

**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**

**MODIFICATION TO  
HAZARDOUS WASTE MANAGEMENT PERMIT**

**Permittees:** U.S. Department of Energy; National Nuclear Security Administration; Bechtel Jacobs Company LLC; WESKEM, LLC; Foster Wheeler Environmental Corporation; Babcock & Wilcox Technical Services Y-12, L.L.C.; and Navarro-GEM, J.V.

**Facility:** Oak Ridge Reservation

**Identification Numbers:** TN3 89 009 0001, TN0 89 009 0004 and TN1 89 009 0003

**Owners/Operators:** U.S. Department of Energy and National Nuclear Security Administration

**Co-Operators:** Bechtel Jacobs Company LLC; WESKEM, LLC; Foster Wheeler Environmental Corporation; Babcock & Wilcox Technical Services Y-12, L.L.C.; and Navarro-GEM, J.V.

**Permit Number:** TNHW-121

**Modification Type:** Class 1

**Modification Number:** 4 (A-846)

Pursuant to the Tennessee Hazardous Waste Management Act of 1977, as amended (Tennessee Code Annotated 68-212-101 et seq.) and the regulations (Chapter 1200-1-11) promulgated thereunder by the Tennessee Solid Waste Disposal Control Board, a hazardous waste management facility permit number TNHW-121, issued to the U.S. Department of Energy, the National Nuclear Security Administration, Bechtel Jacobs Company LLC, WESKEM, LLC, BWXT Y-12, LLC, and Navarro-GEM, J.V., is hereby modified, pursuant to Rule 1200-1-11-.07(9)(c), as follows:

BWXT Y-12, LLC has changed its name to Babcock & Wilcox Technical Services Y-12, L.L.C.; Pages i, I-1, II-1 and III-1 have been modified to reflect this change.

These modifications are hereby made a part of Permit Number: TNHW-121, EPA ID Numbers: TN3 89 009 0001, TN0 89 009 0004 and TN1 89 009 0003, and are effective as of December 5, 2007, and shall remain in effect until September 28, 2014, unless continued, revoked and reissued, or terminated under Rule 1200-1-11-.07(9). Failure to comply with the terms of these modifications shall constitute a violation of the Permit.

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

February 12, 2008  
Date

**Permittees:** U.S. Department of Energy; National Nuclear Security Administration; Bechtel Jacobs Company LLC; WESKEM, LLC; Foster Wheeler Environmental Corporation; Babcock & Wilcox Technical Services Y-12, L.L.C.; and Navarro-GEM, J.V.

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## TABLE OF CONTENTS

	<u>Page</u>
<b>I. STANDARD CONDITIONS</b>	
A. EFFECT OF PERMIT	I-1
B. SEVERABILITY	I-1
C. DEFINITIONS	I-2
D. GENERAL DUTIES AND REQUIREMENTS	I-4
E. REQUIRED NOTICE FOR OWNERSHIP TRANSFER	I-10
F. ANNUAL MAINTENANCE FEES	I-11
G. ORDER OF PRECEDENCE	I-11
H. CONFIDENTIAL INFORMATION	I-11
I. PERMIT STRUCTURE	I-11
<b>II. GENERAL FACILITY CONDITIONS</b>	
A. SECURITY	II-1
B. PERSONNEL TRAINING	II-1
C. MODIFICATION REQUIREMENT FOR CONSTRUCTING RCRA ORGANIC AIR UNITS OR EQUIPMENT	II-2
D. AIR EMISSION STANDARDS FOR PROCESS VENTS	II-2
E. AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS	II-4
F. AIR EMISSION STANDARDS FOR TANKS, SURFACE IMPOUNDMENTS, AND CONTAINERS	II-4
G. LAND DISPOSAL RESTRICTIONS	II-8
H. WASTE MINIMIZATION	II-8
<b>III. SPECIFIC CONDITIONS FOR CORRECTIVE ACTION</b>	
A. APPLICABILITY	III-1
B. NOTIFICATION AND ASSESSMENT REQUIREMENTS FOR NEWLY IDENTIFIED SWMUs AND AOCs	III-2
C. NOTIFICATION REQUIREMENTS FOR NEWLY DISCOVERED RELEASES FROM SWMUS OR AOCs	III-3

## TABLE OF CONTENTS (CONTINUED)

	<u>Page</u>
D. CONFIRMATORY SAMPLING (CS)	III-4
E. RCRA FACILITY INVESTIGATION (RFI)	III-5
F. INTERIM MEASURES (IM)	III-7
G. CORRECTIVE MEASURES STUDY (CMS)	III-10
H. REMEDY APPROVAL AND PERMIT MODIFICATION	III-11
I. MODIFICATION OF CORRECTIVE ACTION	
SCHEDULE OF COMPLIANCE	III-12
J. WORK PLAN AND REPORT REQUIREMENTS	III-12
K. APPROVAL/DISAPPROVAL OF SUBMITTALS	III-13
L. DISPUTE RESOLUTION	III-13

### PERMIT ATTACHMENTS

#### ATTACHMENT 1 CORRECTIVE ACTION REQUIREMENTS AND PROCESS

<b>APPENDIX A.</b>	REQUIREMENTS FOR SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN
<b>APPENDIX B.</b>	RCRA FACILITY INVESTIGATION (RFI) OUTLINE
<b>APPENDIX C.</b>	CORRECTIVE MEASURES STUDY (CMS) OUTLINE
<b>APPENDIX D.</b>	SCHEDULE OF COMPLIANCE
<b>APPENDIX E.</b>	SCREENING LEVELS
<b>APPENDIX F.</b>	CORRECTIVE ACTION REMEDIES (RESERVED)

#### ATTACHMENT 2 SUMMARY OF UNITS SUBJECT TO AIR EMISSION STANDARDS OF TENNESSEE RULE 1200-1-11-.06(32)

**Permittees:** U.S. Department of Energy; National Nuclear Security Administration; Bechtel Jacobs Company LLC; WESKEM, LLC; Foster Wheeler Environmental Corporation; Babcock & Wilcox Technical Services Y-12, L.L.C.; and Navarro-GEM, J.V.

