



Facility Permit No:1910
Brickhaven No.2 Mine Tract "A"
Date: June 5, 2015
DIN: 23655
Page 1 of 10

North Carolina Department of Environment and Natural Resources
Division of Waste Management

Pat McCrory
Governor

Donald R. van der Vaart
Secretary

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT
SOLID WASTE SECTION

**SOLID WASTE MANAGEMENT FACILITY
STRUCTURAL FILL, MINE RECLAMATION
Permit No. 1910**

Green Meadow, LLC and Charah, Inc.
are hereby issued a

PERMIT TO CONSTRUCT AND OPERATE
1910-STRUC-2015
BRICKHAVEN NO.2 MINE TRACT "A" MINE STRUCTURAL FILL
in conjunction with
NCDENR DEMLR MINE PERMIT 19-25

Located 6 miles south of the Moncure Community off of Moncure-Flatwood Road in Chatham County, North Carolina, in accordance with Article 9, Chapter 130A, of the General Statutes of North Carolina and all rules promulgated thereunder and subject to the conditions set forth in this permit. The legal description of the site is identified on the deeds recorded for this property listed in Attachment No. 1 of this permit.

Edward F. Mussler, III, P.E., Supervisor
Permitting Branch, Solid Waste Section
Division of Waste Management, NCDENR

ATTACHMENT 1
GENERAL PERMIT CONDITIONS/INFORMATION

Permit to Operate Date Table

Permit	Issuance	Review	Expiration	DIN
1910-STRUCT-2015, Brickhaven No.2 Mine Tract "A"	June 5, 2015	June 5, 2020	June 5, 2025	23655

General Conditions

1. This permit is issued by the North Carolina Department of Environment and Natural Resources (NCDENR), Division of Waste Management, Solid Waste Section (Section) in accordance with North Carolina General Statute §130A-309.218. The construction must be implemented in accordance with Attachment 2 of this permit. The operation must be implemented in accordance with Attachment 3 of this permit.
2. The persons to whom this permit is issued ("permittee") are the owners and operators of the coal combustion products structural fill.
3. The owner of land where coal combustion products have been used shall file a statement of the volume and locations of the coal combustion residuals or 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 in the form prescribed by G.S. 47-38 through G.S. 47-43. Recordation shall be required within 90 days after completion of a structural fill project using coal combustion residuals or products. A copy of the recordation shall be forwarded to the department.
4. When this property 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 that used in the body of the deed or instrument a statement that coal combustion products have been used as structural fill material on the property.
5. Operation of this structural fill shall be in accordance with the Solid Waste Management Rules, 15A NCAC 13B, Article 9 of the Chapter 130A of the North Carolina General Statutes, the conditions contained in this permit, and the approved plan. Should the approved plan and the rules conflict, §130A Part 2I, Coal Ash Management Act shall take precedence unless specifically addressed by permit condition. Failure to comply shall be a violation and may result in enforcement or permit revocation.
6. This permit is issued based on the documents submitted in support of the application for permitting the facility including those identified in Attachment 1, "List of Documents for Approved Plan", and which constitute the approved plan for the facility. Where discrepancies exist, the most recent submittals and the Conditions of Permit shall govern.
7. This permit may be transferred only with the approval of the department, through the issuance of a new or substantially amended permit in accordance with applicable statutes and

rules. In accordance with NCGS §130A-295.2(g) the permittee must notify the department thirty (30) days prior to any significant change in the identity or business structure of either the owner or the operator, including but not limited to a proposed transfer of ownership of the facility or a change in the parent company of the owner or operator of the facility.

8. The permittee is responsible for obtaining all permits and approvals necessary for the development of this project including approval from appropriate agencies for a mining permit, a general or individual NPDES Stormwater Discharge Permit. Issuance of this permit does not remove the permittee's responsibilities for compliance with any other local, state or federal rule, regulation or statute.

