

Mirant Mid-Atlantic, LLC  
8301 Professional Place, Suite 230  
Landover, MD. 20785  
T 301-955-9051 F 301-955-9015

RECEIVED  
MAR 03 2009  
Solid Waste Program



Mr. Edward M. Dexter, Administrator  
Solid Waste Program, Suite 605  
Maryland Dept. of the Environment  
18000 Washington Boulevard  
Baltimore, MD. 21230

Re: 2008 CCB Tonnage Report – Mirant Mid-Atlantic, LLC – Dickerson Generating Station  
2008 CCB Tonnage Report – Mirant Mid-Atlantic, LLC – Morgantown Generating Station

Dear Mr. Dexter,

Pursuant to COMAR 26.04.10.08 that states that generators of coal combustion byproducts (CCBs) file an annual report by March 1 describing the manner in which CCBs were managed during the preceding year, Mirant Mid-Atlantic, LLC hereby submits reports for coal combustion byproducts generated at its Dickerson Generating Station located in Montgomery County, and its Morgantown Generating Station located in Charles County. In addition, since this is the first year reporting, information concerning CCB activity for the last five (5) years is also included in the reports, to the extent that it was known, in accordance with the regulations.

Please feel free to contact me at 301-955-9051 should you have any questions or concerns regarding this report.

Sincerely,

Elizabeth A. Spitzer  
Environmental Analyst  
8301 Professional Place  
Suite 230  
Landover, MD. 20785

Enclosures

**Coal Combustion Byproducts (CCB)  
Annual Generator Tonnage Report**

**Instructions for Calendar Year 2008**

The following is general information relating to the requirement for reporting quantities of coal combustion byproducts that were managed in the State of Maryland during calendar year 2008. Please answer the questions on the form provided, attaching additional information and any requested supplemental information to the back of the form.

**I. Background.** This requirement that generators of coal combustion byproducts (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. In addition, for this first report, information concerning CCB activity during the past 5 years is required to be submitted, to the extent that this is known. 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.** Coal combustion byproducts 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

Facility Name: Dickerson Generating Station **CCB Tonnage Report – 2008**

**B. Applicability.** If you or your company meet 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.

**III. Required Information.** The following information must be provided to the Department by March 1, 2009:

A. Contact information:

Facility Name: Dickerson Generating Station

Name of Permit Holder: Mirant Mid-Atlantic, LLC

Facility Address: 21200 Martinsburg Road  
Street

Facility Address: Dickerson MD. 20842  
City State Zip

County: Montgomery County

Contact Information (Person filing report or Environmental Manager)

Facility Telephone No.: 301-601-6500 Facility Fax No.: 301-601-6556

Contact Name: Elizabeth Spitzer

Contact Title: Environmental Analyst

Contact Address: 8301 Professional Place  
Street

Contact Address: Landover MD. 20785  
City State Zip

Contact Email: elizabeth.spitzer@mirant.com

Contact Telephone No.: 301-955-9051 Contact Fax No.: 301-955-9074

*For questions on how to complete this form, please call Mr. Tariq Masood, Head of the Office of Reports and Data Management, Solid Waste Program at 410-537-3326.*

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

See Attachment A.

C. In the first Annual Report you submit, the annual volume of coal combustion byproducts generated during the last 5 calendar years, including an identification of the different types of coal combustion byproducts generated and the volume of each type generated. (Please note that in subsequent years you need only provide the information in this paragraph for the last calendar year.) If the space provided is insufficient, please attach additional pages in a similar format:

Table I: Volume of CCBs Generated for Previous 5 Years:

Reporting Year	Volume of CCB Type:	Volume of CCB Type:	Volume of CCB Type:
	<u>Flyash</u>	<u>Bottom Ash</u>	<u>_____</u>
2008	228.3	30.7	
2007	198.0	30.1	
2006	178.6	28.5	
2005	203.0	35.0	
2004	187.0	31.0	

Additional notes:

Note: Values reported in thousand tons dry.

Facility Name: Dickerson Generating Station CCB Tonnage Report – 2008

D. Descriptions of any modeling or risk assessments, or both, conducted relating to the coal combustion byproducts 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 coal combustion byproducts. Please attach this information to the report. (See Attachment B.)

