



Maryland
Department of
the Environment

Report to the Legislature: FY23 Status of the State Coal Combustion By-Products Management Fund

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**Report to the Legislature:
Status of the State Coal Combustion By-Products Management Fund**

INTRODUCTION, BACKGROUND, AND SCOPE

The Maryland Department of the Environment (MDE), Land and Materials Administration (LMA), Solid Waste Program (SWP) as part of its mission to protect public health, the environment, and the state's natural resources from concentrated heavy metals and other pollutants, regulates the management, disposal, and beneficial reuse of coal combustion byproducts in the State. Due to the potential significant environmental impacts from CCBs, MDE will need to continue inspection monitoring activities for the foreseeable future. This report is submitted to the General Assembly of Maryland to satisfy §9-285 of the Environment Article, Annotated Code of Maryland, which requires MDE to inform the legislature about the status of the State Coal Combustion By-Products (CCBs) Management Fund ("the Fund"). Section §9-285 requires MDE to provide information on:

- (1) The status of the Fund;
- (2) Revenues of and expenditures from the Fund;
- (3) The efficiency of the CCBs 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 Fund is to provide MDE with the resources to oversee the disposal, beneficial use, and management of CCBs in the State. These materials are the residuals created when coal is burned for energy. 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 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 make up the other minerals remain as solids and often oxides form when the coal 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, surface water, and groundwater unhealthy for prolonged human exposure when not handled properly.

STATUS OF THE FUND

In accordance with the CCB law, each year MDE calculates a generator fee to charge the major CCB generators. This fee supports the State's CCB regulatory activities. This fee is based on the following factors:

- The requirements of the Code of Maryland Regulations (COMAR) 26.04.10.09;
- The amount of CCBs generated by each major generator, and the fate of those CCBs;

- The funding required to operate MDE’s CCB activities for a fiscal year (FY); and
- The amount of money remaining in the Fund at the end of the previous fiscal year.

Revenues to the Fund. Under COMAR 26.04.10.09, CCB generators were required to submit a report detailing their CCB generation during calendar year 2021(CY21). These reports were due in March 2022. Based on the information contained in the reports, MDE developed fees for each site generating CCBs. In accordance with the regulation, MDE calculated an adjusted base fee of \$23.23389624 per ton of CCBs disposed in Maryland, and \$11.61694812 per ton for CCBs transported outside the state. Invoices were mailed to generators, and \$989,763.98 was collected to support the program. A balance of \$135,315.51 was remaining in the Fund at the end of FY22.

Expenditures from the Fund. A total of \$1,005,914.09 was expended from the Fund in FY23. The expenditures were largely for salaries for technical staff, with the remainder to provide supplies needed to operate the program. A balance of \$119,165.40 was remaining in the Fund at the end of FY23.

Projected Costs for FY24. The anticipated costs to operate the program for FY24 are \$1,595,823.00. This amount has been appropriated for the FY24 budget. A balance of \$119,165.40 was remaining in the Fund at the end of FY23, which is required to be subtracted from the total amount billed for FY24 activities. This leaves \$1,476,657.60 as the total amount to be invoiced for CY22 CCBs generation, in order to cover FY24 costs.

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 per ton for CCBs disposed or used for noncoal mine reclamation in Maryland, and 0.5 per ton for CCBs transported outside the state. No fee is charged to generators for CCBs that are beneficially used, used for coal mine reclamation in Maryland, or to generators that generated less than 10,000 tons of CCBs per year. After removing tonnages exempt from the fee and applying the adjustment factors to the remaining tonnages, there were 46,025 billable tons of CCBs disposed in state or transported outside the state. Further, MDE can adjust the base rate to accommodate anticipated expenditures. Based on the anticipated program needs and the amount of CCBs managed, MDE has calculated the base fee for this billing period (FY24) as \$32.08381532 per billable ton. MDE developed fees for each site generating CCBs, which are outlined in Table I. These fees are anticipated to generate \$1,476,658 (rounded), which would leave no surplus to be carried over if all appropriated funds are expended. Any surplus or unexpended funds will be credited to FY25’s invoices.

If any generators question MDE’s assessments and MDE agrees with any of 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), the base fee may be subject to reevaluation.

