



REPORT TO THE LEGISLATURE:
Status of the State Coal Combustion
By-Products Management Fund

Fiscal Year 2011

Prepared for:

Senate Education, Health, and Environmental Affairs Committee
and the
House Environmental Matters Committee
Maryland General Assembly



MARYLAND DEPARTMENT OF THE ENVIRONMENT



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REPORT TO THE LEGISLATURE:
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November 1, 2011

INTRODUCTION, BACKGROUND, AND SCOPE. This report is submitted to the General Assembly of Maryland to satisfy §9-285 of the Environment Article, Annotated Code of Maryland, which requires that the Maryland Department of the Environment (“MDE”, the “Department”) inform the Legislature about the status of the State Coal Combustion By-products Management Fund, which was created by §9-282 of the Environment Article effective July 1, 2009. The specific topics that §9-285 requires the Department to provide information about are:

- (1) The status of the Fund;
- (2) Revenues of and expenditures from the Fund;
- (3) The efficiency of the regulatory program;
- (4) Compliance rates within the regulatory program; and
- (5) Based on the factors listed in items (1) through (4) above, the necessity to review and adjust the fee in accordance with § 9-283(g).

The purpose of the State Coal Combustion By-products Management Fund (the “Fund”) is to provide the Department with the resources to oversee the disposal, beneficial use, and management of coal combustion by-products (“CCBs”) in the State of Maryland. These materials are the residuals created when coal is burned. Coal consists of a large percentage of organic carbon, with a variable percentage of other naturally-occurring minerals that may contain a wide range of elements including metals. A significant amount of volume reduction takes place when the coal is burned, as a large percentage of the organic carbon in the coal is converted into carbon dioxide. The carbon dioxide escapes as a gas; but most of the chemicals that made up the other minerals remain as solids, often oxides formed when the rock is burned. The removal of the carbonaceous material causes the percentage, or concentration, of the nonvolatile elements that were present to be increased in the residual ash. So, although there is no more of a given element in the ash than there was in the original coal, it is now mixed with a much smaller volume of other chemicals, producing a higher concentration in the ash than there was in the original coal. Therefore, although largely derived from natural earth materials including coal and limestone, CCBs can contain potentially harmful amounts of some heavy metals, such as mercury, lead, chromium, cadmium, selenium, molybdenum, and boron, among others. Although not acutely toxic or immediately hazardous, the concentrations of these chemicals can be harmful to plant and aquatic life, and can render the air and both surface water and groundwater unhealthy for prolonged human consumption.

The need for closer regulation of CCBs was brought into sharp focus in 2006 and 2007 with the discovery that the BBSS, Inc. site in Crofton, Anne Arundel County, where CCBs were being used to reclaim a sand and gravel mine and had contaminated nearby domestic water supplies (for more information, see the fact sheet and related materials on MDE’s Coal Combustion By-products webpage at <http://www.mde.maryland.gov/programs/marylander/publichealthhome/pages/citizensinfocenter/health/flyash.aspx>).

In addition to responding to that crisis, MDE undertook numerous other actions to better regulate CCBs, including a survey of past and current CCB disposal sites, the development of comprehensive new regulations setting stringent standards for the disposal and use of CCBs in landfills and mine reclamation, and enforcement action against several sites which were found to be causing environmental impacts, including the BBSS site. Among other successful outcomes, these efforts resulted in the promulgation of several regulations, which are discussed below. More information on MDE’s activities to regulate CCBs is available on the MDE website at http://mde.maryland.gov/programs/Land/SolidWaste/CoalCombustionByproducts/Pages/Programs/LandPrograms/Solid_Waste/ccbs/index.aspx.

REGULATORY FRAMEWORK AND DEVELOPMENT

The Department has undertaken an aggressive approach to the development of regulations to govern all aspects of the management of CCBs. These activities have led to the promulgation of several regulations governing various aspects of CCB handling, transportation, use, and disposal. The following regulations became effective in December, 2008:

COMAR 26.04.10, Management of Coal Combustion By-products
www.dsd.state.md.us/comar/SubtitleSearch.aspx?search=26.04.10.*

Subtitle 20 Surface Coal Mining and Reclamation Under Federally Approved Program
COMAR 26.20.24 Special Performance Standards
www.dsd.state.md.us/comar/comarhtml/26/26.20.24.08.htm

Subtitle 21 Mining COMAR 26.21.04 Utilization of Coal Combustion By-products in Noncoal Surface Mine Reclamation
www.dsd.state.md.us/comar/SubtitleSearch.aspx?search=26.21.04.*

In addition, following the 2009 Legislative Session when §§9-281 through 290 relating to CCB disposal and use were added to the Environment Article, MDE was authorized to charge fees to the generators of CCBs in the State to help support the Department's regulatory efforts. This resulted in an addition to COMAR 26.04.10, initially proposed as both emergency regulations, which were effective immediately, and then a normal regulatory proposal, which was subsequently adopted on February 26, 2010.

