

## SECTION .1700 - REQUIREMENTS FOR BENEFICIAL USE OF COAL COMBUSTION BY-PRODUCTS

### 15A NCAC 13B .1701 DEFINITIONS

The following definitions shall apply throughout this Section:

- (1) "Beneficial and beneficial use" means projects promoting public health and environmental protection, offering equivalent success relative to other alternatives, and preserving natural resources.
- (2) "Coal combustion by-products" means residuals, including fly ash, bottom ash, boiler slag and flue gas desulfurization residue produced by coal fired electrical or steam generation units.
- (3) "Jurisdictional wetland" means those areas that meet the criteria established by the United States Environmental Protection Agency for delineating wetlands and are considered by the Division to be waters of the United States.
- (4) "Structural fill" means an engineered fill with a projected beneficial end use constructed using coal combustion by-products properly placed and compacted.
- (5) "Use or reuse of coal combustion by-products" means the procedure whereby coal combustion by-products are directly used as follows:
  - (a) As an ingredient in an industrial process to make a product, unless distinct components of the coal combustion by-products are recovered as separate end products; or
  - (b) In a function or application as an effective substitute for a commercial product or natural resource.

*History Note:* Authority G.S. 130A-294;  
Eff. January 4, 1994.

**15A NCAC 13B .1702 GENERAL PROVISIONS FOR STRUCTURAL FILL FACILITIES**

The provisions of this Section shall apply to the siting, design, construction, operation, closure and recordation of projects which utilize coal combustion by-products as structural fill material or as specified in Item (4) of Rule .1708 of this Section and shall apply to structural fills other than those which received written approval from the Division prior to the effective date of this Section. A solid waste management permit is not required for coal combustion by-products structural fills which meet the requirements listed in this Section.

*History Note: Authority G.S. 130A-294;  
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**15A NCAC 13B .1703 NOTIFICATION FOR STRUCTURAL FILL FACILITIES**

(a) A minimum of 30 days before using coal combustion by-products in structural fill projects, the person proposing the use shall submit a written notice to the Division. The notice shall contain, at a minimum:

- (1) A description of the nature, purpose and location of the project, including the name of the United States Geological Survey seven and one-half minute map on which the project is located and a Department of Transportation map or an eight and one-half by 11 inch topographic map showing the project.
- (2) The estimated start and completion dates for the project.
- (3) An estimate of the volume of coal combustion by-products to be used for the project.
- (4) A Toxicity Characteristic Leaching Procedure (TCLP) analysis from a representative sample of each different coal combustion by-product source to be used in the project. The TCLP analysis shall be conducted and certified by the generator to be representative of each coal combustion by-product source used in the project. A TCLP analysis shall be conducted at least annually. A minimum analysis shall include: arsenic, barium, cadmium, lead, chromium, mercury, selenium and silver.
- (5) A signed and dated statement by the owner(s) of the land on which the structural fill is to be placed, acknowledging and consenting to the use of coal combustion by-products as structural fill and agreeing to record the fill in accordance with Rule .1707 of this Section.
- (6) The notification shall include:
  - (A) Name of coal combustion by-products generator;
  - (B) Physical location of the generating facility;
  - (C) Address of generator;
  - (D) Name of contact for generator;
  - (E) Telephone number of generator; and
  - (F) Changes that occur will require subsequent notification of the Division of Solid Waste Management.

(b) In addition to the notification requirements under Paragraph (a) of this Rule, at least 30 days before using coal combustion by-products as a structural fill in projects with a volume of more than 10,000 cubic yards, the person proposing the use shall submit a written notice to the Division containing construction plans for the structural fill facility, including a stability analysis when necessary, which shall be prepared, signed and sealed by a registered professional engineer in accordance with sound engineering practices. The Department of Transportation is not required to submit construction plans with the written notice. The Department of Transportation shall maintain a complete set of construction plans and shall notify the Division where the construction plans are located.

