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Division of Solid Waste Management
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STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Solid Waste Management
5th Floor, L & C Tower
401 Church Street
Nashville, TN 37243-1535

July 17, 1996

CERTIFIED MAIL # Z 737 780 614
RETURN RECEIPT REQUESTED

The Honorable Hunter W. Wright
Mayor of Kingsport
225 W. Center Street
Kingsport, TN 37660

RE: Permit Modification for City of Kingsport Demolition Landfill
DML 82-104-0016

Dear Mayor Wright:

The Tennessee Department of Environment and Conservation has decided to issue the enclosed modified permit to the City of Kingsport for the closure and post-closure care of a Class IV Landfill.

I appreciate your interest in complying with state statutes and look forward to working with you again.

Sincerely,

Tom Tiesler, Director
Division of Solid Waste Management

JTT/BHF/lr kingsprt.30

cc: Johnson City Field Office

State of Tennessee
Department of Environment
and Conservation
Division of Solid Waste Management

Solid Waste Management Program
401 Church Street
5th Floor L&C Tower
Nashville, Tennessee 37243-1535
615-532-0780

REGISTRATION AUTHORIZING SOLID WASTE
DISPOSAL ACTIVITIES IN
TENNESSEE

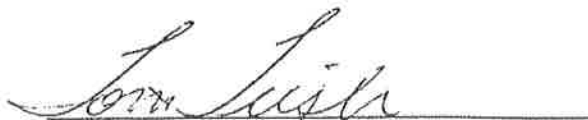
Registration Number: DML 82-104-0016

Date Issued: July 18, 1996

Issued to: The City of Kingsport for a facility located off Brookside Drive in the Bloomingdale community just north of the Kingsport City limits.

Activities Authorized: Closure and post closure care of a Class IV Disposal Landfill in accordance with approved closure plan.

By my signature this registration is issued in compliance with the provisions of the Tennessee Solid Waste Disposal Act (Tennessee Code Annotated, Section 68-211-101, et seq.), and applicable regulations developed pursuant to this law and in effect; and in accordance with the conditions and other terms set forth in this registration document and attached Registration Conditions.



Tom Tiesler, Director
Division of Solid Waste Management

JTT/BHF/lr

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PERMIT TERMS AND CONDITIONS

1. Recertification by Permittee for Facilities Whose Initial Operation is Delayed - If the facility does not initiate construction and/or operation within one year of the date of this permit, the permittee must recertify the application in accordance with Rule 1200-1-7-.02(2)(e).
2. Duty to Comply - The permittee must comply with all conditions of this permit, unless otherwise authorized by the Department. Any permit noncompliance, except as otherwise authorized by the Department, constitutes a violation of the Act and is grounds for enforcement action, or for permit termination, revocation and reissuance, or modification.
3. Need to Halt or Reduce Activity Not a Defense - It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. Duty to Mitigate - In the event of noncompliance with the permit, the permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent adverse impacts on human health or the environment.
5. Proper Operation and Maintenance - The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.
6. Permit Actions - This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any existing permit condition.
7. Property Rights - This permit does not convey any property rights of any sort, or any exclusive privilege.
8. Duty to Provide Information - The permittee shall furnish to the Commissioner, within a reasonable time, any relevant information which the Commissioner may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Commissioner, upon request, copies required to be kept by this permit.

9. Inspection and Entry - The permittee shall allow the Commissioner, or an authorized representative, to:
- (i) Enter at any reasonable time the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
 - (ii) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - (iii) Inspect at any reasonable time any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit (Note: If requested by the permittee at the time of sampling, the Commissioner shall split with the permittee any samples taken.);
 - (iv) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Act any substances or parameters at any location; and
 - (v) Make photographs for the purpose of documenting items of compliance or noncompliance at waste management units, or where appropriate to protect legitimate proprietary interests, require the permittee to make such photos for the Commissioner.
10. Monitoring and Records
- (i) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - (ii) The permittee shall retain records of all required monitoring information. The permittee shall maintain records for all groundwater monitoring wells and associated groundwater surface elevations, for the active life of the facility, and for the post-closure care period as well. This period may be extended by request of the Commissioner at any time.
 - (iii) Records of monitoring information shall include:
 - (I) The date, exact place, and time of sampling or measurements;
 - (II) The individual(s) who performed the sampling or measurements;
 - (III) The date(s) analyses were performed;
 - (IV) The individual(s) who performed the analyses;
 - (V) The analytical techniques or methods used (including equipment used); and
 - (VI) The results of such analyses.

