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

Hazardous Waste Management Program
5th Floor, L & C Tower
401 Church Street
Nashville, Tennessee 37243-1535

HAZARDOUS WASTE MANAGEMENT PERMIT

Permittee: **Foster Wheeler Environmental Corporation**
Facility: **Transuranic (TRU) Waste Remediation Facility**
Owner / Operator: **Foster Wheeler Environmental Corporation**
Land Owner: **U. S. Department of Energy**
Location: **HFIR Access Road (Approx. 1.5 miles north of I-40 on SR 95)**
Oak Ridge, Tennessee 37830
Installation Identification Number: TNR 00 000 6981
Permit Number: **TNHW-100**

Pursuant to the Tennessee Hazardous Waste Management Act, as amended (Tennessee Code Annotated 68-212-101 et seq.) and regulations (Chapter 1200-1-11) promulgated thereunder by the Tennessee Solid Waste Disposal Control Board, a permit is issued to Foster Wheeler Environmental Corporation (hereinafter called the permittee), to construct and operate a hazardous waste treatment and storage facility for the management of mixed waste (radioactive and hazardous waste), located in Oak Ridge, Roane County, Tennessee, at latitude 35° 54' 038" and longitude 84° 19' 000". The permittee shall be allowed to store mixed waste in containers and to store and treat mixed waste in tanks and miscellaneous units only in accordance with the terms of this permit. This permit does not allow the permittee to operate this facility in a manner defined by §68-212-104(19) as a "commercial facility."

This permit is issued under the authority of §68-212-108. This Permit, in conjunction with the HSWA portion of the RCRA permit, issued by the Environmental Protection Agency, constitutes the full hazardous waste permit for this facility. The permittee shall be required to investigate any releases of hazardous waste or hazardous constituents pursuant to this permit at the facility regardless of the time at which waste was placed in a unit and to take appropriate corrective action for any such releases. The permit also requires the permittee to comply with all land disposal restrictions and air emission standards applicable to this facility and to certify annually that on-site generation of hazardous waste is minimized to the extent practicable.

The permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in Rule Chapters 1200-1-11 or 1200-1-14, as specified in the permit. Applicable regulations are those from Rule 1200-1-11-.06 or from Rule 1200-1-14-.03, which are in effect on the date of issuance of the permit; for all other rules in Rule Chapters 1200-1-11 or 1200-1-14, applicable regulations are those in effect on the date of the issuance of this permit and any subsequent modifications to those rules as they become effective.

Continuation, Transfer, Modification, Revocation and Reissuance, and Termination of this permit shall comply with and conform to Rule 1200-1-11-.07(9).

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This permit is based on the premise that the information and reports submitted by the permittee prior to issuance of this permit or prior to any subsequent modification to this permit are accurate. Any inaccuracies found in this information or information submitted as required by this permit may be grounds for termination or modification of this permit and enforcement action. The Commissioner may modify this permit if information is received which was not available at the time of permit issuance and which justifies the application of different permit conditions at the time of issuance. The permittee must notify the Commissioner of any deviation from or changes in the information in the application which would affect the permittee's ability to comply with the applicable regulations or permit conditions.

This permit is effective as of September 30, 1999, and shall remain in effect until September 30, 2009, unless revoked and reissued, or terminated, or continued.

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Mike Apple, Director
Division of Solid Waste Management
Tennessee Department of Environment and Conservation

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I. STANDARD CONDITIONS

A. EFFECT OF PERMIT

The permittee is allowed to treat and store hazardous waste in accordance with the conditions of this permit. Any receipt or handling of hazardous waste not authorized in this permit is prohibited, unless such management is not subject to a permit as set forth at Rule 1200-1-11-.07(1)(b), is operating under interim status as set forth in Rule 1200-1-11-.07(3)(a), or is subject to a separate hazardous waste management permit issued by the Department. Compliance with this permit during its term constitutes compliance, for the purposes of enforcement, with the Tennessee Hazardous Waste Management Act of 1977, as amended, as it applies to the permitted activities, except for those requirements not included in the permit which: (1) become effective by statute; or (2) are promulgated under Rule 1200-1-11-.10 restricting the placement of hazardous waste in or on the land. However, this permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in this permit and paragraph (9) of Rule 1200-1-11-.07. Issuance of this permit does not authorize any injury to persons or property, any invasion of other private rights, or any infringement of other State or local laws or regulations. This permit does not convey any property rights of any sort or any exclusive privilege. Compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Section 3013 or Section 7003 of the Resource Conservation and Recovery Act of 1976 as amended (42 U.S.C. 6901 et seq., commonly referred to as RCRA), Sections 104, 106(a) and 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq., commonly known as CERCLA), Sections 68-212-206(a), 207, and 215(c) of the Tennessee Hazardous Waste Management Act of 1983, as amended, or any other law providing for protection of public health or the environment.

B. SEVERABILITY

The provisions of this permit are severable, and if any provisions of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

C. DEFINITIONS

For the purpose of this permit, terms used herein shall have the same meaning as those in Rules 1200-1-11-.01, .02, .06, .07, and .10, unless this permit specifically provides otherwise. Where terms are not defined in the regulations, the permit, or U.S. EPA guidelines or publications, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

1. “Action levels” for the purposes of this permit are health-based concentrations of hazardous constituents determined to be indicators for the protection of human health and/or the environment.

2. “Area of concern” (AOC) for the purposes of this permit includes any area having a probable release of a hazardous waste or hazardous constituent which is not from a solid waste management unit and is determined by the Commissioner to pose a current or potential threat to human health or the environment. Such areas of concern may require investigations and remedial action as required by this permit and Rule 1200-1-11-.07(8)(b)2(ii) in order to ensure adequate protection of human health and the environment.

3. “Contamination” refers to the presence of any hazardous constituent in a concentration which exceeds the naturally occurring concentration of that constituent in the immediate vicinity of the unit(s) (in areas not affected by the units(s)).

4. “Corrective action” for the purposes of this permit, may include all corrective measures necessary to protect human health and the environment from all releases of hazardous waste or hazardous constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in the unit, as required by Rule 1200-1-11-.06(6)(l). Corrective measures may address releases to air, soils, surface water or groundwater.

5. A “corrective action management unit” (CAMU) for the purposes of this permit, includes any area within a facility that is designated by the Commissioner under Rule 1200-1-11-.06(22), for the purpose of implementing corrective action requirements under Rule 1200-1-11-.06(6)(l). A corrective action management unit shall only be used for the management of remediation wastes pursuant to implementing such corrective action requirements at the facility.

6. “Corrective measures” for the purposes of this permit, include all corrective action necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents from any solid waste management unit at the facility, regardless of the time the waste was placed in the unit, as required under Rule 1200-1-11-.06(6)(l). Corrective measures may address releases to air, soils, surface water or groundwater.

7. “Extent of contamination” for the purposes of this permit, is defined as the horizontal and vertical area in which the concentrations of hazardous constituents in the environmental media being investigated are above detection limits or background concentrations indicative of the region, whichever is appropriate as determined by the Commissioner.

8. “Facility” for the purposes of this permit includes all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combination of them). For the purposes of implementing corrective action under Rule 1200-1-11-.06(6)(l), a facility includes

all contiguous property under the control of the owner or operator seeking a permit under the Tennessee Hazardous Waste Management Act.

9. "Hazardous constituent(s)" or "hazardous waste constituent(s)" for the purposes of this permit are those substances listed in Rule 1200-1-11-.02(5), Appendix VIII and in Rule 1200-1-11-.06(57), Appendix IX, including hazardous constituents released from any waste and hazardous constituents that are reaction by-products.

10. "Interim measures" for the purposes of this permit are actions necessary to minimize or prevent the further migration of contaminants and limit actual or potential human and environmental exposure to contaminants while long-term corrective action remedies are evaluated and, if necessary, implemented.

11. "Land disposal" for the purposes of this permit and Rule 1200-1-11-.10 means placement in or on the land, except for a "corrective action management unit," and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, underground mine or cave, or concrete vault or bunker intended for disposal purposes.

12. "Landfill" for the purposes of this permit includes any disposal facility or part of a facility where hazardous waste is placed in or on the land and which is not a pile, a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine, a cave, or a corrective action management unit.

13. "Point of compliance" refers to the vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated unit.

14. "Registered engineer" or "registered professional engineer" shall mean a person authorized to perform engineering in Tennessee pursuant to Tennessee Code Annotated, Title 62, Chapter 2.

15. "Release" for the purposes of this permit, includes any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste or hazardous constituents.

16. "Remediation waste" for the purposes of this permit includes all solid and hazardous wastes, and all media (including ground water, surface water, soils, and sediments) and debris, which contain listed hazardous waste or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements of Rule 1200-1-11-.06(6)(l). For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed for releases beyond the facility boundary.

17. "Solid waste" means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flow or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

18. A "solid waste management unit" (SWMU) for the purposes of this permit includes any unit which has been used for the treatment, storage, or disposal of solid waste at any time, irrespective of whether the unit is or ever was intended for the management of solid waste. Permitted or interim status hazardous waste management units are also solid waste management units. Solid waste management units include areas that have been contaminated by routine and systematic releases of hazardous waste or hazardous constituents, excluding one-time accidental spills that are immediately remediated and cannot be linked to solid waste management activities (e.g., product or process spills).

19. A "temporary unit" (TU) for the purposes of this permit includes any temporary tanks and/or container storage areas used solely for treatment or storage of hazardous remediation wastes during specific remediation activities. Designated by the Commissioner, such units must conform to specific standards, and may only be in operation for a period of time as specified in this permit.

20. A "unit" for the purposes of this permit includes, but is not limited to, any landfill, surface impoundment, waste pile, land treatment unit, incinerator, injection well, tank, container storage area, septic tank, drain field, wastewater treatment unit, elementary neutralization unit, transfer station, or recycling unit.

D. GENERAL DUTIES AND REQUIREMENTS

1. Duty to Comply: The permittee shall comply with all conditions of this permit, except that the permittee need not comply with the conditions of the permit to the extent and for the duration that such noncompliance is authorized in an emergency permit. Any permit noncompliance, except under the terms of an emergency permit, constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. Duty to Reapply: If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The permittee must submit a new application at least 180 days before the expiration date of the effective permit, unless permission for a later date has been granted by the Commissioner. (The Commissioner shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

3. Need to Halt or Reduce Activity Not a Defense: It shall not be a defense for the 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 significant 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 as specified in Rule 1200-1-11-.07(9)(c) except for the Corrective Action Schedule of Compliance (Attachment 12, Appendix 12-D) which shall be modified in accordance with subsection VI.I of this permit. 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. 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, terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Commissioner, upon request, copies of records required to be kept by this permit.

8. Inspection and Entry: The permittee shall allow the Commissioner, or any authorized representative, upon presentation of credentials and other documents as may be required by law to:

   (a) Enter, at reasonable times, upon the permittee's premises where a regulated unit(s) or activity is located or conducted, or where records must be kept under the conditions of this permit;

   (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

   (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit;

(d) 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

(e) Make photographs for the purpose of documenting items of compliance or noncompliance at waste management units or, where appropriate to protect legitimate proprietary interest, make such photographs for him or her.

"At reasonable times" shall mean, for the purposes of this permit condition, at least but not limited to, any time the facility is in operation.

