



**Mark G. Nitz P.E.**  
Environmental Specialist  
Chalk Point Generating Station  
25100 Chalk Point Road  
Aquasco, MD 20608  
Office: 301-843-4439  
Mobile: 240-299-2096

Certified Mail  
Return Receipt Requested  
7010 1870 0002 8028 3081

Ms. Martha Hynson  
Maryland Department of the Environment  
Land Management Administration  
1800 Washington Boulevard, Suite 605  
Baltimore MD 21230-1719

February 28, 2018

Re: 2017 CCB Tonnage Report for GenOn Mid-Atlantic, LLC's Chalk Point Generating Station.

Dear Ms. Hynson,

Pursuant to COMAR 26.04.10.08, enclosed please find the 2017 CCB Tonnage Reports for GenOn Mid-Atlantic, LLC's Chalk Point Generating Station.

If you have any questions regarding this report, please contact me at 301-843-4439, or at [mark.nitz@genon.com](mailto:mark.nitz@genon.com).

Regards,

Mark Nitz  
Environmental Specialist

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MAR 08 2018  
LAND MANAGEMENT ADMIN.  
SOLID WASTE PROGRAM

# MARYLAND DEPARTMENT OF THE ENVIRONMENT

Land Management Administration • Solid Waste Program  
1800 Washington Boulevard • Suite 605 • Baltimore Maryland 21230-1719  
410-537-3315 • 800-633-6101 x3315 • [www.mde.maryland.gov](http://www.mde.maryland.gov)

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## **Coal Combustion Byproducts (CCBs) Annual Generator Tonnage Report Instructions for Calendar Year 2017**

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 2017. 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.dexter@maryland.gov](mailto:ed.dexter@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.”*

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SOLID WASTE PROGRAM

**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, 2018:

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: Mark Nitz

Contact Title: Environmental Specialist

Contact Address: 25100 Eagle Harbor Road  
Street

Contact Address: Aquasco Maryland 20608  
City State Zip

Contact Email: Mark.Nitz@genon.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.

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C. The volume and weight of CCBs generated during calendar year 2017, 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 2017:** 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.

<b>Volume and Weight of CCBs Generated for Calendar Year 2017</b>				
Flyash Type of CCB	Bottom Ash Type of CCB	On-Spec Gypsum Type of CCB	Off Spec Gypsum Type of CCB	WWTP Fines Type of CCB
13,564	1,057	11,845	691	54
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
13,564	1,057	23,139	1,349	105
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

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.

F. A description of how you disposed of or used your CCBs in calendar year 2017, 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:

**FlyAsh:** 13,564 tons of flyash were generated at Chalk Point in 2017 and sent to Morgantown for processing at the STAR Facility, where Morgantown flyash and Chalk Point flyash are comingled and injected into the Staged Turbulent Air Reactor (STAR) as a fuel to produce flyash that is suitable for beneficial uses. During the STAR process, the mass and volume of ash injected is reduced as Carbon and moisture are released from the ash, and the resulting beneficiated ash is sent to the Morgantown storage dome for sale and shipment by the SEFA Group, headquartered in Columbia, SC for beneficial use. The 13,564 tons of Chalk Point ash were reduced to 11,736 tons, and 6,206 tons were stored on-site at the end of 2016. Of this total 12,144 tons of dry flyash,(808 tons of which were sold in Maryland for beneficial use, and 11,336 tons of which were sold in seven other states for beneficial use), and a total of 5,798 tons were stored on-site at the end of 2017.

**BottomAsh:**1,057 tons of dry bottom ash were generated at Chalk Point in 2017, of which 158 tons were disposed of at the Brandywine Ash Site, located in Prince George's Co., Md, and 899 tons of which were disposed of at Waste Management's Amelia Landfill located in Jetersville, Va..

**On-Spec Gypsum** generated at Chalk Point in 2017 was 23,139 tons. A total of 2,867 tons were stored on-site at the end of 2017, and 281 tons were stored on-site at the end of 2016. Of this total, 20,553 dry tons were sold to and transported by barge to Continental, Inc, located in Buchanan, NY.

**Off-Spec Gypsum** generated in 2017 was 1,349 tons, all of which was disposed of at Waste Management's Amelia Landfill located in Jetersville, Va.

**WWTP Fines** produced in 2017 was 105 tons, all of which was disposed of at Waste Management Inc's Amelia Landfill, located in Jetersville, Va.

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

**On-Spec Gypsum:**

Volume: 20,553 tons sold.

Use: Wallboard

**Flyash:** 12,144 tons sold.

Use: Cementitious material for concrete products.