11. Reporting Requirements

- (i) The permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility.
- (ii) Monitoring results shall be reported at the intervals specified elsewhere in this permit.
- (iii) The permittee shall report orally within 24 hours from the time the permittee becomes aware of the circumstances of any release, discharge, fire, or explosion from the permitted solid waste facility which could threaten the environment or human health outside the facility. Such report shall be made to the Tennessee Emergency Management Agency, using 24-hour toll-free number 1-800-262-3300.
- (iv) Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Commissioner, it shall promptly submit such facts or information.

12. Periodic Survey

- (i) Within 60 days of his receipt of the written request of the Commissioner to do so, the permittee shall cause to be conducted a survey of active and/or closed portions of his facility in order to determine if operations (e.g., cut and fill boundaries, grades) are being conducted in accordance with the approved design and operational plans. The permittee must report the results of such survey to the Commissioner within 90 days of his receipt of the Commissioner's request.
- (ii) The Commissioner may request such a survey:
 - (I) If he has reason to believe that operations are being conducted in a manner that significantly deviates from the approved plans; and/or
 - (II) As a periodic verification (but no more than annually) that operations are being conducted in accordance with the approved plans.
- (iii) Any survey performed pursuant to this part must be performed by a qualified land surveyor duly authorized under Tennessee law to conduct such activities.

13. Duration of Permits - This permit shall be effective for the operating life of the facility.

14. Effect of Permit - The issuance of this permit does not authorize the permittee to injure persons or property or to invade other private rights, or to violate any local law or regulations.

15. Transfer, Modification, Revocation and Reissuance, and Termination of Permits - This permit may be transferred, modified, revoked and reissued, or terminated as set forth in 1200-1-7-.02(5).
16. Applicable Standards - All applicable facility standards of Rule Chapter 1200-1-7, Solid Waste Processing and Disposal Amendments shall be considered conditions of this registration.
17. Penalties - Any violation of the conditions or other terms of this registration may subject the registrant to the penalties set forth in Tennessee Code Annotated Section 68-211-114 and 68-211-117.
18. Hazardous Waste Restriction - No hazardous waste, as regulated by the Tennessee Hazardous Waste Management Act (TCA Section 68-212-101, et seq.), and the Rules adopted pursuant to that Act, shall be accepted at this facility.
19. Construction and Operation - The permittee shall construct and operate the facility in accordance with the approved engineering plans and operations manual which becomes a condition of this permit in Attachment I.
20. Special Waste - Except as specifically provided for in the Facility-Specific Conditions of this permit, the permittee may not accept for disposal any special waste unless approved to do so in writing by this Department.
21. Automobile Batteries - This facility is specifically prohibited from accepting automobile batteries for disposal.

Registration Number DML 82-104-0016

VARIANCES AND WAIVERS

The following variances or waivers from standards or requirements in Rule 1200-1-7, Solid Waste Processing and Disposal Amendments, are hereby granted in accordance with Rule 1200-1-7-.01(5):

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FACILITY-SPECIFIC PERMIT CONDITIONS

The following conditions of this permit are established pursuant to Rule 1200-1-7-.02(4)(b):

1. Prior to placement of waste, a constructed geologic buffer shall be in place above bedrock. The buffer shall have a maximum permeability of 1×10^{-6} cm/sec. The thickness of the buffer shall be a minimum of five (5) feet in the base of the trenches and a minimum of two (2) feet on the sideslopes.
2. The construction quality assurance program included as Attachment I shall be followed to insure that the above specifications for permeability and thickness are achieved.
3. The wastes that may be accepted for disposal in this site are limited to demolition waste and land clearing waste (brush, stumps, etc.) and ash from burning of same. Wastes that may not be accepted for disposal in this site include:
 - a. Any asbestos-containing building materials.
 - b. Any containers from construction sites that have oil, chemicals, or paint remaining in them.
 - c. Any industrial special wastes.
 - d. Any garbage or other putrescible waste.
4. Cover shall consist of at least six inches of compacted clay soil applied over all exposed solid waste, at least once every seven (7) days. Intermediate cover of at least twelve (12) inches shall be applied to all waste disposal areas that shall be left exposed for a period of more than thirty (30) days.
5. A permanent benchmark of known elevation shall be maintained at the site.
6. The City of Kingsport will be required to monitor phase I of the landfill on a quarterly basis for any methane gas according to Rule 1200-1-7-.04(5). If methane gas is detected, the City of Kingsport will have to install the following:
 - a. Gas monitoring wells.
 - b. Gas vent system, at least one per acre.
7. The permittee shall close the facility in accordance with the approved closure and post closure plan that becomes a condition of this permit as Attachment II.

