



February 26, 2008

HAND DELIVERY

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

Subject: Proposed Regulations Related to Coal Combustion Byproduct Management  
COMAR 26.04.10, 26.20.24 and 26.21.04

Dear Mr. Pattison:

Constellation Energy strongly supports Maryland Department of the Environment's regulatory proposal governing the use and disposal of coal combustion byproducts. More detailed regulation of the variety of uses of coal combustion byproducts will hopefully enhance certainty for those responsible for daily decisions with respect to coal combustion byproduct management and use. It should also serve the dual goals of encouraging use of these materials in lieu of disposal, and for protecting the public health and the environment during such use.

Constellation Energy hereby submits the following comments on these proposed regulations.

**26.04.10.02(a)**

*(2) Beneficial use.*

*(a) "Beneficial use" means the use of coal combustion byproducts in a manufacturing process to make a product, or as a substitute for a raw material or commercial product, which does not increase ~~contribute to~~ adverse effects to public health or the environment.*

*(b) "Beneficial use" does not include the use of coal combustion byproducts in a mining operation or in mine reclamation activities.*

Comment: The text of paragraph (2)(a) is ambiguous. It could be read to suggest that all beneficial uses must be manufacturing uses. Alternatively, and more correctly we

believe, it may be understood to provide for a manufacturing associated use or, as an entirely separate matter, a substitute for a raw material or commercial product. We believe that this was the intention, as some substitutions for a raw material or commercial product are in a non-manufacturing context and should be a "beneficial use." To correct the ambiguity, we propose adding a comma as noted, to distinguish the separation of the clauses.

Beneficial use (as substitute for a raw material or commercial product) that is not in a manufacturing context is well-established. For example, synthetic gypsum from the flue gas desulfurization (FGD) process is used in agricultural applications as a lime substitute. Another example is use of bottom ash for snow and ice control, or coal combustion byproducts as blasting grit. Structural fill for road bed and related highway infrastructure is another important beneficial use of coal combustion byproducts "as a substitute for a raw material or commercial product," unrelated to manufacturing.

With respect to the standard "does not contribute to the adverse effects to the public health or the environment," this is problematic. It arguably establishes a zero tolerance for any arguable contribution to adverse effects of any type, when the beneficial coal combustion byproducts use may be less harmful than the raw material or commercial product that it is replacing. The coal combustion byproducts should be on an even playing field with the competing raw materials or commercial products when evaluating potential risks and benefits. An absence of risk may not be the most desirable standard for society or for the end users. For example, one may argue that certain fertilizer products "contribute to adverse effects to . . . the environment." Coal combustion byproducts used in the same way with the same (or lesser) effects should not be excluded from serving as fertilizers as a beneficial use. To address this problem, we suggest that the regulation exclude uses that "increase" adverse effects.

The beneficial use definitions under 26.04.10.02(a)(2) do not address the use of coal ash as a structural fill material for applications such as road base, parking lots, building pads, etc. It is unclear whether MDE intends to develop regulations governing use as a structural fill under future beneficial use regulations or whether they should be addressed in this regulatory proposal. Constellation Energy suggests that MDE consider utilizing the regulatory language developed by the Pennsylvania Department of the Environment (PADEP) governing the use of coal ash as structural fill located in 25 Pa. Code §287.661.

**26.04.10.02B(3)**

*Coal combustion byproducts.*

(a) "*Coal combustion byproducts*" means the residue generated by or resulting primarily from the burning of coal.

(b) "*Coal combustion byproducts*" includes flyash, 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.*

Comment: This change helps match the scope of this regulation to COMAR 26.13.02.04-1(4), which excludes from hazardous waste regulation “fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.” (emphasis added). This language is important because coal may at times be mixed with small percentages of biomass or other permitted materials, and the resulting ash should still remain coal combustion byproducts.

Furthermore, as noted below, we recommend that this Subtitle .04 definition of coal combustion by-products should remain consistent throughout the subtitle .04 regulations to avoid confusion. As discussed below in these comments, if subsets of coal combustion byproducts should be regulated in specific ways, or subject to specific prohibitions, that objective can be achieved in the text of the regulations without changing the applicable definition.

**26.04.10.02B(4)**

*“Coal combustion byproducts facility” means a facility or site where coal combustion byproducts are generated, stored, handled, processed, recycled, disposed of, or used.*

*(b) “Coal combustion byproducts facility” does not include locations at which coal combustion byproducts are used exclusively for beneficial use.*

Comment: The language clarifying the scope of the term “facility” in context of this particular type of “coal combustion byproducts facility” is incorporated into this definition. This is recommended because a stand-alone definition of “facility” is not truly necessary and creates confusion. The term “facility” is used in multiple ways in the proposed regulations. It refers to an air pollution control “facility” in one place, and a “solid waste acceptance” facility in another. The term “facility” is also referenced in the definition of “sludge.” Therefore, we suggest omitting the stand-alone definition of facility (proposed 26.04.10.02(9)), and instead adding the clarification as to the scope of facility as suggested in the above-recommended change in the definition of a “coal combustion byproducts facility.”

