

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2019**

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SENATE BILL 328

Short Title: Increase Rqmts. for Small Structural Fills. (Public)

Sponsors: Senator Sawyer (Primary Sponsor).

Referred to: Rules and Operations of the Senate

March 25, 2019

A BILL TO BE ENTITLED

AN ACT TO SUBJECT ALL PROJECTS USING COAL COMBUSTION PRODUCTS AS STRUCTURAL FILL TO THE SAME REQUIREMENTS FOR PERMITTING, DESIGN AND CONSTRUCTION, CLOSURE, AND POST-CLOSURE.

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 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 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)~~ (b1) 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 (1) ~~For projects involving placement of less than 8,000 tons of coal combustion~~
2 ~~products per acre or less than 80,000 tons of coal combustion products in total~~
3 ~~per project, the person shall provide, at a minimum, the following information:~~
4 ~~a. The description of the nature, purpose, and location of the project.~~
5 ~~b. The estimated start and completion dates for the project.~~
6 ~~c. An estimate of the volume of coal combustion products to be used in~~
7 ~~the project.~~
8 ~~d. A Toxicity Characteristic Leaching Procedure analysis from a~~
9 ~~representative sample of each different coal combustion product's~~
10 ~~source to be used in the project for, at a minimum, all of the following~~
11 ~~constituents: arsenic, barium, cadmium, lead, chromium, mercury,~~
12 ~~selenium, and silver.~~
13 ~~e. A signed and dated statement by the owner of the land on which the~~
14 ~~structural fill is to be placed, acknowledging and consenting to the use~~
15 ~~of coal combustion products as structural fill on the property and~~
16 ~~agreeing to record the fill in accordance with the requirements of G.S.~~
17 ~~130A-309.219 [130A-309.223].~~
18 ~~f. The name, address, and contact information for the generator of the~~
19 ~~coal combustion products.~~
20 ~~g. Physical location of the project at which the coal combustion products~~
21 ~~were generated.~~

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

32 **(b1) Information to Be Provided to the Department. – At least 60 days before initiation of**
33 **a proposed project using coal combustion products as structural fill, the person proposing the**
34 **project shall submit all of the following information to the Department on a form as prescribed**
35 **by the Department:**

- 36 (1) The description of the nature, purpose, and location of the project.
37 (2) The estimated start and completion dates for the project.
38 (3) An estimate of the volume of coal combustion products to be used in the
39 project.
40 (4) A Toxicity Characteristic Leaching Procedure analysis from a representative
41 sample of each different coal combustion product's source to be used in the
42 project for, at a minimum, all of the following constituents: arsenic, barium,
43 cadmium, lead, chromium, mercury, selenium, and silver.
44 (5) A signed and dated statement by the owner of the land on which the structural
45 fill is to be placed, acknowledging and consenting to the use of coal
46 combustion products as structural fill on the property and agreeing to record
47 the fill in accordance with the requirements of G.S. 130A-309.223.
48 (6) The name, address, and contact information for the generator of the coal
49 combustion products.
50 (7) Physical location of the project at which the coal combustion products were
51 generated.

1 (8) Construction plans for the project, including a stability analysis as the
2 Department may require. If required by the Department, a stability analysis
3 shall be prepared, signed, and sealed by a professional engineer in accordance
4 with sound engineering practices. A construction plan shall, at a minimum,
5 include a groundwater monitoring system and an encapsulation liner system
6 in compliance with the requirements of G.S. 130A-309.220.

7 "**§ 130A-309.220. Design, construction, and siting requirements for projects using coal**
8 **combustion products for structural fill.**

9 (a) Design, Construction, and Operation of Structural Fill Sites. –

10 (1) A structural fill site must be designed, constructed, operated, closed, and
11 maintained in such a manner as to minimize the potential for harmful release
12 of constituents of coal combustion residuals to the environment or create a
13 nuisance to the public.

14 (2) Coal combustion products shall be collected and transported in a manner that
15 will prevent nuisances and hazards to public health and safety. Coal
16 combustion products shall be moisture conditioned, as necessary, and
17 transported in covered trucks to prevent dusting.