Properties Approved for the Solid Waste Management Facility

Chatham County, N.C. Register of Deeds			
Book	Page	Property Owner	Acres
1770	99 - 108	Green Meadows, LLC	333.55
Total Site Acreage: 333.55 acres			

Permitting History

Permit Type	Date Issued	DIN
Brickhaven No.2 Mine Tract "A", Mine Reclamation, Original Issuance	June 5, 2015	23655

List of Documents for Approved Plan

DIN	Description
24022	Application. Prepared for Green Meadows. Prepared by HDR. March 2015.
24023	Operations Plan. Prepared for Green Meadows. Prepared by HDR. March 2015. <i>(extracted from the Application)</i>
24024	Water Quality Monitoring Plan. Prepared for Green Meadows. Prepared by HDR. March 2015. <i>(extracted from the Application)</i>
22482	<i>North Carolina Special Warranty Deed.</i> Prepared by Green Meadows, LLC. December 2014.
24032	<i>Establishment of Financial Assurance Mechanisms for Proposed Structural Fill Sites – Brickhaven and Colon Mines.</i> Prepared by NCDENR. March 2015.

~ End of Section ~

ATTACHMENT 2

CONDITIONS OF CONSTRUCTION

General

1. Upon issuance of this permit any further modification or amendment to approved plans, including the water quality monitoring, sampling, and analysis plans, will require written Section approval prior to implementation.
2. Construction of all structural fill phases and cells within this facility must be in accordance with the pertinent approved plans and only for those phases of development approved for construction as described in Attachment 1, List of Documents for the Approved Plan.
3. Financial assurance prepared in accordance with §130A-309.221 must be in place and funded in its entirety prior to issuance of the permit. Financial assurance shall be provided in the amounts specified in the document provided in Attachment 1, List of Documents for Approved Plan.
4. In areas with streams and/or wetlands, the permittee shall provide to the Section the approved 404/401 from U.S. Army Corps of Engineers and/or the NCDENR Division of Water Resources, in electronic format (pdf) prior to construction in the affected areas. The following table lists the cells in which stream and/or wetlands have been noted, that the permittee must provide 404/401 approval prior to construction;

Cell	Area (acres)	Status
3	30.2	Proposed
4	17.3	Proposed

5. Prior to construction of the phase or cell(s) within the phase, all piezometers, borings, and groundwater monitoring wells within the footprint must be properly abandoned in accordance with 15A NCAC 2C .0113(b)(1) and (d), entitled "Abandonment of Wells".
6. In areas where soil is to be undercut, abandoned piezometers, monitoring wells and borings must not be grouted to pre-grade land surface, but to the proposed base grade surface to prevent having to cut excess grout and possibly damage the wells.
7. A Licensed Geologist must report any pertinent geological feature(s) exposed during phase or cell excavation. Prior to placing any structural fill liner, the geologist must submit to the Section hydrogeologist a written report that includes an accurate description of the exposed geological feature(s) and effect of the geological feature(s) on the design, construction, and operation of the cell, phase, or unit.
8. Within thirty (30) days of the completed permanent abandonment of a piezometer, monitoring well or boring, the well abandonment record (Division of Water Resources Form GW-30) and any additional information included in the abandonment record must be submitted to the Section in electronic format (pdf). The well abandonment records must be submitted to the Section in accordance with 15A NCAC 2C .0114(b) and be certified by a Licensed Geologist.

9. Within 30 days of completed construction of each new groundwater monitoring well, a well construction record (Division of Water Resources Form GW-1b), typical well schematic, boring log, field log and notes, and description of well development activities must be submitted to the Section in electronic format (pdf).
10. A Licensed Geologist must supervise installation of groundwater monitoring wells and surface water sampling stations.
11. Any modification to the approved water quality monitoring plan must be submitted to the Section Hydrogeologist for review.
12. The permittee must submit a plan sheet-sized, scaled topographical map, showing the location and identification of new, existing and abandoned groundwater monitoring wells and piezometers in electronic format (pdf).
13. Burning of land-clearing debris generated on site as a result of construction activities requires approval by the Section prior to initiating the burn. In addition, the facility must ensure the activity is in compliance with all air pollution and open burning laws, regulations, and ordinances.
14. All sedimentation and erosion control activities must be conducted in accordance with the Sedimentation Control Act N.C.G.S. §113A-50, et seq., rules promulgated under 15A NCAC 4, and mining permit, whichever is applicable. The facility must furnish a copy of the approved Sedimentation and Erosion Control Plan from the Land Quality Section of the NCDENR Division of Mining, Energy and Land Resources (DEMLR) to the Section.
15. All required sedimentation and erosion control measures must be installed and operable to mitigate excessive on-site erosion and to prevent silt from leaving the area of the structural fill unit during the service life of the facility.
16. Modifications to the approved sedimentation and erosion control activities require approval by the NCDENR DEMLR Land Quality Section. The Section must be notified of any sedimentation and erosion control plan modifications.
17. Facility construction, operations or practices must not cause or result in a discharge of pollution, dredged material, and/or fill material into waters of the state in violation of the requirements under Sections 401 and 404 of the Clean Water Act, as amended.
18. The following conditions must be met prior to approval for operation of the initial phase, cell or construction sequence of the structural fill;
 - a. A leachate disposal permit must be provided, in electronic format (pdf).
 - b. The permittee must contact the Section, arrange, hold and document a pre-operative meeting with key operations personnel and representatives of the Section.
19. The pre-operative conditions of Attachment 3 must be met prior to placing coal combustion products in a newly constructed area. See Attachment 3, Condition 25.

