

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2021

FILED SENATE
Apr 6, 2021
S.B. 572
PRINCIPAL CLERK

S

D

SENATE BILL DRS15240-RI-19

Short Title: Coal Ash/Structural Fill Modifications.

(Public)

Sponsors: Senator Marcus (Primary Sponsor).

Referred to:

1 A BILL TO BE ENTITLED
2 AN ACT TO MODIFY THE REQUIREMENTS FOR THE USE OF COAL COMBUSTION
3 PRODUCTS AS STRUCTURAL FILL AND TO CONFORM THE STATE'S COAL ASH
4 MANAGEMENT REQUIREMENTS FOR USE AS STRUCTURAL FILL TO FEDERAL
5 STANDARDS PROMULGATED BY THE UNITED STATES ENVIRONMENTAL
6 PROTECTION AGENCY.

7 The General Assembly of North Carolina enacts:

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

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

11 "§ 130A-309.218. **Applicability.**

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

14 "§ 130A-309.219. **Permit requirements for projects using coal combustion products for
15 structural fill.**

16 (a) Permit Requirements. –

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

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

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



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

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

35 **"§ 130A-309.220. Design, construction, and siting requirements for projects using coal**
 36 **combustion products for structural fill.**

37 ...
 38 (b) Liners, Leachate Collection System, Cap, and Groundwater Monitoring System
 39 Required for Large Structural Fills. – ~~For projects~~ Projects involving placement of ~~8,000~~ 12,400
 40 or more tons of coal combustion products ~~per acre or 80,000 or more tons of coal combustion~~
 41 ~~products in total~~ per project shall have an encapsulation liner system. The encapsulation liner
 42 system shall be constructed on and around the structural fill and shall be designed to efficiently
 43 contain, collect, and remove leachate generated by the coal combustion products, as well as
 44 separate the coal combustion products from any exposure to surrounding environs. At a
 45 minimum, the components of the liner system shall consist of the following:

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

- 1 permeability of no more than 1.0×10^{-7} centimeters per
2 second.
- 3 b. A composite liner utilizing a geosynthetic clay liner. This composite
4 liner is one liner that consists of three components: a geomembrane
5 liner installed above and in uniform contact with a geosynthetic clay
6 liner overlying a compacted clay liner with a minimum thickness of
7 18 inches (0.46 m) and a permeability of no more than 1.0×10^{-5}
8 centimeters per second.
- 9 (2) A leachate collection system, which is constructed directly above the base
10 liner and shall be designed to effectively collect and remove leachate from the
11 project.
- 12 (3) A cap system that is designed to minimize infiltration and erosion as follows:
- 13 a. The cap system shall be designed and constructed to (i) have a
14 permeability less than or equal to the permeability of any base liner
15 system or the in situ subsoils underlying the structural fill, or the
16 permeability specified for the final cover in the effective permit, or a
17 permeability no greater than 1×10^{-5} centimeters per second,
18 whichever is less; (ii) minimize infiltration through the closed
19 structural fill by the use of a low-permeability barrier that contains a
20 minimum 18 inches of earthen material; and (iii) minimize erosion of
21 the cap system and protect the low-permeability barrier from root
22 penetration by use of an erosion layer that contains a minimum of six
23 inches of earthen material that is capable of sustaining native plant
24 growth.
- 25 b. The Department may approve an alternative cap system if the owner
26 or operator can adequately demonstrate (i) the alternative cap system
27 will achieve an equivalent or greater reduction in infiltration as the
28 low-permeability barrier specified in sub-subdivision a. of this
29 subdivision and (ii) the erosion layer will provide equivalent or
30 improved protection as the erosion layer specified in sub-subdivision
31 a. of this subdivision.
- 32 (4) A groundwater monitoring system, that shall be approved by the Department
33 and, at a minimum, consists of all of the following:
- 34 a. A sufficient number of wells, installed at appropriate locations and
35 depths, to yield groundwater samples from the uppermost aquifer that
36 represent the quality of groundwater passing the relevant point of
37 compliance as approved by the Department. A down-gradient
38 monitoring system shall be installed at the relevant point of
39 compliance so as to ensure detection of groundwater contamination in
40 the uppermost aquifer.
- 41 b. A proposed monitoring plan, which shall be certified by a licensed
42 geologist or professional engineer to be effective in providing early
43 detection of any release of hazardous constituents from any point in a
44 structural fill or leachate surface impoundment to the uppermost
45 aquifer, so as to be protective of public health, safety, and welfare; the
46 environment; and natural resources.
- 47 c. A groundwater monitoring program, which shall include consistent
48 sampling and analysis procedures that are designed to ensure
49 monitoring results that provide an accurate representation of
50 groundwater quality at the background and down-gradient wells.
51 Monitoring shall be conducted through construction and the

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

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

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

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

13 (1) Within 50 feet of any property boundary.

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

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

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

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

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

27 **"§ 130A-309.220A. Specific requirements for all projects using coal combustion products**
 28 **for structural fill placed in open pit mines.**

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

32 (1) Notwithstanding G.S. 130A-309.220(c), in accordance with 40 C.F.R. §
 33 257.60, a 5-foot separation shall be required between the base of coal
 34 combustion products used in such projects and the uppermost aquifer, or the
 35 applicant must demonstrate that there will not be an intermittent, recurring, or
 36 sustained hydraulic connection between any portion of the base of the coal
 37 combustion products used in such projects and the uppermost aquifer due to
 38 normal fluctuations in groundwater elevations, including the seasonal high
 39 water table. Provided, however, that despite an applicant's ability to
 40 demonstrate lack of a hydraulic connection as provided herein, coal
 41 combustion products shall not be placed within 4 feet of the seasonal high
 42 groundwater table.

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

46 **"§ 130A-309.221. Financial assurance requirements for large projects using coal**
 47 **combustion products for structural fill.**

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

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

6 ...

7 **"§ 130A-309.222. Closure of projects using coal combustion products for structural fill.**

8 (a) Closure of Structural Fill Projects. –

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

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

14 a. Minimize erosion of cover materials.

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

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

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

26 (b) Additional Closure and Post-Closure Requirements for Large Structural Fill Projects.

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

35"

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