18 (3) Coal combustion products shall be placed uniformly and shall be compacted
19 to standards, including in situ density, compaction effort, and relative density,
20 specified by a registered professional engineer for a specific end-use purpose.

21 (4) Equipment shall be provided that is capable of placing and compacting the
22 coal combustion products and handling the earthwork required during the
23 periods that coal combustion products are received at the fill project.

24 (5) The coal combustion product structural fill project shall be effectively
25 maintained and operated as a nondischarge system to prevent discharge to
26 surface water resulting from the project.

27 (6) The coal combustion product structural fill project shall be effectively
28 maintained and operated to ensure no violations of groundwater standards
29 adopted by the Environmental Management Commission pursuant to Article
30 21 of Chapter 143 of the General Statutes due to the project.

31 (7) Surface waters resulting from precipitation shall be diverted away from the
32 active coal combustion product placement area during filling and construction
33 activity.

34 (8) Site development shall comply with the North Carolina Sedimentation
35 Pollution Control Act of 1973, as amended.

36 (9) The structural fill project shall be operated with sufficient dust control
37 measures to minimize airborne emissions and to prevent dust from creating a
38 nuisance or safety hazard and shall not violate applicable air quality
39 regulations.

40 (10) Coal combustion products utilized on an exterior slope of a structural fill shall
41 not be placed with a slope greater than 3.0 horizontal to 1.0 vertical.

42 (11) Compliance with this subsection shall not insulate any of the owners or
43 operators of a structural fill project from claims for damages to surface waters,
44 groundwater, or air resulting from the operation of the structural fill project.
45 If the project fails to comply with the requirements of this section, the
46 constructor, generator, owner, or operator shall notify the Department and
47 shall take any immediate corrective action as may be required by the
48 Department.

49 (b) Liners, Leachate Collection System, Cap, and Groundwater Monitoring System
50 Required for ~~Large Structural Fills. – For projects~~ Projects involving placement of 8,000 or more
51 ~~tons of coal combustion products per acre or 80,000 or more tons of~~ of coal combustion products

1 ~~in total per project as structural fill~~ shall have an encapsulation liner system. The encapsulation
2 liner system shall be constructed on and around the structural fill and shall be designed to
3 efficiently contain, collect, and remove leachate generated by the coal combustion products, as
4 well as separate the coal combustion products from any exposure to surrounding environs. At a
5 minimum, the components of the liner system shall consist of the following:

- 6 (1) A base liner, which shall consist of one of the following designs:
- 7 a. A composite liner utilizing a compacted clay liner. This composite
8 liner is one liner that consists of two components: a geomembrane liner
9 installed above and in direct and uniform contact with a compacted
10 clay liner with a minimum thickness of 24 inches (0.61 m) and a
11 permeability of no more than 1.0×10^{-7} centimeters per
12 second.
- 13 b. A composite liner utilizing a geosynthetic clay liner. This composite
14 liner is one liner that consists of three components: a geomembrane
15 liner installed above and in uniform contact with a geosynthetic clay
16 liner overlying a compacted clay liner with a minimum thickness of
17 18 inches (0.46 m) and a permeability of no more than 1.0×10^{-5}
18 centimeters per second.
- 19 (2) A leachate collection system, which is constructed directly above the base
20 liner and shall be designed to effectively collect and remove leachate from the
21 project.
- 22 (3) A cap system that is designed to minimize infiltration and erosion as follows:
- 23 a. The cap system shall be designed and constructed to (i) have a
24 permeability less than or equal to the permeability of any base liner
25 system or the in situ subsoils underlying the structural fill, or the
26 permeability specified for the final cover in the effective permit, or a
27 permeability no greater than 1×10^{-5} centimeters per second,
28 whichever is less; (ii) minimize infiltration through the closed
29 structural fill by the use of a low-permeability barrier that contains a
30 minimum 18 inches of earthen material; and (iii) minimize erosion of
31 the cap system and protect the low-permeability barrier from root
32 penetration by use of an erosion layer that contains a minimum of six
33 inches of earthen material that is capable of sustaining native plant
34 growth.
- 35 b. The Department may approve an alternative cap system if the owner
36 or operator can adequately demonstrate (i) the alternative cap system
37 will achieve an equivalent or greater reduction in infiltration as the
38 low-permeability barrier specified in sub-subdivision a. of this
39 subdivision and (ii) the erosion layer will provide equivalent or
40 improved protection as the erosion layer specified in sub-subdivision
41 a. of this subdivision.
- 42 (4) A groundwater monitoring system, ~~that~~ which shall be approved by the
43 Department and, at a minimum, consists of all of the following:
- 44 a. A sufficient number of wells, installed at appropriate locations and
45 depths, to yield groundwater samples from the uppermost aquifer that
46 represent the quality of groundwater passing the relevant point of
47 compliance as approved by the Department. A down-gradient
48 monitoring system shall be installed at the relevant point of
49 compliance so as to ensure detection of groundwater contamination in
50 the uppermost aquifer.

