



**GenOn Mid-Atlantic, LLC**  
Morgantown Generating Station  
12620 Crain Hwy.  
Newburg, Maryland 20620

70171450 0000 36815262

Certified Mail/Return Receipt Requested

Mr. Ed Dexter  
Maryland Department of the Environment  
Land Management Administration  
1800 Washington Boulevard, Suite 605  
Baltimore MD 21230-1719

February 26, 2020

Re: 2019 CCB Tonnage Report for GenOn Mid-Atlantic, LLC's Morgantown  
Generating Station.

Dear Mr. Dexter,

Pursuant to COMAR 26.04.10.08, enclosed please find the 2019 CCB Tonnage  
Report for GenOn Mid-Atlantic, LLC's Morgantown Generating Station.

If you have any questions regarding this report, please contact me at 301-843-  
4670, or at [debra.knight@genon.com](mailto:debra.knight@genon.com).

Regards,

Debra Knight  
Senior Environmental Analyst  
GenOn Mid-Atlantic, LLC

RECEIVED

MAR 03 2020

LANDMANAGEMENTADMIN  
SOLIDWASTEPROGRAM

**Coal Combustion Byproducts (CCBs)  
Annual Generator Tonnage Report  
Instructions for Calendar Year 2019**

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 2019. 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 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.”*

Facility Name: Morgantown Generating Station

**CCB Tonnage Report – 2019**

**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, 2020:

A. Contact information:

Facility Name: Morgantown Generating Station

Name of Permit Holder: GenOn Mid-Atlantic LLC

Facility Address: 12620 Crain Highway  
Street

Facility Address: Newburg Maryland 20664  
City State Zip

County: Charles

Contact Information (Person filing report or Environmental Manager)

Facility Telephone No.: 301-843-4670 Facility Fax No.: 301-843-4552

Contact Name: Debra Knight

Contact Title: Senior Environmental Specialist

Contact Address: 12620 Crain Highway  
Street

Contact Address: Newburg Maryland 20664  
City State Zip

Contact Email: debra.knight@genon.com

Contact Telephone No.: 301-843-4670 Contact Fax No.: 301-843-4552

*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 2019, 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 2019:** Please note that this table includes both the volume and weight of the types of CCBs your facility produces.

<b>Volume and Weight of CCBs Generated for Calendar Year 2019</b>			
<b>FlyAsh</b> Type of CCB	<b>BottomAsh</b> Type of CCB	<b>On-Spec Gypsum</b> Type of CCB	<b>WWTP Fines</b> Type of CCB
45,186	9,563	35,898	910
Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards
45,186	9,563	70,125	1,778
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 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 2019, 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:** Ash produced at the Morgantown Generating Station is processed at the on-site STAR Facility, where the ash is beneficiated by reduced it in weight through high-temperature combustion. A total of 45,186 tons of flyash were generated at Morgantown in 2019, and was reduced in weight to 40,781 tons. All of this ash was sold to SEFA (headquartered in Columbia, SC) for beneficial use as cementitious material for concrete and concrete products in Maryland and in six other states. Ash from GenOn's Chalk Point generating station is also beneficiated at the STAR facility, and the Chalk Point tonnages of flyash are addressed in the Chalk Point CCB Report.

**Bottom Ash:** 9,563 tons of dry bottom ash was generated in 2019, all of which were disposed of at Waste Management's Amelia Landfill, located in Jesterville, Va.

**On-Spec Gypsum:** 70,125 tons of On-Spec Gypsum were generated at Morgantown in 2019, and 1,528 tons were stored on-site at the end of 2019. Of this total, 84,978 tons were transported by barge to Continental, located in Buchanan, NY for use in the manufacture of wallboard, and a total of 16,381 tons were stored on site at the end of 2018.

**WWTP Fines** produced in 2019 was 1,778 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:

**FlyAsh:**

Volume: 40,781 tons of Morgantown generated flyash sold,

Uses:

1) 40,781 tons beneficially used as a Supplementary cementitious material for concrete and concrete products, 4,783 tons of which were used in Md., and 35,998 tons beneficially used in six other states.

**On-Spec Gypsum:**

Volume: 84,978 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 45,200 dry tons to be generated at Morgantown and 16,400 dry tons to be imported from Chalk Point Generating Station, all to be processed at the STAR facility and sold to SEFA, headquartered in Columbia, SC.

**Bottom Ash:** Anticipate 9,600 tons to be generated and disposed of at Waste Management's Amelia Landfill, located in Jesterville, Va.

**On-Spec Gypsum:** Anticipate approximately 70,000 dry tons to be generated and transported by barge to Continental, located in Buchanan, NY.

**WWTP Fines:** Approximately 1,800 dry 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.

**FlyAsh:**

Volume: Approximately 40,782 dry tons of Morgantown generated flyash to be sold

Uses: 1) All used as a Supplementary cementitious material for concrete and concrete products.

**On-Spec Gypsum:**

Volume: Approximately 70,000 tons to be sold

Use: Wallboard

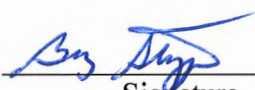
If the space provided is insufficient, please attach additional pages in a similar format.

Facility Name: Morgantown Generating Station

**CCB Tonnage Report – 2019**

**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	<u>Greg Stagers, General Manager, Morgantown Generating Station</u> 301-843-4521 Name, Title, & Telephone No. (Print or Type)  <u>Gregory.stagers@genon.com</u> Your Email Address	<u>2/27/20</u> Date
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**V: Attachments (please list):**

A)Morgantown Generating Station Process Description

B)Microbac Report #19E:1507: Analyses of Fly Ash, Bottom Ash, Gypsum, and WWTP Fines