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 13,500 tons/year to be generated and sent to the Morgantown STAR facility for processing.

**Bottom Ash:** Anticipate 1,060 tons/year to be generated and sent to the Brandywine Ash Site, located in Prince George's Co., Md, for disposal.

**On-Spec Gypsum:** Anticipate approximately 23,000 tons/year to be generated and sold to Continental, located in Buchanan, NY, for beneficial use.

**Off-Spec Gypsum:** Approximately 1,300 tons/year to be generated and disposed of at Waste Management's Amelia Landfill located in Jetersville, Va.

**WWTP Fines:** Approximately 100 tons/year 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: 23,000 tons/year to be sold.

Use: Wallboard

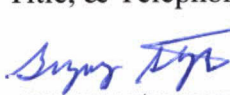
**Flyash:**

Volume: 12,000 tons/year to be sold.

Use: Cementitious material for concrete products.

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.		
	<u>Greg Staggers, General Manager, Chalk Point Generating Station</u> 301-843-4121	
Signature	Name, Title, & Telephone No. (Print or Type)	Date
	 gregory.staggers@genon.com	2/28/18
	Your Email Address	

**V: Attachments (please list):**

A)Chalk Point Generating Station Process Description \_\_\_\_\_

B)Microbac Report #17H1575: Analyses for Fly Ash, Bottom Ash, Off- Spec Gypsum and  
WWTP Fines \_\_\_\_\_

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## Attachment A

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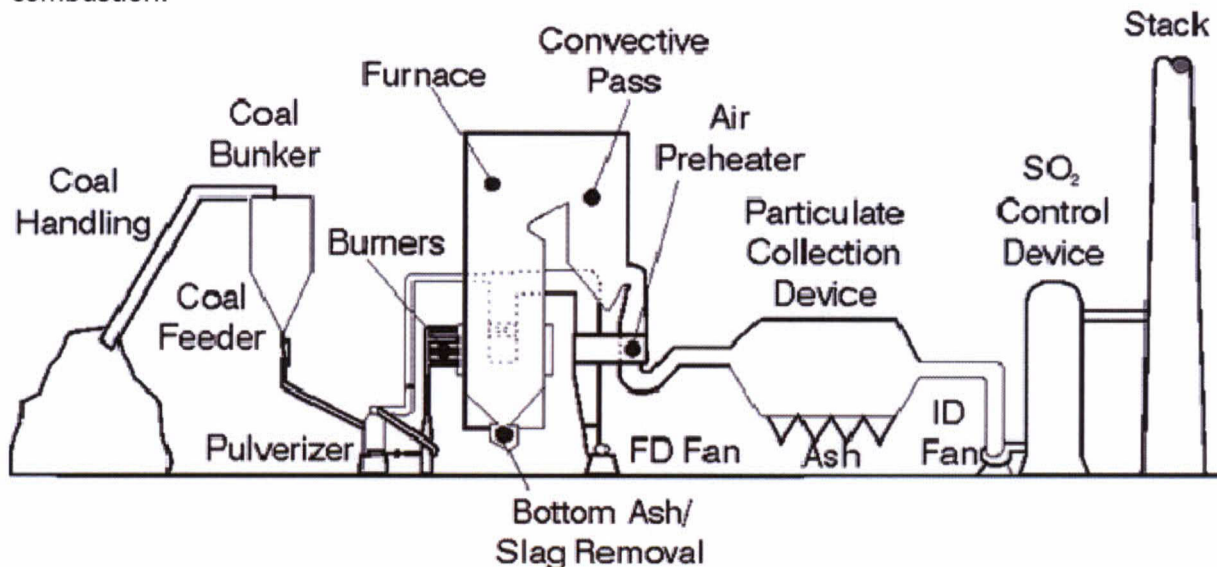
Chalk Point Generating Station  
25100 Eagle Harbor Road,  
Aquasco, Prince George's County, MD. 20608  
301-843-4100

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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**

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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 SO<sub>2</sub> removal by the Flue Gas Desulfurization (FGD) system, commonly known as a scrubber. Chalk Point uses wet scrubbers for SO<sub>2</sub> removal. Wet scrubbing uses a slurry of limestone alkaline sorbent to remove SO<sub>2</sub> 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 Buchanan, New York to be made into wallboard. Gypsum 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.



**Microbac Laboratories, Inc.**

Baltimore Division  
2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800  
Fax: 410-633-6553  
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**COVER LETTER**

Greg Conden  
NRG Energy - Chalk Point Gen. Sta.  
25100 Chalk Point Road  
Aquasco, MD 20608  
RE: Chalk Point-FGD Special Yearly

September 12, 2017  
Report No.: 17H1575

The report of analyses contains test results for samples received at Microbac Laboratories, Inc., Baltimore Division on 08/22/2017 15:00.

