

5101Permit2002 - Batch No. _____

1

Johnston Co.

5101acca

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary
Dexter R. Matthews, Director



January 25, 2002

Mr. Pieter Scheer
G.N. Richardson & Associates
425 North Boylan Avenue
Raleigh, NC 27603

RE: Permit to Construct Application, Johnston County MSW Landfill, Phase 4A, Permits [REDACTED] and 51-02

The NC Division of Waste Management, Solid Waste Section (Section) has completed its review of the engineering portion of the permit to construct application for the above referenced facility. Rule .1603 (a)(1), of the NC Solid Waste Management Rules (15A NCAC 13B .1600), directs that an application for permit amendment shall be submitted as set forth in Paragraph (a) of Rule .1617. The section hydrogeologist has reviewed the Hydrogeologic Report section of the permit amendment application and sent a review under separate cover. The hydrogeologic section of the application has been determined to be complete.

When reviewing and editing comments on the quality assurance plan and/or the technical specifications, please ensure that both documents are consistent. Comments or questions on one section may not be duplicated for the other section, but could apply to both. Based on its review, the Section requests the following information:

FACILITY PLAN

1. Johnston County will need to provide a legal description of the property or properties that make up the facility, sufficient to record the permit against. Typically this is the deed with meets and bounds. If several properties have been previously consolidated and recorded, then that instrument may suffice.
2. 2.6.3 Leak Detection System. Are the pumps equipped to automatically pump the leak detection system, or is this a manual operation? If it is not automatic, what is the plan or procedure to check this system? How is the liquid removed measured? The removed liquid measurement should be recorded and included in the facility records that are kept. (See also operations plan/record keeping and Section 4 of the Facility Plan)
3. 4.4 Leachate Discharge and Storage System- Are the pumps automatic? How is the leachate volume measured? The removed liquid measurement should be recorded and included in the facility records that are kept. (See also operations plan/record keeping)

OPERATIONS MANUAL

4. The Solid Waste Section has modified Johnston County's landfill permit to provide for leachate recirculation in Phase 5, use of alternate daily cover, and to provide a procedure to spray irrigate reclaimed wastewater at the facility. Please consolidate the appropriate portions of the respective plans into one operations manual. The manual should also include the operation requirements for the C&D disposal area.

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5. 1.6.1 Fire Control- This Section should be expanded for the benefit of the owner/operator.
6. 2.4 Waste Screening- Is the number of vehicles inspected sufficient, such that it meets recommendations that 1-2% of the waste stream be routinely, randomly, inspected? What types of trucks are targeted for inspection? How is the random truck chosen?
7. 2.5.3-Cell Activation- It is recommended that a notation be placed in the facility operating record that the GT-S separator textile has been removed from the gravel columns, prior to activating the cell or subcell.
8. 2.7-Height Monitoring- How is this done or measured?
9. 3.3.1.3- What is the allowable discharge to the sewer treatment plant? Is a procedure needed to ensure that adequate draw down is performed in a timely manner in the advent of a hurricane or other tropical disturbance?
10. 3.3.3-Leachate Quality Sampling- Leachate must be analyzed for the listed parameters as well as Appendix I constituents (I assume that is what the metals and volatile scan refers to, please clarify) sulfates and nitrates. Leachate recirculation in Phase V requires more frequent leachate analysis. A plan should also be presented to the Section which contains a provision to collect samples from the leachate removal risers and not as a grab sample from the lagoon. Leachate data provided to the section, that has been drawn from the large volume storage facility, is not representative of leachate quality. All facilities are being required to upgrade their leachate sampling plans.
11. 3.3.4 Record Keeping - What records are kept and at what frequency?
12. 3.3.5- The Section should be notified in advance of any plan to store leachate in the landfill unit.

When submitting revisions to the application, the changed pages should be clearly identified with a revision date in either the header or the footer. It is not necessary to submit five copies of the revisions. Two copies will suffice. When the application is finalized and there are no more changes, then a total of five copies will be needed. The final version of the application should also contain an appendix with copies of correspondence and response to comments.

These comments are intended to expedite the review of the referenced application, and in no way do they restrict the Section's right to request additional information during the technical review process. If you have any additional questions or need help, please feel free to call me at (919) 733-0692 Ext. 343. My email address is : ed.mussler @ncmail.net.