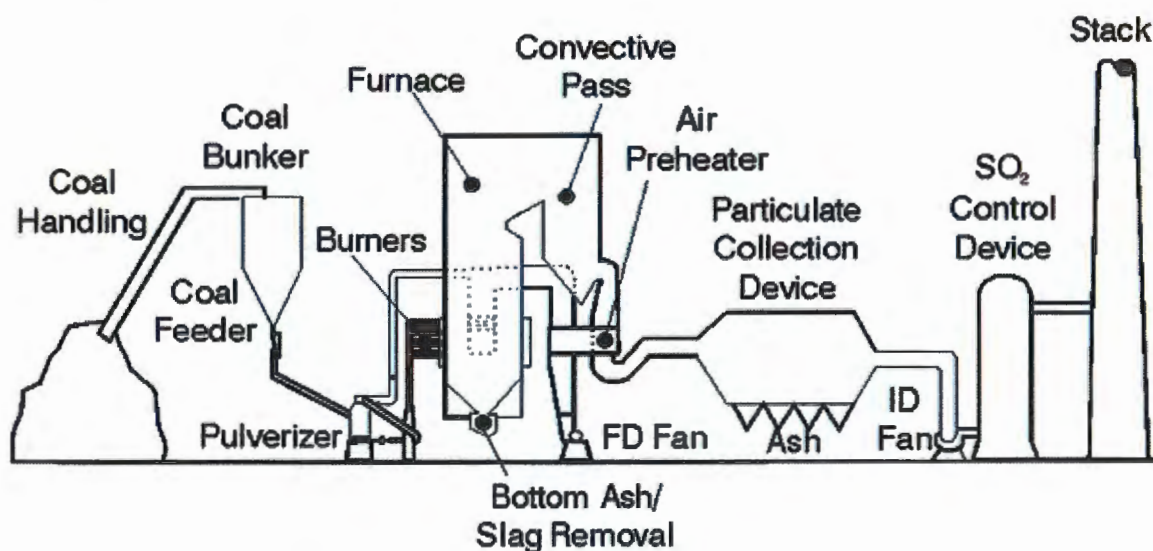
## Attachment A

Morgantown Generating Station  
12620 Crain Highway,  
Newburg, Charles County, MD. 20664  
301-843-4600

The Morgantown Generating Station is located on the Potomac River, just south of Rt. 301 at the Harry W. Nice Bridge near the town of Newburg in Charles County, MD. The facility is engaged in the generation of electrical energy for sale. The primary SIC code is 4911. There are two tangentially fired supercritical steam units each firing bituminous coal. Each unit is rated at 640 MWs (base loaded) and each is equipped with a superheater, single reheat, and economizer. Pollution control devices on both units include low NO<sub>x</sub> burners with Separated Over-Fired Air (SOFA) and Selective Catalytic Reduction (SCR) for control of oxides of nitrogen (NO<sub>x</sub>); 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 separate 700 ft. stacks.

Coal is currently delivered by both rail and by barge. The rail cars are emptied using a rotary dumper, then transferred by conveyor and dravo to either a storage pile or fed directly to the units' bunker. The barge unloading facility consists of a dock, an unloader, a transfer system, and a rail loading system and a rail loading facility. The barge unloading transfer and distribution system is integrated into Morgantown's existing coal handling system.

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.

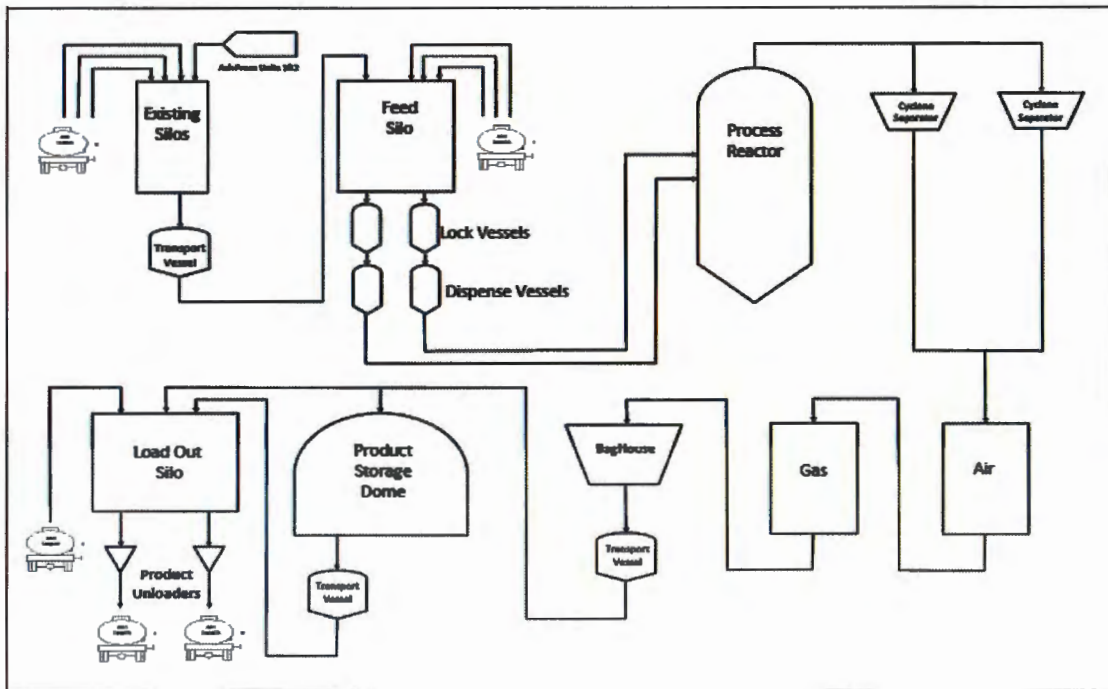




## Attachment A

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%–90% 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. Silo fly ash is sent to the Staged Turbulent Air Reactor (STAR) facility (which is located on-site) where volatiles are burned off from the ash to make it more marketable for sale. Ash from the STAR facility is stored in on-site storage silos until it can be sold. A diagram of the STAR process is shown below.



The bottom ash is conveyed out of the bottom of the boiler via a drag chain conveyor. The bottom ash is then either prepared for sale or disposed of out of state

Gypsum is a byproduct of SO<sub>2</sub> removal by the Flue Gas Desulfurization (FGD) system, commonly known as a scrubber. Morgantown uses wet scrubbers for SO<sub>2</sub> removal. Wet scrubbing uses a slurry of limestone alkaline sorbent to remove SO<sub>2</sub>, - as well as some mercury contaminants - from the air stream. The byproduct - gypsum - is conveyed to a storage dome temporarily and then sent via barge to Continental, located in 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.