F. In this first Annual Report you submit, a description of how you disposed of or used your coal combustion byproducts in the last 5 calendar years (Please note that in subsequent years you need only provide the information in this paragraph for the last calendar year), identifying:

(a) The types and volume of coal combustion byproducts disposed of or used (if different than described in Paragraph C above), the location of disposal, mine reclamation and use sites, and the type and volume of coal combustion byproducts disposed of or used at each site:

Flyash: An average of 199,000 tons generated, per year of which an average of ninety-three (93) percent was disposed of at the Westland Ash Site located in Montgomery County and seven (7) percent was sold.

Bottom Ash : An average of 31,006 tons generated per year of which sixty-three (63) percent was disposed of at the Westland Ash Site, fifteen(15) percent was used/stored on site and twenty-two (22) percent was sold.

(See Attachment C for additional volume information.)

and (b) The different uses by type and volume of coal combustion byproducts:

Flyash:

Uses: Concrete/concrete products/grout.

Volume: Seven percent or 13,200 tons per year on average.

Bottom Ash:

Uses: Snow and ice control

Volume: Thirty-seven percent or 11,400 tons

If the space provided is insufficient, please attach additional pages in a similar format. . (Please note that in subsequent years you need only provide the information in Section F for the last calendar year).

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

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

Flyash: An average of 199,000 tons generated, per year of which an average of ninety-three (93) percent will be disposed of at the Westland Ash Site located in Montgomery County and seven (7) percent is sold.

Bottom Ash : An average of 31,006 tons generated per year of which sixty-three (63) percent will be disposed of at the Westland Ash Site, fifteen(15) percent to be used/stored on site and twenty-two (22) percent is anticipated to be sold

FGD Waste: Beginning in 2010, an average of 185,000 tons of gypsum will begin to be produced on an annual basis at the facility's Units 1- 3. All of the gypsum will be transported to Baltimore, MD. for the manufacture of wallboard.

and (b) The different intended uses by type and volume of coal combustion byproducts.

Flyash:

Uses: Concrete/ concrete products/grout

Volume: Seven percent or 13,200 tons on average.

Bottom Ash:

Uses: Snow and ice control.

Volume: Thirty-seven percent or 11,400 tons on average.

FGD Waste:

Uses: Wallboard

Volume: One hundred (100) percent or 185,000 tons on average.

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

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

This is to certify that, to the best of my knowledge, the information contained in this report and any attached documents are true, accurate, and complete.		
 Signature	<u>James P. Garlick, SR-VP - Operations</u> 678-579-5040 <hr/> Name, Title, & Telephone No. (Print or Type) <u>jim.garlick@mirant.com</u> Your Email Address	<u>2-24-09</u> Date

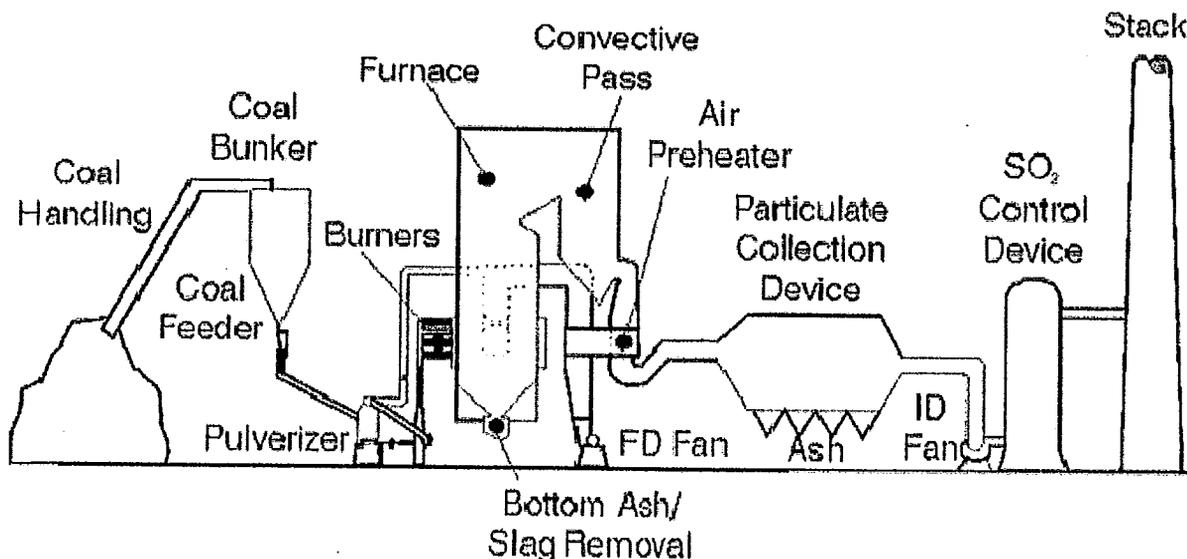
## Attachment A

Dickerson Generating Station  
21200 Martinsburg Road,  
Dickerson, Montgomery County, MD. 20842  
301-601-6500

