GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2021

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SENATE BILL 572

Short Title:	Coal Ash/Structural Fill Modifications.	(Public)
Sponsors:	Senator Marcus (Primary Sponsor).	
Referred to:	Rules and Operations of the Senate	

April 7, 2021

A BILL TO BE ENTITLED

AN ACT TO MODIFY THE REQUIREMENTS FOR THE USE OF COAL COMBUSTION PRODUCTS AS STRUCTURAL FILL AND TO CONFORM THE STATE'S COAL ASH MANAGEMENT REQUIREMENTS FOR USE AS STRUCTURAL FILL TO FEDERAL STANDARDS PROMULGATED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

The General Assembly of North Carolina enacts:

SECTION 1. Subpart 3 of Part 2I of Article 9 of Chapter 130A of the General Statutes reads as rewritten:

"Subpart 3. Use of Coal Combustion Products in Structural Fill.

"**§ 130A-309.218. Applicability.**

The provisions of this Subpart shall apply to the siting, design, construction, operation, and closure of projects that utilize coal combustion products for structural fill.

"**§ 130A-309.219. Permit requirements for projects using coal combustion products for structural fill.**

(a) Permit Requirements. –

(1) Projects using coal combustion products as structural fill involving the placement of less than ~~8,000~~ 12,400 tons of coal combustion products ~~per acre or less than 80,000 tons of coal combustion products in total~~ per project, which proceed in compliance with the requirements of this section and rules adopted thereunder, are deemed permitted. Any person proposing such a project shall submit an application for a permit to the Department upon such form as the Department may prescribe, including, at a minimum, the information set forth in subdivision (1) of subsection (b) of this section.

(2) No person shall commence or operate a project using coal combustion residuals as structural fill involving the placement of ~~8,000~~ 12,400 or more tons of coal combustion products ~~per acre or 80,000 or more tons of coal combustion products in total~~ per project without first receiving an individual permit from the Department. Any person proposing such a project shall submit an application for a permit to the Department upon such form as the Department may prescribe, including, at a minimum, the information set forth in subdivisions (1) and (2) of subsection (b) of this section.

(b) Information to Be Provided to the Department. – At least 60 days before initiation of a proposed project using coal combustion products as structural fill, the person proposing the project shall submit all of the following information to the Department on a form as prescribed by the Department:

(1) For projects involving placement of less than ~~8,000~~ 12,400 tons of coal combustion products ~~per acre or less than 80,000 tons of coal combustion products in total~~ per project, the person shall provide, at a minimum, the following information:
a. The description of the nature, purpose, and location of the project.
b. The estimated start and completion dates for the project.
c. An estimate of the volume of coal combustion products to be used in the project.
d. A Toxicity Characteristic Leaching Procedure analysis from a representative sample of each different coal combustion product's source to be used in the project for, at a minimum, all of the following constituents: arsenic, barium, cadmium, lead, chromium, mercury, selenium, and silver.
e. A signed and dated statement by the owner of the land on which the structural fill is to be placed, acknowledging and consenting to the use of coal combustion products as structural fill on the property and agreeing to record the fill in accordance with the requirements of G.S. 130A-390.219 [130A-309.223].
f. The name, address, and contact information for the generator of the coal combustion products.
g. Physical location of the project at which the coal combustion products were generated.
h. A site plan detailing where the fill will be placed, including reference to project siting requirements set forth in G.S. 130A-309.220(c).

(2) For projects involving placement of ~~8,000~~ 12,400 or more tons of coal combustion products ~~per acre or 80,000 or more tons of coal combustion products in total~~ per project, the person shall provide all information required pursuant to subdivision (1) of this subsection and shall provide construction plans for the project, including a stability analysis as the Department may require. If required by the Department, a stability analysis shall be prepared, signed, and sealed by a professional engineer in accordance with sound engineering practices. A construction plan shall, at a minimum, include a groundwater monitoring system and an encapsulation liner system in compliance with the requirements of G.S. 130A-309.220.

