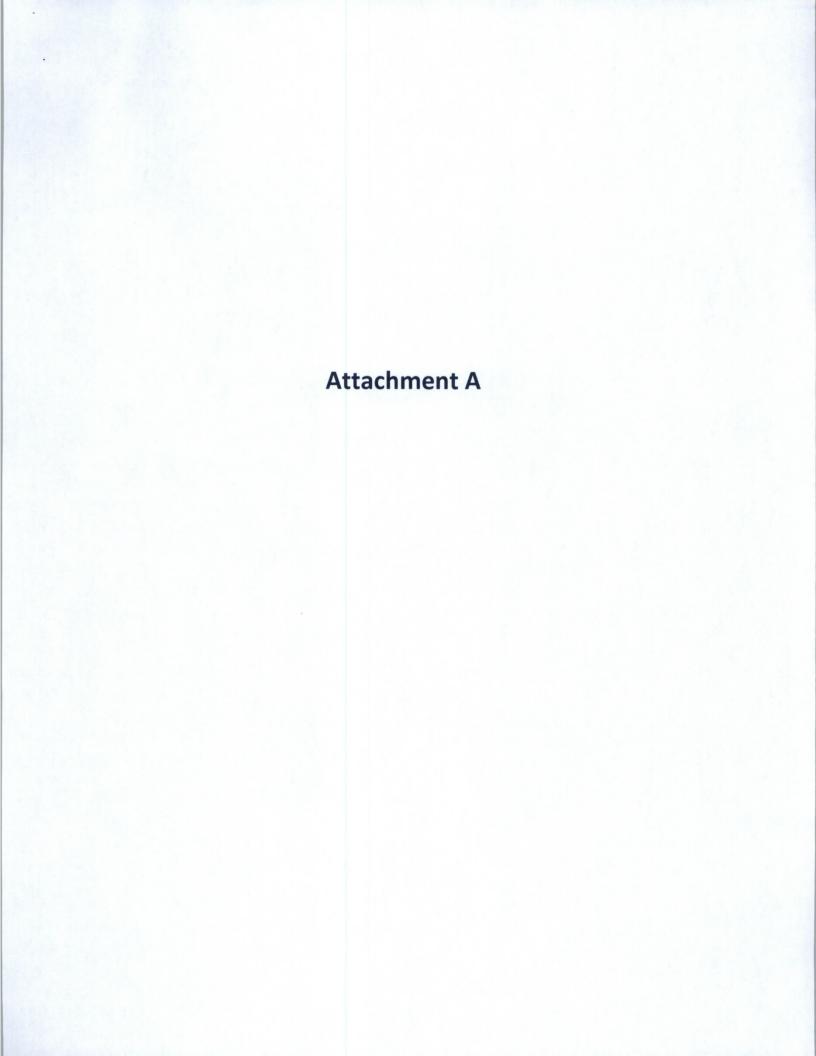
**IV. Signature and Certification**. An authorized official of the generator must sign the annual report, and certify as to the accuracy and completeness of the information contained in the annual report:

[1] [1] [1] [1] [1] [1] [2] [2] [3] [4] [4] [4] [4] [4] [4] [4] [4] [4] [4	e best of my knowledge, the information contained in e true, accurate, and complete.	this report and
	Greg Staggers, General Manager, Chalk Point  Generating Station  301-843-4121	
Signature	Name, Title, & Telephone No. (Print or Type)	Date
Buy Hyy	gregory.staggers@nrgenergy.com	2/27/13
	Your Email Address	

# 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

Form Number: MDE/WAS/PER.033 Date of Revision: January 2, 2013 TTY Users: 800-735-2258 Page 7 of 7



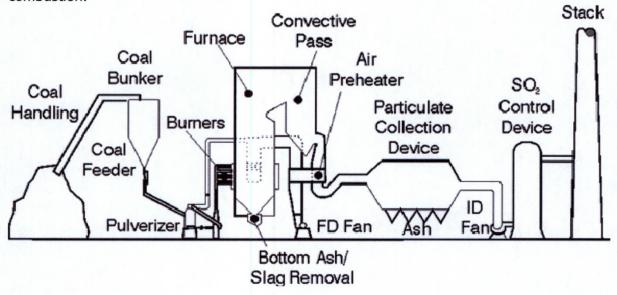
# **Attachment A**

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, tangentially 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 secondary 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 Non-Catalytic Reduction (SNCR) for control of oxides of nitrogen (NOx); and secondary 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.