- 1 b. A proposed monitoring plan, which shall be certified by a licensed
2 geologist or professional engineer to be effective in providing early
3 detection of any release of hazardous constituents from any point in a
4 structural fill or leachate surface impoundment to the uppermost
5 aquifer, so as to be protective of public health, safety, and welfare; the
6 environment; and natural resources.
- 7 c. A groundwater monitoring program, which shall include consistent
8 sampling and analysis procedures that are designed to ensure
9 monitoring results that provide an accurate representation of
10 groundwater quality at the background and down-gradient wells.
11 Monitoring shall be conducted through construction and the
12 post-closure care period. The sampling procedures and frequency shall
13 be protective of public health, safety, and welfare; the environment;
14 and natural resources.
- 15 d. A detection monitoring program for all Appendix I constituents. For
16 purposes of this subdivision, the term "Appendix I" means Appendix
17 I to 40 C.F.R. Part 258, "Appendix I Constituents for Detection
18 Monitoring," including subsequent amendments and editions.
- 19 e. An assessment monitoring program and corrective action plan if one
20 or more of the constituents listed in Appendix I is detected in
21 exceedance of a groundwater protection standard.

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

- 24 (1) Within 50 feet of any property boundary.
- 25 (2) Within 300 horizontal feet of a private dwelling or well.
- 26 (3) Within 50 horizontal feet of the top of the bank of a perennial stream or other
27 surface water body.
- 28 (4) Within four feet of the seasonal high groundwater table.
- 29 (5) Within a 100-year floodplain except as authorized under
30 G.S. 143-215.54A(b). A site located in a floodplain shall not restrict the flow
31 of the 100-year flood, reduce the temporary water storage capacity of the
32 floodplain or result in washout of solid waste so as to pose a hazard to human
33 life, wildlife or land or water resources.
- 34 (6) Within 50 horizontal feet of a wetland, unless, after consideration of the
35 chemical and physical impact on the wetland, the United States Army Corps
36 of Engineers issues a permit or waiver for the fill.

37 **"§ 130A-309.221. Financial assurance requirements for large projects using coal
38 combustion products for structural fill.**

39 (a) ~~For projects involving placement of 8,000 or more tons of coal combustion products~~
40 ~~per acre or 80,000 or more tons of coal combustion products in total per project, the~~ The applicant
41 for a permit or a permit holder to construct or operate a structural fill shall establish financial
42 assurance that will ensure that sufficient funds are available for facility closure, post-closure
43 maintenance and monitoring, any corrective action that the Department may require, and to
44 satisfy any potential liability for sudden and nonsudden accidental occurrences, and subsequent
45 costs incurred by the Department in response to an incident at a structural fill project, even if the
46 applicant or permit holder becomes insolvent or ceases to reside, be incorporated, do business,
47 or maintain assets in the State.

48 (b) To establish sufficient availability of funds under this section, the applicant for a
49 permit or a permit holder may use insurance, financial tests, third-party guarantees by persons
50 who can pass the financial test, guarantees by corporate parents who can pass the financial test,
51 irrevocable letters of credit, trusts, surety bonds, or any other financial device, or any combination

1 of the foregoing shown to provide protection equivalent to the financial protection that would be
2 provided by insurance if insurance were the only mechanism used.

