



Raven Power

February 27, 2014

Martha Hynson
Maryland Department of the Environment
Land Management Administration
Solid Waste Program
1800 Washington Boulevard, Suite 605
Baltimore, Maryland 21230-1719

SOLID WASTE

MAR 05 2014

PROGRAM

Re: Annual Generator Tonnage Reports for Calendar Year 2013 for the Brandon Shores, C. P. Crane, and H. A. Wagner Electric Generating Stations

Dear Ms. Hynson:

Enclosed please find the 2013 Annual Generator Tonnage Reports for Raven Power's Brandon Shores, C. P. Crane, and H. A. Wagner generating facilities. These reports cover the period from January 1, 2013 to December 31, 2013 for all of the coal-fired units at these facilities and reflect coal combustion byproduct production, beneficial reuse, and disposal figures at all three facilities.

Please contact me with any questions regarding these reports at 410-787-5188, or by email at amontier@raven-power.com. You can also contact Thomas Weissinger, Director, Environmental, at 410-787-5532, or by email at tweissinger@raven-power.com.

Regards,

Anthony Montier
Environmental Manager, Raven Power

Enclosures (3)

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

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

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

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

A. Contact information:

Facility Name: H. A. Wagner Generating Facility

Name of Permit Holder: H. A. Wagner LLC

Facility Address: 3000 Brandon Shores Road
Street

Facility Address: Baltimore Maryland 21226
City State Zip

County: Anne Arundel

Contact Information (Person filing report or Environmental Manager)

Facility Telephone No.: 410-787-5188 Facility Fax No.: 410-787-5160

Contact Name: Anthony Montier

Contact Title: Environmental Manager

Contact Address: 1005 Brandon Shores Road, Suite 100
Street

Contact Address: Baltimore Maryland 21226
City State Zip

Contact Email: amontier@raven-power.com

Contact Telephone No.: 410-787-5188 Contact Fax No.: 410-787-5160

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:

The H. A. Wagner electric generating facility has two coal fired units which produce electricity for commercial sale. Unit 2 is equipped with a Babcock & Wilcox single reheat boiler which burns approximately 60 tons of bituminous Central Appalachian (“CAPP”) coal per hour at full load. Unit 3 is equipped with a Babcock & Wilcox double reheat once-through supercritical boiler which burns approximately 120 tons per hour of bituminous CAPP coal per hour at full load. For both units, coal is delivered by barge and stored in a pile adjacent to the plant. A proprietary additive, Chem-Mod®, is added to the coal for NOx and mercury emissions reduction as it is conveyed by belt from the coal pile to storage bunkers in the plant. The coal is then pulverized and fed by air to the boilers where it is burned using low NOx burners.

On both units, the heavier ash (bottom ash) drops to the bottom of the boilers where it is conveyed by water to dewatering bins before it is eventually loaded onto trucks for disposal. Lighter ash (fly ash) is conveyed by furnace air flow to electrostatic precipitators where the ash is collected and falls to storage hoppers below. Ash is conveyed pneumatically from the hoppers to storage silos where it is loaded into trucks for either beneficial reuse or disposal.

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

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

Calendar Year 2013		Volume and Weight of CCBs Generated for C		
CCB	Type of CCB	Fly Ash Type of CCB	Bottom Ash Type of CCB	Type of CCB
	96,524	2,534	---	---
	Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards
	71,669	1,882	---	---
	Weight of CCB, in Tons	Weight of CCB, in Tons	Weight of CCB, in Tons	Weight of CCB, in Tons

Additional notes:

Coal combustion byproducts ("CCB") are reported in dry tons. Cubic yards are calculated using a conversion factor of 1 ton = 1.3468 cubic yards.

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.

No modeling or risk assessments were completed during 2013.

E. Copies of all laboratory reports of all chemical characterizations of the CCBs. Please attach this information to the report.

No chemical characterizations of CCBs were conducted at Wagner in 2013.

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

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

Fly Ash - Beneficial Reuse

18,988 tons (25,573 CY) of fly ash was delivered to Separation Technologies, Inc. in Baltimore, MD for use in concrete.

17,437 tons (23,484 CY) of fly ash was delivered to Lehigh in Union Bridge, MD for use in cement manufacturing.

966 tons (1,301 CY) of fly ash was delivered to Ashworks in Wilmington, DE for use as flow-able fill.

35 tons (47 CY) of fly ash was delivered to MERG in Williamsport, MD for use in cement manufacturing.

Fly Ash - Disposal

33,024 tons (44,477 CY) of fly ash was delivered to the Fort Armistead Road – Lot 15 Landfill in Baltimore, MD for landfilling.

Fly Ash - Storage

1,219 tons (1,642 CY) of fly ash was stored on site at the end of 2013.

Bottom Ash - Beneficial Reuse

39 tons (52 CY) of bottom ash was delivered to Lehigh in Union Bridge, MD for use in cement manufacturing.

Bottom Ash - Disposal

1,843 tons (2,482 CY) of bottom ash was delivered to the Fort Armistead Road – Lot 15 Landfill in Baltimore, MD for landfilling.

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

Fly Ash

36,460 tons (49,104 CY) of fly ash was used in the manufacturing of concrete or cement.

966 tons (1,301 CY) of fly ash was used as flow-able fill.

Bottom Ash

39 tons (52 CY) of bottom ash was used in cement manufacturing.

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:

Fly Ash

Raven projects that as much as 75,000 tons (101,025 CY) of fly ash will be generated each year for the next five years. Approximately 62,000 tons (83,514 CY) of fly ash will be beneficially used in cement and/or concrete products and the remaining 13,000 tons (17,511 CY) will be disposed of in the Fort Armistead Road - Lot 15 LLC landfill in Baltimore, MD.

Bottom Ash

Raven projects that approximately 3,000 tons (4,000 CY) of bottom ash will be generated each year for the next five years, of which 2,500 tons (3,375 CY) will be beneficially used in cement and/or concrete products and 500 tons (675 CY) will be disposed of in the Fort Armistead Road - Lot 15 LLC landfill in Baltimore, MD.

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

Fly Ash

Approximately 62,000 tons (83,513 CY) of fly ash each year will be beneficially used in cement and/or concrete products.

Bottom Ash

Approximately 2,500 tons (3,375 CY) of bottom ash each year will be beneficially used in cement and/or concrete products.

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	Scott Blair Authorized Representative, Raven Power 410-787-5017 <hr/> Name, Title, & Telephone No. (Print or Type) sblair@raven-power.com <hr/> Your Email Address	02/26/2014 <hr/> Date
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V: Attachments (please list):

None



Sara Haile -MDE- <sara.haile@maryland.gov>

A lab report for H.A. Wagner

Montier, Anthony <amontier@raven-power.com>

Tue, Mar 18, 2014 at 10:31 AM

To: Sara Haile -MDE- <sara.haile@maryland.gov>

Typically if we do not change coals, or some other part of the process (such as injecting dry sorbent), we will not run another sample. We have been burning the same low-sulfur Central Appalachian coal at Wagner for several years so there has been no need to re-characterize the CCBs since our last test in February 2011, and those characterization reports were included with the 2011 Annual CCB Report.

From: Sara Haile -MDE- [mailto:sara.haile@maryland.gov]**Sent:** Tuesday, March 18, 2014 8:23 AM

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