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

9/12/2017

Final report reviewed by:

Melanie C. Duszynski/Project Manager

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 Melanie C. Duszynski/Project Manager at 410-633-1800. You may also contact Trevor Boyce, President at [trevor.boyce@microbac.com](mailto:trevor.boyce@microbac.com). Any complaint about the quality of reported results may be referred to the accrediting authority if such complaints cannot be resolved directly with the customer.*



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 Baltimore Division

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 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: Greg Conden	Report: 17H1575 Reported: 09/12/2017 14:11
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**SAMPLE SUMMARY**

Sample ID	Laboratory ID	Matrix	Type	Date Sampled	Date Received
89-080817-Gypsum	17H1575-01	Solid	Grab	08/08/2017 08:00	08/22/2017 15:00
89-081017-Flyash	17H1575-02	Solid	Grab	08/10/2017 09:30	08/22/2017 15:00
89-081117-Bottom Ash	17H1575-03	Solid	Grab	08/11/2017 09:00	08/22/2017 15:00
89-081417-WWTP Fines	17H1575-04	Solid	Grab	08/14/2017 09:30	08/22/2017 15:00

Microbac Laboratories, Inc. - Baltimore

*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.*

Melanie C. Duszynski, Project Manager

**Original Report**



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Baltimore Division

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**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: Greg Conden	Report: 17H1575 Reported: 09/12/2017 14:11
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**89-080817-Gypsum**

**17H1575-01 (Solid) Sampled: 08/08/2017 08:00; Type: Grab**

Analyte	Result	Reporting Limit	Units	Limits	Prepared	Analyzed	Analyst	Method	Notes
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**Microbac Laboratories, Inc. - Baltimore**

**Wet Chemistry**

% Solids	75.36	0.05	% by Weight		082517 1520	082817 0930	SAL	SM 2540 G-11	
Chloride	42	13	mg/kg dry		082417 0904	082417 2106	ANC/L	SW-846 9056A	D1
pH	7.51	0.100	pH Units		082917 1038	083117 1641	RDM	SW-846 9045D	Z10b
Sulfate as SO4	500000	13000	mg/kg dry		082817 1037	082817 1328	ANC/L	SW-846 9056A	

**General Chemistry**

Paint Filter Free Liquid	Negative		P/A		090817 0747	090817 0757	SRZ	SW-846 9095B	
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**Microbac Laboratories, Inc. - Chicagoland**

**Metals**

Aluminum	360	9.3	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Antimony	ND	0.93	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Arsenic	ND	0.46	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Barium	23	0.19	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Beryllium	ND	0.046	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Boron	3.7	0.93	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Cadmium	ND	0.19	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Calcium	86000	2300	mg/Kg		083017 0653	083117 2105	BTM	SW-846 6010C	
Chromium	1.0	0.19	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Cobalt	ND	0.19	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Copper	1.8	0.46	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Iron	310	2.3	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Lead	ND	0.35	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Lithium	ND	4.6	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Magnesium	100	23	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Manganese	1.1	0.19	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Mercury	ND	0.0010	mg/L		083117 1031	090117 1350	BTM	1311/7470A	

Microbac Laboratories, Inc. - Baltimore

*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.*

*Melanie C. Duszyński*

Melanie C. Duszyński, Project Manager

**Original Report**

**Page 3 of 17**



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**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: Greg Conden	Report: 17H1575 Reported: 09/12/2017 14:11
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**89-080817-Gypsum**

**17H1575-01 (Solid) Sampled: 08/08/2017 08:00; Type: Grab**

Analyte	Result	Reporting Limit	Units	Limits	Prepared	Analyzed	Analyst	Method	Notes
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**Microbac Laboratories, Inc. - Chicagoland**

**Metals**

Mercury	0.39	0.11	mg/Kg		083017 1150	083017 1443	BTM	SW-846 7471B	
Molybdenum	ND	0.93	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Nickel	ND	0.46	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Potassium	210	23	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Silver	ND	0.46	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Sodium	24	23	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Thallium	ND	2.3	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Vanadium	0.55	0.37	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	
Zinc	ND	0.93	mg/Kg		083017 0653	083017 1717	BTM	SW-846 6010C	