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## I. STANDARD CONDITIONS

### A. EFFECT OF PERMIT

The permittee is required to perform corrective action in accordance with the conditions of this permit. This includes the investigation of any releases of hazardous waste or hazardous constituents at the facility regardless of the time at which waste was placed in a unit and taking appropriate corrective action for any such releases. 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.A. 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.A. 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 provision 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. Environmental Protection Agency (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. "Area of concern" (AOC) includes any area having a probable release of a hazardous waste or hazardous constituent that 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.
2. "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 a unit, i.e., having higher concentrations of a constituent as compared to nearby areas that have not been affected by the unit.
3. A "Corrective Action Management Unit" (CAMU) 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 CAMU shall only be used for the management of remediation wastes pursuant to implementing such corrective action requirements at the facility.
4. "Corrective measures" 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 at which waste was placed in the unit, as required under Rule 1200-1-11-.06(6)(l). Corrective measures may address releases to air, soil, surface water or groundwater.
5. "Extent of contamination" 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.
6. "Facility" 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.

7. "Hazardous constituent(s)" or "hazardous waste constituent(s)" 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.
8. "Interim measures" 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.
9. "Land disposal" 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.
10. "Landfill" 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.
11. "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.
12. "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.
13. "Release" 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.
14. "Remediation waste" includes all solid and hazardous wastes, and all debris and media, including groundwater, surface water, soil and sediment, which contain a listed hazardous waste or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing the corrective action requirements of Rule 1200-1-11-.06(6)(1). 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.

15. "Screening levels" are health-based concentrations of hazardous constituents determined to be indicators for the protection of human health and/or the environment.
16. "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 or agricultural operations or 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 that 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).
17. A "solid waste management unit" (SWMU) includes any unit that 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.
18. "Surface Impoundment" or "impoundment" includes any facility or part of a facility which is a natural topographic depression, man-made excavation or diked area formed primarily of earthen materials, although it may be lined with man-made materials, which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling and aeration pits, ponds and lagoons.
19. A "temporary unit" (TU) 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 the period of time as specified in this permit.
20. A "unit" 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 of hazardous waste or hazardous constituents 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). The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes, under subparagraph I.D.11(a), or anticipated noncompliance, under subparagraph I.D.11(b), 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, and subject to security provisions of the Atomic Energy Act of 1954 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 paragraph I.D.8, at least but not limited to, regular business hours.

9. Monitoring and Records

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative waste sample to be analyzed must be the appropriate method from Appendix I of Rule 1200-1-11-.02(5), the most recent version of EPA Region 4 Environmental Investigations Standard Operating Procedure and Quality Assurance Manual (EISOPQAM) or an equivalent method approved by the Commissioner. Procedures for sampling contaminated media must be those identified in the latest edition of EPA Region 4 EISOPQAM or an equivalent method approved by the Commissioner. Laboratory methods must be those specified in the most recent edition of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, or an equivalent method approved by the Commissioner.

(b) The permittee shall retain at the facility, as provided for under Rule 1200-1-11-.06, or other location approved by the Commissioner, records of all monitoring information and inspections required under the terms of this permit, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentations, records of all data used to prepare documents required by this permit, copies of all reports and records required by this permit, the certification required by paragraph II.H.2, 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, inspection, certification, or application, or until corrective action is completed, whichever date is later. As a generator of hazardous waste, the permittee shall retain a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation produced pursuant to Rule 1200-1-11-.10 for at least three years from the date that the waste which is subject of such documentation was last sent to on-site or off-site treatment, storage or disposal, or until corrective action is completed, whichever date is later. The permittee shall maintain records from all groundwater 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. These periods may be extended by request of the Commissioner at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.

(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 name of the laboratory that performed the analyses;
- (v) The analytical techniques or methods used; and
- (vi) The results of such analyses.

(d) Records of any inspection and the schedule for performing any inspection as required by this permit, shall meet the requirements as specified elsewhere in this permit.

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

11. Reporting Requirements

- (a) **Planned changes:** The permittee shall give written notice to the Commissioner as soon as possible of any planned physical alterations or additions which may impact SWMUs or AOCs referenced in paragraphs III.A.2 through III.A.7, including the onsite and offsite areas known or suspected to be contaminated by these units. For permittee-initiated interim measures, the permittee shall follow the procedures as outlined in subparagraph III.F.1(b).
- (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.
- (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. Submittal of a required item according to the schedule constitutes notification of compliance.
- (f) **Twenty-four hour reporting:**
  - (i) The permittee shall report any noncompliance or any imminent or existing hazard from a release of hazardous waste or hazardous constituent which may endanger health or the environment orally within 24 hours from the time the permittee becomes aware of the circumstances, including but not limited to:
    - (I) Information concerning release of any hazardous waste or hazardous constituent that may cause an endangerment to public drinking water supplies.
    - (II) Any information of a release or discharge of hazardous waste or hazardous constituent, or of a fire or explosion from the

hazardous waste management facility, which may endanger or 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; 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) Annual report: Permittee shall submit an annual report covering facility activities as outlined in paragraph III.C.3.
- (h) Other noncompliance: The permittee shall report all instances of noncompliance not reported under subparagraphs I.D.11(d), (e) or (f), at the time the annual report or other site monitoring reports are submitted. The reports shall contain the information listed in subparagraph I.D.11(f), as appropriate.
- (i) 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 document to the

Commissioner, it shall promptly submit such facts or information. In addition, upon request, the permittee shall furnish to the Commissioner any information related to compliance with this permit.