Furthermore, the exclusion set forth in “(b)” is recommended to be consistent with what we believe to be the agency’s intention. In the proposed regulations, the term “coal combustion byproducts facility” is almost always used in association with generation or disposal. The term may or may not be appropriate for a reclamation location. Regardless, the term does not seem to be used in connection with beneficial use. It would not accomplish a legitimate regulatory purpose to view every location of coal combustion byproducts reuse a “coal combustion byproducts facility.” For instance, a location where coal combustion byproducts are utilized in cement or other manufactured products should not be a coal combustion byproducts facility, and neither should the ultimate location at which the cement is used. Similarly, a road bed or building foundation with (non-reclamation) structural coal combustion byproducts should not fall within this facility definition. We suggest that the definition of “coal combustion

byproducts facility” be narrowed to exclude beneficial uses, or, perhaps more appropriately, all allowable reuse.

**26.04.10.02B(7)**

*“Disposal” means the discarding or abandonment of coal combustion byproducts in a manner that is not a so that they are not recycled or “use”d, as determined by the Department as this term is defined herein. Disposal does not include recycling, placement of coal combustion byproducts in a mine or for purposes of structural fill or soil conditioning or other uses or beneficial uses.*

Comment: Based upon the structure of these regulations, it appears that a variety of “uses” such as mine reclamation are allowed, will be regulated, and are not disposal. Yet we are concerned that “as determined by the Department” provides too much uncertainty while further regulation may be developed, and that this set of proposed regulations must be able to stand alone without creating unacceptable uncertainty. This can be accomplished by defining the term “Use” to encompass all intended allowable Uses, including the subset of “beneficial uses.” Then the regulations governing specific “uses” may be phased in and these are developed. The Department’s development of the new regulations will accomplish the goal of the “as determined by the Department’ clause in the current proposal.

**26.04.10.02B(9)**

*(9) Facility.*

*(a) “Facility” means all contiguous land and structures, other appurtenances, and improvements on the land used for the generation, storage, handling, processing, disposal, recycling, or use of coal combustion byproducts, which are owned, leased, or used by, or under the control of, the owner or operator.*

*(b) “Facility” includes the entirety of any lot or parcel on which generation, storage, handling, processing, disposal, recycling, or use of coal combustion byproducts occurs or has occurred.*

Comment: See the comment regarding Regulation 26.04.10.02(4).

**26.04.10.02 B(12)**

*(12) “Open dump” means a land disposal site which receives discarded or abandoned coal combustion byproducts for disposal after the effective date of these regulations and:*

*(a) Is not designed or operated in accordance with the requirements for a sanitary landfill under COMAR 26.04.07; or*

*(b) Is in violation of the Resource Conservation and Recovery Act, Section 4005, and 40 CFR § 257.*

Comment: The term “land disposal site” is not defined, so we suggest clearly incorporating the term disposal, which is a stand-alone defined term. Also, the regulations should be clarified to ensure that they are not applied retroactively. This is one location where this can be accomplished.

#### **26.04.10.02B**

*(19) “Solid waste” means any garbage, refuse, sludge, or liquid from industrial, commercial, mining, or agricultural operations or from community activities, including coal combustion byproducts that are not managed in a manner that is a “use” recycled or used, as that term is defined in this regulation. ~~determined by the Department.~~*

Comment: As explained above, the text “as determined by the Department” provides too much uncertainty while further regulation may be developed. This set of proposed regulations must be able to stand alone without creating unacceptable uncertainty. This can be accomplished by defining the term “Use” to encompass all intended allowable Uses, including the subset of “beneficial uses.” Then the regulations governing specific “uses” may be phased in and these are developed. The Department’s development of the new regulations will accomplish the goal of the “as determined by the Department” clause in the current proposal.

#### **26.04.10.02**

*( ) “Use” means the utilization of coal combustion byproducts in a manner that is not discarding or abandoning the material. Use includes recycling, raw product substitution, manufacturing, reclamation of coal and non-coal mines, structural fill, soil conditioning and any other use authorized by Md. Env’t Article, § 15-407(b)(2) and this chapter.*

Comment: We are proposing a definition of “use” that is intended to encompass all anticipated coal combustion byproducts management activities except disposal. This definition serves important functions. It ties together Chapter 10 with the Chapter 7 permit exclusion. It also fills in a key missing element in the structure of Chapter 10, which revolves around “use” of the coal combustion byproducts. It removes some of the uncertainty created by these regulations and the silence concerning activities such as structural fill, by at minimum declaring these to be a use and allowing for their further definition as a beneficial use.