9. Monitoring and Records

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, the certification required by subparagraph II.K.1(i), and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, certification, or application, or until corrective action is completed, whichever date is later. The permittee shall maintain records from all ground-water monitoring wells and associated ground-water surface elevations, for the active life of the facility, and, for disposal facilities, for the post-closure care period as well. This period may be extended by request of the Commissioner at any time.

(c) 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; and

(vi) The results of such analyses.

10. Signatory Requirement: All applications, reports, or information submitted to the Commissioner shall be signed and certified. All signatures and certifications shall satisfy the requirements of Rule 1200-1-11-.07(2)(a).

11. Reporting Requirements

(a) Planned changes: The permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility.

(b) Anticipated noncompliance: The permittee shall give advance notice to the Commissioner as soon as possible of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. For a new facility, the permittee may not commence treatment, storage, or disposal of hazardous waste; and for a facility being modified, the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility except as provided in Rule 1200-1-11-.07(9)(c)5, until:

(i) The permittee has submitted to the Commissioner by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and

(ii) (I) The Commissioner has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or

(II) Within 15 days of the date of submission of the letter in subpart I.D.11(b)(ii)(I) above, the permittee has not received notice from the Commissioner of his or her intent to inspect, prior inspection is waived and the permittee may commence treatment, storage, or disposal of hazardous waste.

(iii) It is recognized that minor deviations from exact design specifications may occur during construction. These must be noted in the engineer's statement accompanied with an evaluation of the impact of the deviation on facility performance. If the Commissioner determines that the deviations are indeed minor and will not adversely impact the permittee's ability to comply with the conditions of this permit, he may modify the permit accordingly, without following the procedures of Rules 1200-1-11-.07(7) and (9).

(c) Transfers: This permit is not transferable to any person except after notice to the Commissioner. The Commissioner may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act. (See Rule 1200-1-11-.07(9)(b); in some cases, modification or revocation and reissuance is mandatory.)

(d) Monitoring reports: Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(e) Compliance schedules: Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(f) Twenty-four hour reporting:

(i) The permittee shall report any noncompliance which may endanger health or the environment orally within 24 hours from the time the permittee becomes aware of the circumstances, including:

(I) Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.

(II) Any information of a release or discharge of hazardous waste, or of a fire or explosion from the hazardous waste management facility, which could threaten the environment or human health outside the facility.

(ii) The description of the occurrence and the cause shall include:

(I) Name, address, and telephone number of the owner or operator;

(II) Name, address, and telephone number of the facility;

(III) Date, time, and type of incident;

(IV) Name and quantity of material(s) involved;

(V) The extent of injuries, if any;

(VI) An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and

(VII) Estimated quantity and disposition of recovered material that resulted from the incident.

(iii) A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Commissioner

may waive the five day written notice requirement in favor of a written report within fifteen days.

(g) Manifest discrepancy report: If a significant discrepancy in a manifest is discovered, the permittee must attempt to reconcile the discrepancy. If not resolved within fifteen days, the permittee must submit a letter report, including a copy of the manifest, to the Commissioner. (See paragraph II.J.4.)

(h) Unmanifested waste report: Such report must be submitted to the Commissioner within 15 days of receipt of unmanifested waste. (See paragraph II.K.3.)

(i) Annual report: An annual report must be submitted covering facility activities during the previous calendar year. (See paragraph II.K.4.)

(j) Other noncompliance: The permittee shall report all instances of noncompliance not reported under subparagraphs I.D.11(d), (e), and (f) above, at the time monitoring reports are submitted. The reports shall contain the information listed in subparagraph I.D.11(f) above.

(k) Other information: 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. Continuation of Expiring Permit: When the permittee has made timely and sufficient application for a new permit, the existing permit does not expire until the application has been finally determined by the Commissioner and, in case the application is denied, or the terms of the new permit limited, until the last day for seeking review of the Commissioner's order or a later date fixed by order of the reviewing court.

13. Obligation for Corrective Action: The permittee is required to continue this permit for any period necessary to comply with the corrective action requirements of this permit. If corrective action is expected to continue beyond the expiration date of this permit, the permittee is required to meet the reapplication requirement under paragraph I.D.2.

E. CONFIDENTIAL INFORMATION

In accordance with Rule 1200-1-11-.01(7), the permittee may claim for confidential handling any proprietary information required to be submitted by this permit.

F. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The permittee shall maintain at the facility, until closure is completed and certified by an independent registered professional engineer, the following documents and amendments, revisions and modifications to these documents:

1. Waste analysis plan(s) required by this permit;

2. Personnel training documents and records required by this permit, except that training records on former employees are not required to be kept for more than three years from the date the employee last worked at the facility; (Personnel training records may accompany personnel transferred within the same company.)

3. Contingency plan required by this permit;

4. Closure plan(s) required by this permit;

5. Operating record(s) required by this permit; and

6. Inspection schedule(s) and records required by this permit, except that inspection records need only be kept for three years after the date of the inspection.

G. ANNUAL PERMIT MAINTENANCE FEE

The permittee shall submit to the Commissioner an annual permit maintenance fee as required by Rule 1200-1-11-.08.

H. REQUIRED NOTICES

1. If the permittee has arranged to receive hazardous waste from a foreign source, he must notify the Commissioner in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.

2. If the permittee receives hazardous waste from an off-site source (except where the permittee is also the generator), he must inform the generator in writing that he has the appropriate permit(s) for, and will accept, the waste the generator is shipping. The permittee must keep a copy of this written notice as part of the operating record.

3. Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the post-closure care period, the permittee must notify the new owner or operator in writing of the requirements of this permit and Rule 1200-1-11-.07.

   (Comment: A permittee's failure to notify the new owner or operator of the requirements of this permit condition in no way relieves the new owner or operator of his obligation to comply with all applicable requirements.)

I. ORDER OF PRECEDENCE

In the event of any inconsistency between the permit conditions and the material contained in any attachment to this permit, the permit conditions shall take precedence.

J. PERMIT STRUCTURE

This permit is organized, numbered, and referenced according to the following outline form:

I. Section

A. Subsection

1. Paragraph

(a) Subparagraph

(i) Part

(I) Subpart

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II. GENERAL FACILITY CONDITIONS

A. **HAZARDOUS WASTES TO BE MANAGED:** The hazardous wastes to be managed in the unit(s) authorized by this permit are identified in Attachment 1. The permittee shall not manage any other hazardous wastes identified by Rule 1200-1-11-.02 in the unit(s) authorized by this permit, until this permit has been appropriately modified.

B. **CONSTRUCTION AND MAINTENANCE OF THE FACILITY**

1. The permittee shall construct and maintain the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment. Specifically the permittee shall construct the facility as described in the detailed construction drawings and specifications approved by the Division Director pursuant to paragraph II.B.3 below. The facility to be constructed is described in the preliminary design plans and process flow schematics contained in Attachments 9, 10, and 11, but the exact dimensions, equipment locations, and other relatively minor design details may be revised during final design as necessary to ensure safe and efficient facility operation.

2. If a tank or miscellaneous treatment system is to be included, at least thirty (30) days prior to initiation of any phase of construction, the permittee must provide to the Division Director:

   (a) The written assessment required by Rules 1200-1-11-.06(10)(c)1 and 1200-1-11-.06(27)(b), attesting that the tank or miscellaneous treatment system(s) has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste;

   (b) A written description of how the tank or miscellaneous treatment system will be tested for tightness in accordance with Rules 1200-1-11-.06(10)(c)4 and 1200-1-11-.06(27)(b);

   (c) Calculations demonstrating that the secondary containment system(s) provides sufficient volume in accordance with Rules 1200-1-11-.06(10)(d)5 and 1200-11-.06(27)(b);

   (d) A detailed written description of the controls and practices to be used to prevent spills and overflows from tanks, miscellaneous treatment systems, or containment systems in accordance with Rules 1200-1-11-.06(10)(e)2 and 1200-1-11-.06(27)(b);

3. The permittee may not commence construction of any hazardous waste management unit until the Division Director has reviewed and approved (in writing) the information submitted pursuant to paragraph II.B.2 above and subsection VI.A of this permit.

4. The permittee may not commence storage or treatment of hazardous waste in any newly constructed or modified hazardous waste management unit until;

   (a) The permittee has submitted to the Commissioner by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed in compliance with the permit; and

   (b) (i) The Commissioner has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or

   (ii) After 15 days of the date of submission of the letter mentioned above, the permittee has not received notice from the Commissioner of his or her intent to inspect, prior inspection is waived and the permittee may commence management of hazardous waste.

5. It is recognized that minor deviations from exact design specifications may occur during construction. These must be noted in the engineer's statement accompanied with an evaluation of the impact of the deviation on facility performance. The Commissioner may modify the permit accordingly, without following the procedures of Rule 1200-1-11-.07(7), if he determines that the deviations are indeed minor and will not adversely impact the permittee's ability to comply with regulatory requirements.

6. Within 30 days after submission of the construction certification required by subparagraph II.B.4(a) above, the permittee must submit to the Division Director at least two (2) sets of "as-built" construction drawings and specifications or corrections (i.e., text and/or modified drawings) to the detailed drawings and specifications previously submitted pursuant to paragraph II.B.1 above.

C. SAMPLING, ANALYSIS, AND MONITORING

1. General Waste Analysis: Before the permittee stores and treats any hazardous waste, he shall obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum, this analysis shall contain all the information which must be known to manage the waste in accordance with this permit and Rule 1200-1-11-.10.

2. Waste Analysis Plan

   (a) The permittee shall follow the procedures described in the Waste Analysis Plan found in Attachment 2. However, use of the exact forms if included in Attachment 2 is not mandatory. The permittee may change

the format and content of those forms as deemed necessary to provide the information he needs to properly manage the facility. Any deletion of information from such forms, however, must be approved in advance in writing by the Commissioner as a modification to this permit.

(b) The permittee shall ensure that the waste analysis plan, required by subparagraph II.C.2(a) above, at a minimum specifies:

(i) The parameters for which each hazardous waste will be analyzed and the rationale for the selection of these parameters;

(ii) The test methods which will be used to test for these parameters;

(iii) The sampling method which will be used to obtain a representative sample of the waste to be analyzed;

(iv) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date;

(v) For off-site facilities, the waste analysis the hazardous waste generators have agreed to supply; and

(vi) Where applicable, the methods that will be used to meet the additional waste analysis requirements for specific waste management methods as specified in paragraph II.G.3, and subsections II.O, II.P, II.Q, and II.R.

(c) For off-site facilities, the permittee shall also ensure that the waste analysis plan, required by subparagraph II.C.2(a) above, at a minimum, specifies the procedures to be used to inspect and, if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan shall describe:

(i) The procedures which will be used to determine the identity of each movement of waste managed at the facility; and

(ii) The sampling method which will be used to obtain a representative sample of the waste to be identified, if the determination method includes sampling.

3. Frequency of Analysis: The analysis shall be repeated as necessary to ensure that it is accurate and up-to-date. At a minimum, the analysis shall be repeated no less frequently than the frequency specified in the Waste Analysis Plan (Attachment 2) and shall be repeated:

(a) When the permittee is notified or has reason to believe that the process or operation generating the hazardous waste has changed; and

(b) For off-site facilities, when the results of the inspection required in subparagraph II.C.4(a) below indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

4. Additional Analysis

(a) The permittee shall inspect and, if necessary, analyze each hazardous waste shipment received from off-site at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper. The procedure which shall be followed is described in the Waste Analysis Plan, Attachment 2.