3 (c) The applicant for a permit or a permit holder and any parent, subsidiary, or other
4 affiliate of the applicant, permit holder, or parent, including any joint venturer with a direct or
5 indirect interest in the applicant, permit holder, or parent shall be a guarantor of payment for
6 closure, post-closure maintenance and monitoring, any corrective action that the Department may
7 require, and to satisfy any potential liability for sudden and nonsudden accidental occurrences
8 arising from the operation of the hazardous waste facility.

9 (d) Assets used to meet the financial assurance requirements of this section shall be in a
10 form that will allow the Department to readily access funds for the purposes set out in this section.
11 Assets used to meet financial assurance requirements of this section shall not be accessible to the
12 permit holder except as approved by the Department.

13 (e) The Department may provide a copy of any filing that an applicant for a permit or a
14 permit holder submits to the Department to meet the financial responsibility requirements under
15 this section to the State Treasurer. The State Treasurer shall review the filing and provide the
16 Department with a written opinion as to the adequacy of the filing to meet the purposes of this
17 section, including any recommended changes.

18 (f) In order to continue to hold a permit for a structural fill, a permit holder must maintain
19 financial responsibility as required by this Part and must provide any information requested by
20 the Department to establish that the permit holder continues to maintain financial responsibility.

21 (g) An applicant for a permit or a permit holder shall satisfy the Department that the
22 applicant or permit holder has met the financial responsibility requirements of this Part before
23 the Department is required to otherwise review the application.

24 ~~"§ 130A-309.222. Closure of projects using coal combustion products for structural fill.~~

25 ~~(a) Closure of Structural Fill Projects.—~~

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

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

31 ~~a. Minimize erosion of cover materials.~~

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

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

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

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

- 1 (1) Submit a written closure plan that includes all of the following:
2 a. A description of the cap liner system and the methods and procedures
3 used to install the cap that conforms to the requirement in G.S.
4 130A-309.220(b).
5 b. An estimate of the largest area of the structural fill project ever
6 requiring the cap liner system at any time during the overall
7 construction period that is consistent with the drawings prepared for
8 the structural fill.
9 e. An estimate of the maximum inventory of coal combustion products
10 ever on site over the construction duration of the structural fill.
11 d. A schedule for completing all activities necessary to satisfy the closure
12 criteria set forth in this section.
- 13 (2) Submit a written post-closure plan that includes all of the following:
14 a. A description of the monitoring and maintenance activities required
15 for the project and the frequency at which these activities must be
16 performed.
17 b. The name, address, and telephone number of the person or office
18 responsible for the project during the post-closure period.
19 e. A description of the planned uses of the property during the
20 post-closure period. Post-closure use of the property must not disturb
21 the integrity of the cap system, base liner system, or any other
22 components of the containment system or the function of the
23 monitoring systems, unless necessary to comply with the requirements
24 of this subsection. The Department may approve disturbance if the
25 constructor or operator demonstrates that disturbance of the cap
26 system, base liner system, or other component of the containment
27 system will not increase the potential threat to public health, safety,
28 and welfare; the environment; and natural resources.
29 d. The cost estimate for post-closure activities required under this
30 section.
- 31 (3) Maintain the integrity and effectiveness of any cap system, including repairing
32 the system as necessary to correct the defects of settlement, subsidence,
33 erosion, or other events and preventing run-on and runoff from eroding or
34 otherwise damaging the cap system.
- 35 (4) Maintain and operate the leachate collection system. The Department may
36 allow the constructor or operator to stop managing leachate upon a satisfactory
37 demonstration that leachate from the project no longer poses a threat to human
38 health and the environment.
- 39 (5) Monitor and maintain the groundwater monitoring system in accordance with
40 G.S. 130A-309.220 and monitor the surface water in accordance with 15A
41 NCAC 13B .0602.
- 42 (e) Completion of Post-Closure Care. — Following completion of the post-closure care
43 period, the constructor or operator shall submit a certification, signed by a registered professional
44 engineer, to the Department, verifying that post-closure care has been completed in accordance
45 with the post-closure plan, and include the certification in the operating record.