The Dickerson Generating Station is located on the Potomac River, south of the Monocay River in upper Montgomery County, near Dickerson, MD. The facility is engaged in the generation of electric energy for sale. The primary SIC code for this facility is 4911. The facility consists of three steam units, each rated at 191 MWs (base loaded), firing bituminous coal. Each unit is tangentially fired, with a superheater, reheat and economizer. All boiler emissions are directed to a common 700 ft. stack during normal operations. One half of the flue gas passes through electrostatic precipitators (ESPs) while the other half pass through a baghouse for particulate control. A baghouse was installed in 2002 for control of particulate emissions. Low NO<sub>x</sub> burners, Separated Over-Fired Air (SOFA) along with an advanced combustion control system are installed on each unit to reduce and control emissions of oxides of nitrogen (NO<sub>x</sub>).

Coal is delivered to the Dickerson facility by rail. The rail cars are emptied using a rotary dumper, then transferred by conveyor to either a storage pile or fed directly to a unit's 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.



Future SO<sub>2</sub> Control 1

## **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 65%–85% 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 two ash silos. Flyash that is not marketed is sent to the Westland Ash Site, whose property is separated from the Dickerson facility by a public road, and is also located in Montgomery County. 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 either prepared for sale, used on site or sent to the Westland Ash Site, where it is often used in the construction of flyash disposal cells.

Attachment B



# Microbac Laboratories, Inc. Baltimore Division

Phone: 410-633-1800

Fax: 410-633-6553

www.microbac.com

2101 Van Deman Street • Baltimore, MD 21224

## CERTIFICATE OF ANALYSIS

Page 1 of 1

Mirant Corporation  
21200 Martinsburg Rd.  
  
Dickerson, MD 20842  
Attn: Pat Miglio

Report No: 0803703  
Date Received: 3/27/2008  
Date Reported: 4/1/2008

Project:

Test	Result	Units	Reporting Limit	Date/Time of Analysis	Analyst
Lab ID: <b>0803703-001</b>				Collection Date: 3/27/2008 11:00:00 AM	
Client Sample ID: Grab Sample From "B" Flyash Silo				Matrix: SOLID	
<u>ICP/MS METALS, TCLP (METHOD: SW846 1311/6020)</u>					
Prep. Method: <u>SW846 3010A</u>			Prep. Date: <u>3/28/2008 10:50:00 AM</u>	Prep Analyst	<u>EDP</u>
Arsenic	<b>0.39</b>	mg/L-TC	0.040	3/28/2008 15:05	PBK
Barium	<b>0.27</b>	mg/L-TC	0.10	3/28/2008 15:05	PBK
Cadmium	<b>&lt; 0.010</b>	mg/L-TC	0.010	3/28/2008 15:05	PBK
Chromium	<b>&lt; 0.10</b>	mg/L-TC	0.10	3/28/2008 15:05	PBK
Lead	<b>&lt; 0.040</b>	mg/L-TC	0.040	3/28/2008 15:05	PBK
Selenium	<b>0.84</b>	mg/L-TC	0.10	3/28/2008 15:05	PBK
Silver	<b>&lt; 0.020</b>	mg/L-TC	0.020	3/28/2008 15:05	PBK
<u>TCLP MERCURY (HG) (METHOD: EPA 1311/7470A)</u>					
Prep. Method: <u>SW846 7470</u>			Prep. Date: <u>3/28/2008 1:43:00 PM</u>	Prep Analyst	<u>EDP</u>
Mercury	<b>&lt; 0.010</b>	mg/L -TC	0.010	3/28/2008 18:23	APS

Final report reviewed by:

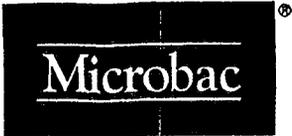
Michael D. Arbaugh, Sr./Division Manager