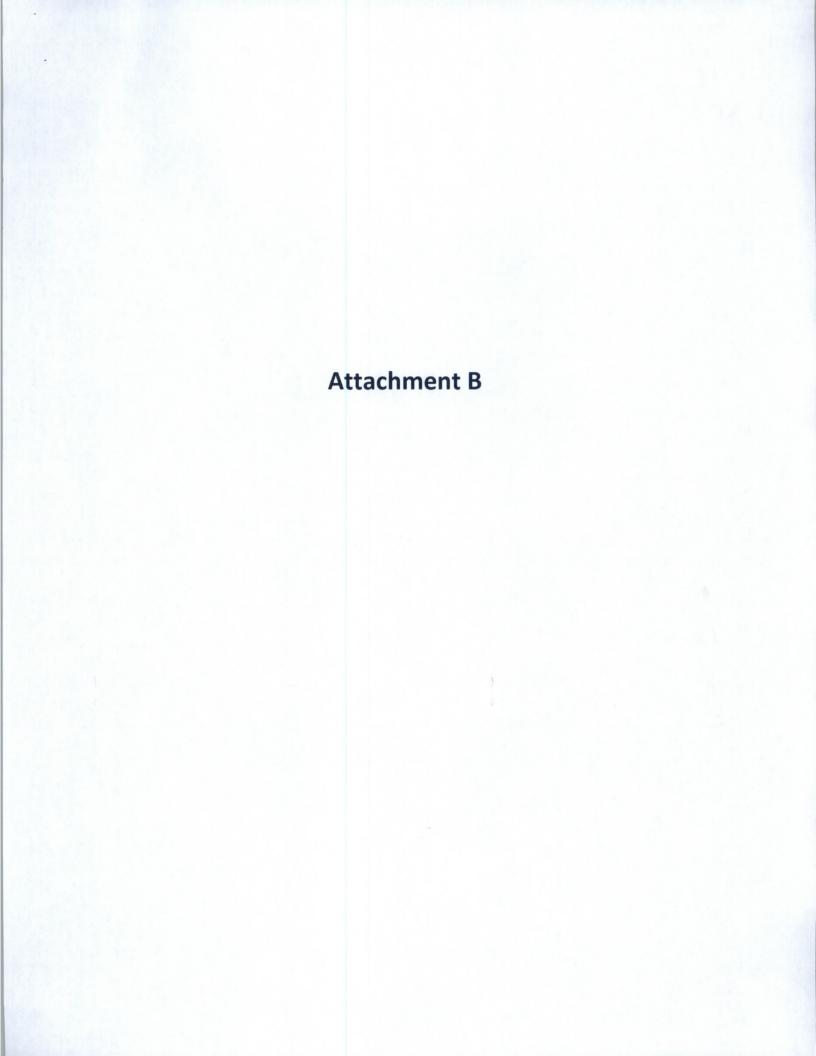


# **Attachment A**

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, where it is often used in the construction of flyash disposal cells.

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, - as well as some mercury contaminants - from the air stream. The byproduct - gypsum - is conveyed to a storage dome temporarily and then sent to Buchannan, New York to be made into wallboard. Gyspum that doesn't meet the specifications for wallboard production is either sold for agricultural use or 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.





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 GenOn- Chalk Point Gen. Sta. 25100 Chalk Point Road Aquasco, MD 20608

RE: Chalk Pt-FGD Special

December 06, 2012 Report No.: 12K1337

The report of analyses contains test results for samples received at Microbac Laboratories, Inc., Baltimore Division on 11/26/2012 10:45.

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

Markey

12/6/2012

Final report reviewed by:

Mark B. Horan/Laboratory Director

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 <a href="mailto:sean.hyde@microbac.com">sean.hyde@microbac.com</a> or James Nokes, President <a href="mailto:james.nokes@microbac.com">james.nokes@microbac.com</a> or james Nokes <a href="mailto:james.nokes@microbac.com">james.nokes@microbac.com</a> or james Nokes <a href="mailto:james.nokes@microbac.com">james.nokes@microbac.com</a> or james Nokes <a href="mailto:james.nokes@microbac.com">james.nokes@microbac.com</a



**Baltimore Division** 

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

# **CERTIFICATE OF ANALYSIS**

GenOn- Chalk Point Gen. Sta. 25100 Chalk Point Road

Aquasco, MD 20608

Project: Chalk Pt-FGD Special Project Number: Chalk Pt-FGD Special Report: 12K1337 Reported: 12/06/2012 07:50