"**§ 130A-309.220. Design, construction, and siting requirements for projects using coal combustion products for structural fill.**

…

(b) Liners, Leachate Collection System, Cap, and Groundwater Monitoring System Required for Large Structural Fills. – ~~For projects~~ Projects involving placement of ~~8,000~~ 12,400 or more tons of coal combustion products ~~per acre or 80,000 or more tons of coal combustion products in total~~ per project shall have an encapsulation liner system. The encapsulation liner system shall be constructed on and around the structural fill and shall be designed to efficiently contain, collect, and remove leachate generated by the coal combustion products, as well as separate the coal combustion products from any exposure to surrounding environs. At a minimum, the components of the liner system shall consist of the following:

(1) A base liner, which shall consist of one of the following designs:
a. A composite liner utilizing a compacted clay liner. This composite liner is one liner that consists of two components: a geomembrane liner installed above and in direct and uniform contact with a compacted clay liner with a minimum thickness of 24 inches (0.61 m) and a

permeability of no more than 1.0 x 10-=ss 7 =ks centimeters per second.

b. A composite liner utilizing a geosynthetic clay liner. This composite liner is one liner that consists of three components: a geomembrane liner installed above and in uniform contact with a geosynthetic clay liner overlying a compacted clay liner with a minimum thickness of 18 inches (0.46 m) and a permeability of no more than 1.0 x 10-=ss 5 =ks centimeters per second.

(2) A leachate collection system, which is constructed directly above the base liner and shall be designed to effectively collect and remove leachate from the project.

(3) A cap system that is designed to minimize infiltration and erosion as follows:

a. The cap system shall be designed and constructed to (i) have a permeability less than or equal to the permeability of any base liner system or the in situ subsoils underlying the structural fill, or the permeability specified for the final cover in the effective permit, or a permeability no greater than 1 x 10-=ss 5 =ks centimeters per second, whichever is less; (ii) minimize infiltration through the closed structural fill by the use of a low-permeability barrier that contains a minimum 18 inches of earthen material; and (iii) minimize erosion of the cap system and protect the low-permeability barrier from root penetration by use of an erosion layer that contains a minimum of six inches of earthen material that is capable of sustaining native plant growth.

b. The Department may approve an alternative cap system if the owner or operator can adequately demonstrate (i) the alternative cap system will achieve an equivalent or greater reduction in infiltration as the low-permeability barrier specified in sub-subdivision a. of this subdivision and (ii) the erosion layer will provide equivalent or improved protection as the erosion layer specified in sub-subdivision a. of this subdivision.

(4) A groundwater monitoring system, that shall be approved by the Department and, at a minimum, consists of all of the following:

a. A sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer that represent the quality of groundwater passing the relevant point of compliance as approved by the Department. A down-gradient monitoring system shall be installed at the relevant point of compliance so as to ensure detection of groundwater contamination in the uppermost aquifer.

b. A proposed monitoring plan, which shall be certified by a licensed geologist or professional engineer to be effective in providing early detection of any release of hazardous constituents from any point in a structural fill or leachate surface impoundment to the uppermost aquifer, so as to be protective of public health, safety, and welfare; the environment; and natural resources.

c. A groundwater monitoring program, which shall include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of groundwater quality at the background and down-gradient wells. Monitoring shall be conducted through construction and the

post-closure care period. The sampling procedures and frequency shall be protective of public health, safety, and welfare; the environment; and natural resources.

d. A detection monitoring program for all Appendix I constituents. For purposes of this subdivision, the term "Appendix I" means Appendix I to 40 C.F.R. Part 258, "Appendix I Constituents for Detection Monitoring," including subsequent amendments and editions.

e. An assessment monitoring program and corrective action plan if one or more of the constituents listed in Appendix I is detected in exceedance of a groundwater protection standard.

(c) Siting for Structural Fill Facilities. – Coal combustion products used as a structural fill shall not be placed:

(1) Within 50 feet of any property boundary.

(2) Within 300 horizontal feet of a private dwelling or well.