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

*If we have not met or exceeded your expectations, please contact the Director or Trevor Boyce, President at tboyce@microbac.com or Robert Morgan, Chief Operation Officer, at rmorgan@microbac.com.*

Microbac Laboratories, Inc. Baltimore Division- laboratory accreditations: MD 109, VA 00152, NY 11158, PA 68-339, SC 86010, ISO 17025, NELAC, AIHA 100491. The data and information on this, and other accompanying documents, represents only the sample(s) analyzed and is not to be reproduced wholly or in part for advertising or other purposes without written approval from the laboratory. Organics Qualifiers: (U) analyzed for but not detected; (J) estimated value, below the reporting limit but above one-half the reporting limit; (B) detected in the associated method blank; (D) reanalyzed at a higher dilution factor. Inorganics Qualifiers: (U) analyzed for but not detected; (B) estimated value, below the reporting limit but above one-half the reporting limit. A copy of COC is attached.





www.microbac.com

# Microbac Laboratories, Inc. Baltimore Division

2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800

Fax: 410-633-6553

www.microbac.com

## CERTIFICATE OF ANALYSIS

Page 1 of 1

Mirant Corporation  
21200 Martinsburg Rd.

Dickerson, MD 20842  
Attn: Pat Miglio

Report No: 0804006

Date Received: 3/27/2008

Date Reported: 4/1/2008

Project:

Test	Result	Units	Reporting Limit	Date/Time of Analysis	Analyst
<b>Lab ID:</b> 0804006-001	<b>Collection Date:</b> 3/27/2008 11:00:00 AM				
<b>Client Sample ID:</b> C5 HPCP Flyash	<b>Matrix:</b> SOLID				
<u>ICP/MS METALS, TCLP (METHOD : SW846 1311/6020)</u>					
Prep. Method: SW846 3010A	Prep. Date: 3/28/2008 10:50:00 AM		Prep Analyst EDP		
Arsenic	0.45	mg/L-TC	0.040	3/28/2008 15:10	PBK
Barium	0.17	mg/L-TC	0.10	3/28/2008 15:10	PBK
Cadmium	< 0.010	mg/L-TC	0.010	3/28/2008 15:10	PBK
Chromium	< 0.10	mg/L-TC	0.10	3/28/2008 15:10	PBK
Lead	< 0.040	mg/L-TC	0.040	3/28/2008 15:10	PBK
Selenium	1.0	mg/L-TC	0.10	3/28/2008 15:10	PBK
Silver	< 0.020	mg/L-TC	0.020	3/28/2008 15:10	PBK
<u>TCLP MERCURY (HG) (METHOD : EPA 1311/7470A)</u>					
Prep. Method: SW846 7470	Prep. Date: 3/28/2008 1:43:00 PM		Prep Analyst EDP		
Mercury	< 0.010	mg/L -TC	0.010	3/28/2008 18:25	APS

Final report reviewed by:

Michael D. Arbaugh, Sr./Division Manager

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

If we have not met or exceeded your expectations, please contact the Director or Trevor Boyce, President at tboyce@microbac.com or Robert Morgan, Chief Operation Officer, at rmorgan@microbac.com.

Microbac Laboratories, Inc. Baltimore Division- laboratory accreditations: MD 109, VA 00152, NY 11158, PA 68-339, SC 86010, ISO 17025, NELAC, AIHA 100491. The data and information on this, and other accompanying documents, represents only the sample(s) analyzed and is not to be reproduced wholly or in part for advertising or other purposes without written approval from the laboratory. Organics Qualifiers: (U) analyzed for but not detected; (J) estimated value, below the reporting limit but above one-half the reporting limit; (B) detected in the associated method blank; (D) reanalyzed at a higher dilution factor. Inorganics Qualifiers: (U) analyzed for but not detected; (B) estimated value, below the reporting limit but above one-half the reporting limit. A copy of COC is attached.