Project Manager: Glenn St. Clair

## **SAMPLE SUMMARY**

Sample ID	Laboratory ID	Matrix	Туре	Date Sampled	Date Received
089-112312-Gypsum	12K1337-01	Solid	Not Specified	11/23/2012 00:00	11/26/2012 10:45
089-112212-Flyash #1	12K1337-02	Solid	Not Specified	11/22/2012 00:00	11/26/2012 10:45
089-112612-Bottom Ash	12K1337-03	Solid	Not Specified	11/26/2012 00:00	11/26/2012 10:45
089-112612-WWTP Fines	12K1337-04	Solid	Not Specified	11/26/2012 00:00	11/26/2012 10:45

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** 

Page 2 of 14



# **Baltimore Division**

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# **CERTIFICATE OF ANALYSIS**

GenOn- Chalk Point Gen. Sta. 25100 Chalk Point Road Project: Chalk Pt-FGD Special Project Number: Chalk Pt-FGD Special Report: 12K1337

Reported: 12/06/2012 07:50

Aquasco, MD 20608

Project Manager: Glenn St. Clair

# 089-112312-Gypsum

12K1337-01 (Solid) Sampled: 11/23/2012 00:00; Type: Not Specified

Analyte	Result	Reporting Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
	Micro	bac Laborate	ories, Inc., Balt	imore Division				
Wet Chemistry							• 100	
% Solids	73.17	0.05	% by Weight	112712 0930	112812 0739	LCR	SM (20) 2540G	
Chloride	55	14	mg/kg dry	120412 1118	120512 1308	BMC	SM(20)4500Cl-C(M)	
pH	7.08	0.100	pH Units	112712 0559	112912 0802	LCR	EPA 9045D	
Sulfate as SO4	16000	1400	mg/kg dry	120312 1100	120312 1438	LCR	ASTM D516-02(M)	
Mercury, Total by EPA 7000	Series Methods							
Mercury	0.65	0.032	mg/kg dry	112812 1235	112812 1715	APS	SW846 7471B	
Metals, Total by EPA 6000/70	000 Series Methods							
Silver	ND	3.4	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Aluminum	450	17	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Arsenic	ND	6.7	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Barium	32	3.4	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Beryllium	ND	1.3	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Calcium	210000	340	mg/kg dry	120312 1539	120412 1814	APS	EPA 6010B	
Cadmium	ND	0.67	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Cobalt	ND	3.4	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Chromium	ND	3.4	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Copper	ND	3.4	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Iron	530	13	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Potassium	240	34	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Magnesium	210	34	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Manganese	ND	3.4	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Sodium	870	670	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Nickel	ND	6.7	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Lead	ND	6.7	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Antimony	ND	13	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Selenium	ND	6.7	mg/kg dry	120312 1539	120412 1715	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.

Nan B.



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

# **CERTIFICATE OF ANALYSIS**

GenOn- Chalk Point Gen. Sta.

Project: Chalk Pt-FGD Special

Report: 12K1337

25100 Chalk Point Road Aquasco, MD 20608 Project Number: Chalk Pt-FGD Special Project Manager: Glenn St. Clair Reported: 12/06/2012 07:50

## 089-112312-Gypsum

## 12K1337-01 (Solid) Sampled: 11/23/2012 00:00; Type: Not Specified

		Reporting						
Analyte	Result	Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
	Micro	bac Laborato	ories, Inc., Bal	timore Division				
Metals, Total by EPA 6000/70	000 Series Methods					1		
Thallium	ND	13	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Vanadium	ND	3.4	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
Zinc	ND	3.4	mg/kg dry	120312 1539	120412 1715	APS	EPA 6010B	
TCLP Extraction by EPA 131	11							
TCLP Extraction	COMPLETED		N/A	112712 1359	112812 1432	BMC	EPA 1311	
TCLP Metals by 6000/7000 S	eries Methods							
Silver	ND	0.20	mg/L	112912 1128	112912 1720	APS	EPA 6010B	
Arsenic	ND	0.20	mg/L	112912 1128	112912 1720	APS	EPA 6010B	
Barium	ND	0.50	mg/L	112912 1128	112912 1720	APS	EPA 6010B	
Cadmium	ND	0.20	mg/L	112912 1128	112912 1720	APS	EPA 6010B	
Chromium	ND	0.20	mg/L	112912 1128	112912 1720	APS	EPA 6010B	
Mercury	ND	0.0020	mg/L	120412 1143	120412 1850	APS	EPA 7470A	
Lead	ND	0.20	mg/L	112912 1128	112912 1720	APS	EPA 6010B	
Selenium	ND	0.20	mg/L	112912 1128	112912 1720	APS	EPA 6010B	

