



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

Pat McCrory  
Governor

Dexter R. Matthews  
Director

John E. Skvarla, III  
Secretary

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

**SOLID WASTE MANAGEMENT FACILITY**  
**Permit No.'s 8503, 8504 and 8505**

DUKE ENERGY CAROLINAS, LLC  
is hereby issued a

**PERMIT TO CONSTRUCT**  
*Not applicable*

**PERMIT TO OPERATE**

8504-INDUS-, DUKE ENERGY CORPORATION- BELEWS CREEK CRAIG RD LANDFILL  
8505-INDUS-, DUKE ENERGY CORP.- BELEWS CREEK FGD RESIDUE LANDFILL

**PERMIT FOR CLOSURE**

8503-INDUS-1984, DUKE POWER/BELEWS CREEK ST PLT

Located within the *Duke Energy Carolinas, LLC – Belews Creek Steam Station property boundaries at 3195 Pine Hall Road, Belews Creek community, Stokes 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.

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Edward F. Mussler, III, P.E.,  
Permitting Branch Supervisor  
Solid Waste Section

**ATTACHMENT 1**  
**GENERAL PERMIT CONDITIONS/INFORMATION**

**PART I: GENERAL FACILITY**

Permit to Operate Date Table

Permit	Status	Issuance	Expiration	DIN
8503-INDUS-1984, Duke Energy Corp. - Belews Creek, Pine Hall Road Landfill	PermittedClosed	<i>Not Applicable</i>	<i>Not Applicable</i>	19222
8504-INDUS-, Duke Energy Corporation- Belews Creek Craig Rd Landfill	Active	August 5, 2011	January 24, 2018	19222
8505-INDUS-, Duke Energy Corp.- Belews Creek FGD Residue Landfill	Active	October 22, 2012	January 24, 2018	17067

General Conditions

1. This permit is issued by the North Carolina Department of Environment and Natural Resources, Division of Waste Management, Solid Waste Section (Section). In accordance with North Carolina Solid Waste Management Rule 15A NCAC 13B .0201(d), a solid waste management facility permit shall have two parts: a Permit to Construct and a Permit to Operate. The Permit to Construct must be implemented in accordance with Attachment 2 of this permit. The Permit to Operate 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 solid waste management facility.
3. The Permit to Construct for this facility dated June 29, 2006, was recorded in the Stokes County Register of Deeds on November 14, 2007, in Deed Book 575, Pages 1825 - 1833.
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 the property has been used as a solid waste management facility and a reference by book and page to the recordation of the permit.
5. By receiving waste at this facility the permittee shall be considered to have accepted the terms and conditions of this permit.
6. Operation of this solid waste management facility 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 (NCGS 130A-290, et seq.), the conditions contained in this permit; and the approved plan. Should the approved plan and the rules conflict, the Solid Waste Management Rules shall take precedence unless specifically addressed by permit condition. Failure to comply may result in compliance action or permit revocation.

7. 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.
8. This permit may be transferred only with the approval of the Section, 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 Section 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.
9. The permittee is responsible for obtaining all permits and approvals necessary for the development of this project including approval from appropriate agencies for 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

Stokes County, N.C. Register of Deeds				
Permit	Book	Page		Acres
8503-INDUS-1984, Duke Power/Belews Creek St Plt	535	965	Duke Energy Carolinas, LLC	67.2±
8504-INDUS-, Duke Energy Corporation-Belews Creek Craig Rd Landfill	11	122	Duke Energy Carolinas, LLC	350.6±
8505-INDUS-, Duke Energy Corp.- Belews Creek FGD Residue Landfill	08	10	Duke Energy Carolinas, LLC	264.8±
Total Site Acreage:				682.6±

PART II: MUNICIPAL SOLID WASTE LANDFILL UNIT(S)

*Not Applicable*

PART III: CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL UNIT(S)

*Not Applicable*

PART IV: INDUSTRIAL LANDFILL UNIT(S)