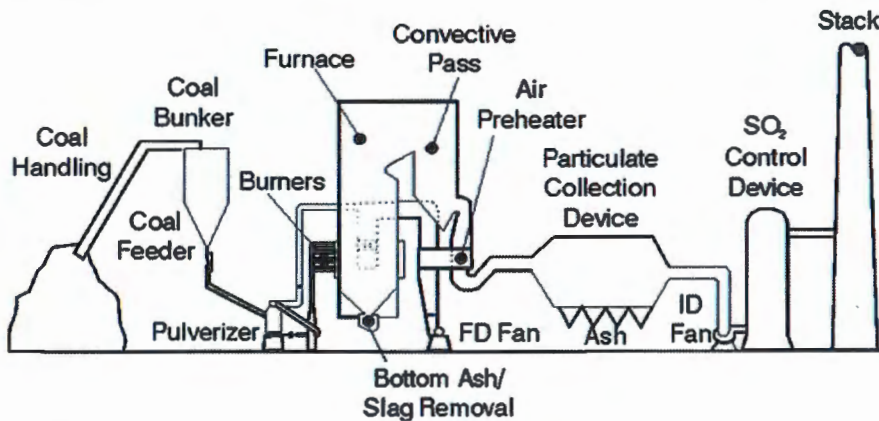
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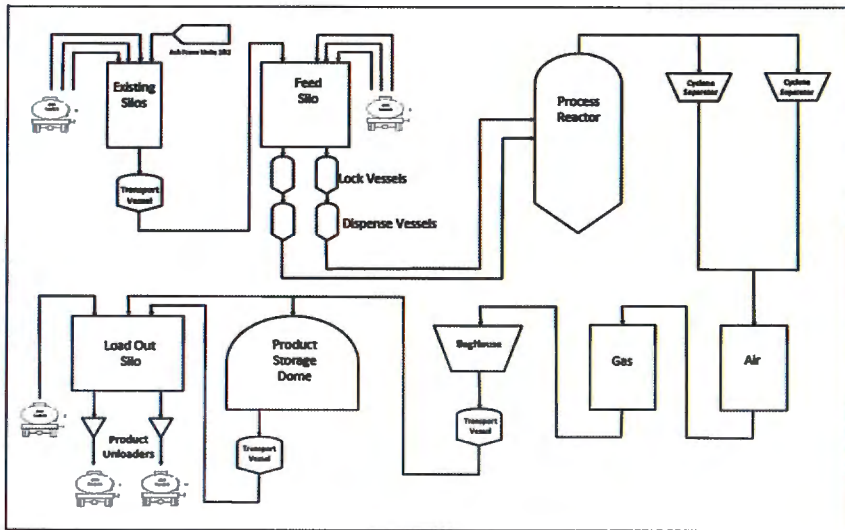




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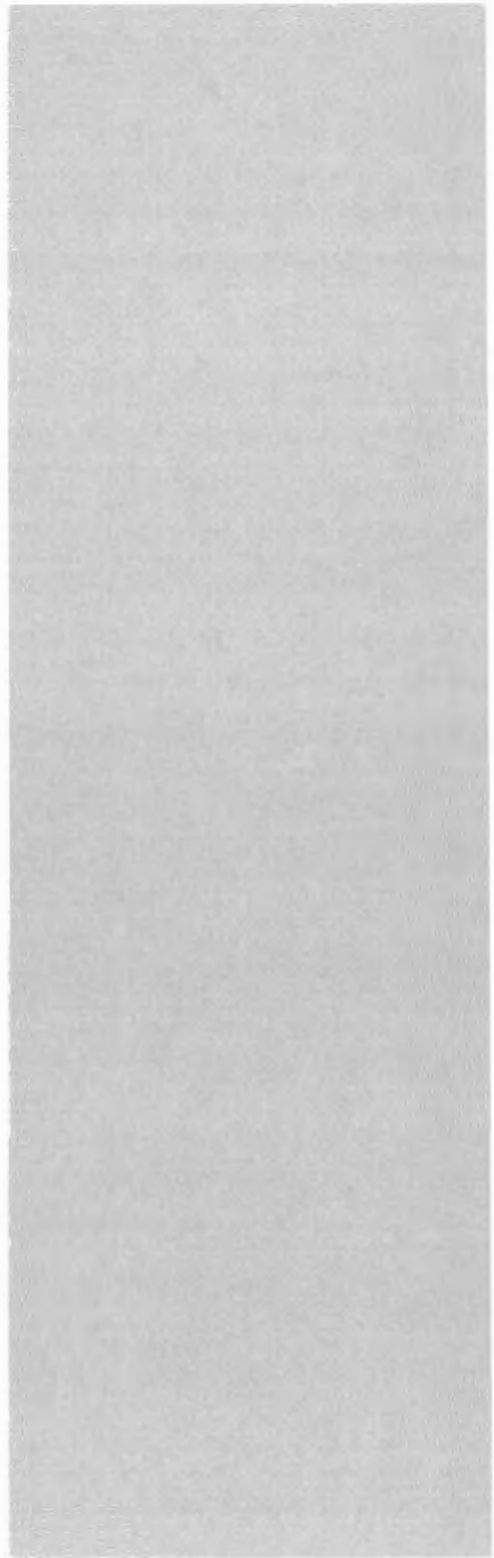


The bottom ash is conveyed out of the bottom of the boiler via a drag chain conveyor. The bottom ash is then either prepared for sale, or disposed of out of state, or sent to the Brandywine Ash Site, where it can be used in the construction of flyash disposal cells.