Microbac Laboratories, Inc., Baltimore Division

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Mark B. Horan, Laboratory Director

Original Lab Report

Page 4 of 14



# **Baltimore Division**

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# **CERTIFICATE OF ANALYSIS**

GenOn- Chalk Point Gen. Sta. 25100 Chalk Point Road Project: Chalk Pt-FGD Special Project Number: Chalk Pt-FGD Special Report: 12K1337

Reported: 12/06/2012 07:50

Aquasco, MD 20608 Project Manager: Glenn St. Clair

## 089-112212-Flyash #1

## 12K1337-02 (Solid) Sampled: 11/22/2012 00:00; Type: Not Specified

		Reporting						
Analyte	Result	Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
	Micro	bac Laborat	ories, Inc., Balt	imore Division				
Wet Chemistry							Landa La	
% Solids	99.77	0.05	% by Weight	112712 0930	112812 0739	LCR	SM (20) 2540G	
Chloride	10	10	mg/kg dry	120412 1118	120512 1308	BMC	SM(20)4500CI-C(M)	
pH	4.15	0.100	pH Units	112712 0559	112912 0802	LCR	EPA 9045D	
Sulfate as SO4	15000	500	mg/kg dry	120312 1100	120312 1438	LCR	ASTM D516-02(M)	
Mercury, Total by EPA 7000 S	eries Methods							
Mercury	0.48	0.025	mg/kg dry	112812 1235	112812 1718	APS	SW846 7471B	
Metals, Total by EPA 6000/700	00 Series Methods							
Silver	ND	2.4	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Aluminum	18000	12	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Arsenic	140	4.9	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Barium	170	2.4	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Beryllium	1.9	0.98	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Calcium	11000	24	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Cadmium	3.1	0.49	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Cobalt	5.5	2.4	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Chromium	66	2.4	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Copper	27	2.4	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Iron	34000	9.8	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Potassium	2400	24	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Magnesium	1200	24	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Manganese	76	2.4	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Sodium	1200	490	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Nickel	34	4.9	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Lead	29	4.9	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Antimony	ND	9.8	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Selenium	ND	4.9	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	

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# **CERTIFICATE OF ANALYSIS**

GenOn- Chalk Point Gen. Sta. 25100 Chalk Point Road

Aquasco, MD 20608

Project Number: Chalk Pt-FGD Special
Project Number: Chalk Pt-FGD Special
Project Manager: Glenn St. Clair

Report: 12K1337

Reported: 12/06/2012 07:50

## 089-112212-Flyash #1

## 12K1337-02 (Solid) Sampled: 11/22/2012 00:00; Type: Not Specified

Reporting								
Analyte	Result	Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
	Micro	bac Laborato	ries, Inc., Bal	timore Division				
Metals, Total by EPA 6000/7	7000 Series Methods							
Thallium	ND	9.8	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Vanadium	150	2.4	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
Zinc	78	2.4	mg/kg dry	120312 1539	120412 1749	APS	EPA 6010B	
TCLP Extraction by EPA 13	311							
TCLP Extraction	COMPLETED		N/A	112712 1359	112812 1432	BMC	EPA 1311	
TCLP Metals by 6000/7000	Series Methods							
Silver	ND	0.20	mg/L	112912 1128	112912 1728	APS	EPA 6010B	
Arsenic	0.87	0.20	mg/L	112912 1128	112912 1728	APS	EPA 6010B	
Barium	ND	0.50	mg/L	112912 1128	112912 1728	APS	EPA 6010B	
Cadmium	ND	0.20	mg/L	112912 1128	112912 1728	APS	EPA 6010B	
Chromium	0.44	0.20	mg/L	112912 1128	112912 1728	APS	EPA 6010B	
Mercury	ND	0.0020	mg/L	120412 1143	120512 1215	APS	EPA 7470A	
Lead	ND	0.20	mg/L	112912 1128	112912 1728	APS	EPA 6010B	
Selenium	ND	0.20	mg/L	112912 1128	112912 1728	APS	EPA 6010B	