**8503-INDUS-1984, Duke Energy Corp. - Belews Creek, Pine Hall Road Landfill**

Permitting History

*Note: Available historical documents can be found in DIN 20371.*

Permit Type	Date Issued	DIN
Permit to Operate, Original	December 10, 1984	20371
Closure Construction, Completed	February 24, 2009	6871
Closure Permit, Issuance	<b>January 16, 2014</b>	19222

List of Documents for Approved Plan

DIN	Description
6871	<i>Pine Hall Road Ash Landfill Closure, Construction Certification Report, Volumes I and II, Belews Creek, North Carolina, S&amp;ME Project No. 1356-07-017 Ph.3. Prepared for Duke Energy. Prepared by S&amp;ME. January 2009.</i>
12227	<i>Groundwater Monitoring, Sampling and Analysis Plan, Pine Hall Road Ash Landfill Permit #85-03, Duke Energy Belews Creek Steam Station, Stokes County, North Carolina, S&amp;ME Project No. 1411-09-097. Prepared for Duke Energy. Prepared by S&amp;ME. November 2010.</i>

### 8504-INDUS-, Duke Energy Corporation- Belews Creek Craig Rd Landfill

#### Permitting History

Permit Type	Date Issued	DIN
Notification of Site Suitability, Phase 1	May 12, 2006	2865
Permit to Construct, New Permit, Phase 1	June 20, 2006	2866
Permit to Operate, New Permit, Phase 1	November 5, 2007	3235
Permit to Operate, Amendment, 5 year renewal and vertical expansion	August 5, 2011	14242
Notification of Site Suitability, Phase 2	November 8, 2011	15549
Permit to Construct, Amendment, Phase 2	May 18, 2012	16604
<b>Permit to Operate, Modification, Phase 2</b>	<b>January 16, 2014</b>	<b>19222</b>

#### List of Documents for Approved Plan

*The descriptions of previous/historical documents are found in the Permit to Operate issued May 18, 2012. DIN 16604.*

DIN	Description
14241	<i>Construction Plan Application, Craig Road Ash Landfill, Duke Power – Belews Creek Steam Station, Belews Creek, North Carolina. 2 Volumes. Prepared for Duke Energy. Prepared by S&amp;ME. S&amp;ME Project No. 1356-03-544. October 26, 2005.</i>
5184	<i>Application for Permit to Operate, Volumes I and II, Craig Road Ash Landfill, Duke Energy-Belews Creek Steam Station, Belews Creek, North Carolina, S&amp;ME Project No. 1356-03-544A. Prepared for Duke Energy Prepared by S&amp;ME. March 2007, received June 6, 2007.</i>
13326	<i>Craig Road landfill Phase I Vertical Expansion, Duke Energy Belews Steam Station, 3195 Pine Hall Road, Belews Creek, Stokes County, North Carolina, S&amp;ME Project No. 1356-10-041. Prepared for Duke Energy Prepared by S&amp;ME. S&amp;ME. March 2011.</i>
13935	<i>Phase I Vertical Expansion Financial Assurance Cost Estimate, Belews Creek Steam Station – Craig Road Landfill, Permit No. 85-04, Duke Energy – Belews Creek Steam Station, 3195 Pine Hall Road, Belews Creek, NC 27009, S&amp;ME Project No. 1356-10-041, North Carolina P.E. License No. F-0176. Prepared for Duke Energy Prepared by S&amp;ME. S&amp;ME. May 2011.</i>