*History Note: Authority G.S. 130A-294;  
Eff. January 4, 1994.*

**15A NCAC 13B .1704 SITING FOR STRUCTURAL FILL FACILITIES**

- (a) Coal combustion by-products used as a structural fill shall not be placed:
- (1) Within 50 horizontal feet of a jurisdictional wetland unless after consideration of the chemical and physical impact on the wetland, the U.S. Corps of Engineers issues a permit or waiver for the fill;
  - (2) Within 50 horizontal feet of the top of the bank of a perennial stream or other surface water body;
  - (3) Within two feet of the seasonal high ground-water table;
  - (4) Within 100 horizontal feet of any source of drinking water, such as a well, spring or other groundwater source of drinking water;
  - (5) Within an area subject to a one-hundred year flood, unless it can be demonstrated to the Division that the facility will be protected from inundation, and washout, and the flow of water is not restricted and the storage volume of the flood plain will not be significantly reduced;
  - (6) Within 25 feet of any property boundary; and
  - (7) Within 25 feet of a bedrock outcrop.
- (b) The Division and the Department of Transportation may agree on specific structural fill siting criteria that may be used on Department of Transportation projects.

*History Note: Authority G.S. 130A-294;  
Eff. January 4, 1994.*

**15A NCAC 13B .1705 DESIGN, CONSTRUCTION, AND OPERATION FOR STRUCTURAL FILL FACILITIES**

- (a) The structural fill facility must be designed, constructed, operated, closed, and maintained in such a manner as to minimize the potential for harmful release of constituents of coal combustion by-products to the environment or create a nuisance to the public.
- (b) Coal combustion by-products shall be collected and transported in a manner that will prevent nuisances and hazards to public health and safety. Coal combustion by-products shall be moisture conditioned, as necessary, and transported in covered trucks to prevent dusting.
- (c) Coal combustion by-products shall be placed uniformly and compacted in lifts not exceeding one foot in thickness and shall be compacted to standards, including in-situ density, compaction effort and relative density, specified by a registered professional engineer for a specific end use purpose.
- (d) Equipment shall be provided which is capable of placing and compacting the coal combustion by-products and handling the earthwork required during the periods that coal combustion by-products are received at the fill area.
- (e) The coal combustion by-product structural fill facility shall be effectively maintained and operated as a non-discharge system to prevent discharge to surface water resulting from the operation of the facility.
- (f) The coal combustion by-product structural fill facility shall be effectively maintained and operated to ensure no violations of ground water standards, 15A NCAC 2L.
- (g) Surface waters resulting from precipitation shall be diverted away from the active coal combustion by-product placement area during filling and construction activity.
- (h) Site development shall comply with the North Carolina Sedimentation Pollution Control Act of 1973, as amended.
- (i) The structural fill project must be operated with sufficient dust control measures to minimize airborne emissions and to prevent dust from creating a nuisance or safety hazard and must not violate applicable air quality regulations.
- (j) All structural fills shall be covered with a minimum of 12 inches compacted earth, and an additional surface six inches of soil capable of supporting native plant growth.
- (k) Compliance with these standards does not insulate any of the owners or operators from claims for damages to surface waters, ground-water or air resulting from the operation of the structural fill facility. If the facility fails to comply with the requirements of this Section, the constructor, generator, owner or operator shall notify the Division and shall take such immediate corrective action as may be required by the Department.
- (l) Coal combustion by-products utilized on an exterior slope of a structural fill shall not be placed with a slope greater than 3.0 horizontal to 1.0 vertical.
- (m) The Division and the Department of Transportation may agree on specific design, construction, and operation criteria that may apply to the Department of Transportation projects.

*History Note: Authority G.S. 130A-294;  
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**15A NCAC 13B .1706 CLOSURE OF STRUCTURAL FILL FACILITIES**

- (a) No later than 30 working days or 60 calendar days, whichever is less after coal combustion by-product placement has ceased, the final cover shall be applied over the coal combustion by-product placement area.
- (b) The final surface of the structural fill shall be graded and provided with drainage systems that:
  - (1) Minimize erosion of cover materials; and
  - (2) Promote drainage of area precipitation, minimize infiltration and prevent ponding of surface water on the structural fill.
- (c) Other erosion control measures, such as temporary mulching, seeding, or silt barriers shall be installed to ensure no visible coal combustion by-product migration to adjacent properties until the beneficial end use of the project is realized.
- (d) The constructor or operator shall submit a certification to the Division signed and sealed by a registered professional engineer or signed by the Secretary of the Department of Transportation or his designee certifying that all requirements in the Rules of this Section have been met. The report shall be submitted within 30 days of application of the final cover.
- (e) The Division and the Department of Transportation shall agree on specific closure criteria that apply to Department of Transportation projects.