(b) The permittee shall inspect and, if necessary, analyze all standing liquid in the secondary containment system(s) prior to its release from the facility. Sampling and analysis shall be performed as necessary to determine whether the liquid is a hazardous waste and how to properly manage it.

5. Sampling and Monitoring: Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Rule 1200-1-11-.02(5), Appendix I, or an equivalent method. Laboratory methods must be those specified in the most recent edition of Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW-846 or Methods for Chemical Analysis of Water and Wastes (EPA-600/4-79-020), or the methods as specified in the attached Waste Analysis Plan, Attachment 2.

D. SECURITY

1. The permittee shall prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of the facility. The permittee shall maintain security for the facility in the manner described in Attachment 3.

2. The permittee shall post a sign with the legend, "Danger - Unauthorized Personnel Keep Out", at each entrance to any active portion of the facility, and at other locations, in sufficient numbers to be seen from any approach to the active portion. The legend must be written in English and in any other language predominant in the area surrounding the facility, and must be legible from a distance of at least 25 feet.

E. GENERAL INSPECTION REQUIREMENTS

1. Inspection Schedule: The permittee shall inspect the facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to (1) release of hazardous constituents to the environment or (2) a threat to human health. The permittee shall inspect the items listed in the inspection

schedule in Attachment 4. The inspection type and frequency shall be in accordance with the inspection schedule in Attachment 4.

2. Remedies: The permittee shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals, on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action shall be taken immediately.

3. Inspection Records: The permittee shall record inspections in an inspection log or summary. The permittee shall keep these records for at least three years from the date of inspection. At a minimum, these records shall include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions. The permittee may change the format and content of the inspection forms, contained in Attachment 4, as deemed necessary to provide the information he needs to properly manage the facility. Any deletion of information from such forms, however, must be approved in advance, in writing, by the Commissioner as a modification to this permit.

F. PERSONNEL TRAINING

The permittee shall ensure that facility personnel successfully complete a program of classroom instruction and/or on the job training that teaches them to perform their duties in a way that ensures the permittee's compliance with this permit. The permittee shall ensure that the training program is directed by a person(s) trained in hazardous waste management procedures and shall include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed.

1. Training Program: The training program shall at least conform to the personnel training outline included in Attachment 5. The permittee shall ensure that the training program is, at a minimum, designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including where applicable:

   (a) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;

   (b) Key parameters for automatic waste feed cut-off systems;

   (c) Communications or alarm systems;

   (d) Response to fires or explosions;

   (e) Response to ground-water contamination incidents; and

(f) Shutdown of operations.

2. Timing: Facility personnel shall successfully complete the program within six months after the date of their employment or assignment to the facility, or to a new position at the facility, whichever is later. Untrained personnel shall not work in unsupervised positions until they have completed the training requirements of this permit.

3. Annual Review: Facility personnel shall take part in an annual review of the initial training required by this permit.

4. Training Documents and Records: The permittee shall maintain the following documents and records at the facility:

   (a) The job title for each position at the facility related to hazardous waste management, and the name of the employee(s) filling each job;

   (b) A written description for each position listed in subparagraph II.F.4(a) above. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications, and duties of employees assigned to each position;

   (c) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under subparagraph II.F.4(a) above; and

   (d) Records that document that the training or job experience required under paragraphs II.F.1, 2 and 3 above has been given to, and completed by, facility personnel.

5. Retention of Training Records: Training records on current personnel shall be kept until closure of the facility; training records on former employees shall be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

G. GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

1. The permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste shall be separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat producing chemical reactions), and radiant heat. While ignitable or reactive waste is handled, the permittee shall confine smoking and open flames to specially designated locations. "No smoking" signs shall be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

2. Where specifically required by this permit, the permittee that treats, stores or disposes of ignitable or reactive waste, or mixes incompatible waste or incompatible wastes and other materials, shall take precautions to prevent reactions which:

   (a) Generate extreme heat or pressure, fire or explosions, or violent reactions;

   (b) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;

   (c) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

   (d) Damage the structural integrity of the device or facility; or

   (e) Through other like means threaten human health or the environment.

3. When required to comply with paragraphs II.G.1 or 2 above, the permittee shall document that compliance. This documentation may be based on references to published scientific or engineering literature, data from trial tests (e.g., bench scale or pilot scale tests), waste analyses, or the results of the treatment of similar waste by similar treatment processes and under similar operating conditions.

H. PREPAREDNESS AND PREVENTION

1. Operation/Maintenance of the Facility: The facility shall be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned release of hazardous waste or hazardous constituents to air, soil, or surface water which could threaten human health or the environment.

2. Required Equipment: At a minimum, the permittee shall equip the facility with the equipment listed in the contingency plan, Attachment 6, and with the following:

   (a) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;

   (b) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams;

   (c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and

(d) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

3. Testing and Maintenance of Equipment: The permittee shall test and maintain all facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, as necessary to assure its proper operation in time of emergency.

4. Access to Communications or Alarm Systems: The permittee shall ensure that:

(a) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation shall have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee.

(b) If there is ever just one employee on the premises while the facility is operating, he shall have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance.

5. Required Aisle Space: The permittee shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the facility operation in an emergency. Aisle space shall also be provided between the containers and the limits (e.g., walls and containment curbs) of the container storage areas.

6. Arrangements with Local Authorities

(a) The permittee shall attempt to make the following arrangements, as appropriate for the type of waste authorized to be managed by this permit and the potential need for the services of these organizations:

(i) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;

(ii) Where more than one police or fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;

(iii) Arrangements with State emergency response teams, emergency response contractors, and equipment suppliers; and

(iv) Arrangements to familiarize local hospitals with the properties of hazardous wastes handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(b) If State or local authorities decline to enter into such arrangements, the permittee shall document this refusal in the operating record.

7. Unloading Operations: Prevention of hazards at the container unloading area shall be accomplished by several means.

(a) Hazardous waste received at the facility shall be routed, within 24-hours, to the container unloading area, where the waste is to be unloaded by trained operations personnel.

(b) Containers of hazardous waste shall be checked for proper closure, labeling, and proper placement prior to unloading.

(c) Operational equipment (fork-lift trucks, straps, etc.) shall be properly maintained to prevent the occurrence of a spill or release of hazardous waste due to equipment malfunctions.

(d) The unloading area shall be checked prior to use for potential hazards due to aisle space obstructions, for improper container management practices, and for cleanliness.

8. Personnel Protection:

(a) A summary of the toxicity/health hazard, fire and explosion hazard potential, radiation exposure potential, protective equipment recommendations and first-aid procedures to be followed for the various waste materials shall be prepared by the permittee and kept on file at the facility.

(b) The information required by subparagraph II.H.8(a) above, shall be made available to facility personnel for determinations of the appropriate personnel protective equipment to be worn when handling the hazardous waste.

I. CONTINGENCY PLAN: The permittee shall have a contingency plan for the facility.

1. Purpose of the Contingency Plan: The contingency plan, contained in this permit as Attachment 6, shall, at all times, be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

2. Implementation of Plan(s): The permittee shall immediately carry out the provisions of the Contingency Plan, Attachment 6, whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which threatens or could threaten human health or the environment.

3. Content of the Contingency Plan

   (a) The contingency plan, Attachment 6, shall accurately describe the actions facility personnel must take to comply with paragraphs II.I.1 and 2 above and paragraph II.I.7 below in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

   (b) The contingency plan, Attachment 6, shall accurately describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services, pursuant to paragraph II.H.6.

   (c) The contingency plan, Attachment 6, shall list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see paragraph II.I.6), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates. For new facilities, this information must be supplied to the Commissioner at the time of certification.

   (d) The contingency plan, Attachment 6, shall include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the contingency plan, Attachment 6, shall include the location and a physical description of each item on the list, and a brief outline of its capabilities.

   (e) The contingency plan, Attachment 6, shall include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This evacuation plan shall describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires).

4. Copies of Plan: The permittee shall maintain at the facility a copy of the contingency plan, Attachment 6, and its subsequent revisions. In addition, the contingency plan and all revisions to the plan shall be submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.

5. Amendments to Plan(s): The permittee shall review and immediately amend the contingency plan(s) whenever one or more of the following occur:

   (a) This permit is revised;

   (b) The contingency plan fails in an emergency;

   (c) The facility changes - in its design, construction, operation, maintenance, or other circumstances - in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous constituents, or changes the response necessary in an emergency;

   (d) The list of emergency coordinators changes; or

   (e) The list of emergency equipment changes.

6. Emergency Coordinator: There shall be, at all times, at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste(s) handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

7. Emergency Procedures

   (a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:

      (i) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

      (ii) Notify appropriate State or local agencies with designated response roles if their help is needed.

   (b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials. He may do this by observation or review of facility records or manifests, and, if necessary, by chemical analysis.

   (c) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any

hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions).

(d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he must report his findings as follows:

(i) If his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and

(ii) He must immediately notify the Tennessee Emergency Management Agency (using their 24-hour toll free number 800/262-3300) and/or the National Response Center (using their 24-hour toll free number 800/424-8802). The report must include:

(I) Name and telephone number of reporter;

(II) Name and address of facility;

(III) Time and type of incident (e.g., release, fire);

(IV) Name and quantity of material(s) involved, to the extent known;

(V) The extent of injuries, if any; and

(VI) The possible hazards to human health, or the environment, outside the facility.

(e) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.

(f) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(g) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

(h) The emergency coordinator must ensure that, in the affected area(s) of the facility:

(i) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

(ii) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(i) The permittee shall notify the Commissioner, and appropriate State and local authorities, that the facility is in compliance with subparagraph II.I.7(h) above before operations are resumed in the affected area(s) of the facility.

(j) The permittee shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he shall submit a written report on the incident to the Commissioner. The report must include:

(i) Name, address, and telephone number of the owner or operator;

(ii) Name, address, and telephone number of the facility;

(iii) Date, time, and type of incident (e.g., fire, explosion);

(iv) Name and quantity of material(s) involved;

(v) The extent of injuries, if any;

(vi) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

(vii) Estimated quantity and disposition of recovered material that resulted from the incident.

J. MANIFEST SYSTEM

1. Use of the Manifest System: If the facility receives hazardous waste accompanied by a manifest, the permittee or his agent shall:

(a) Sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received;

(b) Note any significant discrepancies in the manifest, as defined in subparagraph II.J.4(a) below, on each copy of the manifest;

(Note: The Department does not intend that the permittee whose procedures under subparagraph II.C.2(c) include waste analysis to perform that analysis before signing the manifest and giving it to the transporter. Subparagraph II.J.4(b) below, however, requires reporting an unreconciled discrepancy discovered during later analysis.)

(c) Immediately give the transporter at least one copy of the signed manifest;

(d) Within 30 days after the delivery, send a copy of the manifest to the generator; and

(e) Retain at the facility a copy of each manifest for at least three years from the date of delivery.

2. Bulk Shipments: If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste which is accompanied by a shipping paper containing all the information required on the manifest (excluding the installation identification numbers, generator's certification, and signatures), the permittee, or his agent, shall:

(a) Sign and date each copy of the manifest or shipping paper (if the manifest has not been received) to certify that the hazardous waste covered by the manifest or shipping paper was received;

(b) Note any significant discrepancies (as defined in subparagraph II.J.4(a) below, on each copy of the manifest or shipping paper;

(Note: The Department does not intend that the permittee whose procedures under subparagraph II.C.2(c) include waste analysis to perform that analysis before signing the shipping paper and giving it to the transporter. Subparagraph II.J.4(b) below, however, requires reporting an unreconciled discrepancy discovered during later analysis.)