#### **26.04.10.03B(1) (Specific Prohibited Acts)**

*(1) Operating an Open Dump. A person may not:*

*(a) Dispose of coal combustion byproducts in an open dump; or*

*(b) Cause, suffer, allow, or permit disposal ~~open dumping~~ of coal combustion byproducts on his or her property in an open dump.*

Comment: The term "open dumping" is not well enough defined for use in this context. Assuming that the term disposal will be better defined to exclude allowable uses (see above comment), then the term "disposal" can be used here in tandem with "open dump." This is important because open dumping should only occur in context of "disposal." The danger is that, without adequately defining key terms, actions such as soil conditioning could be interpreted as falling within the prohibition. There is no indication that the Department would intend this result.

**26.04.10.03B(2) (Specific Prohibited Acts).**

*(2) ~~Accepting Controlled Hazardous Substances. A person may not accept a material that meets the definition of hazardous waste under COMAR 26.13.02 at a coal combustion byproducts facility unless the facility is in compliance with the permit requirements of COMAR 26.13.07.01.~~*

Comment: This proposed provision seems to simply state that hazardous waste must be managed as a hazardous waste. This concept is not necessary in this Chapter or even Subtitle, as this concept is covered thoroughly in 26.13 and its repetition in 26.04.10 does not add any substantive environmental protections. Moreover, the mere presence of this proposed provision within 26.04.10 has the potential to create enormous confusion concerning what material this provision is intended to cover and its significance. For these reasons, we recommend deletion of 26.04.10.03B(2). It is self-evident that only facilities permitted under 26.13 may accept for storage or disposal a hazardous waste.

**26.04.10.04B**

*B. A person shall dispose of coal combustion byproducts only in a coal combustion byproducts facility ~~or a solid waste acceptance facility~~ that is has been authorized by the Department for the disposal of coal combustion byproducts, or in a solid waste acceptance facility that is permitted and may legally receive coal combustion byproducts.*

Comment: As drafted, the proposed regulation creates the impression that a special Department approval process is needed before a permitted sanitary landfill may accept coal combustion byproducts, and even could be construed to extend out of State (though we do not believe that this would be MDE's intention). We are not aware of the environmental concerns that would lead to such a conclusion, as the solid waste landfill regulations should adequately address any coal combustion byproduct risks.

**26.04.10.04C**

*A person who desires to ~~operate~~ dispose of coal combustion byproducts in any new coal combustion byproducts facility constructed after April 1, 2008 that will serve as a location for the disposal of coal combustion byproducts shall apply for a permit for an industrial waste landfill under Environment Article, § 9204, Annotated Code of Maryland, and comply with the requirements for industrial waste landfills in COMAR 26.04.07 to the satisfaction of the Department, including but not limited to:*

- (1) The general requirements in COMAR 26.04.07.19;*
  - (2) The permit requirements in COMAR 26.04.07.20;*
  - (3) The closure requirements in COMAR 26.04.07.21;*
  - (4) The postclosure monitoring and maintenance requirements in COMAR 26.04.07.22;*
- and*
- (5) Any other requirements the Department considers necessary to protect public health and the environment or to prevent nuisance conditions.*

Comment: The language of this proposed regulation would create confusion as to the identity of the permit holder. The operator of the facility would obtain the permit. A generator of the coal combustion product may not be the operator of such disposal facility.

**26.04.10.04D**

*A new coal combustion byproducts facility that will accept coal combustion byproducts for disposal may not be constructed or receive coal combustion byproducts operated after April 1, 2008 unless a permit for an industrial waste landfill has been issued by the Department authorizing the facility.*

Comment: The concern here is the potential breadth of the term “operated.” Existing facilities need to be maintained, and this may involve a variety of site activities that one could construe as “operation.” These will have to continue to occur after April 1, 2008, and presumably will not require a permit. The suggested edit provides a more focused restriction, by confining the prohibition to the activity of concern: the receipt of coal combustion byproducts.

**26.04.10.05C**

*A person shall store coal combustion byproducts in a manner that prevents contact with precipitation and waters of this State and that is designed either to minimize contact with precipitation or to collect leachate that may result from contact with precipitation.*

Comment: While we agree that contact with the waters of the State should and can be prevented, contact with precipitation should not be equated with an environmental problem. To the contrary, if there is a leachate collection system in place that will minimize the risk of any pollution to waters of the State, then the environmental concern with precipitation would be addressed. Furthermore, absolute prevention of contact with precipitation may be virtually impossible in some circumstances. Instead, a more reasonable standard for performance would be to require minimization of contact with precipitation.