Gypsum is a byproduct of SO<sub>2</sub> removal by the Flue Gas Desulfurization (FGD) system, commonly known as a scrubber. Morgantown uses wet scrubbers for SO<sub>2</sub> removal. Wet



scrubbing uses a slurry of limestone alkaline sorbent to remove SO<sub>2</sub>, - as well as some mercury contaminants - from the air stream. The byproduct - gypsum - is conveyed to a storage dome temporarily and then sent via barge to Continental, located in 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**  
**CERTIFICATE OF ANALYSIS**

19E1507

**Genon - Morgantown**

**Project Name: Ash/Gypsum/Filter Cake**

Emmanuel Lim  
 Morgantown Generating Station, 12620 Crain Hwy  
 Newburg, MD 20664

Project / PO Number: 4503528576  
 Received: 05/28/2019  
 Reported: 06/11/2019

**Case Narrative**

**Microbac Laboratories, Inc. - Chicagoland**

The Matrix Spike and Matrix Spike Duplicate samples failed the accuracy criteria for sulfur. This bias is due to the high indigenous analyte concentration (relative to the spike amount). The following sample was spiked:

<u>Laboratory ID</u>	<u>Sample Name</u>
19F0329-03	19E1507-03 (Gypsum)

**Analytical Testing Parameters**

<b>Client Sample ID:</b>	Fly Ash	<b>Collected By:</b>	Customer
<b>Sample Matrix:</b>	Solid	<b>Collection Date:</b>	05/27/2019 10:00
<b>Lab Sample ID:</b>	19E1507-01		

<b>Wet Chemistry</b>	<b>Result</b>	<b>Limit(s)</b>	<b>RL</b>	<b>Units</b>	<b>Note</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
<b>Method: SM 2540 G-11</b>								
% Solids	100.2		0.05	% by Weight		05/30/19 1509	05/31/19 1330	EIP
<b>Method: SW-846 9045D</b>								
pH	9.01		0.100	pH Units		05/30/19 0900	05/30/19 1130	DPG
<b>Mercury, Total by EPA 7000 Series Methods</b>	<b>Result</b>	<b>Limit(s)</b>	<b>RL</b>	<b>Units</b>	<b>Note</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
<b>Method: EPA 7471A</b>								
Mercury	0.12		0.025	mg/kg dry		05/29/19 1107	05/30/19 1352	APS
<b>Metals, Total by EPA 6000/7000 Series Methods</b>	<b>Result</b>	<b>Limit(s)</b>	<b>RL</b>	<b>Units</b>	<b>Note</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Analyst</b>
<b>Method: EPA 3050B/EPA 6010B</b>								
Aluminum	14000		49	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Antimony	<20		20	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Arsenic	97		9.8	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Barium	170		9.8	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Beryllium	<9.8		9.8	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Cadmium	<4.9		4.9	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Calcium	12000		98	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Chromium	46		9.8	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Cobalt	<9.8		9.8	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Copper	36		9.8	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Iron	29000		9.8	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Lead	18		9.8	mg/kg dry		05/31/19 0922	06/05/19 1404	APS

Microbac Laboratories, Inc.

2101 Van Deman Street | Baltimore, MD 21224 | 410.633.1800 p | www.microbac.com



Microbac Laboratories, Inc. - Baltimore

CERTIFICATE OF ANALYSIS

19E1507

<b>Client Sample ID:</b> Fly Ash	<b>Collected By:</b> Customer
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 05/27/2019 10:00
<b>Lab Sample ID:</b> 19E1507-01	

Metals, Total by EPA 6000/7000 Series Methods	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Lithium	27		9.8	mg/kg dry	B12	05/31/19 0922	06/05/19 1404	APS
Magnesium	1200		98	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Manganese	71		9.8	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Nickel	32		9.8	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Potassium	1800		98	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Selenium	<20	20		mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Silver	<2.0	2.0		mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Sodium	900		98	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Thallium	<9.8	9.8		mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Vanadium	110		9.8	mg/kg dry		05/31/19 0922	06/05/19 1404	APS
Zinc	42		9.8	mg/kg dry		05/31/19 0922	06/05/19 1404	APS

TCLP Extraction by EPA 1311	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 1311</b>								
TCLP Extraction	COMPLETE D			N/A		05/29/19 1615	05/30/19 1022	APS

TCLP Metals by 6000/7000 Series Methods	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 6010B</b>								
Arsenic	0.30		0.20	mg/L		05/30/19 1616	05/31/19 1254	APS
Barium	0.46		0.20	mg/L	B16	05/30/19 1616	05/31/19 1254	APS
Cadmium	<0.10	0.10		mg/L		05/30/19 1616	05/31/19 1254	APS
Chromium	0.25		0.20	mg/L		05/30/19 1616	05/31/19 1254	APS
Lead	<0.20	0.20		mg/L		05/30/19 1616	05/31/19 1254	APS
Selenium	<0.40	0.40		mg/L		05/30/19 1616	05/31/19 1254	APS
Silver	<0.040	0.040		mg/L		05/30/19 1616	05/31/19 1254	APS

<b>Method: EPA 7470A</b>								
Mercury	<0.0020	0.20	0.0020	mg/L		06/03/19 1130	06/03/19 1559	APS

Analyses Subcontracted to: Microbac Laboratories Inc., - Marietta, OH

Anions by Ion Chromatography	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 9056A</b>								
Chloride	<20.2	20.2		mg/kg dry	D1	06/05/19 1530	06/06/19 0111	KWD
Sulfate as SO4	11700	303		mg/kg dry	D1	06/05/19 1530	06/06/19 0206	KWD

General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: ASTM D2216-10</b>								

Microbac Laboratories, Inc.

2101 Van Deman Street | Baltimore, MD 21224 | 410.633.1800 p | www.microbac.com



Microbac Laboratories, Inc. - Baltimore

CERTIFICATE OF ANALYSIS

19E1507

<b>Client Sample ID:</b> Fly Ash	<b>Collected By:</b> Customer
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 05/27/2019 10:00
<b>Lab Sample ID:</b> 19E1507-01	

General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Percent Solids	99.0		1.00	% by Weight		06/05/19 1407	06/06/19 0820	KMG

Analyses Subcontracted to: Microbac Laboratories, Inc. - Chicagoland

Metals	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SW-846 6010C</b>								
Sulfur	3500		4.7	mg/Kg		06/07/19 0825	06/10/19 1411	RPL

Wet Chemistry	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SM 2540 G-1997</b>								
Percent Solids	100		0.10	wt%		06/07/19 1336	06/10/19 1035	DAT

Microbac Laboratories, Inc.