46 "**§ 130A-309.222A. Closure and post-closure requirements for projects using coal**
47 **combustion products for structural fill.**

- 48 (a) Closure and post-closure requirements include, at a minimum, all of the following:

- 49 (1) No later than 30 working days or 60 calendar days, whichever is less, after
50 coal combustion product placement has ceased, apply the final cover over the
51 coal combustion product placement area.

- 1 (2) The final surface of the structural fill shall be graded and provided with
2 drainage systems that do all of the following:
3 a. Minimize erosion of cover materials.
4 b. Promote drainage of area precipitation, minimize infiltration, and
5 prevent ponding of surface water on the structural fill.
6 (3) Install other erosion control measures, such as temporary mulching, seeding,
7 or silt barriers to ensure no visible coal combustion product migration to
8 adjacent properties until the beneficial end use of the project is realized.
9 (4) Submit a certification to the Department signed and sealed by a registered
10 professional engineer or signed by the Secretary of the Department of
11 Transportation or the Secretary's designee certifying that all requirements of
12 this Subpart have been met. The report shall be submitted within 30 days of
13 application of the final cover.
14 (5) Submit a written closure plan that includes all of the following:
15 a. A description of the cap liner system and the methods and procedures
16 used to install the cap that conforms to the requirement in
17 G.S. 130A-309.220(b).
18 b. An estimate of the largest area of the structural fill project ever
19 requiring the cap liner system at any time during the overall
20 construction period that is consistent with the drawings prepared for
21 the structural fill.
22 c. An estimate of the maximum inventory of coal combustion products
23 ever on-site over the construction duration of the structural fill.
24 d. A schedule for completing all activities necessary to satisfy the closure
25 criteria set forth in this section.
26 (6) Submit a written post-closure plan that includes all of the following:
27 a. A description of the monitoring and maintenance activities required
28 for the project and the frequency at which these activities must be
29 performed.
30 b. The name, address, and telephone number of the person or office
31 responsible for the project during the post-closure period.
32 c. A description of the planned uses of the property during the
33 post-closure period. Post-closure use of the property must not disturb
34 the integrity of the cap system, base liner system, or any other
35 components of the containment system or the function of the
36 monitoring systems, unless necessary to comply with the requirements
37 of this subsection. The Department may approve disturbance if the
38 constructor or operator demonstrates that disturbance of the cap
39 system, base liner system, or other component of the containment
40 system will not increase the potential threat to public health, safety,
41 and welfare; the environment; and natural resources.
42 d. The cost estimate for post-closure activities required under this
43 section.
44 (7) Maintain the integrity and effectiveness of any cap system, including repairing
45 the system as necessary to correct the defects of settlement, subsidence,
46 erosion, or other events and preventing run-on and runoff from eroding or
47 otherwise damaging the cap system.
48 (8) Maintain and operate the leachate collection system. The Department may
49 allow the constructor or operator to stop managing leachate upon a satisfactory
50 demonstration that leachate from the project no longer poses a threat to human
51 health and the environment.

1 (9) Monitor and maintain the groundwater monitoring system in accordance with
2 G.S. 130A-309.220 and monitor the surface water in accordance with 15A
3 NCAC 13B .0602.

4 (b) Duration and Completion of Post-Closure Care. – Post-closure care shall be
5 conducted for 30 years, which period may be increased by the Department upon a determination
6 that a longer period is necessary to protect public health, safety, and welfare; the environment;
7 and natural resources, or decreased upon a determination that a shorter period is sufficient to
8 protect public health, safety, and welfare; the environment; and natural resources. Following
9 completion of the post-closure care period, the constructor or operator shall submit a certification,
10 signed by a registered professional engineer, to the Department, verifying that post-closure care
11 has been completed in accordance with the post-closure plan, and include the certification in the
12 operating record.

13 "

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