From COMAR 26.04.10.09:

“D. Annual Generator Fee Schedule.

(1) Base Fee. The initial base fee shall be \$1.15 for each ton of coal combustion By-products generated. The base fee may be adjusted by the Department on an annual basis as provided in Environment Article, §§9283 and 9284, Annotated Code of Maryland, for the next applicable fiscal year.

(2) Base Fee Adjustment Factors. The base fee shall be adjusted depending on how the coal combustion byproducts are managed based on the appropriate adjustment factor in Table 1:

(3) Calculation of Fee. The annual generator's fee shall be calculated by adding the results of the following formula for each Management Category in Table 1:

(The number of tons of coal combustion byproducts used or disposed of in a management category during the reporting period) × (the base fee for the reporting period as determined by the Department) × (the adjustment factor for that management category) = subtotal of amount charged.

(4) Adjustment of Fees.

(a) Billing of the annual generator's fee shall be based on the generation of coal combustion by-products by a generator that occurs on a calendar year schedule beginning on January 1 of each year, and be based on the annual report of a generator for the previous calendar year as required under Regulation .08 of this chapter.

(b) Expenditures by the Department shall be calculated on a fiscal year basis, beginning on July 1 and ending on June 30 of the next calendar year.

(c) Whenever the combination of unallocated funds remaining in the Coal Combustion By-products Management Fund and the projected revenue from the annual generator's fee exceed anticipated expenditures, the annual generator's base fee shall be adjusted so that the combination of unallocated funds and revenue from the annual generator's fee does not exceed the Department's anticipated expenditures.

(d) Unallocated funds shall include all funds that are expected to be available for carryover into the next fiscal year after payment of all budgeted items and other anticipated expenses.

(5) Exemptions.

(a) A generator may not be required to pay the annual generator's fee for the following:

(i) Coal combustion byproducts that are generated by a generator generating less than 10,000 tons of coal combustion byproducts per calendar year;

(ii) Coal combustion byproducts that are used in accordance with applicable regulations in a surface coal mining and reclamation operation, in a deep mine, or in an abandoned coal mine; and

(iii) Coal combustion byproducts that are used beneficially in the State.

(b) The Department shall determine which uses reported by a generator are beneficial uses for the purpose of calculating the annual generator's fee.

(c) The Department may request supplemental information from a generator concerning a claimed use of coal combustion byproducts to determine whether a specific claimed use should or should not be exempt from the annual generator's fee, and may investigate and make case-specific determinations concerning beneficial uses and other claimed uses at any time.”

Table 1—Base Fee Adjustment Factors based on disposition or use of CCBs.

Management category:	Adjustment Factor
Coal combustion By-products disposed of in the State	1.0
Coal combustion By-products used for noncoal mine reclamation in the State	1.0
Coal combustion By-products transported out-of-State	0.5

Also, as required by §9-289(b)(1), the Department has pursued the promulgation of regulations governing the transportation of CCBs, to prevent the emission of fugitive dust from vehicles that haul CCB materials to various destinations. Changes to the existing regulations regarding CCB general restrictions and prohibited acts at COMAR 26.04.10.03 were adopted effective October 18, 2010. These changes require vehicles hauling CCBs to be covered, inspected, and, if necessary, cleaned prior to departure with a load of CCBs, in order to prevent CCB's from blowing off the load or the wheels and undercarriage of the vehicle.

Lastly, in compliance with §9-289(b)(2), the Department proposed comprehensive regulations governing the beneficial use of CCBs. These regulations were proposed as new Chapter COMAR 26.04.11 on February 26, 2010. The Department received numerous and extensive comments concerning this proposal, and is in the process of reviewing them. The Administrative Executive Legislative Review Committee (AELR) placed a “hold” on the proposed regulations while the Department worked with stakeholders on several issues. The proposed regulations have now expired since the one year after promulgation has passed. The Department has met with various focus groups concerning a variety of aspects, and is working to change the proposed regulations to accommodate the extensive comments and suggestions that were received during the public comment period. Based on the extensive nature of the comments received, the Department is developing a streamlined regulation that includes those beneficial uses that were generally supported by a consensus of those who commented, and will continue the study of the more contentious proposed uses during the coming year. The Department intends to proceed with the promulgation of these regulations in 2012.