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CERTIFICATE OF ANALYSIS

19E1507

<b>Client Sample ID:</b> Bottom Ash	<b>Collected By:</b> Customer
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 05/27/2019 11:00
<b>Lab Sample ID:</b> 19E1507-02	

Wet Chemistry	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SM 2540 G-11</b>								
% Solids	72.16		0.05	% by Weight		05/30/19 1509	05/31/19 1330	EIP
<b>Method: SW-846 9045D</b>								
pH	10.8		0.100	pH Units		05/30/19 0900	05/30/19 1130	DPG
Mercury, Total by EPA 7000 Series Methods	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 7471A</b>								
Mercury	<0.033		0.033	mg/kg dry		05/29/19 1107	05/30/19 1354	APS
Metals, Total by EPA 6000/7000 Series Methods	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 3050B/EPA 6010B</b>								
Aluminum	8900		60	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Antimony	<24		24	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Arsenic	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Barium	72		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Beryllium	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Cadmium	<6.0		6.0	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Calcium	6900		120	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Chromium	16		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Cobalt	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Copper	16		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Iron	43000		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Lead	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Lithium	12		12	mg/kg dry	B12	05/31/19 0922	06/05/19 1408	APS
Magnesium	570		120	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Manganese	80		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Nickel	21		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Potassium	910		120	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Selenium	<24		24	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Silver	<2.4		2.4	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Sodium	360		120	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Thallium	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Vanadium	27		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS
Zinc	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1408	APS

TCLP Extraction by EPA 1311	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 1311</b>								

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CERTIFICATE OF ANALYSIS

19E1507

<b>Client Sample ID:</b> Bottom Ash	<b>Collected By:</b> Customer
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 05/27/2019 11:00
<b>Lab Sample ID:</b> 19E1507-02	

TCLP Extraction by EPA 1311	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
TCLP Extraction	COMPLETE D			N/A		05/29/19 1615	05/30/19 1022	APS

TCLP Metals by 6000/7000 Series Methods	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
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Method: EPA 6010B								
Arsenic	<0.20		0.20	mg/L		05/30/19 1616	05/31/19 1257	APS
Barium	0.28		0.20	mg/L	<b>B16</b>	05/30/19 1616	05/31/19 1257	APS
Cadmium	<0.10		0.10	mg/L		05/30/19 1616	05/31/19 1257	APS
Chromium	<0.20		0.20	mg/L		05/30/19 1616	05/31/19 1257	APS
Lead	<0.20		0.20	mg/L		05/30/19 1616	05/31/19 1257	APS
Selenium	<0.40		0.40	mg/L		05/30/19 1616	05/31/19 1257	APS
Silver	<0.040		0.040	mg/L		05/30/19 1616	05/31/19 1257	APS

Method: EPA 7470A								
Mercury	<0.0020	0.20	0.0020	mg/L		06/03/19 1130	06/03/19 1601	APS

Analyses Subcontracted to: Microbac Laboratories Inc., - Marietta, OH

Anions by Ion Chromatography	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
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Method: EPA 9056A								
Chloride	14.6		3.5	mg/kg dry		06/05/19 1530	06/06/19 0224	KWD
Sulfate as SO4	922		17.3	mg/kg dry		06/05/19 1530	06/06/19 0224	KWD

General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
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Method: ASTM D2216-10								
Percent Solids	57.9		1.00	% by Weight		06/05/19 1407	06/06/19 0820	KMG

Analyses Subcontracted to: Microbac Laboratories, Inc. - Chicagoland

Metals	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
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Method: SW-846 6010C								
Sulfur	550		4.2	mg/Kg		06/07/19 0825	06/10/19 1416	RPL

Wet Chemistry	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
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Method: SM 2540 G-1997								
Percent Solids	69		0.10	wt%		06/07/19 1336	06/10/19 1035	DAT

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CERTIFICATE OF ANALYSIS

19E1507

<b>Client Sample ID:</b> Gypsum	<b>Collected By:</b> Customer
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 05/27/2019 13:00
<b>Lab Sample ID:</b> 19E1507-03	

Wet Chemistry	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SM 2540 G-11</b>								
% Solids	76.07		0.05	% by Weight		05/30/19 1509	05/31/19 1330	EIP
<b>Method: SW-846 9045D</b>								
pH	7.73		0.100	pH Units		05/30/19 0900	05/30/19 1130	DPG
Mercury, Total by EPA 7000 Series Methods	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 7471A</b>								
Mercury	0.50		0.030	mg/kg dry		05/29/19 1107	05/30/19 1357	APS
Metals, Total by EPA 6000/7000 Series Methods	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 3050B/EPA 6010B</b>								
Aluminum	560		61	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Antimony	<24		24	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Arsenic	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Barium	43		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Beryllium	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Cadmium	<6.1		6.1	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Calcium	280000		1200	mg/kg dry		05/31/19 0922	06/05/19 1443	APS
Chromium	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Cobalt	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Copper	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Iron	2200		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Lead	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Lithium	<12		12	mg/kg dry	<b>B13</b>	05/31/19 0922	06/05/19 1411	APS
Magnesium	510		120	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Manganese	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Nickel	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Potassium	190		120	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Selenium	<24		24	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Silver	<2.4		2.4	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Sodium	120		120	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Thallium	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Vanadium	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS
Zinc	<12		12	mg/kg dry		05/31/19 0922	06/05/19 1411	APS

TCLP Extraction by EPA 1311	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 1311</b>								

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Microbac Laboratories, Inc. - Baltimore

CERTIFICATE OF ANALYSIS

19E1507

<b>Client Sample ID:</b> Gypsum	<b>Collected By:</b> Customer
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 05/27/2019 13:00
<b>Lab Sample ID:</b> 19E1507-03	

TCLP Extraction by EPA 1311	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
TCLP Extraction	COMPLETE D			N/A		05/29/19 1615	05/30/19 1022	APS

