



Facility Permit No: 51-03
Part 2-Permit to Operate
Johnston County
Permit Amend No. 3: C&D Area 2, Cell 1
Doc ID: RCO2934
August 24, 2007
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NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
Dexter R. Matthews, Director
Division of Waste Management
Michael F. Easley, Governor
William G. Ross Jr., Secretary

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT
1646 Mail Service Center, Raleigh, NC 27699

**MUNICIPAL SOLID WASTE LANDFILL
FACILITY PERMIT**

JOHNSTON COUNTY is hereby issued a
PERMIT TO OPERATE

A MUNICIPAL SOLID WASTE LANDFILL FACILITY and,
A CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL
Area 2 (Cell 1)

Located on NCSR 1503, Johnston 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 facility is located and described by the legal description of the site or the property map contained within the approved application and recorded in the Johnston County Register of Deeds Office, Book 59, Page 437.

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

ATTACHMENT 3

A. Permit History

Issuance	Date
Permit No. 51-01	Original Issue
Permit No. 51-01 (PTO) Phase 4	March 13, 1984
Permit No. 51-01 (PTO) vertical expansion	October 25, 1990
Permit No. 51-01 (PTO) vertical expansion	July 30, 1991
Permit No. 51-01 (PTO) C&D Phase 4A	December 22, 1998
Permit No. 51-01 (PTO) C&D Phase 4A	January 22, 2002
Permit No. 51-02 (PTC) Phase 5	December 22, 1995
Permit No. 51-02 (PTO) Phase 5	August 6, 1997
Permit No. 51-02 (PTO) Phase 5 leachate recirculation	March 27, 2001
Original Issue (PTC) 51-03 MSW Phase 4A Cells 1 and 2 and C&D Phase 4A	April 3, 2002
Original Issue (PTO) 51-03	April 3, 2002
Amendment 1 (PTO) 51-03 MSW Phase 4A Cell 1 and C&D Phase 4A	December 20, 2002
Amendment 2 (PTO) 51-03 MSW Phase 4A Cell 2 and C&D Area 1	August 1, 2005
Amendment 1 (PTC) 51-03 C&D Area 2, Cell 1	August 31, 2006
Amendment 3 (PTO) 51-03 C&D Area 2, Cell 1	August 24, 2007

B. Approved Documents

PART I: GENERAL FACILITY CONDITIONS

PART II: MUNICIPAL SOLID WASTE (MSW) LANDFILL

1. *Johnston County Subtitle D Landfill Phase 5, Permit 51-02, Construction Quality Assurance and As-Built Certification for Permit-to-Operate.* Prepared by: McKim & Creed Engineers, P.A., Cary, North Carolina. March 1997. 3 Volumes.
2. *Johnston County Subtitle D Landfill CQA, As-Built, and Revised Engineering Plan.* Prepared by: McKim & Creed Engineers, P.A., Cary, North Carolina. March 1997. 14 Sheets.
3. *Johnston County Landfill, Phase 5, Permit 51-02, Johnston County, North Carolina, Survey and As-Built Plans.* Prepared by: F. Donald Lawrence, Monroe, North Carolina. Provided by: Ground Improvement Techniques, Inc., Contractor. Submitted by: McKim & Creed, March 1997. 7 Sheets.