Mr. Terry Lindsay  
 Mirant  
 1400 North Royal Street  
 Alexandria, VA 22314

Date: April 10, 2008  
 TEC Services I.D.: 08-0648  
 Lab No.: 08-109

REPORT OF FLY ASH TESTS					
Sample I.D. No.: <u>Dickerson Fly Ash</u>		Date Sampled: <u>3-10-08</u>			
Manufacturer: <u>Mirant</u>		Date Received: <u>March 10, 2008</u>			
Chemical Analysis			Results	Specification (Class F)	
				ASTM C618-03	AASHTO M295-05
Silicon Dioxide			41.04	---	---
Aluminum Oxide			27.76	---	---
Iron Oxide			9.98	---	---
Sum of Silicon Dioxide, Iron Oxide & Aluminum Oxide			78.77	70 % min.	70 % min.
Calcium Oxide			2.35	---	---
Magnesium Oxide			0.59	---	---
Sulfur Trioxide			0.31	5 % max.	5 % max.
Loss on Ignition			13.69	6 % max.	5 % max.
Moisture Content			0.14	3 % max.	3 % max.
Available Alkalies as Na <sub>2</sub> O			1.23	---	1.5 % max.
Physical Analysis					
Fineness (Amount Retained on #325 Sieve)			32.5%	34 % max.	34 % max.
Strength Activity Index with Portland Cement					
At 7 Days:					
Control Average, psi: 4260		Test Average, psi: 2710	64%	75 % min. (of control)	75 % min. (of control)
At 28 Days:					
Control Average, psi: 5860		Test Average, psi: 4330	74%	75 % min. (of control)	75 % min. (of control)
Water Requirements (Test H <sub>2</sub> O/Control H <sub>2</sub> O)					
Control, mls: 242		Test, mls: 255	105%	105 % max. (of control)	105 % max. (of control)
Autoclave Expansion			0.06%	± 0.8 % max.	± 0.8 % max.
Uniformity Requirements			Variation		
Specific Gravity:	2.24	Average: ---	NA	5 % max. from average	5 % max. from average
% Retained #325 Sieve:	32.5	Average: ---	NA	5 % max. from average	5 % max. from average

\* Optional

\*\* Uniformity is based off of an average of 10 tests. This is the third sample and no average has been obtained.

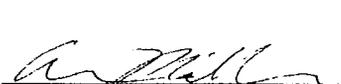
The results of our testing indicate that this sample does not comply with ASTM C618-03 and AASHTO M295-05 specifications for Class F pozzolans.

Respectfully Submitted,

**Testing, Engineering & Consulting Services, Inc.**



Trey McCants  
 Staff Chemist



Anne Miller  
 Staff Engineer



April 10, 2008

Mr. Terry Lindsay  
Mirant  
1400 North Royal Street  
Alexandria, VA 22314

Phone: 410-603-01432  
E-mail: terry.lindsay@mirant.com

Subject: **Final Report - Dickerson Fly Ash Chemical/Physical Properties**  
**Project No. TEC 08-0648**  
**Lab ID. 08-109**

Mr. Lindsay:

Testing Engineering & Consulting Services Inc. (TEC Services) is pleased to present this report of the chemical analysis completed on the submitted Dickerson fly ash sample. The sample was received at our laboratory on March 10, 2008. The chemical analyses were performed by Wyoming Analytical Services. The physical performance testing was completed by TEC Services in accordance with ASTM C618.

We appreciate the opportunity to provide our services to you. If you should have any questions please feel free to contact us at 770-995-8000

Sincerely,

**Testing, Engineering & Consulting Services, Inc.**

James G. McCants III  
Staff Chemist

Anne Miller  
Staff Engineer

Attachments: Table 1 – Elemental Analysis  
Table 2 – Oxide Analysis and Other Properties  
Table 3 – Physical Performance Testing

**Table 1 – Elemental Analysis**

<u>Element</u>	<u>EPA Methods</u>		
	<u>1311/6020</u> <u>SPLP (mg/L)</u>	<u>3052/6020</u> <u>Total Metals (mg/kg)</u>	<u>1311/6020</u> <u>TCLP (mg/L)</u>
Aluminum	3.0	6250	NA
Antimony	0.008	0.90	NA
Arsenic	0.05	39.4	< 1
Barium	0.102	212	< 20
Beryllium	< 0.001	1.19	NA
Boron	< 0.1	< 0.1	NA
Cadmium	0.001	0.47	< 0.2
Chromium	< 0.001	6.74	< 1
Cobalt	< 0.001	4.13	NA
Copper	< 0.001	24.6	NA
Iron	< 0.1	3060	NA
Lead	0.002	14.6	< 1
Manganese	< 0.01	9.0	NA
Mercury	< 0.001	0.31	< 0.04
Molybdenum	.0281	20	NA
Nickel	< 0.001	12.2	NA
Selenium	0.24	20	0.3
Silver	0.001	1.22	< 1.0
Sodium	2.64	1345	NA
Thallium	< 0.001	1.82	NA
Vanadium	0.212	56	NA
Zinc	0.14	119	NA
Chloride	9.1	NA	NA
Nitrate as N	NA	NA	0.15