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Mark B. Horan, Laboratory Director

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# **CERTIFICATE OF ANALYSIS**

GenOn- Chalk Point Gen. Sta. 25100 Chalk Point Road Aquasco, MD 20608 Project: Chalk Pt-FGD Special
Project Number: Chalk Pt-FGD Special
Project Manager: Glenn St. Clair

Report: 12K1337

Reported: 12/06/2012 07:50

# 089-112612-Bottom Ash

12K1337-03 (Solid) Sampled: 11/26/2012 00:00; Type: Not Specified

Analyte	Result	Reporting Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
rinaryte	Result	Emit	Cints	Trepared	Anaryzed	Allaryst	Welliod	Notes
	Microl	oac Laborat	ories, Inc., Balt	imore Division				
Wet Chemistry								
% Solids	77.37	0.05	% by Weight	112712 0930	112812 0739	LCR	SM (20) 2540G	
Chloride	2000	26	mg/kg dry	120412 1118	120512 1308	BMC	SM(20)4500CI-C(M)	
pН	6.73	0.100	pH Units	112712 0559	112912 0802	LCR	EPA 9045D	
Sulfate as SO4	600	26	mg/kg dry	120312 1100	120312 1438	LCR	ASTM D516-02(M)	
Mercury, Total by EPA 7000 S	Series Methods							
Mercury	ND	0.032	mg/kg dry	112812 1235	112812 1720	APS	SW846 7471B	
Metals, Total by EPA 6000/700	00 Series Methods				4 10 11		Landen	
Silver	ND	2.8	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Aluminum	14000	14	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Arsenic	ND	5.6	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Barium	74	2.8	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Beryllium	ND	1.1	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Calcium	4800	28	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Cadmium	2.4	0.56	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Cobalt	ND	2.8	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Chromium	19	2.8	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Copper	ND	2.8	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Iron	34000	11	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Potassium	1300	28	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Magnesium	830	28	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Manganese	51	2.8	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Sodium	1800	560	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Nickel	ND	5.6	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Lead	ND	5.6	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Antimony	ND	11	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Selenium	ND	5.6	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Thallium	ND	11	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	

Microbac Laboratories, Inc., Baltimore Division

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Jan B.



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# **CERTIFICATE OF ANALYSIS**

GenOn- Chalk Point Gen. Sta.

Project: Chalk Pt-FGD Special

Report: 12K1337

25100 Chalk Point Road Aquasco, MD 20608 Project Number: Chalk Pt-FGD Special

Reported: 12/06/2012 07:50

Project Manager: Glenn St. Clair

#### 089-112612-Bottom Ash

## 12K1337-03 (Solid) Sampled: 11/26/2012 00:00; Type: Not Specified

Analyte	Result	Reporting Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
				timore Division		,		7.000
Metals, Total by EPA 6000/700		Dat Laborato	ries, me., Dar	timore Division				
Vanadium	34	2.8	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
Zinc	12	2.8	mg/kg dry	120312 1539	120412 1753	APS	EPA 6010B	
TCLP Extraction by EPA 1311			No. Politica					
TCLP Extraction	COMPLETED		N/A	112712 1359	112812 1432	BMC	EPA 1311	
TCLP Metals by 6000/7000 Se	ries Methods							
Silver	ND	0.20	mg/L	112912 1128	112912 1732	APS	EPA 6010B	
Arsenic	ND	0.20	mg/L	112912 1128	112912 1732	APS	EPA 6010B	
Barium	ND	0.50	mg/L	112912 1128	112912 1732	APS	EPA 6010B	
Cadmium	ND	0.20	mg/L	112912 1128	112912 1732	APS	EPA 6010B	
Chromium	ND	0.20	mg/L	112912 1128	112912 1732	APS	EPA 6010B	
Mercury	ND	0.0020	mg/L	120412 1143	120512 1217	APS	EPA 7470A	
Lead	ND	0.20	mg/L	112912 1128	112912 1732	APS	EPA 6010B	
Selenium	ND	0.20	mg/L	112912 1128	112912 1732	APS	EPA 6010B	

Microbac Laboratories, Inc., Baltimore Division

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Mark B. Horan, Laboratory Director

**Original Lab Report** 

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# **CERTIFICATE OF ANALYSIS**