14618	<i>Operations Plan, Craig Road Landfill, Duke Energy - Belews Creek Steam Station, Belews Creek, North Carolina. S&amp;ME Project No. 1356-10-041. Prepared for Duke Energy Prepared by S&amp;ME. S&amp;ME. March 2011, Revised July 2011. July 2011.</i>
14250 14251	<i>Siting Requirements and Conceptual Design, Craig Road Landfill Expansion, Duke Energy – Belews Creek Steam Station, Belews Creek, North Carolina, S&amp;ME Project No. 1356-10-041, Volumes 1 and 2. Prepared for Duke Energy. Prepared by S&amp;ME. June 2011.</i>
16478	<i>Duke Energy –Belews Creek Steam Station, Craig Road Landfill Expansion, Construction Plan Application Volumes 1 and 2, Craig Road Landfill, Belews Creek, North Carolina, S&amp;ME Project No. 1356-10-041 Ph.3, S&amp;ME Engineering License No. F-0176. Prepared for Duke Energy. Prepared by S&amp;ME. April 2012.</i>
16479	<i>Phase 2 Construction Plan Application, Craig Road Landfill Lateral Expansion, Permit No. 8504, Duke Energy – Belews Creek Steam Station, Belews Creek, North Carolina, April 18, 2012, S&amp;ME Project No. 1356-10-041. Prepared for Duke Energy. Prepared by S&amp;ME. April 2012. (Drawings)</i>
20179	<i>Water Quality Monitoring Plan – Phase 1/Phase 2, Craig Road Landfill, Permit No. INDUS-8504, Duke Energy – Belews Creek Steam Station, Belews Creek, North Carolina, S&amp;ME Project No. 1356-01-041, Revised. Prepared for Duke Energy. Prepared by S&amp;ME. November 2013.</i>
20330	<i>Construction Certification Report, Craig Road Landfill Expansion Phase 2, Permit No. INDUS-8504, Duke Energy – Belews Creek Steam Station, Belews Creek, North Carolina, S&amp;ME Project No. 1356-10-041. Prepared for Duke Energy. Prepared by S&amp;ME. December 2013.</i>
20333	<i>Operations Plan, Craig Road Landfill, Permit No. INDUS-8504, Duke Energy – Belews Creek Steam Station, Belews Creek, North Carolina, S&amp;ME Project No. 1356-10-041, Revision 5. Prepared for Duke Energy. Prepared by S&amp;ME. December 2013.</i>

**8505-INDUS-, Duke Energy Corp.- Belews Creek FGD Residue Landfill**

Permitting History

<b>Permit Type</b>	<b>Date Issued</b>	<b>DIN</b>
Notification of the Site Suitability	June 19, 2006	2862
Permit to Construct, New Permit	June 29, 2006	3608
Permit to Operate, New Permit	January 24, 2008	3236
Permit to Operate, Modification, dust control and chimney drains	August 5, 2011	14301
Permit to Operate, Amendment, five (5) year renewal	October 22, 2012	17067

List of Documents for Approved Plan

<b>DIN</b>	<b>Description</b>
3603	<i>CQA Report, Vol. I, II, and III, Duke Energy Corp, Belews Creek Steam Station, Flue Gas Desulfurization (FGD), Gypsum Landfill, Phase 1, Stokes County, NC.</i>

	Prepared by Chas. H. Sells, Inc. Prepared for Duke Energy. September 28, 2007.
3546	<i>Duke Energy Carolinas – Belews Creek Steam Station, FGD Residue Landfill, Permit# 85-05 Pre-Operational Groundwater Monitoring Report.</i> Prepared by Duke Energy. Prepared for Donald Herndon, NCDENR/DWM/SWS. November 29, 2007.
3550	<i>Addendum, Well Installation – Groundwater Monitoring Network, Geologic and Hydrologic Siting Report FGD Scrubber Residue Disposal Site, Belews Creek Steam Station, 3195 Pine Hall Road , Belews Creek, North Carolina, S&amp;ME Project 1054-04-955.</i> Prepared for Duke Power. Prepared by S&ME. December 6, 2007.
3606	<i>Water Quality Monitoring Plan, FGD Scrubber Residue Landfill, Belews Creek Steam Station, 3195 Pine Hall Road, Belews Creek, North Carolina, S&amp;ME Project 1054-04-955.</i> Prepared for Duke Power. Prepared by S&ME. Dated December 7, 2007.
14203	<i>Belews Creek Steam Station, Stokes County, North Carolina, Permit Number 85-05, Duke Energy, FGD Residue Landfill, Operations Plan, Revised June 2011.</i> Prepared for Duke Energy. Prepared by Joyce Engineering. June 21, 2011.
16987	<i>Operations Plan, Duke Energy Carolinas, LLC – Belews Creek Steam Station, Flue Gas Desulfurization (FGD) Residue Landfill Phase 1, Stokes County, North Carolina, Permit No. 8505, May 23, 2012.</i> Prepared for Duke Energy Carolinas, LLC. Prepared by Joyce Engineering. July 24, 2012.

