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February 4, 2008

Stephen Pattison
Assistant Secretary
Maryland Department of Environment
1800 Washington Boulevard
Baltimore, MD 21230

RE: Comments on Proposed Coal Combustion Byproducts Regulations

Dear Mr. Pattison:

Environment Maryland Research & Policy Center respectfully submits the following comments to the Proposed Action on Regulations related to the use and handling of coal combustion byproducts published by the Department of the Environment ("MDE") on December 21, 2007. Environment Maryland Research & Policy Center acknowledges the need for the disposal and, thus, the obligation for regulating coal combustion byproducts. We fully support establishing requirements to address their storage, handling, processing, disposal, and beneficial and other uses. The proposed regulations do not adequately address, however, the full range of groundwater, surface water and ambient air impacts as a result of such activities. Furthermore, the environmental controls and monitoring set out in the proposed regulations and these comments should apply to a broader range of uses than currently proposed by MDE.

At the outset, it is important to remember that although the United States Environmental Protection Agency ("EPA") exempted coal combustion waste from regulation as hazardous waste under the Resource Conservation and Recovery Act ("RCRA"), Subtitle C, it did so under certain, limited premises. These premises include: (i) state regulatory waste management practices and regimes were adequate to prevent exceedances of the Primary Drinking Water Standards ("PDWS") and (ii) human populations generally are not directly exposed to groundwater in the vicinity of coal combustion byproducts disposal sites. These premises did not necessarily apply, however, in all situations. For example, Maryland Environment Article, § 15-407 has allowed the placement of "pozzolan" for certain purposes without a well-defined regulatory regime and, as evidenced in the Gambrills area of Anne Arundel County, on property abutting and in close proximity to residential communities. Furthermore, the EPA analysis of the risk posed by coal combustion waste completely ignored any impact to human health and the

environment of fugitive emissions flyash and coal ash from coal combustion byproducts use and waste sites.

With this in mind, Environment Maryland Research & Policy Center submits that all use (other than in a manufacturing process to make a new product), handling and placement of coal combustion byproducts should be regulated in a manner consistent with the requirements of the State's solid waste management regime, COMAR 26.04.07. Specific to the proposed coal combustion byproducts regulations, Environmental Maryland submits the following:

26.04.10 - Management of Coal Combustion Byproducts

.02 (Definitions) B. (2) (a)-(b): "Beneficial use" should not encompass uses for landfill, structural/building fill, soil improvement, agriculture, soil conditioning or land reclamation.

.03 (General Restrictions and Specifically Prohibited Acts) A. (2): Identify more precise parameters for the prevention of air pollution by rewording this provision to read, "Interfere with the attainment or maintenance of ambient air quality standards at any offsite location based on the maximum potential emissions;"

.03 (General Restrictions and Specifically Prohibited Acts) B. (3): The second sentence of this provision should be replaced with the following: "The Department shall require that the permit application include a description of the frequency and type of practices that will be employed to comply with air quality regulations, in particular COMAR 26.11.06.03.C. and D., and to prevent a condition of air pollution during operation and closure of the site. For sites bordering or within 2,000 feet of residential properties, the Department shall also require that the permit application include a plan to monitor particulate concentrations in ambient air at multiple locations along the site perimeter."

.04 (Disposal) E.: The owners/operators of coal combustion byproducts disposal sites, authorized prior to April 1, 2008, should be required to evaluate existing site conditions in light of proposed COMAR 26.04.10 and off-site surface water, groundwater and ambient air impacts due to the fly ash disposal operations. The following text should be added to this provision: "The Department shall also require submission of a plan that describes the frequency and type of practices that will be employed to comply with air quality regulations, in particular COMAR 26.11.06.03. C. and D., and to prevent a condition of air pollution during operation and closure of the site. For sites bordering or within 2,000 feet of residential properties, the Department shall also require that the plan detail a methodology that will be implemented to monitor particulate concentrations in ambient air at multiple locations along the site perimeter."

.04 (Disposal) F: The proposed provision should be replaced with the following: "An existing coal combustion byproducts facility that intends or proposes to expand beyond its current authorization or operations shall obtain a refuse disposal permit issued by the Department for a new industrial waste landfill for such expansion, consistent with the requirements of COMAR 26.04.07. The Department shall also require submission of a plan as part of the permit application that describes the frequency and type of practices that will be employed to comply with air quality regulations, in particular COMAR 26.11.06.03. C. and D., and to prevent a condition of air pollution during operation and closure of the site. For sites adjacent or in close proximity to residential properties, the Department shall also require that the permit application include a plan to monitor particulate concentrations in ambient air at multiple locations along the site perimeter.

.07 (Variances): All variances should be subject to public notice and hearing requirements.

.08 (Reporting): Add the following new provisions:

A. (10): For each chemical that is regulated under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), 42 U.S.C. § 11023, the total amount contained in the annual volume of coal combustion byproducts removed from the generating site, regardless of the applicability of EPCRA reporting threshold or *de minimis* level;

A.(11): Copies of any reports submitted under the EPCRA that include data related to the chemicals within the annual volume of coal combustion byproducts identified in A.(10).