USES OF THE FUND

With the support provided by the Fund, MDE employs geologists, engineers, inspectors, and an Assistant Attorney General to focus on the management of CCBs in Maryland. The following is a description of the activities of MDE in FY23 that were supported by the Fund:

Review of engineering plans:

- Reviewed Permit Modification Application for the Fort Armistead Road – Lot 15 Industrial Landfill (located in Baltimore City).

Review of operational plans:

- Reviewed revised operations and maintenance manuals for the Westland Ash Management Facility (located in Montgomery County) and Brandywine Ash Management Facility (located in Prince George's County).

Review of monitoring data:

- Performed hydrogeological evaluation of groundwater and surface water data collected as part of the Nature and Extent of Contamination Studies being conducted at the Brandywine and Westland CCB landfills; and
- Reviewed environmental monitoring data reports for the Westland, Brandywine, and Faulkner CCB landfills.

Compliance activities:

- Performed inspections of CCB facilities, including inspections at the generating facilities, disposal sites, and mine reclamation sites; and
- Inspected the Westland Ash Management Facility.

CONCLUSION

The industry has increased its efforts to recycle CCB materials through mine reclamation and other means, and this trend is anticipated to continue. The further development of beneficial use regulations will provide industry with additional acceptable ways of utilizing these materials, instead of disposing them. The industry has already developed a number of successful ways to recycle these materials in building materials such as gypsum board and concrete, so these additional efforts will largely be supplementary.

The U.S. Environmental Protection Agency issued federal regulations governing CCBs that became effective on Oct. 19, 2015, and in several subsequent years. In a few areas, these regulations are more stringent than Maryland's, so MDE convened a workgroup to discuss the manner in which COMAR 26.04.10 can be amended to match the federal rule. This will allow generators and disposers of CCBs in Maryland to follow one set of rules in managing these materials. The workgroup met with a substantial degree of consensus. These regulatory changes are in development. The draft regulations were most recently anticipated to be proposed in the fourth quarter of CY23, but subsequent changes to the federal regulations have required multiple revisions to MDE's draft regulations which are still in process.

TABLE I: CCB TONNAGES AND INVOICES CALENDAR YEAR 2022

Generators < 10,000 tons total generation are exempt

Name	Total Generation	In State Disposal	Out of State Disposal	Out of State Beneficial Use	Billable Tons	Adjusted Per Ton Fee	Invoice Amount:
AES Warrior Run	338,446	0	0	0	0		
Lanyard Power, LLC (Chalk Point and Morgantown)	84,940	6,291	2,465	0	7,523	\$32.08381532	\$241,366.54
Raven Power - Brandon Shores	215,083	19,254	0	38,496	38,502	\$32.08381532	\$1,235,291.06
Raven Power - H.A. Wagner	8,287	8,099	0	0	0		
Holcim (US) Inc.	*	0	0	0	0		
Lehigh Cement Company LLC	68,389	0	0	0	0		
Mettiki Coal, LLC	1,540	0	0	0	0		
Fort Hill H.S.	13	0	0	0	0		
TOTAL:	716,698	33,644	2,465	38,496	46,025		\$1,476,657.60

Green	All generated CCBs reused beneficially
Red	Invoiced amount
Blue	Below 10,000 tons per year and exempt

Amt. Appropriated:
 \$1,595,823.00
 Minus carryover:
 \$119,165.40
 Amount to be billed:
 \$1,476,657.60

Materials stored in 2021 and used in 2022 are included in the billable tonnage.

TABLE II: FINANCIAL STATEMENT

**STATE COAL COMBUSTION BY-PRODUCTS
MANAGEMENT FUND
Financial Statement
July 1, 2022 to June 30, 2023**

Beginning Fund Balance \$135,315.51

Revenue \$989,763.98

FY23 Expenditures	
Salaries	\$813,136.60
Communications	\$1,047.77
Travel & Training	\$64.85
Vehicles	\$43,307.55
Contractual Services	\$0
Supplies	\$0
Equipment (Computers)	\$0
Other	\$0
Total Expenditures	\$857,556.77
Indirect Costs	\$148,357.32
Balance in Fund 6/30/2023	\$119,165.40