**TCLP Metals**

Arsenic	ND	0.0100	mg/L	5.00	083117 0940	083117 1816	BTM	1311/6010C	
Barium	ND	0.500	mg/L	100	083117 0940	083117 1816	BTM	1311/6010C	
Cadmium	ND	0.00200	mg/L	1.00	083117 0940	083117 1816	BTM	1311/6010C	
Chromium	ND	0.00500	mg/L	5.00	083117 0940	083117 1816	BTM	1311/6010C	
Lead	ND	0.00750	mg/L	5.00	083117 0940	083117 1816	BTM	1311/6010C	
Selenium	0.0573	0.0300	mg/L	1.00	083117 0940	083117 1816	BTM	1311/6010C	
Silver	ND	0.0100	mg/L	5.00	083117 0940	083117 1816	BTM	1311/6010C	

Microbac Laboratories, Inc. - Baltimore

*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.*

*Melanie C. Duszynski*

Melanie C. Duszynski, Project Manager

**Original Report**



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Baltimore Division

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Phone: 410-633-1800  
Fax: 410-633-6553  
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**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: Greg Conden	Report: 17H1575 Reported: 09/12/2017 14:11
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**89-081017-Flyash**

**17H1575-02 (Solid) Sampled: 08/10/2017 09:30; Type: Grab**

Analyte	Result	Reporting Limit	Units	Limits	Prepared	Analyzed	Analyst	Method	Notes
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**Microbac Laboratories, Inc. - Baltimore**

**Wet Chemistry**

% Solids	99.92	0.05	% by Weight		082517 1520	082817 0930	SAL	SM 2540 G-11	
Chloride	32	9.7	mg/kg dry		082417 0904	082417 2121	ANC/L	SW-846 9056A	D1
pH	4.01	0.100	pH Units		082917 1038	083117 1641	RDM	SW-846 9045D	Z10a
Sulfate as SO4	20000	970	mg/kg dry		082517 1244	082517 1244	ANC/L	SW-846 9056A	

**General Chemistry**

Paint Filter Free Liquid	Negative		P/A		090817 0747	090817 0757	SRZ	SW-846 9095B	
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**Microbac Laboratories, Inc. - Chicagoland**

**Metals**

Aluminum	13000	8.5	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Antimony	ND	0.85	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Arsenic	170	0.43	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Barium	140	0.17	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Beryllium	3.4	0.043	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Boron	190	0.85	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Cadmium	0.25	0.17	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Calcium	7700	21	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Chromium	42	0.17	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Cobalt	10	0.17	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Copper	35	0.43	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Iron	48000	210	mg/Kg		083017 0653	083117 2110	BTM	SW-846 6010C	
Lead	17	0.32	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Lithium	26	4.3	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Magnesium	700	21	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Manganese	49	0.17	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Mercury	0.25	0.034	mg/Kg		083017 1150	083017 1415	BTM	SW-846 7471B	

Microbac Laboratories, Inc. - Baltimore

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*Melanie C. Duszynski*

Melanie C. Duszynski, Project Manager

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**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: Greg Conden	Report: 17H1575 Reported: 09/12/2017 14:11
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**89-081017-Flyash**

**17H1575-02 (Solid) Sampled: 08/10/2017 09:30; Type: Grab**

Analyte	Result	Reporting Limit	Units	Limits	Prepared	Analyzed	Analyst	Method	Notes
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**Microbac Laboratories, Inc. - Chicagoland**

**Metals**

Mercury	ND	0.0010	mg/L		083117 1031	090117 1351	BTM	1311/7470A	
<b>Molybdenum</b>	<b>9.5</b>	0.85	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
<b>Nickel</b>	<b>32</b>	0.43	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
<b>Potassium</b>	<b>1900</b>	21	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Silver	ND	0.43	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
<b>Sodium</b>	<b>550</b>	21	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
Thallium	ND	2.1	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
<b>Vanadium</b>	<b>81</b>	0.34	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	
<b>Zinc</b>	<b>38</b>	0.85	mg/Kg		083017 0653	083017 1738	BTM	SW-846 6010C	

**TCLP Metals**

<b>Arsenic</b>	<b>1.77</b>	0.0100	mg/L	5.00	083117 0940	083117 1821	BTM	1311/6010C	
Barium	ND	0.500	mg/L	100	083117 0940	083117 1821	BTM	1311/6010C	
<b>Cadmium</b>	<b>0.0208</b>	0.00200	mg/L	1.00	083117 0940	083117 1821	BTM	1311/6010C	
<b>Chromium</b>	<b>0.291</b>	0.00500	mg/L	5.00	083117 0940	083117 1821	BTM	1311/6010C	
<b>Lead</b>	<b>0.0399</b>	0.00750	mg/L	5.00	083117 0940	083117 1821	BTM	1311/6010C	
<b>Selenium</b>	<b>0.0524</b>	0.0300	mg/L	1.00	083117 0940	083117 1821	BTM	1311/6010C	
Silver	ND	0.0100	mg/L	5.00	083117 0940	083117 1821	BTM	1311/6010C	

