

GUIDELINES FOR USE OF COAL COMBUSTION BY-PRODUCTS ON DMME/DMLR PERMITS

(based on DEQ Regs approved by Waste Board, November 7, 1994)

The Department of Mines, Minerals and Energy (DMME), Division of Mined Land Reclamation (DMLR) will implement the requirements of the "Regulation Governing Management of Coal Combustion By-Products" VR 672-20-20 of the Department of Environmental Quality (DEQ) for the use of coal combustion by-products (CCB) on permits issued in accordance with the Virginia Coal Surface Mining Reclamation Regulations (VR 480-03-19).

The purpose of the regulation is to provide for the use of CCB and to establish appropriate standards for siting, design, construction, operation, and administrative procedures pertaining to their use, reuse, or reclamation.

The regulation establishes minimum standards for the owners or operators of coal mining facilities that accept CCB for mine reclamation or mine refuse disposal on a mine site permitted by DMME unless otherwise exempt under § 3.3.B. of the Solid Waste Management Regulations (VR 672-20-10). The permit issued by the DMME must specify the applicable conditions set forth in Parts III and IV of the CCB regulation.

Persons using CCB other than in a manner prescribed under the CCB regulations, or managing CCB containing any constituent at a level exceeding the levels set forth in Table 1 of Section I of these Guidelines, shall manage their waste in accordance with all provisions of the Virginia Solid Waste Management Regulations (VR 672-20-10).

SECTION I - ADMINISTRATIVE REQUIREMENTS (DEQ Regs - Part IV)

- A. For the CCB site, per Section 778.15, the permittee shall provide a demonstration of legal right to enter and begin surface coal mining and reclamation operations.
- B. DMME/DMLR's notification requirements are to be used in lieu of the local government certification in the DEQ regulation. Per Section 773.13(a)(1), an advertisement published in a local newspaper of general circulation must make specific reference to the use of CCB. The Division will provide written notification to the local governing bodies of the area in which the CCB site is to be located per 773.13(a)(3).
- C. Provide the Director with a general description of the intended use, reuse, or reclamation of CCB. Such description will include:
 1. A description of the nature, purpose and location of the CCB site, including a topographic map showing the site area and available soils, and geological maps. The description shall include an explanation of how CCB will be stored prior to use, reuse or reclamation, if applicable.
 2. The estimated beginning and ending dates for the operation.
 3. An estimate of the volume of the CCB to be utilized.
 4. A description of the proposed type of CCB to be used, reused or reclaimed,

including physical and chemical characteristics of the CCB. The chemical description shall contain the results of TCLP analyses for the constituents shown in Table 1. The description shall also contain a statement that the project will not manage CCB that contain any constituent at a level exceeding those shown in the table.

TABLE 1
LIST OF CONSTITUENTS AND MAXIMUM LEVELS

CONSTITUENT	LEVEL, mg/lit
Arsenic	5.0
Barium	100
Cadmium	1.0
Chromium	5.0
Lead	5.0
Mercury	0.2
Selenium	1.0
Silver	5.0

- 5. For CCB use involving mixing, layering, or blending with mine spoil or refuse, acid-base testing and balancing must be conducted on all materials used, including the CCB. An assessment of environmental impacts based on these tests is required. Additionally, when CCB is placed in refuse with required quarterly acid-base testing, the CCB must also be tested quarterly for acid-base accountability.

- D. The locational restrictions and design and construction details in Section II, Management Standards, must be certified by a professional engineer licensed to practice by the Commonwealth. Such certification shall contain no qualifications or exemptions from the requirements.

- E. Include operational and closure plans describing how the standards in Section II will be met.

- F. The owner or operator of a CCB site may modify the design and operation of the project by submitting a permit revision application including a new certified operational and/or closure plan.