<u>26.21.04 - Utilization of Coal Combustion Byproducts in Surface Mine Reclamation</u>

.03 (Authorization of Use and General Requirements) A.(2): This provision should be modified to read as follows: "The Department shall review and approve the use as part of a separate coal combustion byproducts use permit in accordance with the proposed chapter and the provisions of COMAR 26.04.10 and 26.21, and subject to public notice, comment and hearing."

.03 (Authorization of Use and General Requirements) B.(2)-(6) and (14): Eliminating from this use only fly ash that exceeds the TCLP toxicity limits defined in 40 CFR § 261.24 is not adequate for the protection of the State's ground and surface waters. The experience at the Gambrills, Anne Arundel County mine reclamation site shows that even though the fly ash

registered well below toxicity limits, it generated leachate with metals concentrations well above the toxicity limits, ultimately contaminating drinking water supply wells. To minimize leachate discharge from the site, the following conditions must be part of the coal combustion byproducts use permit:

(i) Coal combustion byproducts shall be placed in layers and compacted to at least ninety-five percent (95%) of its maximum density based on ASTM D698 (Standard Proctor), or to a permeability of less than 10-5 cm/sec. Thickness of each layer shall not be greater than twelve (12) inches. The compaction layers shall be tested and certified, and supporting documents submitted to the Department on a monthly basis;

(ii) The site shall be designed to prevent ground and surface water pollution. There shall be a functional liner and leachate collection system as specified in COMAR 26.01.07.C. (12); and

(iii) A permittee shall provide a minimum of two (2) upgradient and three (3) downgradient monitoring wells at a site.

.03 (Authorization of Use and General Requirements) B. (10) (d): This provision should be modified to read as follows: "Water or a conditioning agent shall be available and applied as frequently as necessary to control fugitive dust, to comply with air quality regulations, in particular COMAR 26.11.06.03. C. and D., and to prevent a condition of air pollution."

.04 (Application for Use): In general terms, the coal combustion byproducts use permit should be subject to a public review and hearing process. Also, the Department should require a comprehensive operation and filling plan for this site to include but not be limited to the provision for design requirements and operating procedures for industrial waste landfills set out in COMAR 26.04.07.19. Specific modifications to this provision are as follows:

C. (3) (g): Change to "Existing public and private water supply and monitoring wells within 1,250 feet of the boundaries of the site."

C. (3) (k): Add a new provision: "Locations of residential properties adjacent and in close proximity to the site and names of property owners."

C. (14) (e): This provision is in conflict with proposed 26.21.04.03.B. (8), which requires immediate placement of the coal combustion byproducts in

compacted layers, and prohibits stockpiling of coal combustion byproducts.

.06 (Leachate Control and Collection):

A. (1) (b): The proposed prepared subbase should be an eighteen (18) inch clay liner or comparable industrial substitute with a permeability less than or equal to 1x10-7 centimeters/second.

A. (2) (c): This provision should set out procedures to measure and monitor leachate accumulation as well as requirements for regular leachate sample collection and analysis, with requirements for documentation and reporting.

A new provision should be added for the requirement of an operation plan to be submitted to the Department for the leachate storage, transport and disposal.

.07 (Monitoring):

B.: The monitoring plan should also include a requirement for monitoring and reporting of groundwater levels, as well as monitoring public drinking water well heads in the proximity to the site or whose source aquifer is below or near the site.

C. (1): This provision should also require analyses and reporting of leachate quality.

C. (2) This provision should also require reporting of water level measurements from all monitoring wells, along with water table or potentiometric surface map, as appropriate, and hydrographs of all such wells.

C. (9): The laboratory data reporting should specifically require inclusion of all QA/QC documentation for the analyses conducted.

C. (11): Considering that C (3) requires monthly sampling, the requirement here for resampling within 30 days following a water quality exceedence is ineffective. If a water quality exceedence is detected, confirmatory sampling should take place no later than 14 days from notification. If the exceedence persists, the permittee should be required to

continue sampling at the greater frequency until the cause of the exceedence is found and remediated.

C. (17): As discussed in the comment on COMAR 26.21.04.03.B. (3), a TCLP analysis is a poor indicator of the leaching potential for coal combustion byproducts. In addition to a TCLP analysis, total metals analyses of the coal combustion byproducts should be conducted. Throughout the project, leachate samples should be collected, analyzed, and documented as per the reporting requirements of this section.

.08 (Closure):

A. (1): The low permeability cap should have a minimum thickness of 40 mil. -- the proposed 20 mil. cap is too thin and can be punctured easily. The cap should be installed with a maximum slope of 1 to 3 percent, with a thorough analysis to demonstrate both global site stability and durability of cap materials.

A. (3): Add the following text: "Cover shall be established and maintained to comply with air quality regulations, in particular COMAR 26.11.06.03. C. and D., and to prevent a condition of air pollution."

A. (4): Add the following text: "Between the time of placement of the final earthen cover and the time of placement of the stabilizing vegetation, steps must be taken to maintain compliance with air quality regulations, in particular COMAR 26.11.06.03. C. D., and to prevent a condition of air pollution."

We look forward to working with the Department to develop final regulations that are fully protective of the public health. Please contact me if you have any questions. Thank you.

Sincerely,

Brad Heavner
State Director