**26.04.10.05D**

*A person may not use a storage system for coal combustion byproducts unless the storage system is:*

- (1) Designed, constructed, and installed to contain coal combustion byproducts and contaminants in the coal combustion byproducts and prevent them from being released to the environment; and*
- (2) Constructed of low permeability~~impervious~~ materials and provided with a roof or other protections to prevent nuisance, air pollution, and unpermitted discharges of contaminated stormwater or leachate to waters of this State.*

Comment: The suggested edits to this provision are to make the language more precise. Impervious materials may be infeasible, and we believe that the more accurate term is “low permeability.” In addition, for clarity, we suggest adding the term “unpermitted” prior to “discharges.”



**26.04.10.05E**

*A person may not store coal combustion byproducts ~~near or~~ in an area likely to pollute waters of this State.*

Comment: "In an area" likely to pollute should be broad enough to encompass risks of pollution. We suggest omitting the words "near or" because it is both vague and arbitrary. If a location is "near" an area likely to pollute, it does not necessarily follow that there is any risk of pollution. For example, a fully enclosed storage facility may be "near" an area likely to pollute but may be entirely protective of the environment.

**26.04.10.05I**

*For storage of less than 30 days in a single location, a person is not required to comply with Paragraphs B - D of this regulation if protections minimize the potential for nuisance, air pollution and discharges of contaminated stormwater or leachate.*

Comment: This new text is suggested to address the temporary storage of material, for example on location of use. We understand that it is the Department's intention for the storage provisions to apply only to large quantities of coal combustion byproducts, though the amount has not been quantified. We suggest that this be clarified in these regulations. Furthermore, this newly suggested provision is consistent with viewing smaller storage areas outside of the scope of the current set of regulations, because large storage piles would have a life of more than 30 days. This clarification would ensure at least some limited flexibility pending development of regulations that would provide further definition of the circumstances that are considered "storage."

**26.04.10.06**

A. A person may not use coal combustion byproducts in a mine reclamation activity or other mining operation after April 1, 2008 except in accordance with this chapter and § B or C of this regulation.

B Active and Abandoned Coal Mines. Coal combustion byproducts may be used in a surface coal mining and reclamation operation and in an abandoned coal mine after April 1, 2008 only in accordance with the provisions of COMAR 26.20, including but not limited to COMAR 26.20.24.08.

C. Noncoal Surface Mines. Coal combustion byproducts may be used in the reclamation of a noncoal surface mine after April 1, 2008 only in accordance with COMAR 26.21.04.

D. Surface coal mine, abandoned coal mine, and non-coal surface mine reclamation activities permitted prior to April 1, 2008 may continue to operate under the Department's authorization, except that the Department reserves the right to modify an existing authorization to require additional controls or requirements as it considers necessary to protect public health and the environment or to prevent nuisance conditions.

Comment: The proposed regulations should not be retroactive for previously authorized mine reclamation activities. A coal or non-coal surface mine reclaimed with coal combustion byproducts should not be out of compliance simply because they do not have newly required authorizations and cannot meet newly imposed construction standards.

**26.04.10.08**

*(5) All laboratory reports of all chemical characterizations of the coal combustion byproducts;*

*~~(6) A statement that authorizes the Department staff to conduct inspections of the processes that generate the coal combustion byproducts;~~*

*~~(7) A statement that authorizes the Department staff to collect samples of the coal combustion byproducts;~~*

*(8) A description of how the generator disposed of or used its coal combustion byproducts in the last 5-years, identifying:*

*(a) The types and volume of coal combustion byproducts disposed of or used; and*

*(b) The different uses by type and volume of coal combustion byproducts; ~~and~~*

*~~(c) The names, addresses, and telephone numbers of the direct recipients of the coal combustion byproducts, the type and volume of coal combustion byproducts provided to each recipient, and if known, how each recipient used the coal combustion byproducts.~~*

*~~(9) A description of how the generator intends to dispose of or use its 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;~~*

*~~(b) The different intended uses by type and volume of coal combustion byproducts; and~~*

*~~(c) The names, addresses, and telephone numbers of the intended direct recipients of the coal combustion byproducts, the type and volume of coal combustion byproducts intended to be provided to each recipient, and if known, how each recipient intends to use the coal combustion byproducts.~~*

Comment: The reporting requirements under Regulation .08 A (1) -(4) are reasonable, but others are overly broad. Regulation A(5) should be narrowed to encompass only the leachate and composition data. Other data, such as compaction or use related testing should be of minimal interest to the state and burdensome.