12. Documents to be Retained at the Facility: The permittee shall retain at a designated Department of Energy (DOE) facility, the following documents and the amendments, revisions and modifications to these documents, until corrective action for the solid waste management units and areas of concern addressed in subsection III.A is completed. Permittee shall notify the Commissioner of the location of the document repository.
  - (a) Monitoring information and inspection records in accordance with subparagraphs I.D.9(b) and (d);
  - (b) Annual reports in accordance with subparagraph I.D.11(g);
  - (c) Personnel training documents and records in accordance with paragraph II.B.4;
  - (d) All corrective action work plans, reports and other documents, in accordance with section III, including the investigations, records of decision and other remedial action documents generated under CERCLA; and
  - (e) Operating and other applicable administrative record(s) as required by this permit and Rule 1200-1-11.
13. 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.
14. 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, permittee is required to meet the reapplication requirement under Paragraph I.D.2.

**E. REQUIRED NOTICE FOR OWNERSHIP TRANSFER**

Before transferring ownership or operation of the facility, 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.)

**F. ANNUAL MAINTENANCE FEES**

For corrective action activities performed under this permit, permittee shall submit annual maintenance fees to the Commissioner as required by Rule 1200-1-11-.08(4)(b)6.

**G. 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.

**H. CONFIDENTIAL INFORMATION**

In accordance with Rule 1200-1-11-.01(7) and .07(1)(h), the permittee may claim for confidential handling any proprietary information required to be submitted by this permit.

**I. 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

**Permittees:** U.S. Department of Energy; National Nuclear Security Administration; Bechtel Jacobs Company LLC; WESKEM, LLC; Foster Wheeler Environmental Corporation; Babcock & Wilcox Technical Services Y-12, L.L.C.; and Navarro-GEM, J.V.

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## II. GENERAL FACILITY CONDITIONS

### A. SECURITY

The permittee shall provide appropriate security measures at the facility that minimize the threat of human and ecological exposures to hazardous waste or hazardous constituents.

### B. 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 and the Tennessee Hazardous Waste Management Regulations. 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 relevant to the positions in which they are employed.

1. Training Program: As applicable, training will be provided for personnel involved with hazardous waste corrective action investigation, remediation or contingency plan implementation.
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 job title under subparagraph II.B.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 has been given to each person as required by this permit; and
- (d) Records that document that the training or job experience required by this permit has been given to, and completed by, facility personnel. 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.

**C. MODIFICATION REQUIREMENT FOR CONSTRUCTING RCRA ORGANIC AIR UNITS OR EQUIPMENT**

Prior to constructing any equipment with process vents subject to the requirements of Rule 1200-1-11-.06(30) or installing any additional equipment subject to the requirements of Rule 1200-1-11-.06(31) or units subject to Rule 1200-1-11-.06(32), the permittee shall supply the specific Part B information required pursuant to Rule 1200-1-11-.07(5)(b)10, 11 and 13, as applicable, and shall obtain a permit modification in accordance with the requirements of Rule 1200-1-11-.07(9).

**D. 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 that are 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.D.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 8260 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.D 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 8260 of SW-846 (Rule 1200-1-11-.01(2)(b)) may be used to resolve the dispute.

**E. 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.

**F. AIR EMISSION STANDARDS FOR TANKS, SURFACE IMPOUNDMENTS, AND CONTAINERS**

1. Applicability:

- (a) Rule 1200-1-11-.06(32) applies to all tanks, containers, and miscellaneous units, except as provided for in Rule 1200-1-11-.06(1)(b) and Rule 1200-1-11-.06(32)(a)2.
- (b) The conditions of this subsection apply to the hazardous waste management units identified in Attachment 2, Summary of Units Subject to Air Emission Standards of Tennessee Rule 1200-1-11-.06(32), for which required control equipment has been installed and is operational.

2. Emission Control Technology: The permittee shall install and maintain all regulated units and associated emission control technology in accordance with the following standards for containers:

- (a) These containers have a design capacity greater than 0.1 m<sup>3</sup> and less than or equal to 0.46 m<sup>3</sup> and meet the applicable U.S. DOT regulations under the Container Level 1 standards. The container shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or

more, it shall be visually inspected for defects at least once every 12 months. [Rules 1200-1-11-.06(32)(g)2(i)(I) and 3(i)(I)]

- (b) These containers have a design capacity greater than 0.1 m<sup>3</sup> and less than or equal to 0.46 m<sup>3</sup> and are equipped with a cover and closure devices which form a continuous barrier over container openings. The container and its cover and closure devices shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every 12 months. [Rules 1200-1-11-.06(32)(g)2(i)(I) and 3(i)(II)]
- (c) These containers have a design capacity greater than 0.1 m<sup>3</sup> and less than or equal to 0.46 m<sup>3</sup> and are open-top containers in which an organic-vapor suppressing barrier is placed on or over the hazardous waste in the container. The container and its cover and closure devices shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every 12 months. [Rules 1200-1-11-.06(32)(g)2(i)(I) and 3(i)(III)]
- (d) These containers have a design capacity greater than 0.46 m<sup>3</sup>, are not in light material service and meet the applicable U.S. DOT regulations under the Container Level 1 standards. The container shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every 12 months. [Rules 1200-1-11-.06(32)(g)2(i)(II) and 3(i)(I)]
- (e) These containers have a design capacity greater than 0.46 m<sup>3</sup>, are not in light material service and are equipped with a cover and closure devices which form a continuous barrier over container openings. The container and its cover and closure devices shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every 12 months. [Rules 1200-1-11-.06(32)(g)2(i)(II) and 3(i)(II)]
- (f) These containers have a design capacity greater than 0.46 m<sup>3</sup>, are not in light material service and are open-top containers in which an organic vapor-suppressing barrier is placed on or over the hazardous waste in the container. The container and its cover and closure devices shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every 12 months. [Rules 1200-1-11-.06(32)(g)2(i)(II) and 3(i)(III)]

