9601 1994

WAYNE Co

1994

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

DEHNR

November 15, 1994

Mr. Lloyd Cook
Wayne County Solid Waste Director
460 B South Landfill Road
Dudley, NC 28333

RE: Technical Review Wayne County Landfill Transition Plan, Permit No 96-01

Dear Mr. Griffin,

The North Carolina Division of Solid Waste Management, Solid Waste Section (Section) recently performed a technical review of the engineering portion of the referenced transition plan application submitted by Municipal Engineering, on behalf of Wayne County. The Section hydrogeologist will review the Water Quality Monitoring Plan of the transition plan and will request any additional water monitoring information or geology needed upon completion of his review.

The Section's engineering review involved evaluating the Wayne County Transition Plan with respect to the N.C. Solid Waste Management Rules, 15A NCAC 13B .1600. Based on its preliminary review, the Section needs the following additional information.

Section I- Summary Report

1. The summary report states that the facility is used to dispose of municipal solid waste and sewage sludge. Is sewage sludge co-disposal a condition of the current permit? Rule .1626(1)(e)(ii) prohibits the co-disposal of sewage sludge unless the facility meets the design requirements of rule .1624 and is approved within the permit, or has been previously approved as a permit condition.
2. The transition plan states that it is anticipated that a site study for a new facility will be started by June 1994. Does this schedule still hold? Wayne County should allow two years for review of an application and one year for construction of a lined facility.

Section II-Location Restriction Demonstration

1. The transition plan states that the Wayne County landfill is located approximately 26,400 feet from the closest airport. Please provide demonstration for this.
2. The FEMA map for the vicinity if the landfill is referenced. Please include this map with the landfill area shown on it.

Section IV- Local Area Study

This portion of the transition plan application will be further reviewed by the Section hydrogeologist.

Section VI-Closed unit documentation-

The Eastern Area Engineer, Jim Barber, should be contacted regarding closure certification of the closed area. His phone number in Fayetteville is 910-486-1191.

Section VII Operations Plan-

The Operations Plan, prepared in accordance with §.1626, should be a manual suitable for use by the landfill personnel. More detail in general is needed. Specifically the following should be addressed.

1. Wayne County proposes to operate their landfill until the end of 1997. The current permit expires in 1995. A vertical expansion is requested and may be granted during the transition plan review. The first sentence of the operation plan section should be rewritten.
2. The use of an alternative daily cover requires a demonstration be made with the Section. Has this been done? If not, please contact Jim Barber for more information on the required daily cover demonstration.
3. Have benchmarks been established? Please locate on the maps.
4. 1.a-Waste acceptance and disposal- What types of wastes is the facility not permitted to receive? What is the facility permitted to receive? What is done with C&D wastes from the County?
5. 1.c. Spoiled foods etc-How and with what are these wastes covered?
6. 1.e.- Is wastewater treatment sludge allowed as a permit condition?
7. Cover material requirements- see comment 2 above.
8. 3. Disease vector control- How does the facility control disease vectors?
9. 4.c. Methane- This section on response to methane exceeding permitted levels should be expanded. Particular attention should be paid to safety for the employees. The plan also does not address such things as recalibrating the equipment and then rechecking the area to ensure that the results are correct. If gas is detected, what will be done to locate and delineate the affected zone, or verify that the gas is coming from the landfill and not some other source?
10. 5.c. Air Criteria, What arrangements have been made for fighting fires? What equipment is available on-site for fire fighting. How should the operator handle "hot loads"?
11. 6. Access and safety- How is access to the site controlled? What dust control measures are employed or suggested?
12. 7. Erosion and sedimentation control- Has the plan been sent to Land Quality Section of DEM for approval? If not please send the plan to DEM and copy the Section with the approval when it is received.
13. 8. Drainage- what measures and or structures are used at the landfill to control drainage, run-on and run-off?
14. 9.c. Liquids Restriction- The "Paint Filter Test", Method 9095 of SW 846, should be included for operator reference, including the test apparatus, how to perform the test, and how to interpret the results.
15. 10. Recordkeeping- Where are the records kept?
16. 11. Spreading and Compacting- Proper operation should be explained here, including how to compact, lift size, number of passes, depth to spread the waste, etc. What is the typical size of the working face? How is blowing litter controlled, How is run-on and run-off controlled at the working face? Are perimeter or temporary berms necessary? What provisions are made for inclement weather?