**Table 2 – ASTM C114 Analysis and Other Properties**

<u>Compound</u>	<u>wt. %, Dry Basis</u>		
Silicon Dioxide	41.04		
Aluminum Oxide	27.76		
Iron Oxide	9.98		
Calcium Oxide	2.35		
Magnesium Oxide	0.59	pH (as received)	9.3
Sodium Oxide	0.22	Chloride per ASTM C1152	0.003 wt.%
Potassium Oxide	1.56	Alkalinity per ASTM C25	0.60 wt.%
Titanium Dioxide	1.50	Base to Acid Ratio	0.21
Manganese Oxide	0.03	Silica Ratio	0.76
Phosphorus Pentoxide	0.75		
Strontium Oxide	0.15		
Barium Oxide	0.09		
Sulfur Trioxide	0.31		
Loss on Ignition	13.69		
Moisture Content	0.14		

**Table 3 – Physical Performance Testing for ASTM C618**

Physical Performance		Results	Specification (Class F)	
			ASTM C618-03	AASHTO M295-05
Fineness (Amount Retained on #325 Sieve)		32.5%	34 % max.	34 % max.
Strength Activity Index with Portland Cement				
At 7 Days:		64%	75 % min. (of control)	75 % min. (of control)
Control Average, psi: 4260	Test Average, psi: 2710			
At 28 Days:		74%	75 % min. (of control)	75 % min. (of control)
Control Average, psi: 5860	Test Average, psi: 4330			
Water Requirements (Test H <sub>2</sub> O/Control H <sub>2</sub> O)		105%	105 % max. (of control)	105 % max. (of control)
Control, mls: 242	Test, mls: 255			
Autoclave Expansion		0.06%	± 0.8 % max.	± 0.8 % max.
Uniformity Requirements		Variation		
Specific Gravity: 2.24	Average: ---	NA	5 % max. from average	5 % max. from average
% Retained #325 Sieve: 32.5	Average: ---	NA	5 % max. from average	5 % max. from average

## Certificate of Analysis

Customer: Mirant Mid-Atlantic, LLC  
 Patrick Miglio  
 21200 Martinsburg Road  
 Dickerson, MD 20842

Report Date: June 06, 2008

Page 1 of 2

Material Tested: Fly Ash  
 Date Sampled: 05/20/2008  
 Date Received: 06/02/2008

Time Sampled: 0:00

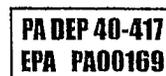
HawkMtn WO #: 0806-00280-001

Sampler: Client

Sample Point ID: Morgantown Ash

Client Sample ID: Morgantown Ash Sample #1 Silo 5/20/08

<u>Test Name</u>	<u>Test Results</u>	<u>Method</u>	<u>Technician</u>	<u>Analysis Date</u>	<u>Time</u>
pH, Solid	9.6 su	SW846-9045	LAP	06/03/2008	12:00
Aluminum, Dry Weight	26000 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Antimony, Dry Weight	6.51 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Arsenic, Dry Weight	109 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Barium, Dry Weight	266 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Beryllium, Dry Weight	10.4 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Boron, Dry Weight	150 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Cadmium, Dry Weight	<2.0 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Calcium, Dry Weight	10300 mg/kg	SW846 6010B	MC	06/03/2008	18:00
Chromium, Dry Weight	77.2 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Cobalt, Dry Weight	24.4 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Copper, Dry Weight	91.9 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Iron, Dry Weight	27200 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Lead, Dry Weight	35.0 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Manganese, Dry Weight	69.8 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Mercury, Dry Weight	0.267 mg/kg	SW846-7471A	MC	06/04/2008	12:30
Molybdenum, Dry Weight	20.1 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Nickel, Dry Weight	49.3 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Selenium, Dry Weight	11.6 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Silver, Dry Weight	<1.0 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Sodium, Dry Weight	858 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Thallium, Dry Weight	525 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Vanadium, Dry Weight	153 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Zinc, Dry Weight	79.6 mg/kg	SW846-6010B	MC	06/03/2008	18:00
Acid Neutralization Potent	12.5 **	EPA 600/2-78-054	LAP	06/06/2008	9:46
SPLP, fluid #1	9.8 su, ending	SW846-1312; 9045	DDF	06/03/2008	9:00
Aluminum, leachate	7.55 mg/l	SW846-6010B	MC	06/03/2008	18:00
Arsenic, Leachate	0.19 mg/l	SW846-6010B	MC	06/03/2008	18:00
Antimony, Leachate	0.05 mg/l	SW846-6010B	MC	06/18/2008	18:00
Barium, Leachate	0.139 mg/l	SW846-6010B	MC	06/03/2008	18:00
Beryllium, Leachate	<0.010 mg/l	SW846-6010B	MC	06/03/2008	18:00
Boron, Leachate	2.40 mg/l	SW846-6010B	MC	06/03/2008	18:00
Cadmium, Leachate	<0.020 mg/l	SW846-6010B	MC	06/03/2008	18:00
Chromium, Leachate	0.048 mg/l	SW846-6010B	MC	06/03/2008	18:00