STATUS OF THE FUND

Each year, the Department calculates a generator fee to charge the major generators to support the State’s CCB regulatory activities. This fee is based on the following factors:

1. The requirements of COMAR 26.04.10.09;
2. The amount of Coal Combustion By-products generated by each major generator, and the fate of these CCBs.
3. The funding required to operate the Department’s CCB activities for a fiscal year; and
4. The amount of money remaining in the CCB fund at the end of the previous fiscal year.

Revenues to the Fund. Under the emergency regulations, generators were required to submit a report detailing their CCB generation for the past 5 years, which was due in March 2010. Based on this information, the Department developed fees for each site generating CCBs, which are detailed in Table I. In accordance with the regulation, the initial base fee for calendar 2009 was \$1.15 per ton of CCBs disposed of in Maryland, and \$0.575 per ton for CCBs transported out of State. Invoices were mailed to generators, and \$763,614.38 was collected to support the program for the fiscal year of the Program (FY 2010). All generators paid the amounts invoiced. This was the subject of last year’s report, which is available on MDE’s website.

For Calendar Year 2010 (FY 2011), the amount appropriated was \$910,719.08, and the final amount invoiced was \$910,718.12, based on an adjusted billing fee of 1.9955 as provided for in the regulations. All generators paid the amounts invoiced.

For Calendar Year 2011 (FY 2012), the appropriated amount being invoiced is \$906,637.50. The status of the fund in FY 2012 will be the subject of next year’s report.

Expenditures from the Fund in FY 2011. All appropriated positions are now filled. A total of \$910,718.12 was expended from the Fund, largely for salaries for the technical staff, and the remainder to provide the necessary supplies needed to run the program. A balance of \$1,253.92 was remaining in the Fund at the end of FY2010, which was required to be subtracted from the total amount billed for FY 2011 activities. This was done.

Costs for FY 2011. The costs to operate the program for fiscal year 2011 were \$910,718.12. All appropriated funds were expended during the fiscal year.

Adjustments to the Base Fee. COMAR 26.04.10.09 provides that the base billing fee (subject to adjustment) is \$1.15 per ton of CCBs generated. The adjustment factors are 1.0 for CCBs disposed of or used for noncoal mine reclamation in Maryland, and 0.5 for CCBs transported out of State. No fee is charged for CCBs which are beneficially used or used for coal mine reclamation in Maryland. Of these amounts, 743,768.8 tons are

billable as either in-State disposal or transportation out-of-State. Further, the Department can adjust the base rate to accommodate anticipated expenditures. Based on the anticipated program needs and the amount of CCBs managed, the Department originally calculated the base billing fee for this billing period as \$1.52317 per billable ton. This was anticipated to generate \$910,734 (rounded), which would have left a total surplus of \$15 to be carried over if all appropriated funds were expended.

However, some generators asked MDE to re-evaluate their assessment, and provided documentation that more material was recycled or used for fee-exempt purposes than that for which they had originally been given credit. In accordance with the regulations governing the assessment of the fee, the Department agreed with the claimed exemptions (e.g., for material that was really beneficially used, or used in coal mine reclamation, which are exempted from the fee by statute). This led to a re-assessment of the amounts billed to all parties. Adjustments were made, and the base fee was changed to 1.9955 to account for the reduced amount of billable tons of CCBs. This led to billings for \$906,637.95. All invoices were paid by the generators. All of the collected funds were expended in support of CCB activities by the end of the fiscal year.

USES OF THE FUND

With the support provided by the Fund, MDE has hired geological scientists, engineers, inspectors, and an Assistant Attorney General to focus on the management of coal combustion By-products in Maryland. The following is a description of the activities of the Department in 2010-2011 that were supported by the Fund.