SECTION II - MANAGEMENT STANDARDS (DEQ Regs - Part III)

2.1. - Locational Restrictions

Coal combustion by-products shall not be placed:

- A. In areas subject to base floods unless it can be shown that CCB can be protected from inundation or washout and that flow of water is not restricted;
 - B. With the vertical separation between the CCB and the maximum seasonal water table or bedrock less than two feet;
 - C. Closer than:
 - 1. 100 feet of any perennial stream or intermittent stream (Section 816.57),
 - 2. 100 feet of any water well (other than a monitoring well) in existence at the onset of the project.
 - 3. 25 feet of a bedrock outcrop, unless the outcrop is properly treated to minimize infiltration into fractured zones,
 - 4. 100 feet of a sinkhole, or
 - 5. 25 feet from the permit boundary.
- (NOTE: All distances are to be measured in the horizontal plane.)
- D. In wetlands, unless applicable federal, state and local permits are obtained;
 - E. On the site of an active or inactive dump, unpermitted landfill, lagoon, or similar facility, even if such facility is closed.

2.2. - Operations Plan, including Closure

An operations plan addressing the CCB site shall be prepared in accordance with Sections 780.11, 780.18, 780.25, 780.29 and 780.35 for surface mining permit applications or comparable sections of Section 784 for underground mining permit applications, as appropriate. The performance standards for construction and closure shall be according to Sections 816.22, 816.71 thru 816.76, 816.81, 816.83, 816.102 thru 816.107. The plans shall include:

- A. The CCB site shall be identified and its location shown on cross-sections and maps of the site.
- B. Design standards for (1) run-on, grading, and run-off, (2) placement and compaction; and (3) side slopes and top slopes shall be in accordance with the permit requirements of Section 780 or 784 and the performance standards in Section 816 or 817 in order to (1)

control and reduce the infiltration of surface water through the CCB and to control the runoff from the placement area to other areas and to surface waters, (2) ensure stability, (3) control erosion of the fill slopes, and (4) prevent ponding of water on top of the fill.

- C. Runoff shall not be permitted to drain or discharge into surface waters except when authorized under the NPDES Permit.
- D. Upon reaching the final grade, the placed material shall be covered in accordance with the requirements of Sections 816.22, 816.71(g), and 816.83(b) or comparable Sections of 817.
- E. Storage, stockpiling, and other processing or handling of CCB, which may need to occur prior to their final placement or use, reuse, or reclamation, shall be in a manner necessary to protect human health and safety, and the environment.
- F. Tracking of mud or CCB onto public roads from the site shall be controlled at all times to minimize nuisances.
- G. Fugitive dust shall be controlled at the site so it does not constitute nuisances or hazards. Dust on primary roads will be addressed in accordance with Section 816.150(b)(1) or 817.150(b)(1). For new permit or revision applications proposing use of CCB, the fugitive dust control plan must also be sent to DEQ's Air Division for review.
- H. The addition of any solid waste including but not limited to hazardous, infectious, construction, debris, demolition, industrial, petroleum-contaminated soil, or municipal solid waste to CCB is prohibited in accordance with Section 816.89 or 817.89. This prohibition does not apply to solid wastes from the extraction, beneficiation and processing of ores and minerals, including coal, conditionally exempted under § 3.3.A.2. of the Solid Waste Management Regulations.

2.3. - PHC Assessment and Water Monitoring Plans

- A. NPDES monitoring will be per the existing DMLR NPDES program.
- B. The Probable Hydrologic Consequences (PHC) assessment must also address use of CCB on the coal mine site.
- C. Surface and/or ground water monitoring will be per the existing DMLR program.

2.4 - Miscellaneous

- A. Slurry injection of CCB into mine voids will be addressed under 816.41(i) or 817.41(h) and the EPA UIC Class V well requirements.
- B. Use of CCB as a soil amendment will be according to either the Virginia Department of Agriculture and Consumer Services (VDACS) or the DEQ/DMME requirements.

1. If VDACS approves a material as a soil amendment, then no additional testing is needed.
 2. If VDACS approval is not received, then the DEQ/DMME processes would apply.
- C. For any proposed alternatives to Section II requirements, the applicant must demonstrate an additional risk to the public health or the environment will not result. (DEQ Regs - Part V)

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