TCLP Metals by 6000/7000 Series Methods	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 6010B</b>								
Arsenic	<0.20		0.20	mg/L		05/30/19 1616	05/31/19 1301	APS
Barium	<0.20		0.20	mg/L	B15	05/30/19 1616	05/31/19 1301	APS
Cadmium	<0.10		0.10	mg/L		05/30/19 1616	05/31/19 1301	APS
Chromium	<0.20		0.20	mg/L		05/30/19 1616	05/31/19 1301	APS
Lead	<0.20		0.20	mg/L		05/30/19 1616	05/31/19 1301	APS
Selenium	<0.40		0.40	mg/L		05/30/19 1616	05/31/19 1301	APS
Silver	<0.040		0.040	mg/L		05/30/19 1616	05/31/19 1301	APS

<b>Method: EPA 7470A</b>								
Mercury	<0.0020	0.20	0.0020	mg/L		06/03/19 1130	06/03/19 1603	APS

Analyses Subcontracted to: Microbac Laboratories Inc., - Marietta, OH

Anions by Ion Chromatography	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 9056A</b>								
Chloride	151		27.5	mg/kg dry	D1	06/05/19 1530	06/06/19 0243	KWD
Sulfate as SO4	20400		413	mg/kg dry	D1	06/05/19 1530	06/06/19 0301	KWD

General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: ASTM D2216-10</b>								
Percent Solids	72.6		1.00	% by Weight		06/05/19 1407	06/06/19 0820	KMG

Analyses Subcontracted to: Microbac Laboratories, Inc. - Chicagoland

Metals	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SW-846 6010C</b>								
Sulfur	130000		460	mg/Kg		06/07/19 0825	06/10/19 1420	RPL

Wet Chemistry	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SM 2540 G-1997</b>								
Percent Solids	75		0.10	wt%		06/07/19 1336	06/10/19 1035	DAT

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Microbac Laboratories, Inc. - Baltimore

CERTIFICATE OF ANALYSIS

19E1507

<b>Client Sample ID:</b> WWTP Filter Cake	<b>Collected By:</b> Customer
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 05/27/2019 14:00
<b>Lab Sample ID:</b> 19E1507-04	

Wet Chemistry	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: SM 2540 G-11</b>								
% Solids	52.34		0.05	% by Weight		05/30/19 1509	05/31/19 1330	EIP
<b>Method: SW-846 9045D</b>								
pH	7.97		0.100	pH Units		05/30/19 0900	05/30/19 1130	DPG
Mercury, Total by EPA 7000 Series Methods	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 7471A</b>								
Mercury	23		0.95	mg/kg dry		05/29/19 1107	05/30/19 1406	APS
Metals, Total by EPA 6000/7000 Series Methods	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 3050B/EPA 6010B</b>								
Aluminum	12000		100	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Antimony	<42		42	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Arsenic	50		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Barium	560		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Beryllium	<21		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Cadmium	<10		10	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Calcium	220000		2100	mg/kg dry		05/31/19 0922	06/05/19 1446	APS
Chromium	63		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Cobalt	<21		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Copper	40		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Iron	25000		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Lead	<21		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Lithium	<21		21	mg/kg dry	<b>B13</b>	05/31/19 0922	06/05/19 1415	APS
Magnesium	15000		210	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Manganese	780		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Nickel	83		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Potassium	3800		210	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Selenium	110		42	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Silver	<4.2		4.2	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Sodium	410		210	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Thallium	<21		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Vanadium	57		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS
Zinc	100		21	mg/kg dry		05/31/19 0922	06/05/19 1415	APS

TCLP Extraction by EPA 1311	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
<b>Method: EPA 1311</b>								

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CERTIFICATE OF ANALYSIS

19E1507

<b>Client Sample ID:</b> WWTP Filter Cake	<b>Collected By:</b> Customer
<b>Sample Matrix:</b> Solid	<b>Collection Date:</b> 05/27/2019 14:00
<b>Lab Sample ID:</b> 19E1507-04	

TCLP Extraction by EPA 1311	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
TCLP Extraction	COMPLETE D			N/A		05/29/19 1615	05/30/19 1022	APS

TCLP Metals by 6000/7000 Series Methods	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
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Method: EPA 6010B								
Arsenic	<0.20		0.20	mg/L		05/30/19 1616	05/31/19 1318	APS
Barium	<0.20		0.20	mg/L	B15	05/30/19 1616	05/31/19 1318	APS
Cadmium	<0.10		0.10	mg/L		05/30/19 1616	05/31/19 1318	APS
Chromium	<0.20		0.20	mg/L		05/30/19 1616	05/31/19 1318	APS
Lead	<0.20		0.20	mg/L		05/30/19 1616	05/31/19 1318	APS
Selenium	<0.40		0.40	mg/L		05/30/19 1616	05/31/19 1318	APS
Silver	<0.040		0.040	mg/L		05/30/19 1616	05/31/19 1318	APS

Method: EPA 7470A								
Mercury	<0.0020	0.20	0.0020	mg/L		06/03/19 1130	06/03/19 1610	APS

Analyses Subcontracted to: Microbac Laboratories Inc., - Marietta, OH

Anions by Ion Chromatography	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: EPA 9056A								
Chloride	1790		40.2	mg/kg dry	D1	06/05/19 1530	06/06/19 0319	KWD
Sulfate as SO4	30700		1010	mg/kg dry		06/05/19 1530	06/06/19 0337	KWD

General Parameters	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: ASTM D2216-10								
Percent Solids	49.6		1.00	% by Weight		06/05/19 1407	06/06/19 0820	KMG

Analyses Subcontracted to: Microbac Laboratories, Inc. - Chicagoland

Metals	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: SW-846 6010C								
Sulfur	51000		46	mg/Kg		06/07/19 0825	06/10/19 1425	RPL

Wet Chemistry	Result	Limit(s)	RL	Units	Note	Prepared	Analyzed	Analyst
Method: SM 2540 G-1997								
Percent Solids	53		0.10	wt%		06/07/19 1336	06/10/19 1035	DAT

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CERTIFICATE OF ANALYSIS

19E1507

Results in bold have exceeded a limit defined for this project. Limits are provided for reference but as regulatory limits change frequently, Microbac Laboratories, Inc. advises the recipient of this report to confirm such limits and units of concentration with the appropriate Federal, state or local authorities before acting on the data.