~ End of Section ~

ATTACHMENT 3

CONDITIONS OF OPERATIONS

General

1. Upon issuance of the permit, any further modification or amendment to approved plans will require Section approval prior to implementation.
2. Financial assurance must be continuously maintained for the duration of the facility in accordance with §130A-309.221. The owner and operator must annually adjust cost estimates for inflation.
3. Copies of this permit, the approved plans, and all records required to be maintained in the operating record by the permittee must be maintained at the facility, unless otherwise approved by the Section, and made available to the Section upon request during normal business hours.
4. All forms, reports, maps, plans, and data submitted to the Section must include an electronic (pdf) copy.
5. A responsible individual trained in facility operations must be on-site at all times during all operating hours of the facility.

Monitoring

6. Monitoring and Reporting shall be accomplished in accordance with the approved Operations Plan listed in Attachment I, List of Documents for the Approved Plan.
7. Prior to placement of waste, at a minimum one (1) independent background sample from each of the compliance groundwater monitoring wells and surface water sampling locations shall be sampled and analyzed for constituents listed in Appendix III and IV in accordance with 40 CFR 257.94(b). In addition, during the first year of operation eight (8) independent samples from each of the compliance groundwater monitoring wells and surface water sampling locations shall be sampled and analyzed for the Appendix III and IV constituents.
8. Compliance groundwater monitoring wells, surface water locations and leachate monitoring ports shall be sampled semi-annually and analyzed for constituents listed in the approved Water Quality Monitoring Plan listed in Attachment 1, List of Documents for Approved Plan.
9. A readily accessible unobstructed path shall be cleared and maintained so that four-wheel vehicles may access monitoring locations, at all times.
10. A field log book which details all development, sampling, repair, and all other pertinent activities associated with each groundwater sampling location shall be kept as part of the permanent facility record.

Coal Combustion Products

11. The permit holder 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.

12. Coal combustion products shall be collected and transported in a manner that will prevent nuisances and hazards to public health and safety. Coal combustion products shall be moisture conditioned, as necessary, and transported in trucks with adequate measures to prevent dusting.
13. The structural fill project shall be operated with sufficient dust control measures to minimize airborne emissions and to prevent dust from creating a nuisance or safety hazard and shall not violate applicable air quality regulations.
14. Coal combustion 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.
15. Coal combustion products must not be placed in standing water. Surface water must be diverted away from the operational area and must not be impounded over or in coal combustion product.
16. Water that contacts coal combustion products shall be leachate and handled as such. Leachate must be properly managed on site using best management practices.
17. The coal combustion products structural fill project shall be effectively maintained and operated as a non-discharge system to prevent discharge of leachate to surface water resulting from the project.
18. The coal combustion products structural fill project shall be effectively maintained and operated to ensure no violations of groundwater standards adopted by the Commission pursuant to Article 2L of Chapter 143 of the General Statutes due to the project.
19. The coal combustion products generator location must be provided for each generator site, in electronic format (pdf) and maintained in the facility operating record.
20. A Toxicity Characteristic Leaching Procedure (TCLP) analysis report must be submitted for each new coal combustion products generator site identified, each change in source at a generator, and a minimum of once per year from each generator and each source at said site, in electronic format (pdf) and maintained in the facility operating record.