Sincerely,



Edward F. Mussler III, P.E.
Environmental Engineer
Solid Waste Section

cc: Mark Fry, SWS
Jim Barber, SWS
Robert Hearn
Haywood Phthisic, Johnston County
File

North Carolina
Department of Environment and Natural Resources

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary
Dexter R. Matthews, Director



January 24, 2002

Mr. Haywood Phthisic
Public Utilities Director
Johnston County Department of Public Utilities
P.O. Box 2263
Smithfield, NC 27577

Re: Johnston County Landfill, Cell 4A, New Facility Designation, Permits 5101 and 5102, Site Study Approval

Dear Mr. Phthisic,

The Solid Waste Section (Section) of the Division of Waste Management has conducted review of the Cell 4A proposal at the Johnston County Landfill. The proposed development of Cell 4A qualifies the existing facilities (5101 and 5102) as a new facility. Rule .1603(a)(1)(E) defines a new facility as one that has a substantial change to the waste stream defined in the effective permit.

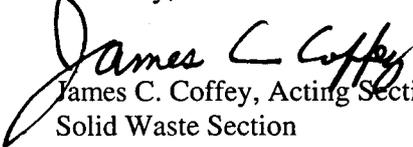
A permit to construct application for Cell 4A has been filed with the Section. Included in this permit application were demonstrations to update the existing site study of the landfill locale, in conformance with the Solid Waste Management Rules. A detailed site study was performed in 1995 for facility 5102 which is adjacent to the original landfill, 5101.

The Section has completed its review of the information submitted to update the site study report for the Johnston County Municipal Solid Waste Landfill Facilities, current permits numbers 5101 and 5102. Pursuant to Rule .1618(a)(1), Johnston County is hereby notified that the combined facilities, as proposed in the conceptual plan, are suitable for development as a solid waste management facility.

The Permit to Construct Application shall be prepared in accordance with 15A NCAC 13B.1617(a) and shall address the first five-year phase of landfill development. The Permit to Construct Application should be in general accordance with the conceptual plan shown in the Site Study.

Solid Waste Management Rule .0201 requires the Division to issue a solid waste permit in two parts. The first part is a Permit to construct and the second part is a Permit to Operate. This letter is not a permit. This letter only informs the applicant that they may proceed with their permit application. The final action the Division may take on a permit application is the issuance or denial of a permit. If you have any questions, please contact Ed Mussler at 919-733-0692, extension 343.

Sincerely,


James C. Coffey, Acting Section Chief
Solid Waste Section

cc: Pieter Scheer, P.E. GNRA Mark Fry, DWM
Jim Barber, DWM Robert Hearn, DWM

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North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross, Jr., Secretary

January 22, 2002

Mr. Haywood Phthisic, Director
Johnston County Public Utilities
P.O. Box 2263
Smithfield, North Carolina 27577

Subject: Johnston County MSWLF facility, C&D Unit: Amendment #2 for Permit #51-01.

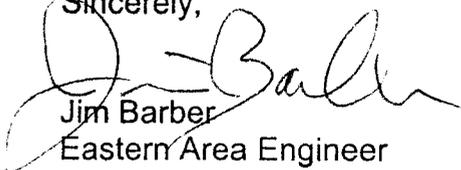
Dear Mr. Phthisic:

The Solid Waste Section hereby approves the modification of the referenced MSWLF Facility permit to allow the construction and operation of a CONSTRUCTION & DEMOLITION LANDFILL UNIT, Phase 4A expansion, consistent with the submittal dated 17 January 2002 from G.N. Richardson & Associates, at the Johnston County landfill. The operation of Phase 4A expansion is effective 22 January 2002 and the operational permit for the facility will be in effect until 22 December 2003 (see Condition Number 2, Page 1).

Please note operational conditions outlined on pages 1 thru five for the facility. The Waste Management Specialist for this facility is Mr. Ben Barnes and he can be reached in our Raleigh Regional Office at (919) 571-4700.

If you have any questions about this approval letter, please contact me at (910) 486-1541 or James C. Coffey at (919) 733-0692 Ext. 256.