Review of plans and construction of liners and caps in CCB landfills and mine reclamation sites:

Constellation Energy had proposed to convert one 28 acre landfill cell of the existing Millennium Chemical industrial waste landfill at the Millennium plant near the Key Bridge in southeast Baltimore City a dedicated landfill for the disposal of CCBs from the BGE coal-fired plants in the Baltimore area. The Department reviewed plans for the proposed upgrades to the landfill liner and other structures at the landfill, and held a public hearing concerning the change. Extensive comments were received and reviewed, and the revised permit was issued in 2011. Departmental quality control engineers monitored the construction of the liner and leachate collection system in the new cell during 2011, and the site went into operation in the fall of 2011. Constellation has submitted an application to obtain a permit for the CCB permit in the name of their ash management subsidiary, and a public informational meeting for this new application was held in October 2011. This application also calls for minor increases in the cell area and height.

In addition, Departmental engineers have evaluated the plans for installation of new lined cells at two of Mirant's existing landfills to insure that they comply with the new regulations and accepted engineering practices. Technical discussions with Mirant concerning the requirements for safe closure of the Faulkner CCB site in Charles County, which is currently inactive and is managed under an NPDES discharge permit, also took place during the reporting period.

Review of groundwater data from CCB landfills. Geologists are needed throughout the Department to evaluate groundwater monitoring data from potential pollution sources, in order to discriminate between chemical pollution and naturally occurring concentrations. The CCB staff review data relating to CCB landfills located in the State to evaluate whether they have caused an impact to the local water resources. Scientific advice and testimony is also provided in support of Departmental enforcement actions.

Compliance Activities. Inspections of CCB facilities are performed by inspectors throughout the Department, and include inspections at the generating facilities, disposal sites, mine reclamation sites, and sites where CCBs are being beneficially used. During FY 2010 and 2011, Departmental counsel and scientific and enforcement staff participated in the ongoing litigation against Mirant over the Faulkner flyash disposal site in Charles County, filed litigation against Mirant in federal court concerning their CCB disposal site near Brandywine, Prince George's County, investigated and prepared for litigation regarding another CCB

disposal facility, and provided comments to Mirant concerning the proposed closure of some of their disposal sites.

Regulatory Development and review. MDE continues its efforts to evaluate the extensive comments received during the public comment period for the beneficial use regulations that were proposed in 2010, and expects to re-propose an amended version taking those comments into account in the first half of calendar 2012. In addition, the Department participated with other States in the careful evaluation of two parallel sets of regulations proposed by the United States Environmental Protection Agency (EPA) concerning CCBs. As a result of that evaluation, MDE submitted detailed comments to the EPA concerning those proposed regulations.

EFFICIENCY OF THE PROGRAM

Due to the reorganizations of the Department that took place on July 1, 2009 and 2011, increased focus on CCB activities and as the hiring and training of new staff to accomplish the requisite activities is still ongoing, the Department's CCB regulatory activities are continuing to be developed. Nevertheless, the overall efficiency is much increased due to the following factors:

- The reassignment of specific CCB-related activities to specific units within the Department;
- The allocation of staff to perform the required tasks, which are supported by the Fund; and
- The increased attention to the issue of CCBs Department-wide.

The Department is working on altering its performance-tracking and reporting mechanisms so that subsequent reports can include quantified performance benchmarks. MDE has obtained a grant from the U.S. EPA to support development of better field inspection record-keeping using laptop computers for hazardous waste site inspections, and if successful this will be expanded to other solid waste enforcement activities, including CCB inspections.

CONCLUSION

The expansion of the Department's regulatory oversight to include CCB transportation, and increasing involvement in other areas of industrial CCB management activities, will cause an increase in CCB-related activities in the coming year. MDE is taking steps to track these activities separately for next year's report.

The further development of the proposed beneficial use regulations will provide industry with accepted and desirable ways of utilizing these materials, instead of disposing of them.

The impact of recently proposed federal regulations governing CCBs is not yet fully known. The federal regulations are complex, and as EPA proposed two separate sets of regulations and has not yet chosen between them, it is not clear what impact they will have on disposal and recycling of CCBs in Maryland. EPA has proposed two possible options for public comment regarding the management of coal ash. Both options fall under the Resource Conservation and Recovery Act (RCRA). Under the first proposal, EPA would list these residuals as special wastes by rule subject to regulation under subtitle C of RCRA, when destined for disposal in landfills or surface impoundments. This would require handling of the materials under most of the requirements imposed on hazardous waste, even though CCBs usually do not test out as hazardous waste when the methods applied to other industrial wastes are used. Under the second proposal,

EPA would regulate coal ash under subtitle D of RCRA, the section for nonhazardous wastes. The Department, in association with the environmental regulatory groups from other states, analyzed these proposed regulatory systems and submitted comments to EPA concerning the impact of these regulations.