(c) Immediately give the rail or water (bulk shipment) transporter at least one copy of the manifest or shipping paper (if the manifest has not been received);

(d) Within 30 days after the delivery, send a copy of the signed and dated manifest to the generator; however, if the manifest has not been received within 30 days after delivery, the permittee, or his agent, shall send a copy of the shipping paper signed and dated to the generator; and

(e) Retain at the facility a copy of the manifest and shipping paper (if signed in lieu of the manifest at the time of delivery) for at least three years from the date of delivery.

3. Initiating a Shipment: Whenever a shipment of hazardous waste is initiated from a facility, the permittee shall comply with the manifesting requirements of Rule 1200-1-11-.03, except for Rule 1200-1-11-.03(4)(e), applicable to the on-site accumulation of hazardous waste by generators. The provisions of Rule 1200-1-11-.03(4)(e) only apply to owners or operators who are shipping hazardous waste which they generated at that facility.

4. Manifest Discrepancies

(a) Manifest discrepancies are differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity or type of hazardous waste the facility actually receives.

(i) Significant discrepancies in quantity are:

(I) For bulk waste, variations greater than 10 per cent in weight; and

(II) For batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload.

(ii) Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.

(b) Upon discovery of a significant discrepancy, the permittee must attempt to reconcile the discrepancy with the waste generator or transporter (e.g., with telephone conversations). If the discrepancy is not resolved within 15 days after receiving the waste, the permittee shall immediately submit to the Commissioner a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

5. Handling Manifested Shipments of Waste: It shall be the responsibility of the permittee to handle as a hazardous waste any material generated and shipped to him by another person which is identified on the manifest or shipping paper as a hazardous waste. The permittee shall not make the determination that such waste is nonhazardous, regardless of the results of his analysis, since that is the responsibility of the generator. If a manifest discrepancy occurs such that the permittee believes that the material shipped is indeed not a hazardous waste, then the permittee may not manage that material other than as a hazardous waste unless and until he obtains written certification from the generator that the material is not a hazardous waste. Such a written certification must be kept with the manifest as part of the operating record as required by subparagraph II.K.1(n).

6. Accepting Hazardous Waste From Transporters: The permittee shall not accept any hazardous waste from a transporter unless that transporter has obtained a valid hazardous waste transporter's permit from the Department. (Note: In accordance with Rule 1200-1-11-.04(2)(d)3, a motor vehicle transporter shall have a copy of his permit with him and available for inspection whenever he picks up, transports, or delivers a shipment of hazardous waste in Tennessee; and shall provide the generator/shipper with the opportunity to inspect that permit if so requested.)

K. RECORDKEEPING AND REPORTING: The permittee shall keep a written operating record at the facility.

1. Operating Record: The following information shall be recorded by the permittee, as it becomes available, and maintained in the operating record until closure of the facility:

   (a) A description and the quantity of each hazardous waste received and the method(s) and date(s) of its treatment, storage, or disposal at the facility as required by Rule 1200-1-11-.06(57), Appendix I;

   (b) The location of each hazardous waste within the facility and the quantity at each location. This information shall include cross-references to specific manifest document numbers if the waste was accompanied by a manifest;

   (c) Records and results of waste analysis performed as specified in subsections II.C, II.G, II.O, II.P, II.Q, and II.R;

   (d) Summary reports and details of all incidents that require implementing the contingency plan as required by subparagraph II.I.7(j);

   (e) Records and results of inspections required by paragraph II.E.3 (except these data need to be kept only three years);

   (f) Monitoring, testing or analytical data, and corrective action where required by Section VI and subsections II.P, II.Q, and II.R;

   (g) For off-site facilities, notices to generators as required by paragraph I.H.2;

   (h) All closure cost estimates as required by subparagraphs II.N.2 and 3;

   (i) A certification by the permittee no less often than annually, that the permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the permittee to be economically practicable; and the proposed method of treatment, storage or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment.

   (j) For an off-site treatment facility, a copy of the notice, and the certification and demonstration, if applicable, required by the generator or the owner or operator under Rule 1200-1-11-.10(1)(g) or (h);

   (k) For an on-site treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator under Rule 1200-1-11-.10(1)(g) or (h);

   (l) For an off-site storage facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator under Rule 1200-1-11-.10(1)(g) or (h);

(m) For an on-site storage facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator under Rule 1200-1-11-.10(1)(g) or (h); and

(n) For off-site facilities, the written certification required by paragraph II.J.5.

2. Availability, Retention, and Disposition of Records

(a) All records, including plans, required by this permit shall be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of the Department who is duly designated by the Commissioner.

(b) The retention period for all records required under this permit is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the Commissioner.

3. Unmanifested Waste Report: If a facility accepts for treatment, storage, or disposal any hazardous waste from an off-site source without an accompanying manifest, or without an accompanying shipping paper (bulk shipments), and if the waste is not excluded from the manifest requirement by Rule 1200-1-11-.02(1)(e) (conditionally exempt small quantity generators), then the permittee shall prepare and submit a single copy of a report to the Commissioner within fifteen days after receiving the waste. Such report shall be designated "Unmanifested Waste Report" and include the following information:

(a) The installation identification number, name, and address of the facility;

(b) The date the facility received the waste;

(c) The installation identification number, name, and address of the generator and the transporter, if available;

(d) A description and the quantity of each unmanifested hazardous waste the facility received;

(e) The method of treatment, storage, or disposal for each hazardous waste;

(f) The certification signed by the permittee or his authorized representative; and

(g) A brief explanation of why the waste was unmanifested, if known.

4. Annual Report

(a) The permittee shall prepare and submit a single copy of an annual report to the Commissioner by March 1 of each year.

(b) Annual reports shall be submitted on forms provided by the Department and in accordance with the instructions accompanying the form.

(c) The annual report shall cover facility activities during the previous calendar year and shall include the following information:

(i) The installation identification number, name, and address of the facility;

(ii) The calendar year covered by the report;

(iii) For off-site facilities, the installation identification number of each hazardous waste generator from which the facility received a hazardous waste during the year; for imported shipments, the report shall give the name and address of the foreign generator;

(iv) A description and the quantity of each hazardous waste the facility received during the year. For off-site facilities, this information shall be listed by installation identification number of each generator;

(v) The method of treatment, storage or disposal for each hazardous waste;

(vi) The most recent closure cost estimate as required by paragraphs II.N.2 and 3;

(vii) For generators who treat, store, or dispose of hazardous waste on-site, a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated;

(viii) For generators who treat, store, or dispose of hazardous waste on-site, a description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for the years prior to 1984; and

(ix) The certification signed by the permittee or his authorized representative.

5. Additional Reports: In addition to submitting unmanifested waste reports and the annual report required by paragraphs II.K.3 and 4, the permittee shall also report to the Commissioner:

(a) Release, fires, and explosions as specified by subparagraph II.I.7(j) and in the Contingency Plan, Attachment 6;

(b) Facility closures as required by paragraph II.L.7; and

(c) As otherwise required by subsections II.P, II.Q, and II.R.

L. CLOSURE

1. Performance Standard:

   (a) The permittee shall close the facility in a manner that:

      (i) Minimizes the need for further maintenance;

      (ii) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere.

   (b) The permittee shall close the facility in accordance with the Closure Plan, Attachment 7.

2. Amendment to Closure Plan(s): The permittee shall submit a written notification of or request for a permit modification to authorize a change in operating plans, facility design, or the approved closure plan in accordance with the procedures in Rule 1200-1-11-.07(9). The written notification or request shall include a copy of the amended closure plan for review or approval by the Commissioner.

   (a) The permittee may submit a written notification or request to the Commissioner for a permit modification to amend the closure plan(s) at any time prior to the notification of partial or final closure of the facility.

   (b) The permittee shall submit a written notification of or request for a permit modification to authorize a change in the approved closure plan whenever:

      (i) Changes in operating plans or facility design affect the closure plan, or

      (ii) There is a change in the expected year of closure, if applicable, or

      (iii) In conducted partial or final closure activities, unexpected events require a modification of the approved closure plan.

   (c) The permittee shall submit a written request for a permit modification including a copy of the amended closure plan for approval at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the partial or final closure period, the permittee shall request a permit modification no later than 30 days after the unexpected event. The Commissioner will approve, disapprove, or modify this amended plan in accordance with the procedures in Rule 1200-1-11-.07(9). The modified closure plan, when approved, will become a condition of this permit.

(d) The Commissioner may request modification to the plan under the conditions described in subparagraph II.L.2(b). The permittee shall submit the modified plan within 60 days of the Commissioner's request, or within 30 days if the change in facility conditions occurs during partial or final closure. Any modifications requested by the Commissioner will be approved in accordance with the procedures in Rule 1200-1-11-.07(9).

3. Notification of Partial and Final Closure

(a) The permittee shall notify the Commissioner in writing at least 45 days prior to the date on which he expects to begin final closure of the facility.

(b) The date when he "expects to begin closure" must be no later than 30 days after the date on which any hazardous waste management unit receives the known final volume of hazardous waste or, if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous waste, no later than one year after the date on which the unit received the most recent volume of hazardous waste. If the permittee can demonstrate to the Commissioner that the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes and he has taken all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the Commissioner may approve an extension to this one-year limit.

(c) Notification of closure is not required, if the permit is terminated or the facility is otherwise ordered, by judicial decree on final order under the Act, to cease receiving hazardous waste or to close. However, the permittee shall close the facility in accordance with the deadlines established in paragraph II.L.5 below.

4. Removal of Wastes and Decontamination or Dismantling of Equipment: Nothing in this subsection (II.L) of the permit shall preclude the permittee from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved partial or final closure plan at any time before or after notification of partial or final closure.

5. Time Allowed For Closure

(a) Within 90 days after receiving the final volume of hazardous waste at a hazardous waste management unit or facility, the permittee shall treat, remove from the unit or facility, or dispose of on-site, all hazardous waste in accordance with the approved closure plan, Attachment 7. The Commissioner may approve a longer period if the permittee complies with all applicable requirements for requesting a modification to the permit and demonstrates that:

(i) (I) The activities required to comply with subparagraph II.L.5(a) above will, of necessity, take longer than 90 days to complete; or

(II) (A) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes;

(B) There is a reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or the facility within one year; and

(C) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(ii) He has taken and will continue to take all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements.

(b) The permittee shall complete partial and final closure activities in accordance with the approved closure plan, Attachment 7, and within 365 days after receiving the final volume of hazardous wastes at the hazardous waste management unit or facility. The Commissioner may approve an extension to the closure period if the permittee complies with all applicable requirements for requesting a modification to the permit and demonstrates that:

(i) (I) The partial or final closure activities will, of necessity, take longer than 365 days to complete; or

(II) (A) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes;

(B) There is a reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or the facility within one year; and

(C) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(ii) He has taken and will continue to take all steps to prevent threats to human health and the environment, from the unclosed but not operating hazardous waste management unit or facility, including compliance with all applicable permit requirements.

(c) The demonstrations referred to in subparagraphs II.L.5(a) and (b) above shall be made as follows:

(i) The demonstration in subparagraph II.L.5(a) above shall be made at least 30 days prior to the expiration of the 90-day period in subparagraph II.L.5(a); and

(ii) The demonstration in subparagraph II.L.5(b) above shall be made at least 30 days prior to the expiration of the 365-day period in subparagraph II.L.5(b).