- (g) These containers have a design capacity greater than  $0.46 \text{ m}^3$ , are in light material service and meet the applicable U.S. DOT regulations, under the Container Level 2 standards. The container shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every 12 months. [Rules 1200-1-11-.06(32)(g)2(i)(III) and 4(i)(I)]
- (h) These containers have a design capacity greater than  $0.46 \text{ m}^3$ , are in light material service and operate with no detectable organic emissions as defined in Rule 1200-1-11-.05(29)(b). The container and its cover and closure devices shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every 12 months. [Rules 1200-1-11-.06(32)(g)2(i)(III) and 4(i)(II)]
- (i) These containers have a design capacity greater than  $0.46 \text{ m}^3$ , are in light material service and that have been demonstrated within the preceding 12 months to be vapor-tight using 40 C.F.R. Part 60, Appendix A, Method 27. The container and its cover and closure devices shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every 12 months. [Rules 1200-1-11-.06(32)(g)2(i)(III) and 4(i)(III)]
- (j) These containers have a design capacity greater than  $0.1 \text{ m}^3$  that are used for treatment of a hazardous waste by a waste stabilization process and are vented directly through a closed-vent system to a control device in accordance with Rule 1200-1-11-.06(32)(g)5(ii)(II). The closed-vent system and control devices shall be inspected and monitored as specified in Rule 1200-1-11-.06(32)(h). [Rules 1200-1-11-.06(32)(g)2(ii) and 5(i)(I)]
- (k) These containers have a design capacity greater than  $0.1 \text{ m}^3$  that are used for treatment of a hazardous waste by a waste stabilization process and are vented inside an enclosure which is exhausted through a closed-vent system to a control device in accordance with Rules 1200-1-11-.06(32)(g)5(ii)(I) and (II). The closed-vent system and control devices shall be inspected and monitored as specified in Rule 1200-1-11-.06(32)(h). [Rules 1200-1-11-.06(32)(g)2(ii) and 5(i)(I)]
- (l) These tanks are located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device and shall comply with Tank Level 2 controls in accordance with Rule 1200-1-11-.06(32)(e)9. The closed-vent system and control device shall be inspected

and monitored in accordance with Rule 1200-1-11-.06(32)(h). [Rule 1200-1-11-.06(32)(e)4(v)]

- (m) These tanks have covers which have been specified as "unsafe to inspect and monitor" and shall comply with the requirements of Rule 1200-1-11-.06(32)(e)9(i). [Rules 1200-1-11-.06(32)(e)6 through 7]

3. Reporting Requirements:

- (a) For each tank, container or miscellaneous unit which manages hazardous waste that is exempted from using air emission controls, a written report shall be submitted to the Division Director within fifteen (15) days of each occurrence when hazardous waste is placed in the waste management unit in noncompliance with the conditions of Rule 1200-1-11-.06(32)(c)3(i) or (ii), as applicable. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent reoccurrence of the noncompliance.
- (b) For tanks referenced in subparagraph II.F.1(b), which use air emission controls in accordance with the requirements of Rule 1200-1-11-.06(32)(e)3, a written report shall be submitted to the Division Director within fifteen (15) days of each occurrence when hazardous waste is managed in the tank in noncompliance with the conditions specified in Rules 1200-1-11-.06(32)(e)3(i) through (iv). The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent reoccurrence of the noncompliance.
- (c) For control devices used in accordance with the requirements of Rule 1200-1-11-.06(32)(h), a semiannual written report shall be submitted to the Division Director except as provided for in subparagraph II.F.3(d). The report shall describe each occurrence during the previous 6-month period when a control device is operated continuously for 24 hours or longer in noncompliance with the applicable operating values defined in Rule 1200-1-11-.06(30)(f)3(iv) or when a flare is operated with visible emissions for 5 minutes or longer in a two-hour period, as defined in Rule 1200-1-11-.06(30)(d)4. The written report shall include the EPA identification number, facility name and address, and an explanation why the control device could not be returned to compliance within 24 hours, and actions taken to correct the noncompliance.
- (d) A report to the Division Director in accordance with the requirements of subparagraph II.F.3(c) is not required for a 6-month period during which

all control devices subject to Rule 1200-1-11-.06(32) are operated by the permittee such that during no period of 24 hours or longer did a control device operate continuously in noncompliance with the applicable operating values defined in Rule 1200-1-11-.06(30)(f)3(iv) or a flare operate with visible emissions for 5 minutes or longer in a two-hour period, as defined in Rule 1200-1-11-.06(30)(d)4.

- (e) All reports shall be signed and dated by an authorized representative of the permittee as per Rule 1200-1-11-.07(2)(a)8.

#### **G. LAND DISPOSAL RESTRICTIONS**

1. 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 the applicable restrictions of Rule 1200-1-11-.10 pending final approval of such application.
2. A restricted waste identified in Rule 1200-1-11-.10(2) may not be placed in a land disposal unit without further treatment unless the requirements of Rule(s) 1200-1-11-.10(2) and/or (3) are met.
3. The storage of hazardous waste restricted from land disposal under Rule 1200-1-11-.10 is prohibited unless the requirements of Rule 1200-1-11-.10(4) are met.
4. Pursuant to the Commissioner's Order, effective October 2, 1992, and RCRA 3021(b), as amended by section 105(a) of the Federal Facility Compliance Act of 1992, the permittee shall comply with the Site Treatment Plan (STP) for mixed wastes restricted from land disposal. The STP provides a schedule and milestone for achieving compliance with the LDR requirements for mixed wastes on the Oak Ridge Reservation.

#### **H. WASTE MINIMIZATION**

1. In the event that the permittee treats, stores or disposes of hazardous wastes on-site where such wastes were generated as a result of corrective actions required under this permit, then the permittee must comply with Rule 1200-1-11-.06(5)(d)2(ix), and the permittee must certify, no less often than annually, that:
  - (a) The permittee has a program in place to reduce the volume and toxicity of hazardous waste generated to the degree determined by the permittee to be economically practicable; and

(b) The proposed method of treatment, storage or disposal is the most practicable method available to the permittee, which minimizes the present and future threat to human health and the environment.