PART V: LAND CLEARING AND INERT DEBRIS LANDFILL UNIT(S)  
*Not Applicable*

PART VI: TRANSFER STATION/TREATMENT & PROCESSING UNIT(S)  
*Not Applicable*

PART VII: MISCELLANEOUS SOLID WASTE MANAGEMENT  
*Not Applicable*

- End of Section-

## ATTACHMENT 2

### CONDITIONS OF PERMIT TO CONSTRUCT

PART I: GENERAL FACILITY

*Not Applicable*

PART II: MUNICIPAL SOLID WASTE LANDFILL UNIT(S)

*Not Applicable*

PART III: CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL UNIT(S)

*Not Applicable*

PART IV: INDUSTRIAL LANDFILL UNIT(S)

*Not Applicable*

PART V: LAND CLEARING AND INERT DEBRIS LANDFILL UNIT(S)

*Not Applicable*

PART VI: TRANSFER STATION/TREATMENT & PROCESSING UNIT(S)

*Not Applicable*

PART VII: MISCELLANEOUS SOLID WASTE MANAGEMENT

*Not Applicable*

*- End of Section -*

### ATTACHMENT 3

#### CONDITIONS OF PERMIT TO OPERATE

##### PART I: GENERAL FACILITY

1. Financial assurance must be continuously maintained for the duration of the facility in accordance with NCGS 130A 295.2. The owner and operator must annually adjust cost estimates for inflation.
2. All sedimentation and erosion control activities must be conducted in accordance with the Sedimentation Control Act NCGS 113A-50, et seq., and rules promulgated under 15A NCAC 4. 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 landfill unit during the service life of the facility.
3. 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.
4. Modifications to the approved sedimentation and erosion control activities require approval by the North Carolina Land Quality Section. The Solid Waste Section must be notified of any sedimentation and erosion control plan modifications.
5. 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.
6. All forms, reports, maps, plans, and data submitted to the Section must include an electronic (pdf) copy.
7. Open burning of solid waste is prohibited. Fires must be reported to the Regional Waste Management Specialist within twenty-four (24) hours of the occurrence with a written notification to be submitted within fifteen (15) calendar days of the occurrence. Fire lanes must be maintained and passable at all times. Dimensions of the fire lanes must be coordinated with the Fire Marshall having jurisdiction over the site.
8. Processing of materials, shredding, or grinding must not take place at the facility unless approval has been granted under the special use permit and a revised operations plan has been submitted to the Solid Waste Section.
9. The facility must be adequately secured by means of gates, chains, berms, fences, or other security measures approved by the Section to prevent unauthorized entry.
10. Interior roadways must be of all-weather construction and maintained in good condition.
11. The edge of the waste footprint for all disposal units must be identified and maintained with permanent physical markers.