Specific Conditions

21. This structural fill is mine reclamation under the state mining act and shall be subject to the terms and conditions of Mining Permit No. 19-25.
22. This permit approves the operation of Cells 1 through 5 and any sub-cells of the structural fill as well as the onsite environmental management and protection facilities as described in the approved plans. Operation of cells or sub-cells is subject to the pre-operative conditions of this attachment.
23. This permit shall expire June 5, 2025. A request to extend the life of the permit must be submitted to the department not later than December 5, 2024.
24. This permit is subject to review by June 5, 2020. The permit must request the five-year limited review on or before December 5, 2019. A five-year review of the 10-year permit includes review of the facility plans, operations plan, closure plan, post-closure plan, financial assurance cost estimates, environmental monitoring plans and any other applicable plans for the facility.

25. The following conditions must be met prior to approval for operation of any phase, cell or construction sequence of the structural fill;
- Financial assurance must be made current if any adjustment is warranted.
 - A construction quality assurance documentation report shall be prepared in accordance with the approved plan and submitted to the Section for review prior to placement of coal ash.
 - New groundwater monitoring wells associated with each new phase or cell shall be installed and background sampling shall be completed for the constituents listed in the approved Water Quality Monitoring Plan listed in Attachment 1, List of Documents for Approved Plan.
26. The following table lists the estimated coal combustion product capacity, acreage and status details for the structural fill.

Cell	Area (acres)	Status
1	33.9	Proposed
2	28.3	Proposed
3	30.2	Proposed
4	17.3	Proposed
5	34.8	Proposed
Total area - 144.5 acres		Note: CCP capacity - 9.2 million cubic yards (1.25 tons per cy)

27. On or before August 1 annually, the Permittee must submit an annual facility report to the Section, on forms prescribed by the Section.
- The reporting period shall be for the previous year beginning July 1 and ending June 30.
 - The owner or operator must maintain a record of the amount of coal combustion residues received at the structural fill, compiled on a monthly basis. Scales must be used routinely to weigh the amount of waste received.
 - A measurement of volume utilized in the structural fill cells must be performed during the second quarter of the calendar year. The date and volumes, in cubic yards, must be included in the report.
 - The amount of coal combustion products (tons), placed in the structural fill cells from June 5, 2015 through the date of the annual volume survey must be included in the report.
28. Within 90 days of issuance of this permit the permittee shall provide the Section with a revised operations plan including the following information;
- On April 1, 2015, the U.S. Fish and Wildlife Service announced it is protecting the northern long-eared bat as a threatened species under the Endangered Species Act (ESA). The operations plan shall include all revisions necessary to ensure compliance with this listing.
 - The operations plan shall contain a coal ash transportation plan that includes at a minimum;

- i) Loading, transfer in-route and offloading of coal ash,
 - ii) monitoring of vehicles along transportation routes (as much as is reasonably possible),
 - iii) emergency response should ash be released during transportation to the fill sites, and
 - iv) clean-up standards.
 - v) documentation of spills and any supporting documents should be retained as part of the facility's operational record and
 - vi) documentation and records should be made available for review and inspection by Section staff upon request.
- c. The operations plan shall include a dust control plan with sufficient dust control measures to minimize airborne emissions and prevent dust from becoming a nuisance or safety hazard, along with any supporting documents.

~ End of Section ~

ATTACHMENT 4

CONDITIONS OF PERMIT FOR CLOSURE AND POST-CLOSURE

1. Closure or partial closure of any structural fill unit must be in accordance with the Closure Plans described in the approved plans. Proposed changes to the approved Closure Plans must be submitted to the Section at least 90 days prior to implementation.
2. Closure Construction Quality Assurance reports must be submitted to the Section at least annually and maintained in the operating record of the facility.
3. Final Closure of the structural fill and initiation of the 30-year post-closure period commences upon the engineer's certification that the closure of the fill is complete.
4. Post-closure use of the property must not disturb the integrity of the cap system, base liner system, or any other components of the containment system or the function of the monitoring systems. The Department may approve disturbance if the constructor or operator demonstrates that disturbance of the cap system, base liner system, or other component of the containment system will not increase the potential threat to public health, safety, and welfare; the environment; and natural resources.

~ End of Conditions ~