17. Appendix I-The waste screening plan refers to RCRA as regulating the disposal of PCBs. This is incorrect. PCBs are regulated under the Toxic Substance Control Act (TSCA).Does the landfill know the industrial users of its service area? Are any of the wastes of concern? What criteria is the county using to determine the random loads that they will inspect. Have any landfill personnel received hazardous waste screening training? Who? The waste screening plan states that waste should be carefully spread for observation using a front end loader or other piece of equipment. The Section recommends that the use of heavy equipment to spread the load be used judiciously. Heavy equipment may rupture a container and thus spill its contents resulting in a cleanup action rather than just a disposal problem. Perhaps the waste should be hand raked to spread it. Please provide the appropriate names and phone numbers that the landfill personnel should contact if a suspicious or known hazardous waste load is discovered. Containers of unknown origin or contents should never be opened by landfill personnel. The plan should state the County's policy on who pays for any testing of suspect loads and cleanup if necessary.
18. Synthetic Cover-Has a demonstration been made to the Section? If so please provide the necessary documentation. If not contact Jim Barber and Bill Morris. When alternative daily cover is applied, at what frequency is soil applied as a firebreak? How does the proposed alternative daily cover deal with vectors, fires, odors, blowing litter and scavenging without being a threat to human health and the environment (.1626(2)(b).
19. Methane Gas- A sampling form for the County to use is requested. The form should have room to identify the wells, the readings, date, time, etc. It is also useful to record weather conditions, and level of ground saturation.

Section VIII-Closure Plan

1. The Operation Plan Miscellaneous Detail Sheet shows the cap system with the permeability specified as minimum, it should be not greater than 1×10^{-5} cm/sec.
2. In accordance with rule .1627(c)(3)(B), a gas venting or collection system must be installed below the low-permeability barrier to minimize pressure exerted on the barrier. Modify the transition plan to include a gas venting or collection system. Also, modify the cost estimates to include the costs for installation and maintenance of gas controls.
3. On page 3 of the written closure plan, paragraph (e), it states that four soil samples will be taken per acre, per lift. How many perm tests will be run? Will paragraph (d) specs be used on these samples? What is the frequency of the tests specified in paragraph (h)? Is any quality control to be done on stock pile materials, prior to placement as a cap? Paragraph (j) refers to a flexible membrane liner. There is not an FML specified in this cap.

Section IX-Post Closure Plan

1. What is the end use of the property?
2. More detail is required on the proposed maintenance schedule. Is a semiannual inspection appropriate in the early years of the facility, before the vegetation has been established and erosion potential reduced? A more detailed table or list of maintenance and inspection procedures and schedules is needed. The Sedimentation and erosion plan says that semiannual maintenance of the sed pond is necessary. This is not addressed here.
3. Address items in Rule .1627(d)(3).

Section X - Cost Analysis and Summary

1. Closure costs should reflect the gas management system.
2. Soil and construction costs should be broken out to include, hauling, placement and cost of soil. Have equipment mobilization costs been accounted for? Are the QA/QC costs sufficient for the frequency of tests specified? How is this broken out?
3. An estimate of $50,000 is included for cap monitoring and repairing any problems for 30 years. Is this estimate to include inspections, mowing, reseeding, fertilizing, filling in for settlement and erosion, and other problems for 30 years? If so, this estimate seems low.
4. Are sediment removal costs for the sed pond accounted for? The Sed and erosion plan calls for biannual cleaning.
5. Are the closure and post-closure costs sufficient for engineering certification, announcements, deeds, fees, construction management and CQA? These costs should be broken out in more detail.

When submitting revisions to the transition plan, the changed pages should be clearly identified with a revision date in either a footer or a header. It is not necessary to submit five copies of revisions or facility drawings, at this time. Two copies will suffice. When the Transition Plan is finalized a total of five copies will be needed. 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 following the technical review process. Please submit the requested information or revisions to the Section within 45 days to expedite the review of the referenced transition plan application. We are available by phone or fax to help clarify this letter and expedite the review of the application.