Microbac Laboratories, Inc. - Baltimore

*Melanie C. Duszyński*

Melanie C. Duszyński, Project Manager

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**CERTIFICATE OF ANALYSIS**

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**89-081117-Bottom Ash**

**17H1575-03 (Solid) Sampled: 08/11/2017 09:00; Type: Grab**

Analyte	Result	Reporting Limit	Units	Limits	Prepared	Analyzed	Analyst	Method	Notes
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**Microbac Laboratories, Inc. - Baltimore**

**Wet Chemistry**

% Solids	73.47	0.05	% by Weight		082517 1520	082817 0930	SAL	SM 2540 G-11	
Chloride	1400	130	mg/kg dry		082517 1258	082517 1258	ANC/L	SW-846 9056A	
pH	7.52	0.100	pH Units		082917 1038	083117 1641	RDM	SW-846 9045D	Z10
Sulfate as SO4	750	13	mg/kg dry		082417 0904	082417 2135	ANC/L	SW-846 9056A	

**General Chemistry**

Paint Filter Free Liquid	Negative		P/A		090817 0747	090817 0757	SRZ	SW-846 9095B	
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**Microbac Laboratories, Inc. - Chicagoland**

**Metals**

Aluminum	8100	9.3	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Antimony	ND	0.93	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Arsenic	23	0.46	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Barium	57	0.19	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Beryllium	1.3	0.046	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Boron	35	0.93	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Cadmium	ND	0.19	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Calcium	2900	23	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Chromium	17	0.19	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Cobalt	5.0	0.19	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Copper	11	0.46	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Iron	34000	23	mg/Kg		083017 0653	083117 2115	BTM	SW-846 6010C	
Lead	2.8	0.35	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Lithium	7.6	4.6	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Magnesium	640	23	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Manganese	53	0.19	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Mercury	ND	0.0010	mg/L		083117 1031	090117 1352	BTM	1311/7470A	

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Melanie C. Duszynski, Project Manager

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**89-081117-Bottom Ash**

**17H1575-03 (Solid) Sampled: 08/11/2017 09:00; Type: Grab**

Analyte	Result	Reporting Limit	Units	Limits	Prepared	Analyzed	Analyst	Method	Notes
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**Microbac Laboratories, Inc. - Chicagoland**

**Metals**

Mercury	ND	0.039	mg/Kg		083017 1150	083017 1416	BTM	SW-846 7471B	
<b>Molybdenum</b>	<b>1.7</b>	0.93	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
<b>Nickel</b>	<b>15</b>	0.46	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
<b>Potassium</b>	<b>740</b>	23	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Silver	ND	0.46	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
<b>Sodium</b>	<b>740</b>	23	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
Thallium	ND	2.3	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
<b>Vanadium</b>	<b>25</b>	0.37	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	
<b>Zinc</b>	<b>8.1</b>	0.93	mg/Kg		083017 0653	083017 1753	BTM	SW-846 6010C	

**TCLP Metals**

<b>Arsenic</b>	<b>0.0142</b>	0.0100	mg/L	5.00	083117 0940	083117 1826	BTM	1311/6010C	
Barium	ND	0.500	mg/L	100	083117 0940	083117 1826	BTM	1311/6010C	
Cadmium	ND	0.00200	mg/L	1.00	083117 0940	083117 1826	BTM	1311/6010C	
<b>Chromium</b>	<b>0.00640</b>	0.00500	mg/L	5.00	083117 0940	083117 1826	BTM	1311/6010C	
Lead	ND	0.00750	mg/L	5.00	083117 0940	083117 1826	BTM	1311/6010C	
Selenium	ND	0.0300	mg/L	1.00	083117 0940	083117 1826	BTM	1311/6010C	
Silver	ND	0.0100	mg/L	5.00	083117 0940	083117 1826	BTM	1311/6010C	

Microbac Laboratories, Inc. - Baltimore

*Melanie C. Duszynski*

Melanie C. Duszynski, Project Manager

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**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: Greg Conden	Report: 17H1575 Reported: 09/12/2017 14:11
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**89-081417-WWTP Fines**

**17H1575-04 (Solid) Sampled: 08/14/2017 09:30; Type: Grab**

Analyte	Result	Reporting Limit	Units	Limits	Prepared	Analyzed	Analyst	Method	Notes
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**Microbac Laboratories, Inc. - Baltimore**