##### PART II: MUNICIPAL SOLID WASTE LANDFILL UNIT(S)

*Not Applicable*

##### PART III: CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL UNIT(S)

*Not Applicable*

##### PART IV: INDUSTRIAL LANDFILL UNIT(S)

#### Operational Requirements

12. This facility is permitted to receive solid waste generated by Duke Energy Carolinas, LLC as described in the approved plan and as defined in G.S. 130-290 (a)(2b), except where prohibited by the N. C. General Statutes Article 9 of Chapter 130A, and the rules adopted by the Commission for Health Services.
13. The facility operator must complete an approved operator training course in compliance with G.S. 130A-309.25.
  - a. A responsible individual certified in landfill operations must be on-site during all operating hours of the facility to ensure compliance with operational requirements.
  - b. All pertinent landfill-operating personnel must receive training and supervision necessary to properly operate the landfill units in accordance with G.S. 130A-309.25 and addressed by memorandum dated November 29, 2000.

#### Monitoring and Reporting Requirements

14. Groundwater locations must be established and monitored as identified in the List of Documents for the Approved Plan.
15. A licensed geologist must be present to supervise the installation of groundwater monitoring wells. The exact locations, screened intervals, and nesting of the wells must be established after consultation with the SWS Hydrogeologist at the time of well installation.
16. Groundwater monitoring wells must be sampled for the constituents in the approved monitoring plan, at least semi-annually, according to the specifications outlined in the approved water quality monitoring plan and the current policies and guidelines of the Section in effect at the time of sampling.
17. Monitoring reports of the analytical results for surface water and groundwater monitoring sampling events must be submitted to the Section within 120 days of the sample collection date. Analytical laboratory data must be submitted in electronic format (pdf ) and in a spreadsheet format in an Electronic Data Deliverable (EDD) Template. All monitoring reports must contain:
  - a. a potentiometric surface map for the current sampling event that also includes surface water sampling locations,
  - b. analytical laboratory reports and summary tables,
  - c. a completed Solid Waste Environment Monitoring Data Form, and
  - d. laboratory data submitted in accordance with the EDD Template.
18. Untreated leachate must be sampled and analyzed at least semi-annually concurrently with the groundwater water sampling, one sample per event. The leachate must be analyzed for the same constituents that the groundwater monitoring wells are the constituents in the approved monitoring plan. Test results must be submitted to the Section along with groundwater test results. In the event leachate is recirculated, additional leachate sampling may be required.
19. A readily accessible unobstructed path must be cleared and maintained so that four-wheel vehicles may access monitoring well locations at all times.
20. A log which details all development, sampling, repair, and all other pertinent activities associated with each monitoring well and all sampling activities associated with each surface water and leachate sampling location must be kept as part of the permanent facility record.

21. All well construction records and soil boring logs for new wells must be submitted to the Solid Waste Section Hydrogeologist for review within 30 days of completion.
22. The owner or operator must maintain a record of the amount of solid waste received at the landfill unit, compiled on a monthly basis. Scales must be used to establish and record an average weight of waste per truck load, once the average weight is established the Facility shall maintain a record of truck loads received.
23. The following, at a minimum, must not be accepted for disposal at the facility: hazardous waste, yard trash, liquid wastes, regulated medical waste, sharps not properly packaged, PCB waste as defined in 40 CFR 761, and wastes banned from disposal in North Carolina by G.S. 130A-309.10(f).
24. Closure or partial closure of any landfill unit must be in accordance with the Closure Plans described in the approved plans. Final Closure Plans must be submitted to the Division at least 90 days prior to implementation.

**8504-INDUS-, Duke Energy Corporation- Belews Creek Craig Rd Landfill**

25. **The Permit to Operate shall expire January 24, 2018.** Pursuant to 15A NCAC 13B .0201(e), no later than July 28, 2017, the owner or operator must submit a request to the Section for permit review and must update pertinent facility plans including, but not limited to, the facility operation and waste screening plans.
26. This permit approves the continued operation of Phase 1 and the **commencement of operations in Phase 2**, as well as the onsite environmental management and protection facilities as described in the approved plans.
27. The following table lists the estimated gross capacity, acreage and status details for the landfill units. Gross capacity is defined as the calculated volume from the elevation of initial waste placement to the top of the final cover.