Sincerely,



Jim Barber
Eastern Area Engineer
Solid Waste Section

cc: James C. Coffey

Mark Fry

Ben Barnes

✓ Raleigh Central Office: Johnston County MSW Facility Permit #51-01.

Fayetteville Regional Office

225 Green Street - Suite 714, Fayetteville, North Carolina 28301-5043

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PERMIT NUMBER: 51-01
DATE AMENDED (#1): 12/22/98
DATE AMENDED (#2): 01/22/02

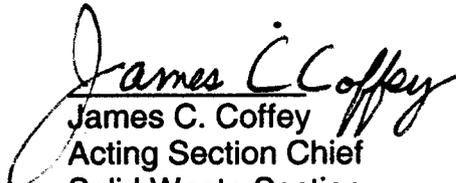
STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT
1646 MAIL SERVICE CENTER; RALEIGH, NC 27699-1646

SOLID WASTE PERMIT

COUNTY OF JOHNSTON

is hereby issued a permit to operate PHASE 4A of a
Construction and Demolition Landfill Unit

located at the Johnston County Landfill at the end of S.R. 1503, Smithfield, Johnston County 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.


James C. Coffey
Acting Section Chief
Solid Waste Section
Division of Waste Management

PERMIT NUMBER: 51-01
AMENDMENT #1 DATED(PTO): 12/22/98
AMENDMENT #2 DATED(PTO): 01/22/02

SOLID WASTE PERMIT

Permit to Operate
Johnston County Landfill
Construction and Demolition Debris Landfill Unit 4A Expansion

CONDITIONS OF PERMIT:

GENERAL

1. When this property is sold, leased, conveyed or transferred, 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 sanitary landfill.
2. This permit will be subject to review on or before 22 December 2003, as per 15A NCAC 13B .0201© or sooner, according to the issuance date of this permit. Modifications to the facility may be required in accordance with rules in effect at the time of review.
3. The approved plan is described by Attachment 1, "List of Documents for Approved Plan". Where discrepancies may exist, the most recent submittal and the Conditions of Permit shall govern. Some components of the approved plan are reiterated in the Conditions of Permit.
4. This permit is not transferable.
5. The Financial Assurance Instrument(FAI) for this facility shall be amended when Closure Certification has been complete and the Closure/Post-Closure Care portion of the instrument is amended. The FAI shall be reviewed and updated annually for this facility once closure of the MSW unit is complete.
6. If during the operational life of the C&D unit it becomes apparent that the operations at the facility are impacting ground water adversely; the Solid Waste Section will require landfilling activities to cease and closure of the operating unit.

CONSTRUCTION AND OPERATION

7. This permit is for development of the Johnston County Landfill Construction and Demolition Unit, Phase 4A expansion, in accordance with the submittal dated 17 January 2002 from G.N. Richardson & Assoc. along with the approved plan dated 10 December 1998.

8. This solid waste management facility is permitted to receive the following waste types:
- a. Land-clearing debris as defined in G.S. 130A-290, specifically, solid waste which is generated solely from land-clearing activities, such as stumps, trees, etc.;
 - b. Inert debris defined as solid waste which consists solely of material that is virtually inert, such as brick, concrete, rock and clean soil; and
 - c. Asphalt in accordance with G.S. 130-294(m).
 - d. Construction and demolition debris defined as solid waste resulting solely from construction, remodeling, repair or demolition operations on pavement, buildings, or other structures.
 - e. C&D like waste that are similar to wastes typically found in the land clearing-inert debris and C&D waste streams consisting of wastes at this time: roofing shingle waste from the manufacturer, waste building materials from mobile home/modular home manufacturer and wooden pallets. Other wastes **MAY** be approved by the Division upon receipt of a written request with the specific waste type, how its generated, how much is generated; along with any additional information the Division may request to render a final decision on the disposal options for the waste.
- Yard trash as defined in G.S. 130A-290, shall not be disposed in the landfill area. However, yard trash, along with land-clearing debris, may be accepted for processing in the Yard Waste Composting Area.
9. All sedimentation/erosion control activities will be conducted in accordance with the Sedimentation Control Act codified at 15 NCAC 4. Native vegetation shall be established on the completed landfill.
10. The following requirements shall be met prior to operation of Phase 4A at this facility:
- a. Site preparation and or closure of that area of the MSW unit shall be in accordance with the transition and/or approved construction plans.
 - b. Signs shall be posted at the facility in accordance with the Access and Safety Requirements under Operation Condition No. 5 listed below.
 - c. The existing groundwater monitoring system will be utilized for ground water monitoring for the C&D unit(s) in accordance with .1630 thru .1633. Assessment monitoring shall continue in accordance with Solid Waste Management Rules and any additional requirements set forth by Solid Waste Section Hydrogeologist.
 - d. Closure certification and documentation shall be submitted to the Solid Waste Section and a approved by the Section prior to receiving C&D waste in the proposed unit(s). This information is provided by letter dated 21 December 1998 in the revised application prepared by G.N. Richardson & Assoc.. Partial closure of units will be accepted with certification and documentation of partial unit closure submitted for approval. Seeding and stabilization of cover soils shall be performed prior to receiving C&D waste.
 - e. The **SOUTH** and **EAST** limits of Phase 4A shall be staked/flagged in the field for visual operating reference and shall be maintained.