(3) Within 50 horizontal feet of the top of the bank of a perennial stream or other surface water body.

(4) Within four feet of the seasonal high groundwater ~~table.~~table, except as provided in G.S. 130A-309.220A.

(5) Within a 100-year floodplain except as authorized under G.S. 143-215.54A(b). A site located in a floodplain shall not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain or result in washout of solid waste so as to pose a hazard to human life, wildlife or land or water resources.

(6) Within 50 horizontal feet of a wetland, unless, after consideration of the chemical and physical impact on the wetland, the United States Army Corps of Engineers issues a permit or waiver for the fill.

"**§ 130A-309.220A. Specific requirements for all projects using coal combustion products for structural fill placed in open pit mines.**

All projects that use coal combustion products for structural fill in open pit mines, without regard to the amount of coal combustion products to be used as fill in such projects, shall be subject to the following requirements:

(1) Notwithstanding G.S. 130A-309.220(c), in accordance with 40 C.F.R. § 257.60, a 5-foot separation shall be required between the base of coal combustion products used in such projects and the uppermost aquifer, or the applicant must demonstrate that there will not be an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the coal combustion products used in such projects and the uppermost aquifer due to normal fluctuations in groundwater elevations, including the seasonal high water table. Provided, however, that despite an applicant's ability to demonstrate lack of a hydraulic connection as provided herein, coal combustion products shall not be placed within 4 feet of the seasonal high groundwater table.

(2) Design and construction standards set forth in G.S. 130A-220(b) that require a liner, leachate collection system, cap, and groundwater monitoring system shall apply.

"**§ 130A-309.221. Financial assurance requirements for large projects using coal combustion products for structural fill.**

(a) For projects involving placement of ~~8,000~~ 12,400 or more tons of coal combustion products ~~per acre or 80,000 or more tons of coal combustion products in total~~ per project, the applicant for a permit or a permit holder to construct or operate a structural fill shall establish financial assurance that will ensure that sufficient funds are available for facility closure,

post-closure maintenance and monitoring, any corrective action that the Department may require, and to satisfy any potential liability for sudden and nonsudden accidental occurrences, and subsequent costs incurred by the Department in response to an incident at a structural fill project, even if the applicant or permit holder becomes insolvent or ceases to reside, be incorporated, do business, or maintain assets in the State.

…

"**§ 130A-309.222. Closure of projects using coal combustion products for structural fill.**

(a) Closure of Structural Fill Projects. –

(1) No later than 30 working days or 60 calendar days, whichever is less, after coal combustion product placement has ceased, the final cover shall be applied over the coal combustion product placement area.

(2) The final surface of the structural fill shall be graded and provided with drainage systems that do all of the following:

a. Minimize erosion of cover materials.

b. Promote drainage of area precipitation, minimize infiltration, and prevent ponding of surface water on the structural fill.

(3) Other erosion control measures, such as temporary mulching, seeding, or silt barriers shall be installed to ensure no visible coal combustion product migration to adjacent properties until the beneficial end use of the project is realized.

(4) The constructor or operator shall submit a certification to the Department signed and sealed by a registered professional engineer or signed by the Secretary of the Department of Transportation or the Secretary's designee certifying that all requirements of this Subpart have been met. The report shall be submitted within 30 days of application of the final cover.

(b) Additional Closure and Post-Closure Requirements for Large Structural Fill Projects. – For projects involving placement of ~~8,000~~ 12,400 or more tons of coal combustion products ~~per acre or 80,000 or more tons of coal combustion products in total~~ per project, a constructor or operator shall conduct post-closure care. Post-closure care shall be conducted for 30 years, which period may be increased by the Department upon a determination that a longer period is necessary to protect public health, safety, and welfare; the environment; and natural resources, or decreased upon a determination that a shorter period is sufficient to protect public health, safety, and welfare; the environment; and natural resources. Additional closure and post-closure requirements include, at a minimum, all of the following:

…."

SECTION 2. This act is effective when it becomes law and applies to contracts for the use of structural fill executed on or after that date.