Sincerely,

Edward F. Mussler III. E.I.T
Environmental Engineer
Solid Waste Section

cc: D.Wayne Sullivan, Municipal Engineering
Billy Morris Terry Dover
Jim Barber [redacted]

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

DEHNR

September 14, 1994

Mr. Lloyd Cook
460 B. South Landfill Road
Dudley NC 28333

RE: Permanent Methane Monitoring Plan, Wayne County Landfill Transition Plan, Permit No. 96-01

Dear Mr. Cook,

In accordance with 15A NCAC 13B .1626(4), owners or operators of all municipal solid waste landfill (MSWLF) units must implement a permanent methane monitoring program on or before October 9, 1994. The permanent methane monitoring plan in the referenced transition plan includes the frequency of testing, test procedure, and a response plan for situations in which methane gas levels are exceeded, in addition to, proposed probe location, depth, and construction. The Solid Waste Section hereby approves the proposed methane monitoring plan as outlined in the referenced transition plan, and Wayne County may begin construction of the proposed methane monitoring system.

If you have any questions regarding this matter, please contact Ed Mussler or Sherri Hoyt at (919)733-0692.

Sincerely,

James C. Coffey

James C. Coffey,
Supervisor, Solid Waste Section Permittting Branch

cc: Mr. D. Wayne Sullivan, Municipal Engineering
Terry Dover
Billy Morris
File

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State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

Wayne Co.
96-01

August 16, 1994

Mr. D. Wayne Sullivan
Municipal Engineering Services, Co., PA
PO Box 97
Garner, NC 27529

RE: Permanent Methane Monitoring Plan, Wayne County Landfill Transition Plan, Permit No. 96-01

Dear Mr. Sullivan,

In accordance with 15A NCAC 13B .1626(4), owners or operators of all municipal solid waste landfill (MSWLF) units must implement a permanent methane monitoring program on or before October 9, 1994. The permanent methane monitoring plan in the referenced transition plan should include the frequency of testing, test procedure, and a response plan for situations in which methane gas levels are exceeded, in addition to, proposed probe or well location, depth, and construction.

The methane monitoring plan should describe the permanent monitoring system including a rationale as too why the particular spacing was chosen and the anticipated depth of the proposed wells. The factors of Rule .1626(4)(b)(i) should be addressed in the design of the permanent methane monitoring system. Other factors to consider are the depth to groundwater and the type of soils in and around the landfill.

The methane monitoring plan should include an emergency response plan, to be implemented in the event that gas is detected, particularly in or around buildings. The plan should address the steps to be taken to ensure protection of human health (see Rule .1626(4)(c)(i). In addition the sampling protocol should be expanded, instruments identified, and sampling locations in and around structures on-site identified. A comprehensive monitoring sampling and analysis plan, similar to groundwater procedures, is recommended since the County plans to have one of its employees do the monitoring.

What steps are being taken to monitor the existing, inactive landfill area, to ensure that the gas compliance limits are being met from these areas ? Does a monitoring plan and or system exist for this closed area?

Please submit this information to the Solid Waste Section within 30 days from the issuance date of this letter to avoid compliance action by the Section. If you have any questions regarding this matter, please contact me or Sherri Hoyt at (919)733-0692.

Sincerely,

Edward F. Mussler
Environmental Engineer
Solid Waste Section

cc: Bill Morris
Terry Dover
File

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96-01
Wayne

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary

DEHNR

April 19, 1994

MEMORANDUM

TO: Landfill Operators

FROM: Dexter R. Matthews, Chief
Solid Waste Section

DRM

SUBJECT: Recordkeeping Requirements for MSWLFS

This is to remind all MSWLF facility operators that certain elements of transition plans for existing facilities are included in required recordkeeping effective April 9, 1994. These elements and other required records must be kept at the facility and available for inspection by section personnel.

For your convenience, I am enclosing a list of the record keeping requirements for MSW Landfills.

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OPERATING RECORD INCLUDES:

1. Outline of waste screening program for detecting and preventing disposal of hazardous waste, liquid waste, P.C.B. waste, and banned items.