Phase	Acres	Gross Capacity (cubic yards)	Status
1	31	1,873,636	Constructed
1-Vertical Expansion	- - -	588,254	Constructed
2	35	3,860,000	Constructed
3	32	5,740,000	Proposed
4	19	4,900,000	Proposed
5	23	4,350,000	Proposed
6	16	3,310,000	Proposed
Total	156	24,621,890	

**8505-INDUS-, Duke Energy Corp.- Belews Creek FGD Residue Landfill**

28. The Permit to Operate shall expire January 24, 2018. Pursuant to 15A NCAC 13B .0201(e), no later than July 28, 2017, the owner or operator must submit a request to the Section for permit review and must update pertinent facility plans including, but not limited to, the facility operation and waste screening plans.

29. This permit approves the continued operation of Phase 1, as well as the onsite environmental management and protection facilities as described in the approved plans.
30. The following table lists the estimated gross capacity, acreage and status details for the landfill units. Gross capacity is defined as the calculated volume from the elevation of initial waste placement to the top of the final cover.

Phase	Acres	Gross Capacity (cubic yards)	Status
1	22.6	1,500,000	Constructed
Total	22.6	1,500,000	

PART V: LAND CLEARING AND INERT DEBRIS LANDFILL UNIT(S)  
*Not Applicable*

PART VI: TRANSFER STATION/TREATMENT & PROCESSING UNIT(S)  
*Not Applicable*

PART VII: MISCELLANEOUS SOLID WASTE MANAGEMENT  
*Not Applicable*

- End of Section -

#### ATTACHMENT 4 CONDITIONS OF PERMIT FOR CLOSURE

PART I: GENERAL FACILITY  
*Not Applicable*

PART II: MUNICIPAL SOLID WASTE LANDFILL UNIT(S)  
*Not Applicable*

PART III: CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL UNIT(S)  
*Not Applicable*

PART IV: INDUSTRIAL LANDFILL UNIT(S)

#### **8503-INDUS-1984, Duke Energy Corp. - Belews Creek, Pine Hall Road Landfill**

1. The owner must provide post-closure care and monitoring for the landfill. The post-closure period begins **February 24, 2009**. After at least five years of post-closure care and monitoring, the landfill owner may submit a written request to modify or discontinue post-closure care and monitoring, depending upon the results of the previous monitoring. However, the owner must continue to conduct water quality monitoring and post-closure care until the Section provides written approval to discontinue monitoring and/or post-closure care.
2. The industrial landfill stopped receiving waste prior to March 2008.

General Requirements

3. The landfill owner must maintain the integrity and effectiveness of the cap system, including making repairs to the cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and prevent surface water from impounding over waste and run-on and run-off from eroding or otherwise damaging the cap system. Mowing of vegetation on the landfill cover is required at least once per year. Trees on the final cover must be removed at least once per year.
4. The owner must maintain permanent markers that accurately identify the edge of the waste disposal boundary.
5. Public access to the landfill must be prevented by gates, fences, and/or other measures. The owner must maintain the public access preventive measures during the post-closure period.
6. Any post-closure use of the property, including but not limited to, residential, commercial, industrial, agricultural, or recreational use, is subject to review and approval by the Section and must not disturb the integrity of the cap system, or the function of the monitoring systems. The Section may approve any other disturbance if the owner or operator submits a modified post-closure plan which describes the planned use of the property and demonstrates that disturbance of the cap system, including any removal of waste, will not increase the potential threat to human health or the environment. Post-closure uses approved by the Section will be included in the List of Approved Documents.
7. All sedimentation and erosion control activities must be conducted in accordance with the Sedimentation Control Act N.C.G.S. 113A-50, et seq., and rules promulgated under 15A NCAC 4. 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 landfill unit.
8. The owner or operator must ensure that the landfill units do not violate any applicable requirements developed under a State Implementation Plan approved or promulgated by the U.S. EPA Administrator pursuant to Section 110 of the Clean Air Act, as amended.