**Wet Chemistry**

% Solids	58.17	0.05	% by Weight		082517 1520	082817 0930	SAL	SM 2540 G-11	
Chloride	2900	170	mg/kg dry		082417 0904	082517 1312	ANC/L	SW-846 9056A	
pH	7.30	0.100	pH Units		082917 1038	083117 1641	RDM	SW-846 9045D	Z10
Sulfate as SO4	330000	17000	mg/kg dry		082817 1037	082817 1439	ANC/L	SW-846 9056A	

**General Chemistry**

Paint Filter Free Liquid	Negative		P/A		090817 0747	090817 0757	SRZ	SW-846 9095B	
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**Microbac Laboratories, Inc. - Chicagoland**

**Metals**

Aluminum	7900	93	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Antimony	ND	9.3	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Arsenic	16	4.7	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Barium	150	1.9	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Beryllium	ND	0.47	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Boron	370	9.3	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Cadmium	ND	1.9	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Calcium	89000	230	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Chromium	47	1.9	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Cobalt	6.0	1.9	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Copper	36	4.7	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Iron	17000	23	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Lead	8.1	3.5	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Lithium	ND	47	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Magnesium	4300	230	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Manganese	830	1.9	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Mercury	34	7.5	mg/Kg		083017 1150	083017 1454	BTM	SW-846 7471B	

Microbac Laboratories, Inc. - Baltimore

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*Melanie C. Duszynski*

Melanie C. Duszynski, Project Manager

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**89-081417-WWTP Fines**  
**17H1575-04 (Solid) Sampled: 08/14/2017 09:30; Type: Grab**

Analyte	Result	Reporting Limit	Units	Limits	Prepared	Analyzed	Analyst	Method	Notes
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**Microbac Laboratories, Inc. - Chicagoland**

**Metals**

Mercury	ND	0.0010	mg/L		083117 1031	090117 1413	BTM	1311/7470A	
Molybdenum	ND	9.3	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
<b>Nickel</b>	<b>78</b>	4.7	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
<b>Potassium</b>	<b>5200</b>	230	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Silver	ND	4.7	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
<b>Sodium</b>	<b>620</b>	230	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
Thallium	ND	23	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
<b>Vanadium</b>	<b>16</b>	3.7	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	
<b>Zinc</b>	<b>50</b>	9.3	mg/Kg		083017 0653	083017 1758	BTM	SW-846 6010C	

**TCLP Metals**

<b>Arsenic</b>	<b>0.0190</b>	0.0100	mg/L	5.00	083117 0940	083117 1705	BTM	1311/6010C	
Barium	ND	0.500	mg/L	100	083117 0940	083117 1705	BTM	1311/6010C	
<b>Cadmium</b>	<b>0.0200</b>	0.00200	mg/L	1.00	083117 0940	083117 1705	BTM	1311/6010C	
<b>Chromium</b>	<b>0.0492</b>	0.00500	mg/L	5.00	083117 0940	083117 1705	BTM	1311/6010C	
Lead	ND	0.00750	mg/L	5.00	083117 0940	083117 1705	BTM	1311/6010C	
<b>Selenium</b>	<b>0.0823</b>	0.0300	mg/L	1.00	083117 0940	083117 1705	BTM	1311/6010C	
Silver	ND	0.0100	mg/L	5.00	083117 0940	083117 1705	BTM	1311/6010C	

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*Melanie C. Duszynski*

Melanie C. Duszynski, Project Manager

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**Project Requested Certification(s):**

Florida - NELAC

***Analyte Certification Exception Summary***

No certification exceptions

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

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**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: Greg Conden