4. Letter Grimes to Fry. Requesting approval of Alternative Daily Cover, Tarpomatic. Includes brochure. July 27, 1998.
5. *Leachate Recirculation Plan, Johnston County MSW Landfill, Phase 5, Johnston County, North Carolina.* Prepared for: Johnston County Department of Public Utilities, Smithfield, North Carolina. Prepared by: G.N. Richardson & Associates, Raleigh, North Carolina. May 2000. Amended through February 2001.
6. *Construction Quality Assurance Report, Johnston County MSW Landfill, Phase 4A, Cell 1, Johnston County, North Carolina.* Prepared for: Johnston County Department of Public Utilities, Smithfield, North Carolina. Prepared by: G.N. Richardson & Associates, Raleigh, North Carolina. December 2002. 2 Volumes.
7. *Construction Quality Assurance Report, Johnston County MSW Landfill, Phase 4A, Cell 2, Johnston County, North Carolina.* Prepared for: Johnston County Department of Public Utilities, Smithfield, North Carolina. Prepared by: G.N. Richardson & Associates, Raleigh, North Carolina. July 2005.
8. *Permit to Construct Application. Johnston County MSW Landfill-Phase 4A. Johnston County, North Carolina.* Prepared for: Johnston County Department of Public Utilities, Smithfield, North Carolina. Prepared by: G.N. Richardson & Associates, Inc., Raleigh, North Carolina. April 2000. Revised December 2001. Volume 1 of 2, Design Engineering. Volume 2 of 2, Design Hydrogeologic Report, revised January 2002.
9. *Johnston County MSW Landfill-Phase 4A. Permit Drawings.* Prepared for: Johnston County Department of Public Utilities. Prepared by: G.N. Richardson & Associates, Inc., Raleigh, North Carolina. April 2000. Revised December 2001. 38 Sheets.

PART III: CONSTRUCTION AND DEMOLITION LANDFILL

1. *Johnston County C&D Landfill Vertical Expansion.* Prepared for: Johnston County Department of Public Utilities. Prepared by: G.N. Richardson & Associates, Inc., Raleigh, North Carolina. December 1998. (Modification No. 1 to Permit No. 51-01)
2. Cap Closure Certification Letter for the Johnston County Landfill dated 21 December 1998 by G.N. Richardson & Associates and received 22 December 1998 and incorporated into the approved application.
3. *Permit Modification Application. Johnston County C&D Landfill Vertical Expansion. Johnston County, North Carolina.* Prepared For: Johnston County Department of Public Utilities, Smithfield, North Carolina. Prepared By: G.N. Richardson & Associates, Inc., Raleigh, North Carolina. January 2002. (Modification No. 2, Area 4A, Permit No. 51-01)

4. *Permit Modification Application. Johnston County C&D Landfill Vertical Expansion. Johnston County, North Carolina.* Prepared For: Johnston County Department of Public Utilities, Smithfield, North Carolina. Prepared By: G.N. Richardson & Associates, Inc., Raleigh, North Carolina. December 2003, Revised August 2005.
5. *Permit to Construct Application. Johnston County C&D Landfill, Area 2, Johnston County, North Carolina.* Prepared for: Johnston County Department of Public Utilities, Smithfield, North Carolina. Prepared by: G.N. Richardson & Associates, Inc., Raleigh, North Carolina. October 2005. Revised May 2006.
6. *Johnston County C&D Landfill, Area 2, Permit Drawings.* Prepared for: Johnston County Department of Public Utilities. Prepared by: G.N. Richardson & Associates, Inc., Raleigh, North Carolina. October 2005. Revised March 2006. 25 Sheets.
7. *Construction Quality Assurance Report, Johnston County C&D Landfill, Area 2, Cell 1, Johnston County, North Carolina.* Prepared for Johnston County Department of Public Utilities, Smithfield, North Carolina. Prepared By: Richardson Smith Gardner & Associates, Raleigh, North Carolina. June 2007.

PART IV: LAND CLEARING AND INERT DEBRIS LANDFILL
(NOT APPLICABLE)

PART V: YARD WASTE
(NOT APPLICABLE)

PART VI: MISCELLANEOUS TREATMENT AND PROCESSING FACILITIES

1. Division of Water Quality Permit No. WQ0019631, Johnston County, Conjunctive Use at Johnston County Landfill, Reclaimed Water Utilization System. March 27, 2002. Modified June 13, 2003, December 20, 2004, May 5, 2006, and November 16, 2006.