2. Records of screening inspections.

3. Outline of training of facility personnel to recognize liquid waste, hazardous waste, P.C.B. waste and banned items.

4. Waste determination records.

5. Amounts by weight of solid waste received at the facility to include source of generation.

6. Gas monitoring results and any remediation plans required. (Recommend written description of monitoring program.)

7. Any demonstration, certification, finding, monitoring, testing, or analytical data required by rules .1630 through .1637 of this section. (see attachment)

8. Any monitoring, testing, or analytical data as required by rule .1627 of this section.

9. Any cost estimates and financial assurance documentation required by Rule .1628 of this section. (see attachment)

10. Any demonstration that a site located within 5,000 ft. of an airport used by only piston powered aircraft or within 10,000 ft. of a runway used by turbine powered aircraft does not pose bird hazard to aircraft as required by rule .1622(1)(C) of this section.

OTHER REQUIRED RECORDKEEPING

1. Contingency Plan.

2. Records required by 40 CFR 61 (asbestos rules).

3. Scrap Tire Certification Forms (scrap tire collection, processing and disposal sites).

4. Operation Plan.

5. Leachate Management Plan .1626(12) (sites with leachate collection system only).

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Inspection Checklist For Rules .1630 - .1637

.1631(b)(1)	Documentation from the Division of approval for the design, installation, development, and decommission of any monitoring well or piezometer.
*.1631(d)(2)	A copy of the approved monitoring plan, including information on the number, spacing, location, and design of the monitoring wells.
*.1632(a)	A copy of the approved ground-water sampling and analysis plan, including procedures and techniques for: sample collection, sample preservation and shipment, analytical procedures, chain of custody, and quality assurance and quality control.
*.1632(j)	For each sampling event, a report that includes all information from each sampling event, including: field observations, field data, laboratory data, statistical analysis, sampling methodologies, QA/QC data, ground-water flow directions and rates for each monitoring well, and for each well any constituents that exceed groundwater standards or show a statistically significant increase over background levels.
.1633(c)(1)	A notice indicating which constituents have shown statistically significant changes from background levels.
.1633(c)(3)	A report documenting any demonstration that statistically significant increases resulted from error in sampling, analysis, statistical evaluation, or natural variation in ground-water quality or that a source other than a MSWLF unit caused the contamination.

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.1634(d)(1)	A notice identifying the Appendix II constituents that have been detected.
.1634(d)(2)	A report from each sampling event.
.1634(g)	A notice if one or more Appendix II constituents are detected at statistically significant levels above the approved ground-water protection standards in any sampling event.
.1634(g)(2)	A report documenting any demonstration that statistically significant increases resulted from error in sampling, analysis, statistical evaluation, or natural variation in ground-water quality or that a source other than a MSWLF unit caused the contamination.
.1636(a)	Any permit modification necessary to document the selection of remedy based on the results of the corrective measures assessment.
.1637(c)(4)	Any report justifying alternative (corrective) measures.
.1637(f)	A report documenting that the (corrective action) remedy has been completed.

NOTE: The need for most of this information is based upon different stages of ground-water investigation and will not be required for all facilities. Initially, all facilities will be responsible for having an approved monitoring plan, .1631(d)(2), an approved sampling and analysis plan, .1632(a), and reports for each sampling event, .1632(j). The monitoring plan and sampling and analysis plan are part of the Transition Plan due by April 9, 1994. The initial sampling report is due by October 9, 1994.

* Initially required

FINANCIAL ASSURANCE CHECKLIST

Cost Estimate For Closure [.1628(b)(1)]

Financial Assurance For Closure (one of the following)

- Trust Fund [.1628(e)(1)(A)]
- Surety Bond [.1628(e)(1)(B)]
- Letter of Credit [.1628(e)(1)(C)]
- Insurance [.1628(e)(1)(D)]
- Local Government Financial Test [.1628(e)(1)(F)]
- Capital Reserve Fund [.1628(e)(1)(I)]

Cost Estimate For Post-Closure Care [.1628(c)(1)]

Financial Assurance For Post-Closure Care (one of the following)

- Trust Fund [.1628(e)(1)(A)]
- Surety Bond [.1628(e)(1)(B)]
- Letter of Credit [.1628(e)(1)(C)]
- Insurance [.1628(e)(1)(D)]
- Local Government Financial Test [.1628(e)(1)(F)]
- Capital Reserve Fund [.1628(e)(1)(I)]

MODIFICATIONS TO APPROVAL
EROSION AND SEDIMENTATION CONTROL PLAN
DUDLEY LANDFILL VERTICAL EXPANSION
DUDLEY
WAYNE COUNTY

Borrow Area

1. A minimum 50' long by 14' wide by 6" deep construction pad of washed gravel must be provided and maintained at each point of project egress to a paved public road. The gravel size is recommended to be 1 1/2 to 3 inches.