## Certificate of Analysis

Customer: Mirant Mid-Atlantic, LLC  
 Patrick Miglio  
 21200 Martinsburg Road  
 Dickerson, MD 20842

Report Date: June 06, 2008

Page 2 of 2

Material Tested: Fly Ash  
 Date Sampled: 05/20/2008 Time Sampled: 0:00  
 Date Received: 06/02/2008

HawkMtn WO #: 0806-00280-001  
 Sampler: Client  
 Sample Point ID: Morgantown Ash

Client Sample ID: Morgantown Ash Sample #1 Silo 5/20/08

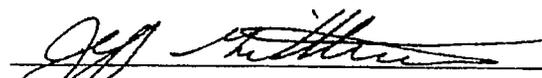
<u>Test Name</u>	<u>Test Results</u>	<u>Method</u>	<u>Technician</u>	<u>Analysis Date</u>	<u>Time</u>
Cobalt, Leachate	<0.020 mg/l	SW846-6010B	MC	06/03/2008	18:00
Copper, Leachate	<0.02 mg/l	SW846-6010B	MC	06/03/2008	18:00
Iron, Leachate	<0.10 mg/l	SW846-6010B	MC	06/03/2008	18:00
Lead, Leachate	<0.10 mg/l	SW846-6010B	MC	06/03/2008	18:00
Manganese, Leachate	<0.020 mg/l	SW846-6010B	MC	06/03/2008	18:00
Mercury, Leachate	<0.001 mg/l	SW846-7470A	MC	06/04/2008	12:30
Molybdenum, Leachate	0.73 mg/l	SW846-6010B	MC	06/03/2008	18:00
Nickel, Leachate	<0.020 mg/l	SW846-6010B	MC	06/03/2008	18:00
Selenium, Leachate	0.29 mg/l	SW846-6010B	MC	06/03/2008	18:00
Silver, Leachate	<0.010 mg/l	SW846-6010B	MC	06/03/2008	18:00
Sodium, Leachate	11.8 mg/l	SW846-6010B	MC	06/03/2008	18:00
Thallium, Leachate	<0.05 mg/l	SW846-6010B	MC	06/03/2008	18:00
Vanadium, Leachate	0.338 mg/l	SW846-6010B	MC	06/03/2008	18:00
Zinc, Leachate	<0.025 mg/l	SW846-6010B	MC	06/03/2008	18:00
SPLP Fluid #3, Water	9.9 su, ending	SW846-1312; 9045	DDF	06/03/2008	9:00
Fluoride	0.86 mg/l	EPA 300 HPLC IC	SAB	06/02/2008	11:00
Chloride, Leachate	<1.0 mg/l	EPA 300 HPLC IC	SAB	06/02/2008	11:00
Nitrite, Leachate	<0.10 mg/l	EPA 300 HPLC IC	SAB	06/02/2008	11:00
Nitrate, Leachate	<0.50 mg/l	EPA 300 HPLC IC	SAB	06/02/2008	11:00
Sulfate, Leachate	703 mg/l	EPA 300 HPLC IC	SAB	06/02/2008	11:00
Sulfur Trioxide	0.40 %	ASTM D4239 (Inducti	DDF	06/06/2008	14:40

\*\* Tons of CaCO<sub>3</sub> equivalent per 1,000 tons of material.