Report: 17H1575  
Reported: 09/12/2017 14:11

**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
<b>Microbac Laboratories, Inc. - Baltimore</b>			
A2LA1	A2LA (Biology)	410.02	04/30/2019
A2LA2	A2LA (Environmental)	410.01	04/30/2019
VA-B	Commonwealth of Virginia (NELAC) - Baltimore	460285	03/14/2018
CPSC	CPSC Testing of Childrens Products and Jewelry	410.01	04/30/2019
Pb	Environmental Lead (ELLAP)	410.01	04/30/2019
FL	Florida - NELAC	E871126	06/30/2018
MD	State of Maryland (Drinking Water)	109	06/30/2018
WV	West Virginia	054	08/31/2018
<b>Microbac Laboratories, Inc. - Chicagoland</b>			
A2LA-B	A2LA (Biology)	3045.01	09/30/2018
A2LA-C	A2LA (Chemistry)	3045.02	09/30/2018
A2LA_	A2LA ISO/IEC 17025 Biological Testing (a)	3045.01	09/30/2018
A2LA	A2LA ISO/IEC 17025 Env. DoD Testing (b)	3045.02	09/30/2018
CDC-ELITE	Center of Disease Control Legionella ELITE Membership (c)		12/01/2017
ILDPH	Illinois DOPH Micro analysis of drinking water (e)	1755266	12/31/2019
ILEPA	Illinois EPA drinking water, wastewater and solid waste analy:	200064	05/31/2018
INSDH	Indiana SDH chemical analysis of drinking water (g)	C-45-03	12/31/2019
INDH	Indiana SDH Micro analysis of drinking water (f)	M-45-8	12/31/2019
ISBOAH	Indiana State Board of Animal Health for microbiological anal	18137	03/31/2019
KSDOH	Kansas Dept Health & Env. NELAP (i)	E-10397	01/31/2018
KYEPP	Kentucky EPPC analysis Underground Storage Tanks (k)	75	01/31/2018
KYDEP	Kentucky Wastewater Laboratory Certification Program (j)	90147	12/31/2017
NYDOH	New York State Department of Health Wadsworth (m)	12006	04/01/2018
NCDEN	North Carolina DENR NPDES effluent, surface water (l)	597	12/31/2017
PADEP	Pennsylvania Department of Environmental Protect (n)	68-04863	07/31/2018
USDAS	USDA Permit To Receive Soil (-)	P330-13-00270	10/17/2019
CGL-VA	VA NELAP	460280	06/14/2018
VELAP	Virginia Department of General Services Division of Consolid	7990	06/15/2018

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Melanie C. Duszynski, Project Manager

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<b>Microbac Laboratories, Inc. - Richmond</b>			
VA-R	Commonwealth of Virginia (NELAC) - Richmond	460022	06/14/2018

Microbac Laboratories, Inc. - Baltimore

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Melanie C. Duszyński, Project Manager

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**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: Greg Conden

Report: 17H1575  
Reported: 09/12/2017 14:11

**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**

Z10b pH@23.9°C  
Z10a pH@23.7°C  
Z10 pH@23.6°C  
D1 Sample required dilution due to matrix.



# Microbac Laboratories, Inc.

Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

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www.microbac.com

## Cooler Receipt Log

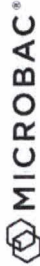
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<b>Cooler ID:</b> Default Cooler	<b>Cooler Temp:</b> 1.40°C	<b>Work Order:</b> 17H1575
Custody Seals Intact: Yes	COC/Containers Agree: Yes	
Containers Intact: Yes	Correct Preservation: Yes	
Received On Ice: Yes	Correct Number of Containers Received: Yes	
Radiation Scan Acceptable: Yes	Sufficient Sample Volume for Testing: Yes	
COC Present: Yes	Samples Received in Proper Condition: Yes	

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**Comments:**





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Work Order Number:

**Chain of Custody Record**

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Instructions for completing the Chain of Custody Record on back.

Client Name: NRG Energy - Chape Point  
 Address: 95700 Chape Point Road  
 City, State, Zip: Aguasca, MD 20608  
 Contact: Greg Conden  
 Telephone #: 301-843-4170

Project: Special EGD - yrly  
 Location: 8 - EGD specifically  
 PO #: \_\_\_\_\_  
 Compliance Monitoring?  Yes  No  
 (1) Agency/Program \_\_\_\_\_

Turnaround Time: \_\_\_\_\_  
 \*Standard (7 Business Days)  
 Level I (NAC)  EDD  
 Level II\*\*  
 Level III\*\*  
 Level IV\*\*  
 Format: \_\_\_\_\_  
 Comments: \_\_\_\_\_

Sampler Signature: [Signature] Sampler Phone #: 301-843-4170 Sampler (DW): \_\_\_\_\_  
 Send Report via  e-mail (address) Area  Telephone  Fax (fax #) 301-843-4478  
 \*\*\* 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	Comments
89-080817-Cypressm-1	S	✓			8-8-17	0800	1	chlorides Sulfate as SO4 pH (as received) Cr, Pb, Se, Hg Total Metals Paint Filter test Sulfate Method for cool	SM(20) 4500.C1.CM
89-081017-Flyash-2	S	✓			8-10-17	0930	1		ASTM D516-08(M)
89-081117-Bottom Ash-3	S	✓			8-11-17	0900	1		EPA 9045
89-081417-WWTP Fines-4	S	✓			8-14-17	0930	1		EPA 600.10-16.00.846.7991A CONCOR 26.21.04.05 EPA 9005 ASTM D2492



se only.