Regulation A(6) and (7) essentially seek to require a generator to provide unrestricted and broad access and sampling, even where that access may exceed legal authority, exceed the bounds of reasonableness, or present a safety issue. Although as a generator we intend to provide reasonable access upon request and do not foresee any access problems, we oppose the structure of this regulation that seeks to mandate an annual affirmative grant of access.

Regulation (8) provides for five years of data in an annual report, which means that data will be repeated year after year. We recommend that the report be every 5 years, or that the data requirements be narrowed to encompass one year of information. Finally, due to business confidentiality issues, we recommend deletion of specific contact information set forth in subparagraph (c).

Regulation (9) is business confidential information that should not be required by MDE. Rather than trying to protect the information we recommend omitting the requirement as unnecessary. The content of the information addressed in 9(a) and 9(b) is highly speculative, and will change over time. Furthermore, we believe that the five year period is arbitrary, and is unlikely to correspond to any particular regulatory needs. As a side note, other provisions already require reporting of changes in processes that will impact

that nature of the coal combustion byproducts. The .08D report requires reporting in the event that "changes in the raw materials or processes used by a generator result in the identification of new pollutants . . ." This should provide the Department with the information to project and evaluation future issues. Also, TCLP and chemical characteristic data is already being reported and provide the Department with a similar tracking tool.

In the event that MDE rejects this recommended deletion of the Regulation (9) reporting requirement, we recommend that the text clarify that the report contains "current plans" and provide that the plans are not subject to Department approval and recognize that the plans are not binding. Generators must have flexibility to respond to innovation, new opportunities and market conditions.

#### **26.20.24.08A**

(1) This regulation establishes certain minimum standards pertaining to the use of coal combustion byproducts in surface coal mining and reclamation operations and in abandoned coal mines after April 1, 2008.

(2) Coal combustion byproducts may not be used in surface coal mining and reclamation operations or in abandoned coal mines after April 1, 2008, except in accordance with this regulation.

(3) Surface coal mine and abandoned coal mine reclamation activities permitted prior to April 1, 2008 may continue to operate under the Department's authorization, except that the Department reserves the right to modify an existing authorization to require additional controls or requirements as it considers necessary to protect public health and the environment or to prevent nuisance conditions.

(4) Compliance with this regulation does not relieve...

Comment: The proposed regulations should not be retroactive for previously authorized coal mine and abandoned coal mine reclamation activities. A previously reclaimed or a site being reclaimed with coal combustion byproducts under prior authorization should not be out of compliance simply because they do not have newly required authorizations and cannot meet newly imposed standards. We are interpreting that the Purpose and Scope of this Chapter applies to the entire Chapter. We encourage clarification throughout the text if the Department does not agree with this interpretation or feels that additional clarification is necessary.

#### **26.20.24.08B(2) (Definitions under Utilization of Coal Combustion Byproducts in Surface Mine Reclamation)**

*(b) Coal combustion byproducts.*

*(i) "Coal combustion byproducts" means the residue generated by or resulting primarily from the burning of coal.*

*(ii) "Coal combustion byproducts" includes flyash, 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.*

Comment: This change is to make this definition conform that that set forth in 26.04.10.

**26.20.24.08G**

~~*G. A utilization of coal combustion byproducts in a surface coal mining and reclamation operation or in an abandoned coal mine that is not in compliance with the provisions of this regulation as determined by the Department is a disposal of a solid waste and is subject to all applicable laws and regulations governing the disposal of a solid waste, including applicable permit requirements of the Department.*~~

Comment: We recommend deletion of this text. For an explanation, please see the comment to 26.21.04.12, below, concerning the same issue.

**26.21.04.02B(1) (Definitions under Utilization of Coal Combustion Byproducts in Surface Mine Reclamation)**

*(a) "Coal combustion byproducts" means the residue generated by or resulting primarily from the burning of coal.*

*(b) "Coal combustion byproducts" includes flyash, 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.*

*(c) ~~In this chapter, "Coal combustion byproducts" does not include flue gas desulfurization sludge and other solid residuals recovered from flue gas by wet or dry methods.~~*

Comment: The definition of coal combustion products should be identical to that found in 26.04.10.02, and that includes flue gas desulfurization byproducts.

To the extent that the Department has questions about flue gas desulfurization byproducts, we believe that this arises in connection with only a narrow subset of this material. Most flue gas desulfurization byproducts either are or can be stabilized to be fully functional as a structural fill. However, it is possible that some of these materials may be less appropriate for reclamation purposes due to water solubility or instability of that specific material. Rather than complicating the definition of Coal Combustion Byproducts, we recommend that use of this particular material be restricted in the General Requirements language (see 26.21.04.03B) rather than through the definition. This would place the restrictions in one location, and allow the restrictions to be more reasonably and precisely tailored.