2. If Condition II.H.1 is applicable, then the permittee shall maintain copies of this certification in the facility operating record as required by Rule 1200-1-11-.06(5)(d)2(ix).

**Permittees:** U.S. Department of Energy; National Nuclear Security Administration; Bechtel Jacobs Company LLC; WESKEM, LLC; Foster Wheeler Environmental Corporation; Babcock & Wilcox Technical Services Y-12, L.L.C.; and Navarro-GEM, J.V.

**Facility:** Oak Ridge Reservation

**Identification Numbers:** TN3 89 009 0001, TN0 89 009 0004 and TN1 89 009 0003

**Owners/Operators:** U.S. Department of Energy and National Nuclear Security Administration

**Co-Operators:** Bechtel Jacobs Company LLC; WESKEM, LLC; Foster Wheeler Environmental Corporation; Babcock & Wilcox Technical Services Y-12, L.L.C.; and Navarro-GEM, J.V.

**Permit Number:** TNHW-121

### III. SPECIFIC CONDITIONS FOR CORRECTIVE ACTION

#### A. APPLICABILITY

For the purpose of hazardous waste (RCRA) corrective action required under Rule 1200-1-.06(6)(1), the Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) identified in Attachment 1, Appendix A, Table A-1 of this permit are being addressed through the requirements of the Oak Ridge Reservation (ORR) Federal Facility Agreement (FFA). The U.S. Environmental Protection Agency (EPA), the State of Tennessee and the U.S. Department of Energy (DOE) entered into the FFA to satisfy the requirements of Section 120(e)(2) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). As long as EPA and the State of Tennessee agree that DOE is conducting cleanup in a timely and protective manner through the requirements of CERCLA and the FFA, hazardous waste corrective action for those SWMUs and AOCs listed in Attachment 1, Appendix A, Table A-1, will be deferred to CERCLA and the FFA. However, hazardous waste corrective action for these SWMUs and AOCs listed in Attachment 1, Appendix A, Table A-1 that are being addressed under CERCLA and the FFA will be resumed under this permit and subject to the conditions of subsections III.E, III.F, III.G, III.H, III.I, III.J, III.K and III.L as specified below, if the State of Tennessee finds that DOE is not accomplishing comprehensive cleanup of ORR in accordance with CERCLA, the FFA and applicable Records of Decision (RODs) agreed to pursuant to the FFA. DOE and NNSA, in accordance with applicable contracts, shall determine the required participation by the appropriate co-operators for corrective actions under this permit.

The remaining Conditions of this Section apply to:

1. The solid waste management units (SWMUs) and areas of concern (AOCs) identified in Attachment 1, Appendix A, Table A-2, which require No Further Action (NFA) under this permit;
2. The SWMUs and AOCs identified in Attachment 1, Appendix A, Table A-3 which require Confirmatory Sampling (CS);
3. The SWMUs and AOCs identified in Attachment 1, Appendix A, Table A-4, which require a RCRA Facility Investigation (RFI);

4. The SWMUs and AOCs identified in Attachment 1, Appendix A, Table A-5, which require Interim Measures (IM);
5. The SWMUs and AOCs identified in Attachment 1, Appendix A, Table A-6, which require Corrective Measures Study (CMS);
6. The SWMUs and AOCs identified in Attachment 1, Appendix A, Table A-7, which require a Corrective Action Remedy;
7. Any additional SWMUs or AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means. As used in this permit section, the terms "discover", "discovery", or "discovered" refer to the date on which the permittee either, (1) visually observes evidence of a new SWMU or AOC, (2) visually observes evidence of a previously unidentified release of hazardous constituents to the environment, or (3) receives information which suggests the presence of a new release of hazardous waste or hazardous constituents to the environment; and
8. Contamination that has migrated beyond the facility boundary, if applicable. The permittee shall implement corrective actions beyond the facility boundary where necessary to protect human health and the environment, unless the permittee demonstrates to the satisfaction of the Commissioner that, despite the permittee's best efforts, as determined by the Commissioner, the permittee was unable to obtain the necessary permission to undertake such actions. The permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis.

**B. NOTIFICATION AND ASSESSMENT REQUIREMENTS FOR NEWLY IDENTIFIED SWMUs AND AOCs**

1. The permittee shall notify the Commissioner in writing, within thirty (30) calendar days of discovery, of any suspected new AOC as discovered under paragraph III.A.7. The notification shall include, an Assessment Report, which at a minimum, shall provide the location of the AOC and all available information pertaining to the nature of the release (e.g., media affected, hazardous constituents released, magnitude of release, etc.). The Commissioner may conduct, or require the permittee to conduct, further assessment (i.e., Confirmatory Sampling) in order to determine the status of the suspected AOC. The Commissioner will notify the permittee in writing of the final determination of the suspected AOC and appropriate Attachment 1, Appendix A category. If the Commissioner determines that further investigation is needed, the permittee will either: 1) prepare a plan for such investigation as outlined in paragraph III.D.1 or subparagraphs III.E.1(a) and (b), or 2) upon agreement by DOE, Tennessee, and EPA, transfer the AOC(s) into the FFA for further investigation.