Possible Hazard Identification:  Hazardous  Non-Hazardous

Number of Containers: \_\_\_\_\_

Relinquished By (signature): [Signature] Date/Time: 8-17-17 1400  
 Relinquished By (signature): [Signature] Date/Time: 8-17-17 1215  
 Relinquished By (signature): [Signature] Date/Time: 8-17-17 1215

Cooler Number: 14  
 Temp upon receipt (°C): \_\_\_\_\_  
 Sample Received on Ice or Refrigerated from Client:  Yes  No

Printed Name/Affiliation: Milton Newman  
 Received By (signature): [Signature]  
 Printed Name/Affiliation: Milton Newman

Printed Name/Affiliation: [Signature]  
 Received By (signature): [Signature]  
 Printed Name/Affiliation: [Signature]

Printed Name/Affiliation: [Signature]  
 Received By (signature): [Signature]  
 Printed Name/Affiliation: [Signature]

# Cooler Receipt Form / Sample Acceptance & Noncompliance Form

Microbac Laboratories, Inc., Baltimore Division  
Control # 606-03  
Effective Date: 11/30/2016  
Page 1 of 1

Number of Coolers Received: 1  
Client: MRG Energy - Chalk Point  
Form Completed By: George Kiriatogian

Receipt Date / Time: 8/22/17 15:20  
Work Order #: 17H1575

Shipper:  
Custody Tape Intact:  
Containers Intact:  
Sample Received on Ice or refrigerated:

Microbac  Client  UPS  FedEx

YES  NO  NA

YES  NO

YES  NO  NA

Infrared (IR) Temperature: 1.4 °C

YES  NO

YES  NO

YES  NO  Not Checked

YES  NO (If No, contact client immediately)

YES  NO  NA

Water  Soil Wipes  Oil Filter  Solid Sludge  Food  Swab  Other

Chain of Custody Present with shipment:  
Sample Bottle IDs agree with COC:  
Preservation requirements met:  
Correct Number of Containers / Sample Volume:  
Headspace in container:  
Type of Sample:

**Container Type / Quantity:**

A -	Unpreserved	<u>2</u>	H2SO4	HNO3	HCl	NaOH	NaOH/Ascorbic Acid:	If preserved pH < <u>2</u> , pH > 10	
B - <u>4</u>	Unpreserved	<u>2</u>	H2SO4	<u>1</u>	HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10
C -	Unpreserved		H2SO4		HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10
D -	Unpreserved		H2SO4		HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10
E -	Unpreserved		H2SO4		HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10
H -	Unpreserved		H2SO4		HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10
K -	Unpreserved		H2SO4		HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10
L -	Unpreserved		H2SO4		HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10
M -	Unpreserved		H2SO4		HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10
P -	Unpreserved		H2SO4		HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10
W -	Unpreserved		H2SO4		HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10
V -	Unpreserved		HCl		HCl / Ascorbic Acid		HCl / NaTHIO (Checked at time of Analysis)		
F -	Unpreserved		NaTHIO (Checked at time of Analysis)						
S -	Unpreserved		NaTHIO (Checked at time of Analysis)						
SN -	Unpreserved		NaTHIO		NaTHIO/EDTA (Checked at time of Analysis)				
	Unpreserved		H2SO4		HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10
	Unpreserved		H2SO4		HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10
	Unpreserved		H2SO4		HNO3	HCl	NaOH	NaOH/Ascorbic Acid	If preserved pH < <u>2</u> , pH > 10

**Describe preservation requirements not met:**

All Acid preserved < 2 pH      NaOH preserved > 12 pH      All others > 2 and < 10 (usually 4-8)

Sample ID: \_\_\_\_\_ H<sub>2</sub>SO<sub>4</sub> HNO<sub>3</sub> NaOH \_\_\_\_\_ mls added  
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 Sample ID: \_\_\_\_\_ H<sub>2</sub>SO<sub>4</sub> HNO<sub>3</sub> NaOH \_\_\_\_\_ mls added

H<sub>2</sub>SO<sub>4</sub> - Sulfuric Acid, HNO<sub>3</sub> - Nitric Acid, NaOH - Sodium Hydroxide, ASC - Ascorbic Acid, NaTHIO - Sodium Thiosulfate

Describe Anomalies:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Contact information / Summary of Actions:

Date / Time: \_\_\_\_\_ Contact: \_\_\_\_\_ Contact By: \_\_\_\_\_  
 Comments: \_\_\_\_\_  
 \_\_\_\_\_