6. Disposal or Decontamination of Equipment, Structures, and Soils: During the partial and final closure periods, all contaminated equipment, structures and soils shall be properly disposed of or decontaminated, unless otherwise specified in the approved closure plan, Attachment 7. By removing any hazardous waste or hazardous constituents during partial or final closure, the permittee may become a generator of hazardous waste and, if so, must handle that hazardous waste in accordance with all applicable requirements of Rule 1200-1-11-.03.

7. Certification of Closure: Within 60 days of completion of final closure, the permittee shall submit to the Commissioner, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan (Attachment 7). The certification shall be signed by the permittee and by an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification shall be furnished to the Commissioner upon request until he releases the permittee from the financial assurance requirements for closure as required by paragraphs II.N.6 through 10.

M. CO-MANAGEMENT OF OTHER MATERIALS

1. The permittee shall not treat, store, or dispose of other wastes or other materials along with hazardous waste in any hazardous waste management unit or facility covered by this permit unless:

(a) The other waste or other material is labeled, marked, or otherwise clearly identifiable as to what it is;

(b) The permittee is able to demonstrate that the other waste or other material is not a hazardous waste; and

(c) The other waste or other material is managed in a manner that does not adversely impact compliance with the conditions of this permit.

N. FINANCIAL REQUIREMENTS

1. Exemptions: States and the Federal government are exempt from the requirements of this subsection (II.N) of the permit.

2. Cost Estimate for Closure: The permittee shall have a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements of subsection II.L.

(a) The estimate shall equal the cost of final closure at the point in the facility's active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan, Attachment 7.

(b) The closure cost estimate shall be based on the costs to the permittee of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary of the permittee.

(c) The closure cost estimate shall not incorporate any salvage value that may be realized with the sale of hazardous waste, facility structures or equipment, land, or other assets associated with the facility at the time of partial or final closure.

(d) The permittee shall not incorporate a zero cost for hazardous wastes that might have economic value.

3. Closure Cost Adjustments

(a) During the active life of the facility, the permittee shall adjust the closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with paragraph II.N.6. If the permittee is using the financial test or corporate guarantee, the closure cost estimate shall be updated for inflation within 30 days after the close of the firm's fiscal year and before submission of updated information to the Division Director as specified at Rule 1200-1-11-.06(8)(g)8(v). The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business, as specified in parts II.N.3(a)(i) and (ii) below. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.

(i) The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate.

(ii) Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.

(b) During the active life of the facility, the permittee shall revise the closure cost estimate no later than 30 days after the Commissioner has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure. The revised closure cost estimate shall be adjusted for inflation as specified in subparagraph II.N.3(a) above.

4. Maintenance of the Closure Cost Estimate: The permittee shall keep the following at the facility during the operating life of the facility: the latest closure cost estimate prepared in accordance with paragraph II.N.2 and subparagraph

II.N.3(b), and, when this estimate has been adjusted in accordance with subparagraph II.N.3(a), the latest adjusted closure cost estimate. Such cost estimates must be itemized and address all closure activities.

5. Submission of the Revised Closure Cost Estimate: Within 30 days of the date the closure cost estimate is revised, the permittee shall submit the latest closure cost estimate to the Commissioner.

6. Financial Assurance for Closure: The permittee shall file and maintain with the Division Director financial assurance for closure of the facility in accordance with the requirements of Rule 1200-1-11-.06(8).

   (a) The permittee shall choose from the financial assurance mechanisms as specified in Rule 1200-1-11-.06(8)(g).

   (b) The permittee shall file and maintain financial assurance in an amount at least equal to the current closure cost estimate.

      (i) Whenever the closure cost estimate increases to an amount greater than the amount of financial assurance currently filed with the Division Director, the permittee shall, within 60 days after the increase, file additional financial assurance at least equal to this increase.

      (ii) Whenever the current closure cost estimate decreases, and upon the written request of the permittee, the Division Director shall, provided he or she validates the decrease, reduce the amount of financial assurance required for the facility to the amount of the current closure cost estimate. Upon such occurrence, the Division Director shall, as appropriate considering the financial assurance mechanism(s) on file, either cause to be released to the permittee cash or collateral equal to this reduction or allow the permittee to substitute for the mechanism(s) on file a new mechanism(s) in the reduced amount.

   (c) For new facilities, financial assurance shall be effective before the date on which hazardous waste is first received for treatment, storage, or disposal.

   (d) The financial assurance shall be maintained until the Commissioner releases the permittee from the requirements of this paragraph (II.N.6), as specified in this subparagraph (II.N.6(d)), or until the Commissioner orders forfeiture of the financial assurance as provided in subparagraph II.N.6(e) below.

      (i) Within 60 days after receiving certifications from the permittee and an independent registered professional engineer that final closure has been accomplished in accordance with the approved closure plan, Attachment 7, the Division Director will notify the permittee in writing that he is no longer required by this paragraph

(II.N.6) to maintain financial assurance for closure of the particular facility, unless the Commissioner has reason to believe that final closure has not been in accordance with the approved closure plan, Attachment 7. At the time of such notification, the Division Director shall also cause to be released to the permittee (or issuing institution, if appropriate) the financial assurance filed to provide for such closure.

(ii) Financial assurance will normally be released in the form(s) it was submitted. However, where such release involves an amount equal to only a portion of the funds assured by a financial assurance mechanism, the Commissioner shall, as appropriate considering the type of mechanism involved, either cause to be released to the permittee cash or collateral equal to that amount or allow the permittee to substitute for the mechanism on file a new mechanism(s) reduced by that amount.

(e) The Commissioner may order that any financial assurance filed by the permittee pursuant to this paragraph (II.N.6) be forfeited to the State if the Commissioner determines that the permittee has failed to perform final closure in accordance with the approved closure plan, Attachment 7, when required to do so. Any such forfeiture action shall follow the procedures provided in paragraph II.N.8 below.

7. Alternate Financial Assurance: In meeting the requirements of paragraph II.N.6 above, the permittee may substitute alternate financial assurance meeting the requirements of paragraph II.N.6 above for the financial assurance already filed with the Division Director. However, the existing financial assurance shall not be released by the Division Director until the substitute financial assurance has been received and approved by him or her.

8. Procedures for Forfeiture of Financial Assurance

(a) Upon his or her determination that the permittee has failed to perform final closure in accordance with the approved closure plan when required to do so, the Division Director shall cause a notice of non-compliance to be served upon the permittee. Such notice shall be hand delivered or forwarded by certified mail. The notice of non-compliance shall specify in what respects the permittee has failed to perform as required, and shall establish a schedule of compliance leading to compliance with the plan and other permit requirements as soon as possible.

(b) If the Division Director determines that the permittee has failed to perform as specified in the notice of non-compliance, or as specified in any subsequent compliance agreement which may have been reached by the permittee and the Division Director, the Division Director shall cause a notice of show cause meeting to be served upon the permittee. Such notice shall be signed by the Division Director and either hand-delivered or forwarded by certified mail to the permittee. The notice of show cause meeting shall establish the date, time, and location of a meeting

scheduled to provide the permittee with the opportunity to show cause why the Division Director should not pursue forfeiture of the financial assurance filed to guarantee such performance.

(c) If no mutual compliance agreement is reached at the show cause meeting, or upon the Division Director's determination that the permittee has failed to perform as specified in such agreement that was reached, the Division Director shall request the Commissioner to order forfeiture of the financial assurance filed to guarantee such performance.

(d) The Commissioner shall order forfeiture of the financial assurance upon his or her validation of the Division Director's determinations and upon his or her determination that the procedures of subparagraphs II.N.8(a), (b) and (c) above have been followed. The Commissioner may however, at his or her discretion, provide opportunity for the permittee to be heard before issuing such order. Upon issuance, a copy of the order shall be hand delivered or forwarded by certified mail to the permittee. Any such order issued by the Commissioner shall become effective 30 days after receipt by the permittee unless it is appealed to the Board as provided in Section 68-212-113 of the Act.

(e) If necessary, upon the effective date of the order of forfeiture, the Commissioner shall give notice to the State Attorney General who shall collect the forfeiture.

(f) All forfeited funds shall be deposited in a special account within the Tennessee Environmental Protection Fund for use by the Commissioner as set forth in T.C.A. Sections 68-212-108(c)(6) of the Act and 68-203-101 et seq.

9. Liability Requirements: The permittee shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities, in accordance with the requirements of Rule 1200-1-11-.06(8)(n).

10. Incapacity of the Permittee, Guarantors, or Financial Institutions

(a) The permittee shall notify the Division Director by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the permittee (owner or operator) as debtor, within 10 days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in Rule 1200-1-11-.06(8)(g)8, shall make such a notification if he is named as debtor, as required under the terms of the corporate guarantee (Rule 1200-1-11-.06(8)(p)8).

(b) The permittee who fulfills the requirements of paragraphs II.N.6 or 9 above by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or

liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The permittee shall establish other financial assurance or liability coverage within 60 days after such an event.

O. LAND DISPOSAL RESTRICTIONS

Tennessee Rule 1200-1-11-.10 identifies hazardous wastes that are prohibited from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be placed in a land treatment, storage or disposal unit. The permittee shall comply with all applicable requirements of Rule 1200-1-11-.10. Where the permittee has applied for an extension, waiver or variance under Rule 1200-1-11-.10, the permittee shall comply with all applicable restrictions of Rule 1200-1-11-.10 pending final approval of such application.

P. AIR EMISSION STANDARDS FOR PROCESS VENTS

1. The permittee shall comply with the requirements of Rule 1200-1-11-.06(30) for all process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous waste with organic concentrations of at least 10 ppmw, if these operations are conducted in hazardous waste management units subject to this permit and in any on-site hazardous waste recycling unit.

2. To show that a process vent associated with a hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of paragraph II.P.1, the permittee shall make an initial determination that the time-weighted, annual average total organic concentration of the waste managed by the hazardous waste management unit is less than 10 ppmw using one of the following two methods:

   (a) Direct measurement of the organic concentration of the waste using the following procedures:

      (i) The permittee shall take a minimum of four grab samples of waste for each waste stream managed in the affected unit under process conditions expected to cause the maximum waste organic concentration.

      (ii) For waste generated on-site, the grab samples shall be collected at a point before the waste is exposed to the atmosphere such as in an enclosed pipe or other closed system that is used to transfer the waste after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For waste generated off-site, the grab samples shall be collected at the inlet to the first waste management unit that receives the waste provided the waste has

been transferred to the facility in a closed system such as a tank truck and the waste is not diluted or mixed with other waste.

(iii) Each sample shall be analyzed and the total organic concentration of the sample shall be computed using Method 9060 or 8240 of SW-846 (Rule 1200-1-11-.01(2)(b)).

(iv) The arithmetic mean of the results of the analyses of the four samples shall apply for each waste stream managed in the unit in determining the time-weighted, annual average total organic concentration of the waste. The time-weighted average is to be calculated using the annual quantity of each waste stream processed and the mean organic concentration of each waste stream managed in the unit.

(b) Using knowledge of the waste to determine that its total organic concentration is less than 10 ppmw. Documentation of the waste determination is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to generate a waste stream having a total organic content less than 10 ppmw, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

3. The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations manage hazardous wastes with time-weighted, annual average total organic concentrations less than 10 ppmw shall be made as follows:

(a) By the effective date that the facility becomes subject to the provisions of subsection II.P or by the date when the waste is first managed in a waste management unit, whichever is later, and

(b) For continuously generated waste, annually, or

(c) Whenever there is a change in the waste being managed or a change in the process that generates or treats the waste.