2. The permittee shall notify the Commissioner in writing, within thirty (30) calendar days of discovery, of any additional SWMUs as discovered under paragraph III.A.7.
3. The permittee shall prepare and submit to the Commissioner, within thirty (30) calendar days of discovery, a SWMU Assessment Report (SAR) for each SWMU identified under paragraph III.B.2 along with the notification. At a minimum, the SAR shall provide the following information:
  - (a) Location of unit(s) on a topographic map of appropriate scale such as required under Rule 1200-1-11-.07(5)(a)(xix) or on a photograph;
  - (b) Designation of type and function of unit(s);
  - (c) General dimensions, capacities and structural description of unit(s). Supply any available plans/drawings;
  - (d) Dates that the unit(s) was operated;
  - (e) Specification of all wastes that have been managed at/in the unit(s) to the extent available. Include any available data on hazardous constituents in the wastes; and
  - (f) All available information pertaining to any release of hazardous waste or hazardous constituents from such unit(s). Include groundwater data, soil analyses, air, and/or surface water data. Examples include, but are not limited to, monitoring and inspection reports from operating records for permitted units.
4. Based on the results of the SAR(s), the Commissioner shall determine the need for further investigations at the SWMU(s) covered in the SAR(s). If the Commissioner determines that further investigation is needed, the permittee will either: 1) prepare a plan for such investigation as outlined in paragraph III.D.1 or subparagraphs III.E.1(a) and (b), or 2) upon agreement by DOE, Tennessee, and EPA, transfer the SWMU(s) into the FFA for further investigation.

**C. NOTIFICATION REQUIREMENTS FOR NEWLY DISCOVERED RELEASES FROM SWMUs or AOCs**

1. The permittee shall notify the Commissioner in writing of any newly discovered release(s) of hazardous waste or hazardous constituents discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, within thirty (30) calendar days of discovery. Such newly discovered releases may be from SWMUs or AOCs previously identified under this permit. This notification shall include updating of any release information described in the previous SAR or AOC Assessment Report.

2. If the Commissioner determines that further investigation of the SWMU or AOC is needed, the permittee will either: 1) prepare a plan for such investigation as outlined in subparagraphs III.E.1(a) and (b), or 2) upon agreement by DOE, Tennessee, and EPA, transfer the AOC/SWMU into the FFA for further investigation.
3. The permittee shall submit to the Commissioner an annual SWMU/AOC Update Report by January 30 for the annual reporting period ending on December 31 with a cover letter summarizing recommended changes, additions, or deletions to the lists of SWMUs or AOCs in Attachment 1, Appendix A.

**D. CONFIRMATORY SAMPLING (CS)**

1. The permittee shall prepare and submit to the Commissioner, within forty-five (45) calendar days of notification by the Commissioner for newly identified SWMUs or AOCs identified in paragraph III.B.2 or III.B.1, a Confirmatory Sampling (CS) Work Plan to determine any release from these SWMUs or AOCs. The CS Work Plan shall include schedules of implementation and completion of specific actions necessary to determine whether or not a release has occurred. It should also address applicable requirements and affected media. In order to partly or wholly satisfy the CS requirement, the use of data obtained outside of the permit structure may be submitted with the work plan for the Commissioner's review and approval.
2. The CS Work Plan must be approved by the Commissioner, in writing, prior to implementation. The Commissioner shall specify the start date of the CS Work Plan schedule in the letter approving the CS Work Plan. If the Commissioner disapproves the CS Work Plan, the Commissioner shall either (1) notify the permittee in writing of the CS Work Plan's deficiencies and specify a due date for submission of a revised CS Work Plan, (2) revise the CS Work Plan and notify the permittee of the revisions or (3) conditionally approve the CS Work Plan and notify the permittee of the conditions.
3. The permittee shall implement the confirmatory sampling in accordance with the approved CS Work Plan.
4. The permittee shall prepare and submit to the Commissioner in accordance with the schedule in the approved CS Work Plan, a Confirmatory Sampling (CS) Report identifying those SWMUs or AOCs that have released hazardous waste or hazardous constituents into the environment. The CS Report shall include all data, including raw data, and a summary and analysis of the data, that supports the above determination.
5. Based on the results of the CS Report, the Commissioner shall determine the need for further investigations at the SWMUs or AOCs covered in the CS Report. If the Commissioner determines that such investigations are needed, the permittee shall be required to prepare a plan for such investigations as outlined in subparagraphs

III.E.1(a) and (b). The Commissioner will notify the permittee of any no further action decision.

**E. RCRA FACILITY INVESTIGATION (RFI)**

1. RFI Work Plan(s)

- (a) The permittee shall prepare and submit to the Commissioner, within one hundred twenty (120) calendar days of notification by the Commissioner, an RFI Work Plan for those units identified under paragraph III.B.1, III.B.4, III.C.2 or III.D.5. The RFI Work Plan(s) shall be developed to meet the requirements of subparagraph III.E.1(b).
- (b) The RFI Work Plan(s) shall meet the requirements of Attachment 1, Appendix B. The RFI Work Plan(s) shall include schedules of implementation and completion of specific actions necessary to determine the nature and extent of contamination and the potential pathways of contaminant releases to the air, soil, surface water and groundwater. The permittee must provide sufficient justification and associated documentation that a release is not probable or has already been characterized if a unit or a media/pathway associated with a unit (groundwater, surface water, soil, subsurface gas or air) is not included in the RFI Work Plan(s). Such deletions of a unit, media or pathway from the RFI(s) are subject to the approval of the Commissioner. The permittee shall provide sufficient written justification for any omissions or deviations from the minimum requirements of Attachment 1, Appendix B. Such omissions or deviations are subject to the approval of the Commissioner. In addition, the scope of the RFI Work Plan(s) shall include all investigations necessary to ensure compliance with Rule 1200-1-11-.06(6)(l)3.
- (c) The RFI Work Plan(s) must be approved by the Commissioner, in writing, prior to implementation. The Commissioner shall specify the start date of the RFI Work Plan schedule in the letter approving the RFI Work Plan(s). If the Commissioner disapproves the RFI Work Plan(s), the Commissioner shall either (1) notify the permittee in writing of the RFI Work Plan's deficiencies and specify a due date for submission of a revised RFI Work Plan, (2) revise the RFI Work Plan and notify the permittee of the revisions and the start date of the schedule within the approved RFI Work Plan or (3) conditionally approve the RFI Work Plan and notify the permittee of the conditions.

2. RFI Implementation

The permittee shall implement the RFI(s) in accordance with the approved RFI Work Plan(s) and Attachment 1, Appendix B. The permittee shall notify the

Commissioner at least twenty (20) calendar days prior to any field activity in the event that it is different than the schedule specified in the RFI Work Plan.