These results relate only to the sample noted above.

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 Ronald Andrae, Technical Director

  
 Jeff Gittleman, Lab Director

**Mirant Fly Ash analysis**

Morgantown Ash Sample #1 silo

Date Sampled: May 20, 2008

Contact Information:

Pat Miglio  
21200 Martinsburg, Rd.  
Dickerson, MD 20842  
(C) 202-365-6812  
patrick.miglio@mirant.com

pH (as received basis)

alkalinity (as received basis)  $\leq$  W-PH-S

Total metals

Chemical requirements

Sulfur trioxide

Fly ash analysis – Pennsylvania Module 25A requirements (SPLP)  
 Please add the following to this list: **Beryllium, Cobalt, Silver, Thallium, and Vanadium**

5600-PM-MR0011 8/98

SECTION E: COAL ASH AND LEACHATE ANALYSES					
Coal Ash Generation Facility Name _____					
RESULTS OF ANALYSES <input type="checkbox"/> No pH adjustment <input type="checkbox"/> After pH Adjustment					
Constituents	Acceptable Methods of Analysis Indicate Method Used		Ash Dry Wt. Concentration. (mg/kg)	EPA's SW-846 Method 1312, SPLP Leachate Concentration (mg/L)	Maximum Acceptable Leachate Concentration (mg/L)
	EPA SW-846	Other Acceptable			
pH Solid	9045				
Aluminum	6010A, 7020				5.0
Antimony	6010A, 7040, 7041				0.15
Arsenic	6010A, 7060A, 7061A				1.25
Barium	6010A, 7080A, 7081				50
Boron		EPA 600/4-79-020			31.50
Cadmium	6010A, 7130, 7131A				0.13
Chromium	6010A, 7190, 7191				2.5
Copper	6010A, 7210, 7211				32.5
Iron	6010A, 7380, 7381				7.5
Lead	6010A, 7420, 7421				1.25
Manganese	6010A, 7460, 7461				1.25
Mercury	7470, 7471A				0.05
Molybdenum	6010A, 7480, 7481				4.38
Nickel	6010A, 7250				2.5
Selenium	6010A, 7740, 7741				1.00
Zinc	6010A, 7950, 7951				125
Sulfate	9035A, 9036A, 38A				2500
Chloride	9250, 9251A, 9252				2500
Sodium	6010A, 7770				
Acid Neutralizing Potential*	Method of Analysis		Calcium Carbonate Equivalence		
	<input type="checkbox"/> Neutralization Potential Test, DEP's Overburden Sampling and Testing Manual, Noll <i>et al.</i> <input type="checkbox"/> Other indicate method _____		Tons of CaCO <sub>3</sub> per 1,000 tons of ash _____	% CaCO <sub>3</sub> Dry Wt. _____	
Hydraulic Conductivity**	<input type="checkbox"/> ASTM D 5084-90 <input type="checkbox"/> Other indicate method _____		Permeability (cm/sec)		
* Provide only when the requested beneficial use is as a liming agent for a soil substitute or soil additive or as alkaline addition.					
** Provide only when the requested beneficial use is as a low-permeability material.					
Analytical Laboratory Name, Address _____			Analyst(s) Name _____		
_____			_____		
_____			Telephone No. _____		
Laboratory reports must be attached					

## Attachment C

## Mirant Mid-Atlantic, LLC Dickerson Generating Station - CCB Tonnage Report 2008

Year	By Product	Dickerson			
		MD. Ash Mgmt. Disposal Site	Onsite Use & Storage	Sold	Total
2004	Flyash	178	0	7	185
	Bottom Ash	29		2	31
	FGD Sludge				
	Other:				
2005	Flyash	199	0	1	200
	Bottom Ash	22		13	35
	FGD Sludge				
	Other:				
2006	Flyash	153.8	0	24.8	178.6
	Bottom Ash	0	23.6	4.9	28.5
	FGD Sludge				
	Other:				
2007	Flyash	185		13	198
	Bottom Ash	22		8.1	30.1
	FGD Sludge				
	Other:				
2008	Flyash	208.3		20	228.3
	Bottom Ash	25.3		5.4	30.7
	FGD Sludge				
	Other:				

Note: Values are in thousand tons dry unless otherwise indicated.