*History Note: Authority G.S. 130A-294;  
Eff. January 4, 1994.*

**15A NCAC 13B .1707 RECORDATION OF STRUCTURAL FILL FACILITIES**

(a) The owners of land where coal combustion by-products have been utilized in volumes of more than 1,000 cubic yards shall file a statement of the volume and locations of the coal combustion by-products with the Register of Deeds in the county or counties where the property is located. The statement shall identify the parcel of land according to the complete legal description on the recorded deed, either by metes and bounds, or by reference to a recorded plat map. The statement shall be signed and acknowledged by the landowners(s) in the form prescribed by G.S. 47-38 through 47-43.

(b) Recordation shall be required within 90 days after completion of coal combustion by-product fill project.

(c) The Register of Deeds in accordance with G.S. 161-14 shall record the notarized statement and index it in the Grantor Index under the name of the owner(s) of the land. The original notarized statement with the Register's seal and the date, book and page number of recording shall be returned to the Division after recording.

(d) When property with more than 1,000 cubic yards of coal combustion by-products is sold, leased, conveyed or transferred in any manner, the deed or other instrument of transfer shall contain in the description section in no smaller type than used in the body of the deed or instrument a statement that coal combustion by-products have been used as fill material on the property.

*History Note: Authority G.S. 130A-294;  
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### **15A NCAC 13B .1708 OTHER USES FOR COAL COMBUSTION BY-PRODUCTS**

Coal combustion by-products may be beneficially used on one or more of the following applications or when handled, processed, transported or stockpiled for such beneficial use applications and do not require a solid waste permit provided the uses are consistent with the requirements identified below:

- (1) Coal combustion by-products used as soil nutrient additives or other agricultural purposes under the authority of the North Carolina Department of Agriculture;
- (2) Coal combustion bottom ash or boiler slag used as a traction control material or road surface material if the use is approved by the North Carolina Department of Transportation;
- (3) Coal combustion by-products used as material in the manufacturing of another product, including, but not limited to concrete products, lightweight aggregate, roofing materials, plastics, paint, flowable fill and roller compacted concrete or as a substitute for a product or material resource, including but not limited to, blasting grit, roofing granules, filter cloth precoat for sludge dewatering and pipe bedding;
- (4) Coal combustion by-products used as a structural fill for the base, sub-base, under a structure or the footprint of a paved road, a parking lot, sidewalk, walkway or similar structure;
- (5) Coal combustion by-products used for the extraction or recovery of materials and compounds contained within the coal combustion by-products. Residuals from the processing operations shall remain solid waste and be subject to this Section and Section .1600 of this Subchapter; and
- (6) Coal combustion by-products processed with a cementitious binder to produce a stabilized structural fill product which is spread and compacted for the construction of a project with a planned end use.

*History Note:* Authority G.S. 130A-294;  
Eff. January 4, 1994.



**15A NCAC 13B .1709 STORAGE AND CONTAINMENT OF COAL COMBUSTION BY-PRODUCTS**

(a) Coal combustion by-products may not be stored or speculatively accumulated at the immediate area where they will be put to beneficial use for a longer period of time than necessary to complete the project. Coal combustion by-products are not being speculatively accumulated when a minimum of 75 percent of the coal combustion by-products are removed from the facility and beneficially used annually.

(b) Compliance with this Section does not exempt the owner or operator of the structural fill facility from applicable North Carolina Water Pollution Control Regulations (15A NCAC 2H), the North Carolina Air Pollution Control Regulations (15A NCAC 2D) and all other federal, state and local laws and regulations.

*History Note: Authority G.S. 130A-294;  
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**15A NCAC 13B .1710 ANNUAL REPORTING**

By October 1 of each year, the generators of coal combustion by-products shall submit an annual summary to the Division. The annual summary shall be for the period July 1 through June 31 and shall include:

- (1) Volume of coal combustion by-products produced;
- (2) Volume of coal combustion by-products disposed;
- (3) Volume of coal combustion by-products used in structural fill facilities; and
- (4) Volume of coal combustion by-products used for other uses as described in Rule .1708 of this Section.

*History Note: Authority G.S. 130A-294;  
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