#### Monitoring and Reporting Requirements

9. Groundwater quality at the facility is subject to "Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina," 15A NCAC 2L. This includes, but is not limited to, the provisions for detection monitoring, assessment, and corrective action.
10. Ground water monitoring wells and surface water sampling location(s) must be sampled on a semi-annual basis, in accordance with the current policies and guidelines of the Section in effect at the time of sampling, unless otherwise specified by the Section. Any proposed modification to an approved plan must be submitted to the Section and approved prior to implementation. Sampling equipment and methods must conform to specifications in the "Solid Waste Section Guidelines for Groundwater, Soil, and Surface Water Sampling," dated April 2008, available on the Section website.
11. Monitoring reports of the analytical results for surface water and groundwater monitoring sampling events must be submitted to the Section within 120 days of the sample collection date. Analytical laboratory data must be submitted in electronic format (pdf or tiff) and in a spreadsheet format in an Electronic Data Deliverable (EDD) Template. All monitoring reports must contain:

- e. a potentiometric surface map for the current sampling event that also includes surface water sampling locations,
  - f. analytical laboratory reports and summary tables,
  - g. a completed Solid Waste Environment Monitoring Data Form, and
  - h. laboratory data submitted in accordance with the EDD Template.
12. The owner must maintain the integrity of all groundwater monitoring wells, including making repairs to well heads, covers, and surface pads, during the post-closure period.
  13. A readily accessible unobstructed path must be maintained so that groundwater wells and surface water sampling locations are accessible using four-wheel drive vehicles.
  14. Each groundwater monitoring well must be surveyed for location and elevation. Each groundwater monitoring well must have an identification plate permanently attached to the well, in accordance with 15A NCAC 2C .0108(o).
  15. If a new well is required to be installed, either to add to the network or to replace an existing well, or if a well is required to be abandoned:
    - a. The permittee must obtain approval from the Section for the design, installation, and abandonment of any groundwater well. A licensed geologist must be present to supervise the installation of groundwater monitoring wells. The exact locations, screened intervals, and nesting of the wells must be established after consultation with the Section Hydrogeologist at the time of well installation.
    - b. Within 30 days of completed construction of each new groundwater well, a well construction record, well schematic, boring log, field log and notes, and description of well development activities must be submitted to the Section. Form GW-1 must be used for both groundwater wells. The submittal must also include a scaled topographic map, showing the location and identification of new, existing, and abandoned wells and piezometers, and hydraulic conductivity and effective porosity values.
    - c. Hydraulic conductivity and effective porosity values must be established for each screened interval at each monitoring well in order to develop groundwater flow characteristics.
    - d. Within thirty (30) days of the abandonment of any groundwater monitoring well, the well abandonment record (GW-30 form) and any additional information included in the abandonment record must be certified by a Licensed Geologist, and submitted to the Section. A copy of the well abandonment records submitted to the Division of Water Quality, consistent with 15A NCAC 2C .0114(b), must be submitted to the Section.

#### Reporting and Recordkeeping

16. Documentation of well completion, development details, repair, abandonment, and all other pertinent activities associated with each groundwater monitoring well must be maintained in the facility operating record. The permittee must maintain a record of all groundwater, surface water, monitoring events and analytical data in the operating record.
17. 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 a location approved by the Section and made available to the Section upon request during normal business hours.
18. All forms, reports, maps, plans, and data submitted to the Section must include an electronic (pdf) copy.

PART V: LAND CLEARING AND INERT DEBRIS LANDFILL UNIT(S)

*Not Applicable*

PART VI: TRANSFER STATION/TREATMENT & PROCESSING UNIT(S)

*Not Applicable*

PART VII: MISCELLANEOUS SOLID WASTE MANAGEMENT

*Not Applicable*

*- End of Conditions -*