Attachment I

Construction Quality Assurance

A five foot thick clay layer with a maximum hydraulic conductivity of 10^{-6} cm/sec compacted to at least 90% of the maximum dry density of the soil, per ASTM D698-78 (standard Proctor) will be constructed atop the sub-drain. The five (5) foot clay layer will decrease to two (2) feet in thickness on the side of the hollow and will be sloped to the center for leachate contour. This liner will act as a barrier to downward migration of leachate from the fill and aid in the minimization potential of ground water contamination. The clay liner will be constructed ahead of the fill operations as necessary in order to stay a minimum of sixty (60) days ahead of the fill operations. This construction will be kept to a minimum to help reduce the potential for severe erosion during heavy rainfall. Drainage will be directed to Sediment Pond No. 1. The clay liner may exceed two feet in certain locations due to steep terrain.

I. CQA Officer

The City of Kingsport will engage a Construction Quality Assurance (CQA) officer who is independent of and not responsible to the construction contractor. The CQA officer will direct the construction inspection, testing, and documentation efforts, with specific responsibilities for activities such as:

General Duties

- a. Scheduling and performing CQA inspections to evaluate compliance with the plans and specifications.
- b. Confirming that testing equipment is properly calibrated and that documentation of the calibration exists.
- c. Verifying that tests are conducted in accordance with the standardized procedures specified in this plan, and that test data are accurately recorded and maintained.
- d. Reviewing and interpreting data sheets and reports associated with the construction.
- e. Rejecting defective work and verifying that corrective measures have been implemented.
- f. Furnishing the results of observations and tests to the construction contractor.

Specific Duties

- a. Inspect and guide excavation of low permeability soil using visual-manual classification, to segregate clay from sandy (unacceptable) material. Inspect clay for large roots, stumps, and large rocks that could impede compaction or result in pathways for infiltration through the low permeability layer.

- b. Inspect placement of clay to verify that it is spread in loose lift thicknesses not exceeding eight (8) inches and that clods larger than four (4) inches are broken down.
- c. Observe weather conditions and suspend compaction work in the event of heavy rain or freezing weather.
- d. Inspect operation of compaction equipment to ensure adequate coverage and number of passes.
- e. Perform moisture density tests on the clay at a frequency of one test per 5,000 cubic yards of material placed or whenever visual inspection indicates a significant change in material gradation.
- f. Perform in-place density tests (ASTM D1556) for each 2,000 cubic yards of material placed or per alternate lift, whichever results in a greater frequency. Any material that fails to meet the density requirements is to be reworked, recompacted, and retested.
- g. Inspect addition of water necessary for compaction to verify that it is applied uniformly and in an amount no greater than necessary to meet moisture requirements. If the moisture content is too high, it is to be reduced before the soil is placed and compacted by working the material over with equipment such as a large disk harrow under dry atmosphere conditions.
- h. Immediately before placement of an additional lift on the low permeability layer, inspect the compacted previous lift to ensure that it is scarified prior to placement of additional material. Inspect the compacted lift for cracks, holes, or other defects that will increase its permeability. Any defects are to be repaired and undisturbed areas.
- i. Direct placement of additional lifts of low permeability material until the thickness of the compacted material is at least 24 inches, measured normal to a plane paralleling the surface of the sideslopes or 60 inches measured normal to a plane paralleling the surface of the trenches.
- j. Survey the completed low permeability layer to confirm that slopes are in accordance with the plans and specifications.
- k. Following completion of the low permeability layer, direct placement of the drainage layer to protect the low permeability layer from drying, erosion, and freezing.

II. Construction Inspection and Testing

All contractors providing clay liner and cover material for the landfill will be required to provide the following information.

1. A topographic map showing property lines of the soil borrow site(s).
2. Soil tests showing type and permeability of clay soil material. A sufficient number of tests will be performed to provide representative information of entire site(s).
3. Calculations showing the total bank yardage available for borrow at the site(s).

The fill shall be placed and compacted to at least 90% of the standard Proctor maximum dry density; allowable moisture limits shall be between 1% and +5% of optimum as defined by the standard Proctor test. The fill shall be placed in eight (8) inch lifts. In-place density tests shall be performed at a frequency of one test per each lift of fill placed to verify that the required density is being obtained. For larger areas, one in-place density test shall be performed for each 2,000 cubic yards of material that is placed in the liner. The density testing shall be performed by removing the upper few inches of fill at a particular test location so that the density within the bottom portion of the particular lift can be determined. Standard Proctor tests for moisture content shall be performed for the fill as determined by the CQA officer to verify compliance with the specifications, but at least once every 5,000 cubic yards of material placed.

III. Documentation and Recordkeeping

The various CQA inspections and testing activities described above, and any required corrective measures, will be documented by data sheets, checklists, and reports.

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