Essentially the same liner, closure, operational and groundwater monitoring requirements would be required under both proposals. The major difference is that under the RCRA C proposal, EPA would have primary enforcement authority, with the States being able to obtain delegation if they adopt the federal rule. Under the RCRA D proposal, the primary enforcement authority would lie with the States instead of with EPA, although citizen and environmental groups would also be able to sue to enforce the rule. More information about the regulatory proposals can be found on EPA's website at:

<http://www.epa.gov/epawaste/nonhaz/industrial/special/fossil/ccrule/index.htm>.

In addition, the Federal regulations docket contains the proposal and all the comments that EPA has received under EPA Docket Number EPA-HQ-RCRA-2009-0640, which can be viewed at:

<http://www.regulations.gov/#!docketDetail;dct=FR%252BPR%252BN;rpp=10;po=0;D=EPA-HQ-RCRA-2009-0640>.

That Maryland will have to alter its existing regulations at least to some extent is a certainty, but due to the large volume of comments being developed nationally – reportedly over 450,000 separate comments were received by EPA - it is impossible to know when they might take effect. To complicate matters further, bills have been introduced in Congress that would require treatment of CCBs under the non-hazardous waste regulations currently governing municipal waste landfills, but would afford EPA the direct enforcement authority they currently lack, which would allow EPA to run a CCB enforcement program in those states that elect not to institute an adequate CCB regulatory program.

Either of the two proposed federal regulatory schemes include as major elements the same basic environmental controls that are provided by Maryland's new regulatory system for CCBs: liners, leachate collection systems, closure caps, dust control, and groundwater monitoring. Maryland's regulations go further than the proposed federal regulations in some areas, such as the specific requirements for inspection and covering of vehicles transporting CCBs. MDE is confident that our existing regulatory program would be approved by EPA with only a few changes to accommodate elements of the federal program which are not currently met by the existing regulations, such as the 30-year post-closure period (currently specified to be 5 years under existing Maryland statutes for industrial waste landfills). This possible requirement of the federal regulation may require a change in Maryland statute governing financial assurance for waste disposal facilities as well.

Table I: **List of CCB invoices needed for calendar 2010:**

Vendor Address	For Generator:	Amount Owed
Mr. Pat Miglio GenOn Maryland Ash Management, LLC 8301 Professional Place West, Suite 230 Landover, MD 20785	Mirant – Morgantown:	\$333,564.22
Mr. Pat Miglio GenOn Maryland Ash Management, LLC 8301 Professional Place West, Suite 230 Landover, MD 20785	Mirant – Dickerson:	\$175,539.93
Mr. Pat Miglio GenOn Maryland Ash Management, LLC 8301 Professional Place West, Suite 230 Landover, MD 20785	Mirant – Chalk Point:	\$213,730.60
Ms. Jennifer Hazen R. Paul Smith Power Station c/o Allegheny Energy 800 Cabin Hill Drive Greensburg, PA 15601	R. Paul Smith	\$12,262.16
Mr. John Quinn Constellation Energy 2 Center Plaza, 12 th Floor 110 West Fayette Street Baltimore, MD 21201	BGE - Brandon Shores	\$85,873.77
Mr. John Quinn Constellation Energy 2 Center Plaza, 12 th Floor 110 West Fayette Street Baltimore, MD 21201	BGE - Wagner	\$69,347.23
Mr. John Quinn Constellation Energy 2 Center Plaza, 12 th Floor 110 West Fayette Street Baltimore, MD 21201	BGE CP Crane	\$16,320.04
Total		\$906,637.95
Amount needed (budgeted)	\$906,637.50	

TABLE II
FINANCIAL STATEMENT

State Coal Combustion By-products Management Fund

FINANCIAL STATEMENT FOR FY2011
July 1, 2010 to June 30, 2011

Beginning Fund Balance \$ 1,253.92

Revenue \$ 910,726.65

FY2011 Expenditures	
Salaries & Fringes	\$753,982.05
Communications	\$ 1,265.55
Travel & Training	\$ 3,947.93
Contractual Services	\$ 8,029.53
Supplies	\$ 20,722.41
Equipment (Computers)	\$ 25,376.86
Indirect Costs	\$ 98,656.24
Total Expenditures	\$911,980.57

Balance in Fund 6/30/2011 \$ 0