- End of Section -

ATTACHMENT 4

Conditions of Permit to Operate

PART I: GENERAL FACILITY CONDITIONS

1. This permit shall be reviewed on August 24, 2012, pursuant to 15A NCAC 13B.0201(e). No later than April 24, 2012, the owner or operator shall submit to the Solid Waste Section for review an amendment to the permit prepared in accordance with 15A NCAC 13B .1603(a)(2), or a permit modification prepared in accordance with 15A NCAC 13B .1603(a)(3), as applicable.
2. This facility is permitted to receive solid waste generated within the State of North Carolina, consistent with local government waste management plans(s) and with local government approval and as defined in G.S. 130A-290(a) (35), except where prohibited by the North Carolina General Statutes Article 9 of Chapter 130A, and the rules adopted by the Commission for Health Services.
3. The annual disposal rate for the MSW and C&D units shall be no more than 350,000 tons/year which corresponds to approximately 1,122 tons/day, 312 operating days per year. No more than 156,000 tons/year, approximately 500 tons/day, 312 operating days per year, shall be waste generated outside of Johnston County, in accordance with the local government approval issued for this facility.
4. The owner or operator of the landfill facility shall not knowingly dispose of any type or form of municipal solid waste that is generated within the boundaries of a unit of local government that by ordinance:
 - a. Prohibits generators or collectors of municipal solid waste from disposing of that type or form of municipal solid waste.
 - b. Requires generators or collectors of municipal solid waste to recycle that type or form of municipal solid waste.
5. The facility operator shall have completed an approved operator training course in compliance with G.S. 130A-309.25.
 - a. A responsible individual certified in landfill operations shall be on-site at all times during all operating hours of the facility that it is open for public use to ensure compliance with operational requirements.
 - b. All pertinent landfill-operating personnel shall 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.

6. In the event of conflicts between this Permit to Operate and previously issued conditions, the conditions of this Permit to Operate shall supersede previously issued conditions.
7. The solid waste management units within this facility shall conform to all operating procedures described in the approved plans, 15A NCAC 13B, and the conditions specified herein.
8. Additional conditions and revision of the approved documents or changes during the operation of the landfill require approval by the North Carolina Solid Waste Section.
9. On or before August 1 annually, the Permittee shall submit an annual facility report to the Solid Waste Section, on forms prescribed by the Section.
 - a. The reporting period shall be for the previous year beginning July 1 and ending June 30.
 - b. The annual report shall list the amount of waste received and landfilled in tons and be compiled:
 - i. On a monthly basis.
 - ii. By county, city or transfer station of origin.
 - iii. By specific waste type.
 - iv. By disposal location within the facility.
 - v. By diversion to alternative management facilities.
 - c. A measurement of volume utilized in the MSW cells and a measurement of volume utilized in the C&D cells shall be performed during the second quarter of the calendar year. The date and volumes, in cubic yards, shall be included in the report.
 - d. The amount of MSW waste, in tons from scale records, disposed in landfill cells since August 6, 1997 through the date of the annual volume survey shall be included in the report. The amount of C&D waste, in tons from scale records, disposed in landfill cells since July 1, 2007 through the date of the annual volume survey shall be included in the report.
 - e. The completed report shall be forwarded to the Regional Waste Management Specialist for the facility by the date due on the prescribed annual facility report form.
 - f. A copy of the completed report shall be forwarded to each county manager for each county from which waste was received at the facility. Documentation that a copy of the report has been forwarded to the county managers must be sent to the Regional Waste Management Specialist by the date due on the prescribed annual facility report form.
10. Ground water quality at this facility is subject to the "Classifications and Water Quality Standards Applicable to the Groundwater of North Carolina," 15A NCAC 2L. This includes, but is not limited to, provisions for detection monitoring, assessment, and corrective action.

11. The approved facility boundary consists of approximately 500 acres. The facility is located and described by the legal description of the site or the property map contained within the approved application and recorded in the Johnston County Register of Deeds Office, Book 59, Page 437.

PART II: MUNICIPAL SOLID WASTE LANDFILL UNIT SPECIFIC CONDITIONS

General Conditions

12. The operation of Phase 4A, Cells 1 and 2 was previously approved in permits dated December 20, 2002 and August 1, 2005. Phase 4A is a lined MSW unit that piggy-backs the unlined MSW units 3 and 4. MSW landfill units Phase 4A (Cell 3) and Phases 6 through 10 have not been approved for operation.
13. Facility 51-03 is a combination of facility permits 51-01 and 51-02. Permit No. 51-01 approved the operation of 84.8 acres of closed unlined MSW units identified as Phases 1, 2, 3, and 4 with a gross capacity of 3,538,233 cubic yards. Permit No. 51-02 approved the operation of Phase 5, an inactive lined MSW unit. Permit No. 51-03 incorporates areas included in the two previous permits, and subsequent Phase 4A, and Phases 6 through 10. The following table lists the dimensions and details for the lined MSW landfill units, both existing and planned, as described in Attachment 3, Approved Documents, Part III, Document 5, Table 2.2A. Approximate service years are based on an average disposal rate of approximately 370 tons per day in 2007 (MSW only), with an increasing rate per year according to the estimated increase in population.