GenOn- Chalk Point Gen. Sta. 25100 Chalk Point Road Aquasco, MD 20608

Project: Chalk Pt-FGD Special Project Number: Chalk Pt-FGD Special Project Manager: Glenn St. Clair

Report: 12K1337

Reported: 12/06/2012 07:50

## 089-112612-WWTP Fines

12K1337-04 (Solid) Sampled: 11/26/2012 00:00; Type: Not Specified

		Reporting						
Analyte	Result	Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
	Microb	oac Laborate	ories, Inc., Balt	imore Division				
Vet Chemistry					44143			
% Solids	60.58	0.05	% by Weight	112712 0930	112812 0740	LCR	SM (20) 2540G	
Chloride	6000	83	mg/kg dry	120412 1118	120512 1308	BMC	SM(20)4500Cl-C(M)	
рН	9.08	0.100	pH Units	112712 0559	112912 0802	LCR	EPA 9045D	
Sulfate as SO4	10000	780	mg/kg dry	120312 1100	120312 1438	LCR	ASTM D516-02(M)	
Mercury, Total by EPA 7000 S	eries Methods							
Mercury	65	2.0	mg/kg dry	112812 1235	120512 1652	APS	SW846 7471B	
Metals, Total by EPA 6000/700	00 Series Methods							
Silver	ND	3.9	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Aluminum	19000	20	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Arsenic	13	7.9	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Barium	1600	3.9	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Beryllium	ND	1.6	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Calcium	1700	3.9	mg/kg dry	120312 1539	120512 1038	APS	EPA 6010B	
Cadmium	3.2	0.79	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Cobalt	8.9	3.9	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Chromium	66	3.9	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Copper	47	3.9	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Iron	25000	16	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Potassium	11000	39	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Magnesium	18000	39	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Manganese	2300	3.9	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Sodium	2100	790	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Nickel	130	7.9	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Lead	8.1	7.9	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Antimony	ND	16	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Selenium	160	7.9	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	

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## **CERTIFICATE OF ANALYSIS**

GenOn- Chalk Point Gen. Sta. 25100 Chalk Point Road

Aquasco, MD 20608

Project: Chalk Pt-FGD Special Project Number: Chalk Pt-FGD Special Report: 12K1337

.

Project Manager: Glenn St. Clair

Reported: 12/06/2012 07:50

#### 089-112612-WWTP Fines

12K1337-04 (Solid) Sampled: 11/26/2012 00:00; Type: Not Specified

Reporting								
Analyte	Result	Limit	Units	Prepared	Analyzed	Analyst	Method	Notes
	Micro	bac Laborato	ries, Inc., Bal	timore Division				
Metals, Total by EPA 600	0/7000 Series Methods							
Thallium	ND	16	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Vanadium	28	3.9	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
Zinc	140	3.9	mg/kg dry	120312 1539	120412 1757	APS	EPA 6010B	
TCLP Extraction by EPA	1311							
TCLP Extraction	COMPLETED		N/A	112712 1359	112812 1432	BMC	EPA 1311	
TCLP Metals by 6000/700	00 Series Methods							
Silver	ND	0.20	mg/L	112912 1128	112912 1736	APS	EPA 6010B	
Arsenic	ND	0.20	mg/L	112912 1128	112912 1736	APS	EPA 6010B	
Barium	ND	0.50	mg/L	112912 1128	112912 1736	APS	EPA 6010B	
Cadmium	ND	0.20	mg/L	112912 1128	112912 1736	APS	EPA 6010B	
Chromium	0.21	0.20	mg/L	112912 1128	112912 1736	APS	EPA 6010B	
Mercury	ND	0.0020	mg/L	120412 1143	120512 1219	APS	EPA 7470A	
Lead	ND	0.20	mg/L	112912 1128	112912 1736	APS	EPA 6010B	
Selenium	ND	0.20	mg/L	112912 1128	112912 1736	APS	EPA 6010B	

Microbac Laboratories, Inc., Baltimore Division

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Mark B. Horan, Laboratory Director

**Original Lab Report** 

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#### **CERTIFICATE OF ANALYSIS**

GenOn- Chalk Point Gen. Sta. 25100 Chalk Point Road Aquasco, MD 20608 Project Number: Chalk Pt-FGD Special
Project Number: Chalk Pt-FGD Special
Project Manager: Glenn St. Clair

Report: 12K1337 Reported: 12/06/2012 07:50

## **Project Requested Certification(s):**

A2LA (Environmental)

State of Pennsylvania (NELAC)