Definitions

- B12: Target analyte detected in initial calibration blank >2.2 times the MDL but less than the reporting limit. Concentration found in the samples was 10 times the concentration found in the blank. No impact on data.
B13: Target analyte detected in initial calibration blank >2.2 times the MDL but less than the reporting limit. Sample result was less than the reporting limit. No impact on data.
B15: Target analyte detected in method blank >2.2 times the MDL but less than the reporting limit. Sample result was less than the reporting limit. No impact on data.
B16: Target analyte detected in method blank >2.2 times the MDL but less than the reporting limit.
D1: Dilution was performed due to matrix interference.
MDL: Minimum Detection Limit
RL: Reporting Limit

Project Requested Certification(s)

Table with 2 columns: Microbac Laboratories, Inc. - Baltimore (E871126), Florida - NELAC; Microbac Laboratories, Inc. - Chicagoland (3045.01, 3045.02, E-10397), A2LA (Biology), A2LA (Chemistry), KS NELAP

Report Comments

Samples were received in proper condition and the reported results conform to applicable accreditation standard unless otherwise noted.

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included.

Reviewed and Approved By:

Evelyn Shinas
Customer Relationship Coordinator
Reported: 06/11/2019 12:04

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CHAIN OF CUSTODY RECORD

Number 19E1507  
Instructions on back

Lab Report Address  
Client Name: Genon Morgantown  
Address: 12020 Crain Highway  
City, State, Zip: Newburg, MD 20664  
Contact: James Albrittain  
Telephone No.: 301-843-4560  
Send Report via:  Mail  Fax  e-mail (address)

Invoice Address  
Client Name:  
Address:  
City, State, Zip:  
Contact:  
Telephone No.:

Turnaround Time  
 Routine (5 to 7 business days)  
 RUSH\* (notify lab)

TO BE COMPLETED BY MICROBAC  
Temperature Upon Receipt (°C) 3.6  
Therm ID  
Holding Time  
Samples Received on Ice?  Yes  No N/A  
Custody Seals Intact? Yes No N/A

Project:  
Sampled by (PRINT):

Location:  
Sampler Signature:

PO No.:  
Sampler Phone No.:

Compliance Monitoring?  Yes  No  
( ) Agency/Program

\* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

\*\* Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

REQUESTED ANALYSIS

Lab ID	Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grabs / Comp	Preservative Types**	pH	TCLP metals	Chlorides	Sulfate as S <sub>2</sub>	Barium	Lithium	Sulfur	Total metals	Count (20.21.04.05)	Add
	Fly ash	5-27-19	1000	1				X	X	X	X	X	X	X	X		
	Bottom ash	}	1100	1				X	X	X	X	X	X	X	X		
	Gypsum		1300	1				X	X	X	X	X	X	X	X		
	WWTP Filter Cake		1400	1				X	X	X	X	X	X	X	X		



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

Comments

Reviewed By: MB  
Date: 5/28/19

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
<i>[Signature]</i>	5-28-19	<i>[Signature]</i>	5/28/19 11:05
Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
<i>[Signature]</i>	5/28/19 15:00	<i>[Signature]</i>	5/28/19 15:00
Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time



# 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: Green Mountain  
 Form Completed By: [Signature]  
 Shipper:  
 Custody Tape Intact:  
 Containers Intact:  
 Sample Received on Ice or refrigerated:  
 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:

Receipt Date / Time: 01/29/19 1500  
 Work Order # AE0129/0142/0143/0289/1488/

Microbac  Client  UPS  FedEx  
 YES / NO / NA  
 YES / NO  
 YES / NO / NA  
 Infrared (IR) Temperature: 3.6 °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

**Container Type / Quantity:**

A -	Unpreserved	H2SO4	<u>2</u>	HNO3	HCl
B -	Unpreserved	<u>4</u>	H2SO4	HNO3	HCl
C -	Unpreserved	H2SO4		HNO3	HCl
D -	Unpreserved	H2SO4		HNO3	HCl
E -	Unpreserved	H2SO4	<u>4</u>	HNO3	HCl
H -	Unpreserved	H2SO4		HNO3	HCl
K -	Unpreserved	H2SO4		HNO3	HCl
L -	Unpreserved	H2SO4		HNO3	HCl
M -	Unpreserved	H2SO4		HNO3	HCl
P -	Unpreserved	H2SO4		HNO3	HCl
W -	<u>4</u>	Unpreserved	H2SO4	HNO3	HCl
V -	Unpreserved	HCl		HCl / Ascorbic Acid	
F -	Unpreserved	NaTHIO		(Checked at time of receipt)	
S -	Unpreserved	NaTHIO		(Checked at time of receipt)	
SN -	Unpreserved	NaTHIO		NaTHIO/EDTA	
<u>6</u>	Unpreserved	H2SO4		HNO3	HCl
	Unpreserved	H2SO4		HNO3	HCl
	Unpreserved	H2SO4		HNO3	HCl

*gallon plastic*

**Describe preservation requirements not met:**  
 All Acid preserved < 2 pH      NaOH preserved > 12 pH  
 Sample ID: \_\_\_\_\_ H<sub>2</sub>SO<sub>4</sub> HNO<sub>3</sub> NaOH \_\_\_\_\_  
 Sample ID: \_\_\_\_\_ H<sub>2</sub>SO<sub>4</sub> HNO<sub>3</sub> NaOH \_\_\_\_\_  
 Sample ID: \_\_\_\_\_ H<sub>2</sub>SO<sub>4</sub> HNO<sub>3</sub> NaOH \_\_\_\_\_  
 Sample ID: \_\_\_\_\_ H<sub>2</sub>SO<sub>4</sub> HNO<sub>3</sub> NaOH \_\_\_\_\_  
 H<sub>2</sub>SO<sub>4</sub> - Sulfuric Acid, HNO<sub>3</sub> - Nitric Acid, NaOH - Sodium Hydroxide