Lined (Subtitle D) MSW Units	Acres	Gross Capacity (cubic yards)	Approximate Service Years ¹
Phase 5	19.2	1,087,199	Inactive
Phase 4A (Cells 1 and 2)	22.0	1,086,783	1.6 – 2.6
Phase 4A (Cell 3)	7.4	1,426,682	2.8 - 6.1
Phase 6	21.1	1,402,016	2.5 – 4.8
Phase 7	19.8	1,758,991	3.0 – 5.3
Phase 8	25.2	1,844,867	2.9 – 4.8
Phase 9	22.5	6,684,914	11.8 – 17.2
Phase 10	17.5	3,075,968	4.8 – 5.5
Total (Lined)	154.7	18,367,420	29.4 – 46.3

¹Life expectancy as calculated 3/21/05

Monitoring and Reporting Conditions

14. Ground water monitoring at this unit shall be as prescribed by the appropriate requirements of 15A NCAC 13B .1630-.1637 and the approved monitoring plan.
15. A readily accessible unobstructed path shall be cleared and maintained so that four-wheel drive vehicles may access monitoring well locations at all times.
16. A field log book 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 shall be kept as part of the permanent facility record.
17. Records of all ground water, surface water and leachate analytical data shall be kept as part of the permanent facility record.
18. Ground water monitoring wells and surface water sampling locations must be sampled for Appendix I constituents 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.
19. Reports of the analytical data for each water quality sampling event shall be submitted to the Section within 60 days of the respective sampling event. Analytical data shall be submitted in a manner prescribed by the Section.
20. The four independent samples which comprise the initial baseline sampling event shall be collected from each ground water monitoring well and the report shall be submitted to the Section within six months after issuance of the Permit to Operate.
21. Untreated leachate shall be sampled and analyzed at least semi-annually concurrently with the ground and surface water sampling. The leachate shall be analyzed for all Appendix I constituents, pH, specific conductance, BOD, COD, phosphate, nitrate, and sulfate. Test results shall be submitted to the Section along with ground and surface water test results. Leachate recirculation is approved for Phase 5. Additional leachate sampling shall be in accordance with the plan approved in Attachment 3, Approved Documents, Part II, Document 5.

Operational Conditions

22. The landfill unit shall conform to all operating requirements described in the approved plans, 15A NCAC 13B .1626, and the conditions specified herein.
23. The use of alternative daily cover requires approval, prior to implementation, by the Solid Waste Section. Requests for alternative daily cover approval must include a plan detailing the comprehensive use and a demonstration of the effectiveness of the alternative daily cover. The plan shall be developed according to Section guidelines. Plans which are approved by the Section will be incorporated into, and

made a part of, the approved documents found in Attachment 3.

24. The use of tarps and the “Tarpomatic” system for alternative daily cover is approved. Its use shall be in accordance with Document 4 of Part II, Attachment 3. Soil cover shall be applied at a minimum of once per week in accordance with Rule .1626 (2). Soil shall be applied more frequently if needed, to control nuisance, odor, or vectors.
25. A leachate recirculation demonstration project is approved for Phase 5. Leachate may be recirculated in accordance with the plan as identified in Attachment 3, Part II, Document 5. Recirculation may continue following the demonstration project unless otherwise directed by the Division.
26. The use of leachate recirculation as a leachate management tool during the post-closure care period requires approval by the Solid Waste Section prior to implementation. Additional engineering demonstrations and operational plans may be necessary. Such demonstrations and plans shall be developed, incorporated into the final Closure and Post-Closure plan, and submitted to the Solid Waste Section for approval prior to implementation. Plans which are approved by the Section will be incorporated into, and made a part of, the approved documents found in Attachment 3.
27. The facility is permitted to co-dispose of wastewater treatment sludge generated within the facility's approved service area, and subject to the terms and procedures of the approved plan.
28. Closure or partial closure of any MSWLF unit shall be in accordance with the Closure Plans described in the approved plans and 15A NCAC 13B .1629. Final Closure Plans shall be submitted to the Division at least 90 days prior to implementation. Closure and Post-Closure cost estimates and financial instruments shall be updated annually pursuant to 15A NCAC 13B .1628.