4. When the permittee and the Commissioner do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous waste with organic concentrations of at least 10 ppmw based on knowledge of the waste, the procedures in Method 8240 of SW-846 (Rule 1200-1-11-.01(2)(b)) may be used to resolve the dispute.

Q. AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

The permittee shall comply with the requirements of Rule 1200-1-11-.06(31) for all equipment that contains or contacts hazardous waste with organic concentrations of at least 10 percent by weight that are managed in units that are subject to this permit or in any on-site hazardous waste recycling unit.

R. ORGANIC AIR EMISSION STANDARDS

1. Air emission controls must be used for tanks, surface impoundments, containers, and miscellaneous units which contact hazardous waste containing an average organic concentration greater than 500 ppmw at the point of origination determined by the procedures outlined in Rule 1200-1-11-.06(32)(d)1, except as specifically exempted under Rule 1200-1-11-.06(32)(a) and (c).

2. Prior to installing any tank, container, surface impoundment, or miscellaneous unit subject to Rule 1200-1-11-.06(32) or modifying an existing process handling waste in tanks or containers, such that the unit(s) will become subject to Rule 1200-1-11-.06(32), the permittee shall apply for a permit modification under Rule 1200-1-11-.07(9)(c)5, and provide specific Part B information required under Rule 1200-1-11-.07(5)(b)13, as applicable, with the modification request.

S. RESTRICTION ON OWNERSHIP OF THE FACILITY

No person who has been convicted of any felony or has been convicted of a misdemeanor for the unlawful storage, treatment, or disposal of hazardous waste may, at any time, be the legal or beneficial owner of ten percent (10%) or more of the stock of the facility.

Permittee: **Foster Wheeler Environmental Corporation**
Facility: **Transuranic (TRU) Waste Remediation Facility**
Owner / Operator: **Foster Wheeler Environmental Corporation**
Land Owner: **U. S. Department of Energy**
Installation Identification Number: TNR 00 000 6981
Permit Number: **TNHW-100**

III. SPECIFIC CONDITIONS FOR STORAGE IN CONTAINERS

A. WASTE IDENTIFICATION

The permittee may store the following hazardous wastes in containers in the unit(s), described in Attachment 9, subject to the terms of this permit:

1. Wastes as listed in Attachment 1.

2. A maximum quantity of 17,000 gallons of hazardous waste will be stored in the container storage areas:

   (a) First Floor RH Container Storage Areas

      (i) Area 1 - 2,175 gallons (equivalent to 5 overpacked casks)

      (ii) Area 2 - 2,175 gallons (equivalent to 5 overpacked casks)

   (b) Second Floor CH Container Storage Areas

      (i) Area 1 - 8,800 gallons (equivalent to 160 55-gallon drums)

      (ii) Area 2 - 3,850 gallons (equivalent to 70 55-gallon drums)

3. The permittee is prohibited from storing, in containers, any hazardous waste that is not identified in Attachment 1.

B. CONDITION OF CONTAINERS

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the permittee shall transfer the hazardous waste from this container to a container that is in good condition or otherwise manage the waste in some other way that complies with the conditions of this permit.

C. COMPATIBILITY OF WASTE WITH CONTAINERS

The permittee shall use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

D. MANAGEMENT OF CONTAINERS

1. Containers of hazardous waste shall be managed as described in Attachment 9.

2. The permittee shall assure that containers holding hazardous waste are always closed during storage, except when necessary to add or remove waste.

3. The permittee shall assure that a container holding hazardous waste shall not be opened, handled or stored in a manner which may rupture the container or cause it to leak.

4. The permittee shall maintain aisle space within the container management units in a manner consistent with the requirements of paragraph II.H.5 and as required by Attachment 9 regarding the dimensions of the primary and secondary aisles.

5. If a container storage unit is storing any quantity of hazardous waste which contains free liquids, the permittee shall place all containers on pallets, or similar devices, which elevate the containers above the floor or place the containers on a sloped floor to drain and remove liquids.

6. Where applicable, the permittee shall arrange palletized waste in rows to facilitate inspections of the containers and the base underlying the containers.

7. When ignitable or reactive hazardous waste are stored, nonsparking tools and equipment shall be used and personnel shall use nonsparking clothing and personal protective equipment. (See subsection II.G for additional requirements.)

E. INSPECTION OF THE CONTAINER MANAGEMENT UNIT(S)

1. At least weekly or as required in Attachment 4, the permittee shall inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors. For the purpose of this permit condition, “weekly” shall be defined as a period not to exceed seven days.

2. The permittee shall inspect the containment system daily when in use (limited to when wastes are moved and loading/unloading areas) for the presence of any release of hazardous waste or accumulated liquid as described in the inspection checklist for each unit in Attachment 4. For the purpose of this permit condition, “each operating day” (or “daily during use”) is equivalent to “daily when in use” and means when wastes are being moved, and therefore, subject to spills.

F. CONTAINMENT, DETECTION, AND MANAGEMENT OF LEAKS OR SPILLS

1. The permittee shall ensure that the container storage areas have a containment system that is designed and operated in accordance with paragraph III.F.2 below, and is constructed and maintained as specified in the plans and specifications found in Attachment 9. When normal maintenance or replacement of equipment or minor piping rearrangements are necessary to properly operate

the facility, the permittee shall use parts or items which meet or exceed the performance standards of those set forth in the attachments. If parts or items are to be used which do not meet or exceed the standards set forth in the attachments, prior approval from the Commissioner shall be required.

2. A containment system shall be designed, operated, and maintained as follows:

   (a) A base shall underlie the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;

   (b) The base shall be sloped or the containment system shall be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids;

   (c) The containment system shall have sufficient capacity to contain 10% of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination;

   (d) Run-on into the containment system shall be prevented unless the collection system has sufficient excess capacity in addition to that required in subparagraph III.F.2(c) above to contain any run-on which might enter the system; and

   (e) Spilled or leaked waste and accumulated precipitation shall be removed from the sump or collection area in as timely manner as necessary to prevent overflow of the collection system.

3. In addition to the requirements of subparagraph III.F.2(e), spilled or leaked waste or accumulated precipitation must be removed in as timely a manner as possible as is necessary to prevent overflow of the collection system, and wash waters must be removed from the containment system within 24 hours of discovery, or in as timely a manner as is possible to prevent harm to human health and the environment if the permittee can demonstrate that removal of the released waste and/or accumulated waters could not be accomplished within 24 hours.

   (a) The permittee shall have available at all times at least one portable pump (dedicated to the hazardous waste management units) and necessary appurtenances (e.g., hoses) for use in removing liquids from the containment systems. For hazardous waste container management units where ignitable wastes are stored, these pumps shall be of a type that will not generate heat or sparks that might result in ignitable vapors, and shall be maintained in proper working order.

   (b) The permittee shall determine if the collected materials are hazardous wastes in accordance with Rule 1200-1-11-.03(1)(b). Unless the permittee can demonstrate in accordance with Rule 1200-1-11-.02(1)(c)4

that the collected material removed from the containment system is not a hazardous waste, the permittee becomes a generator of hazardous waste and shall manage it in accordance with applicable requirements of Rules 1200-1-11-.03 through 1200-1-11-.10.

G. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTES

The permittee shall not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line.

H. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES

The permittee must ensure that:

1. Incompatible wastes, or incompatible wastes and materials, are not placed into the same container, unless paragraph II.G.2 is complied with.

2. Hazardous wastes are not placed in an unwashed container that previously held an incompatible waste or material.

3. A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments is separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

I. CLOSURE OF THE CONTAINER MANAGEMENT UNIT(S)

At closure, the permittee shall remove all hazardous waste and hazardous waste residues from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues shall be decontaminated or removed. At closure, as throughout the operating period, unless the permittee can demonstrate, in accordance with Rule 1200-1-11-.03(1)(b), that the wastes removed from the containment system is not a hazardous waste, the permittee becomes a generator of hazardous waste and shall manage it in accordance with all applicable requirements of Rule Chapter 1200-1-11. (See subsection II.L for additional requirements regarding closure.)

IV. SPECIFIC CONDITIONS FOR STORAGE AND TREATMENT IN TANKS

A. WASTE IDENTIFICATION

The permittee may store and treat the following hazardous wastes in tanks in the unit(s), described in Attachment 10, subject to the terms of this permit:

1. Wastes as listed in Attachment 1.

2. A maximum quantity of 48,200 gallons of hazardous waste will be stored in tanks:

(a)	T-101A (Sludge Collection/Decant Tank)	- 5,000 gallons
(b)	T-101B (Sludge Collection/Decant Tank)	- 5,000 gallons
(c)	T-102A (Sludge Mix/Sample Tank)	- 1,000 gallons
(d)	T-102B (Sludge Mix/Sample Tank)	- 1,000 gallons
(e)	T-103A (Supernate/Filtrate Mix/Sample Tank)	- 7,800 gallons
(f)	T-103B (Supernate/Filtrate Mix/Sample Tank)	- 7,800 gallons
(g)	T-103C (Supernate/Filtrate Mix/Sample Tank)	- 7,800 gallons
(h)	T-107 (Flush/Spent Decon Tank)	- 7,800 gallons
(i)	T-109 (Filtrate Collection Tank)	- 5,000 gallons

3. A maximum quantity of 50,400 gallons/day of hazardous waste will be treated in tanks:

(a)	T-101A (Sludge Collection/Decant Tank)	- 5,000 gallons/day by decanting
(b)	T-101B (Sludge Collection/Decant Tank)	- 5,000 gallons/day by decanting
(c)	T-101A (Sludge Collection/Decant Tank)	- 5,000 gallons/day by mixing
(d)	T-101B (Sludge Collection/Decant Tank)	- 5,000 gallons/day by mixing
(e)	T-102A (Sludge Mix/Sample Tank)	- 1,000 gallons/day
(f)	T-102B (Sludge Mix/Sample Tank)	- 1,000 gallons/day
(g)	T-103A (Supernate/Filtrate Mix/Sample Tank)	- 7,800 gallons/day
(h)	T-103B (Supernate/Filtrate Mix/Sample Tank)	- 7,800 gallons/day
(i)	T-103C (Supernate/Filtrate Mix/Sample Tank)	- 7,800 gallons/day
(j)	T-109 (Filtrate Collection Tank)	- 5,000 gallons/day

4. The permittee is prohibited from storing and treating in tanks any hazardous waste that is not identified in Attachment 1.

B. INSTALLATION OF TANK SYSTEMS

1. In accordance with Rule 1200-1-11-.06(10)(c), the permittee shall ensure that tank systems are constructed, installed, and tested as shown and described in the documentation approved by the Division Director pursuant to subsection II.B of this permit.

2. In accordance with Rule 1200-1-11-.06(10)(c)2, the permittee shall ensure that proper handling procedures are adhered to in order to prevent damage to the tank system(s) during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified, registered professional engineer, either of whom is trained and experienced in the proper installation of tank systems or components, must inspect the system for the presence of any of the following items:

   (a) Weld breaks;

   (b) Punctures;

   (c) Scrapes of protective coatings;

   (d) Cracks;

   (e) Corrosion;

   (f) Other structural damage or inadequate construction/installation.

   All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

3. (a) In accordance with Rule 1200-1-11-.06(10)(c)4, the permittee must ensure that all tanks and ancillary equipment are tested for tightness prior to being covered, enclosed, or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed prior to the tank system being covered, enclosed, or placed into use.