**26.21.04.01**

**A.** The purpose of this chapter is to establish certain requirements pertaining to the use of coal combustion byproducts in the reclamation of a noncoal surface mine after April 1, 2008.

**B.** Coal combustion byproducts may not be used in noncoal surface mines after April 1, 2008, except in accordance with this regulation.

C. Surface noncoal mine reclamation activities permitted prior to April 1, 2008 may continue to operate under the Department's authorization, except that the Department reserves the right to modify an existing authorization to require additional controls or requirements as it considers necessary to protect public health and the environment or to prevent nuisance conditions.

**BD.** Except as otherwise specifically provided in this chapter, this chapter applies to persons engaged in the generation, storage, handling, processing, recycling, or use of coal combustion byproducts that are used or are to be used in the reclamation of a noncoal surface mine.

**CE.** Compliance with the provisions of this chapter does not relieve a person from the duty to comply with any other applicable federal, state, and local laws, regulations, and ordinances.

Comment: The proposed regulations should not be retroactive for previously authorized noncoal surface mine reclamation activities. A previously reclaimed site or a site being reclaimed with coal combustion byproducts under prior authorization should not be out of compliance simply because they do not have newly required authorizations and cannot meet newly imposed standards. We are interpreting that the Scope of this Chapter applies to the entire Chapter. We encourage clarification throughout the text if the Department does not agree with this interpretation or feels that additional clarification is necessary.

#### **26.21.04.03B (General Requirements under Utilization of Coal Combustion Byproducts in Surface Mine Reclamation)**

*~~(1) Flue gas desulfurization sludge and other solid residuals recovered from flue gas by wet or dry methods that are generated by the combustion of coal may not be used in the reclamation of a noncoal surface mine. The use of coal combustion byproducts in the reclamation of a noncoal surface mine shall be designed to provide short-term and long-term structural performance and stability.~~*

*~~(6) Coal combustion byproducts may not be placed in ground or surface waters and may not be placed within 3 feet of the regional groundwater table, unless the Department approves otherwise upon a demonstration that groundwater contamination will not occur. The minimum buffer distance includes the thickness of the prepared subbase.~~*

*~~(7) The area of exposed coal combustion byproducts at a site shall be minimized and may not exceed 5 acres unless approved by the Department.~~*

*~~(8) Coal combustion byproducts at a site shall be immediately placed and compacted within a reasonable time period, which under ordinary circumstances shall be daily. and may not be stockpiled for more than 21 days must be covered. d-~~*

*~~(9) If placement of coal combustion byproducts is halted for more than 15 days, the coal combustion byproducts shall be covered to prevent infiltration of ground or surface water.~~*

*(10) Adequate measures shall be taken to minimize dust at a site as follows:*

*(a) A person shall control dust by moisture conditioning the coal combustion byproducts before they leave the coal combustion byproducts generating facility or by handling them*

in sealed containers designed for transportation of powdery solids and moisture conditioning them prior to off-loading them to the ground;

(b) A person shall control dust by spreading and compacting the coal combustion byproducts within a reasonable time period, which under ordinary circumstances shall be daily upon arrival at a site;

(c) A person may not stockpile uncompacted coal combustion byproducts at a site for more than 21 days without temporary cover;

(d) A water truck shall be available to add water at a site as needed for fugitive dust control; and

(e) The Department may require other measures it considers necessary to protect public health and the environment.

(12) Coal combustion byproducts may not be placed within ~~100~~200 feet of any lands not owned by the permittee.

(13) A permittee shall implement an erosion and sediment control plan that satisfies the requirements of Environment Article, Title 4, Subtitle 1, and COMAR ~~26.09.01~~26.17.01.

Comment:

(1) Instead of excluding a broad category of flue gas desulfurization sludge, we recommend that the underlying issue be addressed for all coal combustion products in the surface mine reclamation context. This can be accomplished by setting a baseline requirement of consideration of the engineering issues and the long-term stability of material. We suggest that structural issues be addressed for all coal combustion byproducts as part of the design process. This approach is consistent with ASTM E 2277-03, Standard Guide for Design and Construction of Coal Ash Structural Fills, which states that "in order to perform satisfactorily, any fill material must support its own mass, that of the loads to be placed on it, and have acceptable settlement. Each of these aspects is analyzed as part of the design process." ASTM E 2277-03, Section 7.5. For example, PADEP has established performance standards for beneficial use of stabilized flue gas desulfurization (FGD) gypsum in mines. The performance standards include a minimum hydraulic conductivity of  $10^{-6}$  cm/sec and a compressive strength of 40 lbs/in<sup>2</sup>.

