Constellation C.P. Crane

MARYLAND DEPARTMENT OF THE ENVIRONMENT
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Land Management Administration • Solid Waste Program

Coal Combustion Byproducts (CCB)
Annual Generator Tonnage Report
Instructions for Calendar Year 2011

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 2011. Please answer the questions on the form provided, attaching additional information and any requested supplemental information to the back of the form. *Note that there were some changes to the form for this year, requiring both volume and weight of the CCBs produced. If you know one of these parameters but not the others, for example, you have the tonnage produced but not the volume, you may calculate the other parameter; however, please provide the calculations and assumptions that you used in your estimate.* Questions can be directed to the Solid Waste Program at (410) 537-3315 or via email at edexter@mde.state.md.us.

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. 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."*

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 SEPERATELY 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, 2012:

A. Contact information:

Facility Name: C.P. Crane Electric Generation Station

Name of Permit Holder: Constellation Power Source Generation

Facility Address: 1001 Carroll Island Road
Street

Facility Address: Chase Maryland 21220
City State Zip

County: Baltimore

Contact Information (Person filing report or Environmental Manager)

Facility Telephone No.: 410.682.9797 Facility Fax No.: 410.682.9805

Contact Name: John E. Murosko, P.G.

Contact Title: Program Manager, Environmental Services

Contact Address: 1005 Brandon Shores Road
Street

Contact Address: Baltimore Maryland 21226
City State Zip

Contact Email: john.murosko@constellation.com

Contact Telephone No.: 410.787.5471 Contact Fax No.: 410.787.6637

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 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:

The C.P. Crane Generating Station (Crane) is located along Seneca Creek in eastern Baltimore County. The plant consists of two coal-fired units: Unit 1, which is rated at 200 MW gross, 190 MW net, and which began operating in 1961; and Unit 2, which is rated at 205 MW gross, 195 MW net, and which began operating in 1963. Both units use cyclone-type boilers manufactured by Babcock and Wilcox (B&W).

Coal is supplied to the plant via rail and is stored adjacent to the plant. The coal is prepared for use by two Pennsylvania hammer mill type crushers. After crushing, the coal is processed by the addition of Cyclean a proprietary additive. Cyclean, first added in December, 2011, aids in slag flow once combusted, as well as mercury reduction in flue gas. It is gravity-fed to the boilers after transport into the plant via mechanical conveyor.

Each unit is equipped with a baghouse for capture and control of particulate matter (PM) emissions. Fly ash is typically collected from the baghouse hoppers and conveyed pneumatically to storage silos from where it is loaded into trucks for final disposition. Currently, fly ash is also removed at the air heater hoppers using vacuum trucks, and transported to a temporary storage facility for final disposition. The temporary storage facility consists of a covered asphalt pad located in the coal yard, and is available as circumstances warrant its use. Boiler slag is recovered from the boilers, stored in dewatering bins where it is processed for shipping.

Coals burned in 2011 at the C.P. Crane Plant included bituminous coal from Northern Appalachia, and sub-bituminous coal from the Powder River Basin.

C. The volume and weight of coal combustion byproducts generated during calendar year 2011, including an identification of the different types of coal combustion byproducts 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 2011: Please note the change to this table from previous years, to include both the volume and weight of the types of CCBs your facility produces.

Volume and Weight of CCBs Generated for Calendar Year 2011			
Fly Ash	Boiler Slag	---	---
Type of CCB	Type of CCB	Type of CCB	Type of CCB
22,006	23,879	---	---
Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards	Volume of CCB, in Cubic Yards
16,340 dry tons	17,730 dry tons	---	---
Weight of CCB, in Tons	Weight of CCB, in Tons	Weight of CCB, in Tons	Weight of CCB, in Tons

Additional notes:

CCBs reported in dry tons
Used conversion factor of 1 ton = 1.3468 cubic yards to calculate CY

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.

No modeling or risk assessments have been performed during the past year.

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

Attached.

F. A description of how you disposed of or used your coal combustion byproducts in calendar year 2011, identifying:

(a) The types and volume of coal combustion byproducts disposed of or used (if different than described in Paragraph C above) including any coal combustion byproducts stored during the previous calendar year, 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:

Disposal (in dry tons)

145 tons/195 CY Fly Ash delivered to Charles City Landfill were used for daily cover in a municipal solid waste (MSW) landfill located in Charles City, VA.

51 tons/68 CY Fly Ash delivered to The East End Landfill in Henrico, VA were used for daily cover in a municipal solid waste (MSW) landfill.

13,309 tons/17,925 CY Fly Ash delivered to Tri-Cities Landfill in Petersburg, VA were used as structural fill to build walls and barriers in that MSW landfill.

2,835 tons/3,818 CY Fly Ash delivered to the company-owned Lot 15 CCB Landfill in Baltimore, MD for disposal.

Beneficial Use (in dry tons)

3,510 tons/4,727 CY Boiler Slag delivered to Virginia Materials, Inc. in Baltimore, MD were beneficially used for abrasives and roofing granules.

14,220 tons/19,152 CY Boiler Slag delivered to Virginia Materials, Inc. in Norfolk, VA were used for abrasives and roofing granules.

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

Beneficial Use (in dry tons)

17,730 tons/23,879 CY Boiler Slag were beneficially used for abrasives and roofing granules.

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 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:

Fly Ash: CPSG projects that as much as 31,000 tons/41,751 CY will be generated each year for the next five years. Unless suitable beneficial uses are identified, the fly ash will be disposed of in the company-owned Lot 15 CCB landfill in Baltimore, Maryland, permitted and authorized to accept CCBs for disposal.

Boiler Slag: CPSG projects that approximately 24,000 tons/32,323 CY will be generated each year for the next five years, all of which will be beneficially used for blasting grit and/or roofing granules.

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

Fly Ash: While there are currently no identified beneficial uses of the projected 31,000 tons/ 41,751 CY of fly ash that may be generated over the next 5 years, it is possible that all or some portion of the fly ash generated at C.P. Crane will be beneficially used. The potential exists that with proper certification as a Class C fly ash, it can be beneficially used in concrete products.

Boiler Slag: Approximately 24,000 tons/32,323 CY each year will be beneficially used for blasting grit and/or roofing granules.

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	Name, Title, & Telephone No.	Date
	Constellation Power Source Generation, Inc. Daniel L. Haught, VP ~~Baltimore Operations~~ 410.787.6415	
	Daniel.haught@constellation.com Your Email Address	2/29/12

V: Attachments (please list):

Analytical Results for Various Ash Samples
Summary Table

C.P. Crane (in dry tons)	In Maryland		Outside Maryland	
	Beneficially Used	Disposed	Beneficially used	Disposed
Fly Ash	----	2,835	----	13,505
Boiler Slag	3,510	----	14,220	----

MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT
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Martin O'Malley
Governor

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Secretary

2011 CCB Annual Generator Report Notes:

Additional lab test results were submitted to the Department along with this generator report. Inquiries regarding these additional materials should be addressed to:

Ms. Martha Hynson
Chief, Solid Waste Operations Division
Land Management Administration
(410) 537-3315
mhynson@mde.state.md.us