3. RFI Reports

- (a) If the time required to conduct the RFI(s) is greater than one hundred eighty (180) calendar days, the permittee shall provide the Commissioner with semi-annual RFI Progress Reports on April 30 and October 30 of each calendar year unless otherwise directed by the Commissioner in the RFI Work Plan approval letter. The Progress Reports shall contain the following information at a minimum:
  - (i) A description of the portion of the RFI completed;
  - (ii) Summaries of findings;
  - (iii) Summaries of any deviations from the approved RFI Work Plan during the reporting period;
  - (iv) Summaries of any significant contacts with local community public interest groups or government agencies;
  - (v) Summaries of any problems encountered during the reporting period;
  - (vi) Actions taken to rectify problems;
  - (vii) Projected work for the next reporting period; and
  - (viii) Copies of daily reports, inspection reports, data, etc.
  
- (b) The permittee shall prepare and submit to the Commissioner Draft and Final RCRA Facility Investigation Report(s) for the investigations conducted pursuant to the RFI Work Plan(s) submitted under subparagraph III.E.1(a). The Draft RFI Report(s) shall be submitted to the Commissioner for review in accordance with the schedule in the approved RFI Work Plan(s). The Final RFI Report(s) shall be submitted to the Commissioner within thirty (30) calendar days of receipt of the Commissioner's final comments on the Draft RFI Report. The RFI Report(s) shall include an analysis and summary of all required investigations of SWMUs and AOCs and their results. The summary shall describe the type and extent of contamination at the facility, including sources and migration pathways, identify all hazardous constituents present in all media, and describe actual or potential receptors. The RFI Report(s) shall also describe the extent of contamination (qualitative/quantitative) in relation to background levels indicative of the area. If the Draft RFI Report is a summary of the initial phase investigatory

work, the report shall include a work plan for the final phase investigatory actions required based on the initial findings. Approval of the final phase work plan shall be carried out in accordance with subparagraph III.E.1(c). The objective of this task shall be to ensure that the investigation data are sufficient in quality (e.g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, potential threat to human health and/or the environment, and to support a Corrective Measures Study, if necessary.

- (c) The permittee shall prepare and submit to the Commissioner, along with the Draft and Final RFI Report(s), screening levels for each of the hazardous constituents reported in subparagraph III.E.3(b). Screening levels shall be calculated as specified in Attachment 1, Appendix E of this permit.
- (d) The Commissioner will review the RFI Report(s), including the screening levels described in subparagraph III.E.3(c). The Commissioner shall notify the permittee of the need for further investigative action if necessary and, if appropriate at this moment of the investigation, inform the permittee, if not already notified, of the need for a Corrective Measures Study to meet the requirements of subparagraph III.G.1(b) and Rule 1200-1-11-.06(6)(l). The Commissioner will notify the permittee of any no further action decision. Any further investigative action required by the Commissioner shall be prepared and submitted in accordance with a schedule specified by the Commissioner and approved in accordance with subparagraph III.E.1(c).

**F. INTERIM MEASURES (IM)**

**1. IM Work Plan**

- (a) Upon notification by the Commissioner, the permittee shall prepare and submit an Interim Measures (IM) Work Plan for any SWMU or AOC which the Commissioner determines is necessary. IM are necessary in order to minimize or prevent the further migration of contaminants and limiting actual or potential human and environmental exposure to contaminants while long-term corrective action remedies are evaluated and, if necessary, implemented. The IM Work Plan shall be submitted within one hundred twenty (120) calendar days of such notification and shall include the elements listed in subparagraph III.F.1(c). Such interim measures may be conducted concurrently with investigations required under the terms of this permit.
- (b) The permittee may initiate IM at a SWMU or AOC by submitting the appropriate notification pursuant to subparagraph I.D.11(a). The permittee shall give written notice to the Commissioner as soon as possible of any planned physical alterations or additions, including permittee-initiated

Interim Measures, which impact known or suspected contamination at or from SWMUs or AOCs referenced in paragraphs III.A.2, III.A.3, III.A.4, III.A.5, III.A.6, III.A.7 and III.C.1. The notice shall include at a minimum, a summary of the planned change, the reason for the planned change, a discussion of the impact(s) the planned change will have on the ability to investigate contamination at or from the SWMU or AOC, and a discussion of the impact(s) the planned change will have on the known or suspected contamination. The Commissioner will process permittee-initiated IM by either conditionally approving the IM or imposing an IM Work Plan per subparagraph III.F.1(a). Permittee-initiated IM shall be considered conditionally approved unless the Commissioner specifically imposes an IM Work Plan within thirty (30) days of receipt of notification of the permittee-initiated IM. The scope and success of permittee-initiated IM conditionally approved per subparagraph III.F.1(b) shall be subject to subsequent in-depth review with the Commissioner providing comments and/or an approval letter for the permittee-initiated IM. Permittee-initiated IM must follow the progress and final reporting requirements in paragraph III.F.3.

- (c) The IM Work Plan shall ensure that the interim measures are designed to mitigate any current or potential threat(s) to human health or the environment and is consistent with and integrated into any long-term solution at the facility. The IM Work Plan shall include: the interim measures objectives, procedures for implementation (including any designs, plans, or specifications) and schedules for implementation.
- (d) The IM Work Plan imposed under subparagraph III.F.1(a) must be approved by the Commissioner, in writing, prior to implementation. The Commissioner shall specify the start date of the IM Work Plan schedule in the letter approving the IM Work Plan. If the Commissioner disapproves the IM Work Plan, the Commissioner shall either (1) notify the permittee in writing of the IM Work Plan's deficiencies and specify a due date for submission of a revised IM Work Plan, (2) revise the IM Work Plan and notify the permittee of the revisions and the start date of the schedule within the approved IM Work Plan or (3) conditionally approve the IM Work Plan and notify the permittee of the conditions.