11. Operation of the C&D landfill units shall conform to the operating procedures described in the approved plan, in accordance with Section .1626 of the Solid Waste Management Rules, and in accordance with the following requirements:

Waste Acceptance and Disposal

- a. The facility shall accept only those solid wastes which it is permitted to receive.
- b. No municipal solid waste, hazardous waste, industrial waste, liquid waste or waste not characterized as LCID or C&D shall be accepted for disposal.
- c. The permittee shall implement a program at the facility for detecting and preventing the disposal wastes listed in item "b" of this section. The program shall include, at a minimum:
 - (i) Random inspections of incoming loads or other comparable procedures;
 - (ii) Records of any inspections;
 - (iii) Training of personnel to recognize hazardous and liquid wastes;
 - (iv) Development of a contingency plan to properly manage any identified wastes listed in item "b" of this section; the plan must address identification, removal, storage, and final disposition of waste.

Cover Material Requirements

12. a. Operational soil cover of at least six inches shall be placed at least once per week or when the active area reaches ½ acre in size or more often as necessitated by the nature of the waste so as to prevent the site from becoming a visual nuisance and to prevent fire, windblown materials, vectors or water infiltration.
- b. Areas which will not have additional waste placed on them for 12 months or more, but where final termination of operations has not occurred, shall be covered with a minimum of one foot of soil cover.
- c. After final termination of disposal operations at the site or major part thereof, or upon revocation of a permit, the fill areas shall be covered with a cap in accordance with .1627© or in accordance with the rules at the time of closure.

Access and Safety

13. a. The facility shall be adequately secured by means of gates, chains, berms, fences, or other security measures approved by the DWM to prevent unauthorized entry.
- b. An attendant shall be on duty at the site at all times while it is open for public use to ensure compliance with operational requirements.
- c. The access road to the site shall be of all-weather construction and maintained in good condition.
- d. Dust control measures shall be implemented when necessary.

- e. Signs providing information on dumping procedures, the hours of operation, the permit number, and other pertinent information shall be posted at the site entrance.
- f. Signs shall be posted stating that no MSW, hazardous waste or liquid waste can be received.
- g. Traffic signs or markers shall be provided as necessary to promote an orderly traffic pattern to and from the discharge area and to maintain efficient operating conditions.
- h. The removal of solid waste from the facility is prohibited unless the owner/operator approves and the removal is not performed on the working face.
- i. Barrels and drums shall not be disposed of unless they are empty and perforated sufficiently to ensure that no liquid or hazardous waste is contained therein, except fiber drums containing asbestos.
- j. Open burning of solid waste is prohibited.
- k. The concentration of explosive gases generated at the facility shall not exceed:
 - i. twenty-five percent of the limit for gases in site structures (excluding gas control or recovery system components; and
 - ii. the lower explosive limit for gases at the facility boundary.

Erosion and Sedimentation Control

- 14. a. Adequate sedimentation and erosion control measures shall be practiced to prevent silt from leaving the site.
- b. Adequate sedimentation and erosion control measures shall be practiced to prevent excessive on-site erosion.
- c. Provisions for a vegetative ground cover sufficient to restrain erosion must be accomplished within 30 working days or 120 calendar days upon completion of any phase of C&D landfill development.