   (b) The permittee must notify the Division Director at least two (2) days in advance of the date the testing for tightness required in subparagraph IV.B.3(a) above is to be conducted so that the Division Director may, if he chooses, inspect this procedure.

4. In accordance with Rule 1200-1-11-.06(10)(c)5, the permittee must ensure that ancillary equipment is supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.

5. In accordance with Rule 1200-1-11-.06(10)(c)7, the permittee must obtain and keep on file at the facility written statements by those persons required to certify

the design of the tank system and supervise the installation of the tank system in accordance with paragraphs IV.B.2, 3, and 4 above, that attest that the tank system was properly designed and installed and that repairs, pursuant to paragraph IV.B.2 and subparagraph IV.B.3(a) above, were performed. These written statements must also include the certification statement as required in Rule 1200-1-11-.07(2)(a)10.

C. CONTAINMENT, DETECTION, AND MANAGEMENT OF RELEASES TO THE SECONDARY CONTAINMENT SYSTEMS

1. In accordance with Rule 1200-1-11-.06(10)(d), the permittee shall ensure that secondary containment systems are constructed and maintained as shown and described in Attachment 10, and the documentation approved by the Division Director pursuant to subsection II.B of this permit, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, groundwater, or surface water at any time during the use of the tank system.

2. The permittee shall inspect the secondary containment systems each operating day for the presence of any release of hazardous waste or accumulated liquid, as described in Attachments 4 and 10. An “operating day” is any calendar day during which one or more of the tanks, including the secondary containment systems, are used to contain wastes.

3. The permittee shall remove all spilled or leaked waste and accumulated precipitation from the secondary containment systems within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment if the permittee can demonstrate that removal of the released waste or accumulated precipitation could not be accomplished within 24 hours.

   (a) The permittee shall have available at all times at least one portable pump dedicated to hazardous waste areas and necessary appurtenances (e.g., hoses) for use in removing liquids from the secondary containment systems. These pumps shall be of a type that will not generate heat or sparks that might result in ignitable vapors and shall be maintained in proper working order.

   (b) Prior to or after removal from the containment systems, the permittee must determine if the collected materials are a hazardous waste in accordance with Rule 1200-1-11-.03(1)(b). If they are, the permittee must manage them as set forth in Rule 1200-1-11-.03 and this permit. Whether a hazardous waste or not, the permittee must manage the collected materials in full compliance with this permit and applicable federal, state, and local regulations.

D. RESPONSE TO LEAKS OR SPILLS

In accordance with Rule 1200-1-11-.06(10)(g), the permittee shall immediately remove from service any tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use. Further, if such a release occurs, the

permittee shall satisfy the following requirements in addition to implementing the Contingency Plan found in Attachment 6:

1. The permittee must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

2. If the release was from a tank system, the permittee shall, within 24 hours after detection of the leak or, if the permittee demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

3. The permittee shall remove and manage all material released to a secondary containment system as set forth in paragraph IV.C.3 above.

4. If visible releases to the environment have occurred, the permittee shall immediately conduct a visual inspection of the release and, based on that inspection, take necessary actions to prevent further migration of the leak or spill to soils or surface water and to remove, and properly dispose of, any visible contamination of the soil or surface water.

5. Unless it consists of less than or equal to a quantity of one pound of hazardous waste and is immediately contained and cleaned up, the permittee shall:

   (a) Within 24 hours of its detection, report any release to the environment to the Division Director, to the Tennessee Emergency Management Agency, or to the National Response Center pursuant to 40 CFR 302; and

   (b) Within 30 days of detection of a release to the environment, submit to the Division Director a report containing the following information:

      (i) Likely route of migration of the release;

      (ii) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);

      (iii) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within 30 days, these data must be submitted to the Division Director as soon as they become available.

      (iv) Proximity to downgradient drinking water, surface water, and populated areas; and

      (v) Description of response actions taken or planned.

6. Unless the permittee satisfies one or more of the following requirements, the tank system must be closed in accordance with the Closure Plan, Attachment 7.

(a) If the cause of the release was a spill that has not damaged the integrity of the system, the permittee may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.

(b) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.

(c) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the permittee must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of Rule 1200-1-11-.06(10)(d) before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of paragraph IV.D.7 below are satisfied. If a component is replaced to comply with the requirements of this paragraph, that component must satisfy the requirements for new tank systems or components in accordance with Rules 1200-1-11.06(10)(c) and (d). Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g., the bottom of an inground or onground tank), the entire component must be provided with secondary containment in accordance with Rule 1200-1-11-.06(10)(d) prior to being returned to use.

7. If the permittee has repaired a tank system in accordance with paragraph IV.D.6 above, and the repair has been extensive (e.g., installation of an internal liner, repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the permittee has obtained a certification by an independent, qualified, registered professional engineer in accordance with Rule 1200-1-11-.07(2)(a)10 that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be submitted to the Division Director within seven days after returning the tank system to use.

E. GENERAL OPERATING REQUIREMENTS

1. In accordance with 1200-1-11-.06(10)(e)1, the permittee shall ensure that hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

2. In accordance with Rule 1200-1-11-.06(10)(e)2, the permittee shall use appropriate controls and practices to prevent spills and overflows from tank or containment systems. Prior to the placement of any tank system into operation, the permittee shall submit to the Division Director, and obtain the Division Director's approval of, a detailed description of controls and practices that will be

utilized to prevent spills and overflows. Upon approval by the Division Director, those controls and practices shall become conditions of this permit.

F. INSPECTION OF THE TANK SYSTEMS

1. In accordance with Rule 1200-1-11-.06(10)(f), the permittee shall develop and follow a schedule and procedure for inspecting overfill controls.

2. The permittee shall inspect at least once each operating day:

   (a) Aboveground portions of the tank system, if any, to detect corrosion or releases of waste;

   (b) Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and

   (c) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

3. The permittee shall document in the operating record of the facility an inspection of those items as set forth in paragraphs IV.F.1 and 2 above.

G. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTES

1. In accordance with Rule 1200-1-11-.06(10)(i)1, the permittee shall ensure that no ignitable or reactive waste is placed in tank systems unless:

   (a) The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that:

      (i) The resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under Rule 1200-1-11-.02(3)(b) or (d); and

      (ii) Paragraph II.G.2 of this permit is complied with; or

   (b) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or

   (c) The tank system is used solely for emergencies.

2. In accordance with Rule 1200-1-11-.06(10)(i)2, the permittee shall ensure, through modification of the facility (and/or operations) and this permit, that the facility maintains compliance with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in

Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1977 or 1981). The permittee shall notify the Division Director as soon as possible of any anticipated change in property lines or public rights-of-way that might impact such compliance.

H. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES

In accordance with Rule 1200-1-11-.06(10)(j), the permittee shall ensure that, unless paragraph II.G.2 of this permit is complied with:

1. Incompatible wastes, or incompatible wastes and materials, are not placed into the tank system; and

2. Hazardous wastes are not placed in an tank system that has not been decontaminated and that previously held an incompatible waste or material.

I. CLOSURE OF THE TANK SYSTEMS

1. In accordance with Rule 1200-1-11-.06(10)(h)1, the permittee shall remove or decontaminate at closure, all waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste unless Rule 1200-1-11-.02(1)(c)4 applies.

2. In accordance with Rule 1200-1-11-.06(10)(h)2, if the permittee demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph IV.I.1 above, then the permittee shall close the tank system and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills.

Permittee: **Foster Wheeler Environmental Corporation**
Facility: **Transuranic (TRU) Waste Remediation Facility**
Owner / Operator: **Foster Wheeler Environmental Corporation**
Land Owner: **U. S. Department of Energy**
Installation Identification Number: TNR 00 000 6981
Permit Number: **TNHW-100**

V. SPECIFIC CONDITIONS FOR STORAGE AND TREATMENT IN MISCELLANEOUS UNITS

A. WASTE IDENTIFICATION

The permittee may store and treat the following hazardous wastes in miscellaneous units, described in Attachment 11, subject to the terms of this permit:

1. Wastes as listed in Attachment 1.

2. A maximum quantity of 1,480 gallons of hazardous waste will be stored in miscellaneous units:

   (a) V-101 (Sludge Dryer) - 240 gallons
   (b) V-102 (Evaporator) - 1,000 gallons
   (c) V-103 (Supernate Dryer) - 240 gallons

3. A maximum quantity of 12,560 gallons/day of hazardous waste will be treated in miscellaneous units:

   (a) V-101 (Sludge Dryer) - 900 gallons/day
   (b) V-102 (Evaporator) - 10,940 gallons/day
   (c) V-103 (Supernate Dryer) - 720 gallons/day

4. A maximum quantity of 84,000 gallons/hour of hazardous waste will be treated through cross-flow filtration units:

   (a) F-101A - 42,000 gallons/hour
   (b) F-101B - 42,000 gallons/hour

5. A maximum quantity of 200 kilograms/hour of hazardous waste will be treated through macroencapsulation and 10 kilograms/hour through amalgamation in miscellaneous units:

   (a) CH Waste Glove Box Macroencapsulation - 100 kilograms/hour
   (b) RH Waste Hot Cell Macroencapsulation - 100 kilograms/hour
   (c) CH Waste Glove Box Amalgamation - 5 kilograms/hour
   (d) RH Waste Hot Cell Amalgamation - 5 kilograms/hour

6. The permittee is prohibited from storing and treating in miscellaneous units any hazardous waste that is not listed Attachment 1.

B. GENERAL OPERATING REQUIREMENTS

1. Consistent with subsection II.B, the miscellaneous units shall be constructed, operated, and maintained by the permittee in a manner that will ensure protection of human health and the environment.

2. The permittee shall maintain and operate the miscellaneous units and their associated systems including those used to prevent releases to air, soil, or water, as described in Attachment 11.

3. All monitoring, recording, maintenance, calibration and test data shall be recorded, and the records for each miscellaneous treatment unit shall be placed in the operating record for each respective unit.

4. The permittee shall maintain, calibrate, and operate process monitoring, control, and recording equipment as specified in Tables 11-3, 11-4, and 11-5 of this permit, while treating hazardous waste.

5. Hazardous waste shall not be fed to the miscellaneous treatment units if any of the monitoring instruments, related to the units and listed in Tables 11-3, 11-4, and 11-5 of this permit, fail to operate properly.

6. The permittee shall keep on file at the facility the written hazardous waste miscellaneous treatment unit assessments of each hazardous waste miscellaneous treatment unit's integrity and suitability for handling hazardous waste, until such time that the hazardous waste miscellaneous treatment unit is certified closed in accordance with this permit.

7. The permittee shall maintain at the facility a record of the results of leak tests and integrity tests conducted.

8. In the event that a hazardous waste miscellaneous treatment unit exceeds the maximum allowable capacity designated for that unit in this permit, the permittee shall document in the operating record, as required by this permit, the following information:

   (a) The date and time of occurrence;

   (b) Identification of the unit;

   (c) Indicate if any other available miscellaneous treatment unit, within the system, is available and identify such unit; and

   (d) If no additional treatment capacity was available within the miscellaneous treatment unit system, indicate if the associated collection and/or treatment activities were automatically or manually cutoff.

9. The permittee shall document and record the results of each miscellaneous treatment unit's waste analysis required by Attachment 2 of this permit.