Additional details are available in the PADEP *General Permit for Processing/Beneficial Use of Residual Waste*, Permit No. WMGR111. If this suggested provision is included, then the overly broad restriction governing flue gas desulfurization sludge can be deleted.

(6) Consistent with other solid waste regulation, "the liner system shall be located entirely above the composite high water table and bedrock. A minimum buffer distance, including the thickness of the prepared subbase, shall be required between the bedrock elevation and the maximum expected ground water elevation." COMAR 26.04.07.07 (12)(b).

(7) The size restriction may have been reasonable in certain contexts where no liner was utilized. However, we recommend deletion of this text because the new liner and other pollution control requirements will now address risks associated with leachate generation. Furthermore, to the extent that dust control may be an issue, dust control is already addressed under .04.03B(10) and may or may not be minimized by the amount of open area, depending upon the particular site plan and activity.

(9) We recommend deletion of this text because the new liner requirements will now address leachate generation. We also note that the proposed restriction is more stringent than that required for sanitary landfills, which may have daily cover mandates, but have no requirement to prevent infiltration during short term interruptions in activity. However, should the Department retain this requirement, we suggest that the more appropriate performance standard would be to “minimize” rather than “prevent” infiltration.

(10) Suggestions to the dust prevention provisions are designed to incorporate reasonable flexibility, while still supporting the Department’s goals of minimizing any potential environmental impact.

(12) We suggest that this buffer zone be changed to 100 feet for consistency with surface mining regulations. This is appropriate for several reasons. First, the pollution control issues are addressed by other regulations. Second, the inconsistency between this regulation and the mining regulations would result in a narrow 100 foot strip of mined area requiring reclamation but also requiring different fill material. This would unnecessarily complicate site engineering and material management.

#### **26.21.04.05 (Initial and Ongoing Characterization)**

*.05 Initial and Ongoing Characterization.*

*B. The sampling plan shall include the following:*

*(1) A list of the ~~pollutants~~ parameters to be analyzed and their detection limits (Practical Quantitation Limits PQL), which shall include, at a minimum, the following:*

Comment: We question whether the table under this regulation should reference “sulfur” rather than “sulfate.” Also, we suggest that the use of “pollutants” in this sampling context is not entirely accurate, as many are natural constituents. Therefore, the term “parameters” is recommended in this location and also in Regulation 26.21.04.07B(4).

#### **26.21.04.06 (Leachate Control and Collection)**

*. . . The liner system shall be . . .*

*(a)(1)(f) Located entirely above the composite high water table and bedrock, with a minimum buffer distance of 3 feet, including the thickness of the prepared subbase, shall be required between the bedrock elevation and the maximum expected ground water elevation, ~~and the bottom of the liner system including the thickness of the prepared subbase.~~*

Comment: This distance between the liner can be consistent with solid waste regulation, 26.04.04.0712(b). In this proposed regulation, it appears that the bottom of the liner system would be construed as the bottom of the subbase, which would increase the separation from the groundwater by a couple of feet. The suggested edit corrects that error and is intended to reconcile the inconsistency that it creates with 26.21.03.B(6) (requiring 3 feet of separation between the regional groundwater table and coal combustion byproducts).

#### **26.21.04.07C - Monitoring**

.07 Monitoring.

C. Monitoring and Reporting Requirements.

(3) Sampling shall occur ~~quarterly~~ monthly unless an alternative schedule is included in the approved monitoring plan.

(7) A permittee shall arrange for a qualified independent laboratory certified for required water quality analysis by the Department of Health and Mental Hygiene or which is otherwise acceptable to the Department to perform the analyses.

(10) If analytical results from samples collected from any sources associated with a site or surrounding properties exceed a State or federal primary drinking water ~~or groundwater quality~~ standard for the first time, a permittee shall notify the Department within 24 hours of receipt of the analytical data detecting the occurrence. Thereafter, if there is a significant increase above a State or federal drinking water or groundwater quality standard, a permittee shall notify the Department within 24 hours of receipt of the analytical data detecting this occurrence.

(11) Upon detection of the exceedance of a State or federal drinking water or groundwater quality standard for the first time, a permittee shall ~~immediately~~ resample each monitoring point in which the standard was exceeded to verify the initial detection. This resampling shall occur as soon as possible, and no later than 30 days following notification of a permittee of the exceedance of the standard by the analytical laboratory performing the analysis of the sample which indicated the exceedance.

(13) All data for each well shall be summarized and presented in time series format. The data for each well shall be presented in graph format on a chart ~~so that the water quality data for each parameter for each well can be observed simultaneously.~~

**Comments:** Concerning the frequency of sampling set forth in proposed 26.21.04.07C(3), due to typically slow movement of groundwater, monthly sampling of a lined site should not be warranted.