Drainage Control and Water Protection Requirements

- 15. a. Surface water shall be diverted from the operational area.
 - b. Surface water shall not be impounded over or in waste.
 - c. A separation distance of at least four feet shall be maintained between waste and the ground-water table.
 - d. Solid waste shall not be disposed of in water.
 - e. Leachate shall be contained on site or properly treated prior to discharge. An NPDES permit may be required prior to discharge of leachate to surface waters.
16. All pertinent landfill operating personnel will receive training and supervision necessary to properly operate this landfill. The site shall have a certified operator as addressed in G.S. 130A-309.25 and consistent with the memorandum dated 29 November 2000(enclosed).

17. Ground water quality at this facility is subject to the classification and remedial action provisions referenced in Rule .1634 thru .1637 of 15A NCAC 13B.
18. A closure and post-closure plan must be submitted for approval at least 90 days prior to closure or partial closure of any landfill unit. The plan must include all steps and measures necessary to close and maintain the facility in accordance with all rules in effect at that time. At a minimum, the plan shall address the following:
 - a. Design of a final cover system; using the cap requirements outlined in Rule .1627
 - b. Construction and maintenance/operation of the final cover system and erosion control structures;
 - c. Surface water, ground water, and explosive gas monitoring.

MONITORING AND REPORTING REQUIREMENTS

19. Ground-water monitoring wells and monitoring requirements for the C&D landfill units shall be in accordance with the monitoring system approved in the TRANSITION PLAN for the facility and these additional conditions:
 - a. Monitoring well design and construction shall conform to the specifications outlined in Attachment 2, "North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities".
 - b. A geologist shall be in the field to supervise well installation, if necessary. The exact locations, screened intervals, and nesting of the wells shall be established after consultation with the SWS Hydrogeologist at the time of well installation for new monitoring wells.
 - c. For each new monitoring well constructed, a well completion record shall be submitted to DWM within 30 days upon completion.
 - d. Sampling equipment, procedures, and parameters shall conform to specifications outlined in the above-referenced guidance document, (Attachment 2), or the current guidelines established by DWM at the time of sampling and in accordance with the approved TRANSITION PLAN OR ASSESSMENT AND REMEDIATION PLAN.
 - e. In order to determine ground-water flow directions and rates, each monitoring well shall be surveyed, and hydraulic conductivity values and effective porosity values shall be established for the screened intervals for each new monitoring well.
 - f. The permittee shall sample the monitoring wells semi-annually or as directed by the SWS Hydrogeologist.
 - g. A readily accessible unobstructed path shall be initially cleared and maintained so that four-wheel drive vehicles may access the monitoring wells at all times.

20. The permittee shall maintain a record of all monitoring events and analytical data. Reports of the analytical data for each water quality monitoring sampling event shall be submitted to DWM in a timely manner.
21. The permittee shall maintain a record of the amount of solid waste received at the facility, compiled on a monthly basis. Scales shall be used to weigh the amount of waste received.
22. On or before 01 August 2002 (or an earlier date as requested by the Solid Waste Section), and each year thereafter, the permittee shall report the amount of waste received (in tons) at this facility and disposed of in the landfill to the Solid Waste Section and to all counties from which waste was accepted, on forms prescribed by the Section. This report shall include the following information:
 - a. The reporting period shall be for the previous year, beginning 01 July and ending on 30 June;
 - b. The amount of waste received and landfilled in tons, compiled on a monthly basis, according to Condition 6 described above; and
 - c. Documentation that a copy of the report has been forwarded to all counties from which waste was accepted.
23. All records shall be maintained on-site and made available to the SWS upon request.
24. The Post-Closure plan approved in the TRANSITION PLAN shall be implemented and followed upon capping and closing the operating unit(s).

ATTACHMENT 1

List of Additional Documents for the Approved Transition Plan

1. Site and Construction Transition Plan modification application for the Johnston County Landfill, Permit # 51-01. Document titled Johnston County C&D Landfill Vertical Expansion, Transition Plan Amendment for Construction and Demolition Landfill Operations, dated December 1998.
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 for Johnston County C&D landfill unit dated 17 January 2002 for the expansion of Phase 4A.