10. In accordance with Rule 1200-1-11-.06(10)(e)1, the permittee shall ensure that hazardous wastes or treatment reagents must not be placed in a miscellaneous treatment system if they could cause the miscellaneous unit, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

11. In accordance with Rule 1200-1-11-.06(10)(e)2, the permittee shall use appropriate controls and practices to prevent spills and overflows from miscellaneous units or containment systems. Prior to the placement of any miscellaneous treatment system into operation, the permittee shall submit to the Division Director, and obtain the Division Director's approval of, a detailed description of controls and practices that will be utilized to prevent spills and overflows. Upon approval by the Division Director, those controls and practices shall become conditions of this permit.

C. INSTALLATION AND MANAGEMENT OF THE MISCELLANEOUS UNITS

1. The permittee shall construct and/or install the miscellaneous units and their associated systems as described by Attachment 11.

2. The permittee shall ensure that proper handling procedures are adhered to in order to prevent damage to the miscellaneous units and their associated systems during installation.

3. Prior to treatment of hazardous waste in the miscellaneous treatment units, the permittee shall install and test all process monitoring and control instrumentation to insure that the equipment meets design specifications.

4. (a) In accordance with Rule 1200-1-11-.06(10)(c)4, the permittee must ensure that all miscellaneous treatment systems and ancillary equipment are tested for tightness prior to being covered, enclosed, or placed in use. If a miscellaneous system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed prior to the miscellaneous treatment system being covered, enclosed, or placed into use.

   (b) The permittee must notify the Division Director at least two (2) days in advance of the date the testing for tightness required in subparagraph V.C.4(a) above is to be conducted so that the Division Director may, if he chooses, inspect this procedure.

5. In accordance with Rule 1200-1-11-.06(10)(c)5, the permittee must ensure that ancillary equipment is supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.

6. In addition to the requirements of subparagraph I.D.11(b) of this permit, the permittee shall not treat or store hazardous waste in the miscellaneous unit until:

(a) An independent registered professional engineer, acceptable to the Commissioner, has completed an assessment of the miscellaneous units and certifies that:

(i) The units have sufficient structural integrity.

(ii) The units are acceptable for storing and treating the maximum permitted capacity.

(iii) The foundation, structural support, seams, connections, and pressure controls are adequately designed, and have sufficient structural strength.

(iv) The equipment is compatible with the waste to be stored or treated, and there is sufficient interior or exterior corrosion protection to ensure that it will not collapse, rupture, or fail.

(b) The assessment required by subparagraph V.C.6(a) above shall also describe the design standards according to which the miscellaneous units' ancillary equipment have been constructed, and recognized the hazardous waste that will be handled.

7. In accordance with Rule 1200-1-11-.06(10)(c), the permittee must obtain and keep on file at the facility written statements by those persons required to certify the design of the miscellaneous treatment system and supervise the installation of the miscellaneous treatment system in accordance with paragraphs V.C.3, 4, and 5 above, that attest that the miscellaneous treatment system was properly designed and installed and that repairs, pursuant to paragraph V.C.2 and subparagraph V.C.3(a) above, were performed. These written statements must also include the certification statement as required in Rule 1200-1-11-.07(2)(a)10.

D. CONTAINMENT, DETECTION, AND MANAGEMENT OF RELEASES TO THE SECONDARY CONTAINMENT SYSTEMS

1. In accordance with Tennessee Rule 1200-1-11-.06(10)(d), the permittee shall ensure that secondary containment systems are constructed and maintained as shown and described in Attachment 11, and the documentation approved by the Division Director pursuant to subsection II.B of this permit, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, groundwater, or surface water at any time during the use of the miscellaneous treatment system.

2. The permittee shall inspect the secondary containment systems each operating day for the presence of any release of hazardous waste or accumulated liquid, as described in Attachments 4 and 11. An "operating day" is any calendar day during which one or more of the miscellaneous units, including the secondary containment systems, are used to contain wastes.

3 The permittee shall remove all spilled or leaked waste and accumulated precipitation from the secondary containment systems within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment if he can demonstrate that removal of the released waste or accumulated precipitation could not be accomplished within 24 hours.

(a) The permittee shall have available at all times, at least one portable pump dedicated to hazardous waste areas and necessary appurtenances (e.g., hoses) for use in removing liquids from the secondary containment system. These pumps shall be of a type that will not generate heat or sparks that might result in ignitable vapors, and shall be maintained in proper working order.

(b) Prior to or after removal from the containment systems, the permittee must determine if the collected materials are a hazardous waste in accordance with Rule 1200-1-11-.03(1)(b). If they are, the permittee must manage them as set forth in Rule 1200-1-11-.03 and this permit. Whether a hazardous waste or not, the permittee must manage the collected materials in full compliance with this permit and applicable federal, state, and local regulations.

E. RESPONSE TO LEAKS OR SPILLS

In accordance with Rule 1200-1-11-.06(10)(g), the permittee shall immediately remove from service any miscellaneous treatment system or secondary containment system from which there has been a leak or spill, or which is unfit for use. Further, if such a release occurs, the permittee shall satisfy the following requirements in addition to implementing the Contingency Plan found in Attachment 6:

1. The permittee must immediately stop the flow of hazardous waste into the miscellaneous treatment system or secondary containment system and inspect the system to determine the cause of the release.

2. If the release was from a miscellaneous treatment system, the permittee shall, within 24 hours after detection of the leak or, if the permittee demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the miscellaneous treatment system to be performed.

3. The permittee shall remove and manage all material released to a secondary containment system as set forth in paragraph V.D.3 above.

4. If visible releases to the environment have occurred, the permittee shall immediately conduct a visual inspection of the release and, based on that inspection, take necessary actions to prevent further migration of the leak or spill to soils or surface water and to remove, and properly dispose of, any visible contamination of the soil or surface water.

5. Unless it consists of less than or equal to a quantity of one pound of hazardous waste and is immediately contained and cleaned-up, the permittee shall:

   (a) Within 24 hours of its detection, report any release to the environment to the Division Director, to the Tennessee Emergency Management Agency, or to the National Response Center pursuant to 40 CFR 302; and

   (b) Within 30 days of detection of a release to the environment, submit to the Division Director a report containing the following information:

      (i) Likely route of migration of the release;

      (ii) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);

      (iii) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within 30 days, these data must be submitted to the Division Director as soon as they become available.

      (iv) Proximity to downgradient drinking water, surface water, and populated areas; and

      (v) Description of response actions taken or planned.

6. Unless the permittee satisfies one or more of the following requirements, the miscellaneous treatment system must be closed in accordance with the Closure Plan, Attachment 7:

   (a) If the cause of the release was a spill that has not damaged the integrity of the system, the permittee may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.

   (b) If the cause of the release was a leak from the primary miscellaneous treatment system into the secondary containment system, the system must be repaired prior to returning the miscellaneous treatment system to service.

   (c) If the source of the release was a leak to the environment from a component of a miscellaneous treatment system without secondary containment, the permittee must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of Rule 1200-1-11-.06(10)(d) before it can be returned to service, unless the source of the leak is an aboveground portion of a miscellaneous treatment system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of paragraph V.E.7 below are satisfied. If a component is replaced to comply with the requirements of this paragraph, that component must satisfy the requirements for new miscellaneous treatment systems or components in accordance with Rules 1200-1-11-.06(10)(c) and (d). Additionally, if a

leak has occurred in any portion of a miscellaneous treatment system component that is not readily accessible for visual inspection, the entire component must be provided with secondary containment in accordance with Rule 1200-1-11-.06(10)(d) prior to being returned to use.

7. If the permittee has repaired a miscellaneous treatment system in accordance with paragraph V.E.6 above, and the repair has been extensive (e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the miscellaneous treatment system must not be returned to service unless the permittee has obtained a certification by an independent, qualified, registered professional engineer in accordance with Rule 1200-1-11-.07(2)(a)10 that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be submitted to the Division Director within seven days after returning the miscellaneous treatment system to use.

F. INSPECTION OF THE MISCELLANEOUS TREATMENT SYSTEMS

1. In accordance with Rule 1200-1-11-.06(10)(f), the permittee shall develop and follow a schedule and procedure for inspecting overfill controls.

2. The permittee shall inspect at least once each operating day:

   (a) Aboveground portions of the miscellaneous treatment system, if any, to detect corrosion or releases of waste;

   (b) Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the miscellaneous treatment system is being operated according to its design; and

   (c) The construction materials and the area immediately surrounding the externally accessible portion of the miscellaneous treatment system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

3. The permittee shall regularly inspect during each batch.

4. The permittee shall document in the operating record of the facility an inspection of those items as set forth in paragraphs IV.F.1, 2, and 3 above.

G. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTES

1. In accordance with Rule 1200-1-11-.06(10)(i)1, the permittee shall ensure that no ignitable or reactive waste is placed in miscellaneous treatment systems unless:

   (a) The waste is treated, rendered, or mixed before or immediately after placement in the miscellaneous treatment system so that:

(i) The resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under Tennessee Rule 1200-1-11-.02(3)(b) or (d); and

(ii) Paragraph II.G.2 of this permit is complied with; or

(b) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or

(c) The miscellaneous treatment system is used solely for emergencies.

2. In accordance with Rule 1200-1-11-.06(10)(i)2, the permittee shall ensure, through modification of the facility (and/or operations) and this permit, that the facility maintains compliance with the requirements for the maintenance of protective distances between the waste management areas and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1977 or 1981). The permittee shall notify the Division Director as soon as possible of any anticipated change in property lines or public rights-of-way that might impact such compliance.

H. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES

In accordance with Rule 1200-1-11-.06(10)(j), the permittee shall ensure that, unless paragraph II.G.2 of this permit is complied with:

1. Incompatible wastes, or incompatible wastes and materials, are not placed in the same miscellaneous treatment system; and

2. Hazardous wastes are not placed in a miscellaneous treatment system that has not been decontaminated and that previously held an incompatible waste or material.

I. CLOSURE OF THE MISCELLANEOUS UNITS

1. At closure, the permittee shall close the miscellaneous units and their associated systems in accordance with subsection II.L of the permit and Attachment 7.

2. At closure, as throughout the operating period, unless the permittee can demonstrate, in accordance with Rule 1200-1-11-.03(1)(b), that the wastes removed from the containment system, miscellaneous units or their associated systems is not a hazardous waste, the permittee becomes a generator of hazardous waste and shall manage it in accordance with all applicable requirements of Rule Chapter 1200-1-11-.03.

Permittee: Foster Wheeler Environmental Corporation
Facility: Transuranic (TRU) Waste Remediation Facility
Owner / Operator: Foster Wheeler Environmental Corporation
Land Owner: U. S. Department of Energy
Installation Identification Number: TNR 00 000 6981
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VI. SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN

Permittee: **Foster Wheeler Environmental Corporation**
Facility: **Transuranic (TRU) Waste Remediation Facility**
Owner / Operator: **Foster Wheeler Environmental Corporation**
Land Owner: **U. S. Department of Energy**
Installation Identification Number: TNR 00 000 6981
Permit Number: **TNHW-100**

VII. SCHEDULE OF COMPLIANCE

A. At least thirty (30) days prior to initiation of construction/installation of any units, the permittee shall provide to the Division Director:

1. At least two (2) sets of detailed construction drawings and specifications;

2. Written notification clearly describing the portions of the facility to be constructed/installed; and

3. An itemized construction schedule.

B. Prior to initiation of any phase of construction/installation of any units, the permittee shall comply with Rule 1200-1-11-.06(32).