# Analyte Certification Exception Summary

Microbac Laboratories, Inc., Baltimore Division

Matrix: Solid 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 La	boratories, Inc., Baltimore Division		
A2LA1	A2LA (Biology)	410.02	04/30/2013
A2LA2	A2LA (Environmental)	410.01	04/30/2013
VA-B	Commonwealth of Virginia (NELAC) - Baltimore	460170-1829	06/14/2013
CPSC	CPSC Testing of Childrens Products and Jewelry	1115	04/30/2013
Pb	Environmental Lead (ELLAP)	410.01	04/30/2013
NJ	New Jersey	NLC120001	06/30/2013
MD	State of Maryland (Drinking Water)	109	06/30/2013
PA	State of Pennsylvania (NELAC)	68-00339	08/31/2013
USDA	US Department of Agriculture	P330-09-00021	02/19/2012
W	West Virginia	054	08/31/2013
Microbac La	boratories, Inc., Richmond Division		
VA-R	Commonwealth of Virginia (NELAC) - Richmond	460022-1834	06/14/2013

Microbac Laboratories, Inc., Baltimore Division

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# **CERTIFICATE OF ANALYSIS**

GenOn- Chalk Point Gen. Sta. 25100 Chalk Point Road Project Number: Chalk Pt-FGD Special Project Number: Chalk Pt-FGD Special Project Manager: Glenn St. Clair Report: 12K1337

Reported.

Reported: 12/06/2012 07:50

# Qualifiers/Notes and Definitions

## General Definitions:

Aquasco, MD 20608

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

D

Sample Diluted



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# **Cooler Receipt Log**

Cooler ID: Default Cooler		Cooler Temp: 19.80 °C Work Order: 12K1337
Custody Seals Intact:	Yes	COC/Containers Agree: Yes
Containers Intact:	Yes	Correct Preservation: Yes
Received On Ice:	No	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:

instructions for completing the Chain of Custody Record on back. 12K1337 QC and EDD Type (Required) Senon Comments 12K 1337 301843-4/70Sampler (DW)Cert# [] EDD Format: Other SM(de) 4500 CHC/F ASTM D516-62(M) SWOOTS LANA Surface Water (SW), Waste Water (WW), of G.wasH Comments CO109 HAT [] Level I (NAC) of PA 9045 Page [ ] Archive [] Level III\*\* [] Level II\*\* [] Level IV\*\* イナナ Page Work Order Number: [] Return 361843 (signature) Requested Analysis Please notify lab prior to drop off. [] Disposa as appropriate Received for Lab By Turnaround Time [] Standard (7 Business Days) Sampler Phone # SolfSolid (S), Oil(O), Wipe(WI), Drinking Water (DW), Groundwater (GW), [] RUSH\* Needed By: 7 J-Fax (fax #) Receive Chain of Custody Record 3480 121-90-11 40550 Sample Disposition YELLOW - RECEIPT [ Fefephone Chloride Date/Time 11/26/11 Microbac Laboratories Inc., Baltimore Division No. of Containers FO-VRU recot Compliance Monitoring? [] Yes [] No Time Collected WHITE - ORIGINAL LAB GARRYWRIGHT alennisticlairegenon com 2101 Van Deman St, Baltimore, MD 21224 P-462 Radioactive 130 21/20/17 22 12 11/83/17 1/26/12 special Date Collected Sampler Signature Location Filtered Project Non-Hazardous Relinquished By (signature) shed By (signature) Relinquished By (signature) # Od \*\* Matrix Types: Air(A), Childrens Produe((CP), Food(F), Paint(P), Composite 410-633-6553 410-633-1800 www.microbac.com Grab \*\* Surcharge May Apply to add'l QC Packages\*\* Pt. Gen. Sto \*\*\*XinteM 20108 KENNETH WATTS ] Hazardous Fax: Tel: 30-843-4172 (Je-mail (address) DUKK#9 WWTP Fines Actuasco, MD Bottom Ash diation Scan Acceptable (Yes / No Client Sample ID 089-112312- Gypsum rigerated from Client: Yes (No Gren On-C Possible Hazard Identification 189-112312 - Flukh mp upon receipt(°C); 4,5 Microbac mple Received on Ice or 00 mber of Containers: Sampled by (PRINT) Send Report via 189119313 219811 88 7/98/1 City, State, Zip oler Number: Client Name # elephone # Address Contact 886 Page 14 of 14