2. The "high walls" of the borrow area must be at a 3 horizontal to 1 vertical slope when each section is complete.

Fill Area

1. In reviewing the calculations, we have determined that Class 1 riprap will not stabilize the channels or riprap aprons (energy dissipators) in the event of a 10-year peak storm. We are, therefore, requiring that the riprap be NCDOT Class B.

2. The depth of riprap is recommended to be a minimum of 1.5 times the diameter of the largest stone. In the case of Class B riprap, the minimum depth would be 21 inches.

3. When constructing the filter basins, note that the riprap extends to the top of the berm and that the center section of the filter check dam is lower than the sides.

4. All drop inlets must be provided with temporary inlet protection until a vegetative cover has been established.

5. The seeding specifications provided with this plan listed 19 options, not all of which are appropriate for this project area. We recommend the attached seeding specifications for this project.

   NOTE: Rye grass <u>will not</u> be approved for use in combination with any other grass variety. We recommend that any small grain (rye, oats, millet, etc.) be used where temporary or nurse cover is required.

Both areas

A ground cover sufficient to restrain erosion must be provided within 30 working days of completion of any phase of grading on cut or filled slopes.

Table 6.11p
Seeding No. 1CP for: Well- to Poorly Drained Soils with Good Moisture Retention; Low Maintenance

Seeding mixture

Species[1]	Rate (lb/acre)
Tall fescue	80
Pensacola Bahiagrass	50
Sericea lespedeza	30
Kobe lespedeza	10

Seeding notes

1. From Sept. 1 - Mar. 1, use unscarified sericea seed.
2. On poorly drained sites omit sericea and increase Kobe to 30 lb/acre.
3. Where a neat appearance is desired, omit sericea and increase Kobe to 40 lb/acre.

Nurse plants

Between Apr. 15 and Aug. 15, add 10 lb/acre German millet or 15 lb/acre Sudangrass. Prior to May 1 or after Aug. 15, add 25 lb/acre rye (grain).

Seeding dates

	Best	Possible
Early spring:	Feb. 15 - Mar. 20	Feb. 15 - Apr. 30
Fall:	Sept. 1 - Sept. 30	Sept. 1 - Oct. 31

Soil amendments

Apply lime and fertilizer according to soil tests, or apply 3,000-5,000 lb/acre ground agricultural limestone (use the lower rate on sandy soils) and 1,000 lb/acre 10-10-10 fertilizer.

Mulch

Apply 4,000 lb/acre grain straw or equivalent cover of another suitable mulch. Anchor straw by tacking with asphalt, netting, or roving or by crimping with a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance

If growth is less than fully adequate, refertilize in the second year, according to soil tests or topdress with 500 lb/acre 10-10-10 fertilizer. Mow as needed when sericea is omitted from the mixture. Reseed, fertilize, and mulch damaged areas immediately.

[1]Refer to *Appendix 8.02* for botanical names.

Table 6.11t
Seeding No. 5CP for:
Well-Drained Sandy Loams to Dry Sands; Low Maintenance

Seeding mixture

Species[1]	Rate (lb/acre)
Pensacola Bahiagrass	50
Sericea lespedeza	30
Common Bermudagrass	10
German millet	10

Seeding notes

1. Where a neat appearance is desired, omit sericea.
2. Use common Bermudagrass only on isolated sites where it cannot become a pest. Bermudagrass may be replaced with 5 lb/acre centipedegrass.

Seeding dates

Apr. 1 - July 15

Soil amendments

Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agricultural limestone and 500 lb/acre 10-10-10 fertilizer.

Mulch

Apply 4,000 lb/acre grain straw or equivalent cover of another suitable mulch. Anchor by tacking with asphalt, roving, or netting or by crimping with a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance

Refertilize the following Apr. with 50 lb/acre nitrogen. Repeat as growth requires. May be mowed only once a year. Where a neat appearance is desired, omit sericea and mow as often as needed.

[1]Refer to *Appendix 8.02* for botanical names.