Within Table I, we note that the PQL lists in Table I for arsenic is 0.05 ppm which is above the MCL of 0.01. We wished to point this out, in case it is an error.

With respect to the proposed requirement to use a certified, independent laboratory, we believe that we should be able to use our lab if it is certified for water quality analysis by the Department of Health and Mental Hygiene or if it is otherwise acceptable to the Department to perform the analyses. The requirement for the lab to be "independent" is inconsistent with other MDE and Federal regulatory programs such as analytical requirements under the NPDES program. Our lab has a strong QA/QC program that is routinely audited internally by independent Company organizations and externally by State and Federal inspectors. Periodic quality control tests are used to confirm that our results on split samples are within acceptable analytical error of the results obtained by



independent similarly certified laboratories. We should also have the latitude to perform additional sampling in other laboratory settings.

Concerning 26.21.04.07C(10), we suggest that the 24-hour notification requirement should be confined to exceedences of primary drinking water standards. Under other reporting requirements, any exceedence of a secondary drinking water standard would be captured.

With respect to the timing of resampling, 26.21.04.07C(11) sets forth two different standards. We suggest deleting "immediately" and retaining the more thorough description of the sampling time frame as set forth in the next sentence.

Finally, we appreciate the Department's concern for useful presentation of data, but urge the Department to avoid restricting the presentation in the manner suggested by 26.21.04.07C(13). Multiple graphs may be needed to describe data trends in the most usable form, because of the range of values for various constituents varies. For example, thallium is typically at levels in the 0.001 range, in contrast to chlorides, which are found in the 10s or 100s range. Putting these two constituents on the same graph may render the graph unreadable.

#### **26.21.04.10A. (Drinking Water Supply)**

##### *.10 Drinking Water Supply.*

*A. Based upon monitoring data, if a drinking water supply exceeds State or Federal primary drinking water standards ~~is impacted due to coal combustion byproduct use at a site, during active operation or during postclosure up to the time of bond release, a permittee shall:~~*

*(1) Notify the Department in accordance with 26.21.04.07C(10) or within 24 hours of receiving and verifying the data. ~~within 24 hours of the impact to the water supply, identifying the contaminants and contamination levels;~~*

*(2) Immediately provide a temporary potable water supply to replace those supplies that exceed State or Federal primary drinking water standards until the permanent water supply is restored or replaced. ~~until a permanent replacement can be restored;~~ and*

*(3) If necessary to achieve a safe water supply, replace at no cost to affected property owners a permanent potable water supply that meets the minimum yield requirements established in COMAR 26.04.04.*

Comment: We are concerned that the term "impact" is too vague. For instance, one could argue that an elevation in a parameter is an "impact" even if it would have no adverse health impact. Instead, the issue here should be whether or not the water supply meets primary drinking water standards.

Furthermore, the suggested change to paragraph A.1 is intended to cross-reference the pre-existing notification requirement under the monitoring section. It also provides for the possibility that data may be provided to permittee from an outside source. In the latter circumstance, the 24 hours would apply, but it should run from receipt and verification of data, since the source and quality of the data may be unknown.

**26.21.04.12 (Unauthorized Use of Coal Combustion Byproducts)**

~~*A use of coal combustion byproducts in a noncoal surface mine reclamation operation that is not in compliance with the provisions of this chapter as determined by the Department is a disposal of a solid waste and is subject to all applicable laws and regulations governing the disposal of a solid waste, including applicable permit requirements of the Department.*~~

Comment: This provision creates an untenable compliance provision. For instance, the failure to file a report on time would subject the filer to solid waste permits that would be impossible to obtain. Likewise, if there were a monitoring, slope or other problems that could be remediated, in lieu of remediation to comply with the coal combustion byproducts standards, this provision places the activity under an entirely different set of standards, again with permitting that would likely be impossible to obtain. Consider the siting, County solid waste management planning, and other implications that would arise were a coal combustion byproducts activity suddenly to become an activity that required a solid waste permit.

To address this issue, we suggest deleting this provision, and applying normal statutory enforcement mechanisms. If MDE insists on retaining this provision, then it is strongly recommended that the provision be amended to allow for a compliance plan and coming into compliance with coal combustion byproducts regulations. For instance, the compliance plan language could be modeled on 26.03.03.05 (noise pollution). We note that this “impossibility” situation does arise in other waste regulation, but typically in a setting where the violations can be remedied. Otherwise, the violation requires complex consent decrees to avoid the impossibility issue.

Thank for the opportunity to comment on these proposed rules. Please contact me by email at [yvonne.a.dedrickson@constellation.com](mailto:yvonne.a.dedrickson@constellation.com) or by phone at 410-787-5456 if you have any questions regarding our comments.

Sincerely,

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Constellation Energy