PART III: CONSTRUCTION AND DEMOLITION DEBRIS UNIT SPECIFIC CONDITIONS

29. This permit approves the operation of Area 2, Cell 1 for the disposal of C&D waste. The following table lists the dimensions and details for the C&D landfill units, both existing and planned, as described in Attachment 3, Approved Documents, Part III, Document 5, Table 2.2A. Approximate service years are based on an average disposal rate of approximately 106 tons per day in 2007 (C&D waste only), with an increasing rate per year according to the estimated increase in population. C&D Unit Area 2, Cell 2 has not been approved for operation.

C&D Units	Acres	Gross Capacity (cubic yards)	Approximate Service Years ¹
Area 1	16.2	572,734	2.0-2.4
Area 2, Cell 1	11.3	451,611	5.5 – 6.4

Area 2, Cell 2	4.5	462,658	4.6 – 5.3
Total	32.0	1,487,003	11.9 – 14.2

¹Life expectancy as calculated 3/21/05

30. The C&DLF unit is permitted to receive construction and demolition waste and land clearing and inert debris as follows:
- a. "C&D solid waste" as defined in 15A NCAC 13B, Rule .0532(8) means solid waste generated solely from the construction, remodeling, repair, or demolition operations on pavement and buildings or structures. C&D waste does not include municipal and industrial wastes that may be generated by the on-going operations at buildings or structures.
 - b. A land clearing and inert debris landfill as defined in 15A NCAC 13B, Rule .0101(54) means a facility for the land disposal of land-clearing waste, concrete, brick, concrete block, uncontaminated soil, gravel and rock, untreated and unpainted wood, and yard trash.
 - c. Land Clearing Waste as defined in 15A NCAC 13B, Rule .0101(53) means solid waste which is generated solely from land clearing activities, limited to stumps, trees, limbs, brush, grass, and other naturally occurring vegetative material.
 - d. Asphalt in accordance with G.S. §130A-294(m).
31. The C&DLF unit shall not accept wastes excluded for disposal as specified in 15A NCAC 13B, Rule .0542(e).
32. The leachate collection system within the C&D units shall be operated to remove leachate from the landfill in such a way as to ensure that the leachate head on the liner does not exceed one foot under normal operating conditions.
33. Groundwater and surface water sampling and analysis shall conform to the specifications found in the approved plan. The existing groundwater monitoring system will be utilized for groundwater monitoring for the C&D units in accordance with 15A NCAC 13B .1630 through .1633. Assessment monitoring shall continue in accordance with the Solid Waste Management Rules and any additional requirements set forth by the Solid Waste Section.
34. The C&D units shall be closed in accordance with the approved plan and the requirements of the Solid Waste Section at the time of closure. A final closure plan shall be submitted for review at least ninety (90) days prior to closure of any phase of the C&D landfill unit.

PART IV: LAND CLEARING AND INERT DEBRIS UNIT SPECIFIC CONDITIONS
 (NOT APPLICABLE)

PART V: YARD WASTE UNIT SPECIFIC CONDITIONS

35. Yard Waste shall be managed within the facility in the area identified on Sheets 2 and 3 of Document 6, Part III, Attachment 3. Management of yard waste in areas of the facility other than that referenced above, require written permission of the Solid Waste Section.

PART VI: MISCELLANEOUS TREATMENT AND PROCESSING UNIT SPECIFIC CONDITIONS

SPRAY IRRIGATION UNIT

36. Operation of the spray irrigation system at the landfill will be in accordance with the approved solid waste management operation plan, Attachment 3, Part II, Document 1.
37. Operation of the spray irrigation system will be in accordance with Water Quality Permit No. WQ0019631, Attachment 3, Part VI, Document 1.