Describe Anomalies: All samples split for IC submitt. [Signature]  
01/29/19

Contact information / Summary of Actions:  
 Date / Time: \_\_\_\_\_ Contact: \_\_\_\_\_ Contact By: \_\_\_\_\_  
 Comments: \_\_\_\_\_



**SUBCONTRACT ORDER  
19E1507**

**SENDING LABORATORY:**

Microbac Laboratories, Inc. - Baltimore  
2101 Van Deman Street  
Baltimore, MD 21224  
Phone: 410.633.1800  
Project Manager: Jake Mason

**RECEIVING LABORATORY:**

Microbac - OVD  
158 Starlite Dr  
Marietta, OH 45750  
Phone: (800) 373-4071

**Project Info:**

Project Name: Special Project  
Project No: Ash/Gypsum/Filter Cake

Client: Genon - Morgantown  
Project Type: ENV-WasteWater  
Project Location: Maryland (South)

Report TAT: 7  
Due: 06/06/2019 17:00

**Sample ID: 19E1507-01**

**Matrix: Solid**

**Sampled: 05/27/2019 10:00**

Analysis	Method	Analysis Due	Expires	Network \$
Cl_IC Chloride	SW-846 9056A 0.1 mg/kg	06/05/2019 16:00	06/24/2019 10:00	\$ 16.80
Sample split for subout				
SO4_IC Sulfate as SO4	SW-846 9056A 0.1 mg/kg	06/05/2019 16:00	06/24/2019 10:00	\$ 16.80
Sample split for subout				

**Sample ID: 19E1507-02**

**Matrix: Solid**

**Sampled: 05/27/2019 11:00**

Analysis	Method	Analysis Due	Expires	Network \$
Cl_IC Chloride	SW-846 9056A 0.1 mg/kg	06/05/2019 16:00	06/24/2019 11:00	\$ 16.80
Sample split for subout				
SO4_IC Sulfate as SO4	SW-846 9056A 0.1 mg/kg	06/05/2019 16:00	06/24/2019 11:00	\$ 16.80
Sample split for subout				

**Sample ID: 19E1507-03**

**Matrix: Solid**

**Sampled: 05/27/2019 13:00**

Analysis	Method	Analysis Due	Expires	Network \$
Cl_IC Chloride	SW-846 9056A 0.1 mg/kg	06/05/2019 16:00	06/24/2019 13:00	\$ 16.80
Sample split for subout				
SO4_IC Sulfate as SO4	SW-846 9056A 0.1 mg/kg	06/05/2019 16:00	06/24/2019 13:00	\$ 16.80
Sample split for subout				





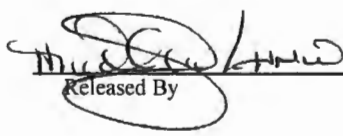
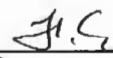
**SUBCONTRACT ORDER  
19E1507**

**Sample ID: 19E1507-04**

**Matrix: Solid**

**Sampled: 05/27/2019 14:00**

Analysis	Method	Analysis Due	Expires	Network \$
<b>Cl_IC</b> Chloride	<b>SW-846 9056A</b> 0.1 mg/kg	<b>06/05/2019 16:00</b>	<b>06/24/2019 14:00</b>	<b>\$ 16.80</b>
Sample split for subout				
<b>SO4_IC</b> Sulfate as SO4	<b>SW-846 9056A</b> 0.1 mg/kg	<b>06/05/2019 16:00</b>	<b>06/24/2019 14:00</b>	<b>\$ 16.80</b>
Sample split for subout				


05/30/19


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Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_

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Released By \_\_\_\_\_ Date \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_



**SUBCONTRACT ORDER  
19E1507**

**RUSH**

**SENDING LABORATORY:**

Microbac Laboratories, Inc. - Baltimore  
2101 Van Deman Street  
Baltimore, MD 21224  
Phone: 410.633.1800  
Project Manager: Jake Mason

**RECEIVING LABORATORY:**

Microbac - CGL  
250 West 84th Drive  
Merrillville, IN 46410  
Phone: (219) 769-8378

**Project Info:**

Project Name: Special Project	Client: Genon - Morgantown	Report TAT: 7
Project No: Ash/Gypsum/Filter Cake	Project Type: ENV-WasteWater	Due: 06/06/2019 17:00
	Project Location: Maryland (South)	

**Sample ID: 19E1507-01**

**Matrix: Solid**

**Sampled: 05/27/2019 10:00**

Analysis	Method	Analysis Due	Expires	Network \$
M_S_ICP Sulfur	EPA 6010B 0.04 mg/kg	06/05/2019 16:00	11/23/2019 10:00	\$ 22.40

Sample split for subout

**Sample ID: 19E1507-02**

**Matrix: Solid**

**Sampled: 05/27/2019 11:00**

Analysis	Method	Analysis Due	Expires	Network \$
M_S_ICP Sulfur	EPA 6010B 0.04 mg/kg	06/05/2019 16:00	11/23/2019 11:00	\$ 22.40

Sample split for subout

**Sample ID: 19E1507-03**

**Matrix: Solid**

**Sampled: 05/27/2019 13:00**

Analysis	Method	Analysis Due	Expires	Network \$
M_S_ICP Sulfur	EPA 6010B 0.04 mg/kg	06/05/2019 16:00	11/23/2019 13:00	\$ 22.40

Sample split for subout

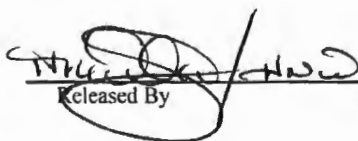
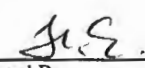
**Sample ID: 19E1507-04**

**Matrix: Solid**

**Sampled: 05/27/2019 14:00**

Analysis	Method	Analysis Due	Expires	Network \$
M_S_ICP Sulfur	EPA 6010B 0.04 mg/kg	06/05/2019 16:00	11/23/2019 14:00	\$ 22.40

Sample split for subout

	06/05/19		
Released By	Date	Received By	Date

Released By	Date	Received By	Date
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