## 2. IM Implementation

- (a) The permittee shall implement the interim measures imposed under subparagraph III.F.1(a) in accordance with the approved IM Work Plan.
- (b) The permittee shall give notice to the Commissioner as soon as possible of any planned changes, reductions or additions to the IM Work Plan imposed under subparagraph III.F.1(a) or initiated by the permittee under subparagraph III.F.1(b).

- (c) Final approval of corrective action required under Rule 1200-1-11-.06(6)(l) which is achieved through interim measures shall be in accordance with Rule 1200-1-11-.07(9)(c) and subsection III.H as a permit modification.

3. IM Reports

- (a) If the time required for completion of interim measures imposed under subparagraph III.F.1(a) or implemented under subparagraph III.F.1(b) is greater than one year, the permittee shall provide the Commissioner with progress reports at intervals specified in the approved Work Plan or semi-annually for permittee-initiated interim measures. The Progress Reports shall contain the following information at a minimum:
  - (i) A description of the portion of the interim measures completed;
  - (ii) Summaries of findings;
  - (iii) Summaries of any deviations from the IM Work Plan during the reporting period;
  - (iv) Summaries of any problems or potential problems encountered during the reporting period; and
  - (v) Projected work for the next reporting period.
- (b) The permittee shall prepare and submit to the Commissioner, within ninety (90) days of completion of interim measures conducted under subsection III.F, an Interim Measures (IM) Report. The IM Report shall contain the following information at a minimum:
  - (i) A description of interim measures implemented;
  - (ii) Summaries of results;
  - (iii) Summaries of all problems encountered;
  - (iv) Summaries of accomplishments and/or effectiveness of interim measures; and
  - (v) Copies of all relevant laboratory/monitoring data, etc. in accordance with paragraph I.D.9.

**G. CORRECTIVE MEASURES STUDY**

1. Corrective Measures Study (CMS) Work Plan

- (a) The permittee shall prepare and submit a CMS Work Plan for those units requiring a CMS within one hundred twenty (120) calendar days of notification by the Commissioner that a CMS is required. This CMS Work Plan shall be developed to meet the requirements of subparagraph III.G.1(b). The permittee may seek approval from the Commissioner for concurrent RFI/CMS. The CMS may be performed concurrent with the RFI process if the Commissioner determines that sufficient investigative details are available to allow concurrent action.
- (b) The CMS Work Plan shall meet the requirements of Attachment 1, Appendix C at a minimum. The CMS Work Plan shall include schedules of implementation and completion of specific actions necessary to complete a CMS. The permittee must provide sufficient justification and/or documentation for any unit deleted from the CMS Work Plan. Such deletion of a unit is subject to the approval of the Commissioner. The CMS shall be conducted in accordance with the approved CMS Work Plan. The permittee shall provide sufficient written justification for any omissions or deviations from the minimum requirements of Attachment 1, Appendix C. Such omissions or deviations are subject to the approval of the Commissioner. The scope of the CMS Work Plan shall include all investigations necessary to ensure compliance with Rules 1200-1-11-.06(6)(1), .06(22)(c) and .07(8)(b)2(ii). The permittee shall implement corrective actions beyond the facility boundary, as set forth in paragraph III.A.8.
- (c) The Commissioner shall either approve or disapprove, in writing, the CMS Work Plan. If the Commissioner disapproves the CMS Work Plan, the Commissioner shall either (1) notify the permittee in writing of the CMS Work Plan's deficiencies and specify a due date for submittal of a revised CMS Work Plan, (2) revise the CMS Work Plan and notify the permittee of the revisions or (3) conditionally approve the CMS Work Plan and notify the permittee of the conditions. This modified CMS Work Plan becomes the approved CMS Work Plan.

2. Corrective Measures Study Implementation

The permittee shall begin to implement the Corrective Measures Study according to the schedules specified in the CMS Work Plan, no later than ninety (90) calendar days after the permittee has received written approval from the Commissioner for the CMS Work Plan. Pursuant to subparagraph III.G.1(b) the CMS shall be conducted in accordance with the approved CMS Work Plan.

3. CMS Report

- (a) The permittee shall prepare and submit to the Commissioner a draft and final CMS Report for the study conducted pursuant to the approved CMS Work Plan. The draft CMS Report shall be submitted to the Commissioner in accordance with the schedule in the approved CMS Work Plan. The final CMS Report shall be submitted to the Commissioner within thirty (30) calendar days of receipt of the Commissioner's final comments on the draft CMS Report. The CMS Report shall summarize any bench-scale or pilot tests conducted. The CMS Report must include an evaluation of each remedial alternative. If a remedial alternative requires the use of a Corrective Action Management Unit (CAMU), the CMS report shall include all information necessary to establish and implement the CAMU. The CMS Report shall present all information gathered under the approved CMS Work Plan. The CMS Final Report must contain adequate information to support the Commissioner's decision on the recommended remedy, described under subsection III.H.
- (b) If the Commissioner determines that the CMS Final Report does not fully satisfy the information requirements specified under subparagraph III.G.3(a), the Commissioner may disapprove the CMS Final Report. If the Commissioner disapproves the CMS Final Report, the Commissioner shall notify the permittee in writing of deficiencies in the CMS Final Report and specify a due date for submittal of a revised CMS Final Report. The Commissioner will notify the permittee of any no further action decision.
- (c) As specified under subparagraph III.G.3(b), based on preliminary results and the CMS Final Report, the Commissioner may require the permittee to evaluate additional remedies or particular elements of one or more proposed remedies.

**H. REMEDY APPROVAL AND PERMIT MODIFICATION**

- 1. A remedy shall be selected from the remedial alternatives evaluated in the CMS. It will be based at a minimum on protection of human health and the environment, as per specific site conditions, existing regulations, and guidance. The selected remedy may include any interim measures implemented to date.
- 2. Pursuant to Rule 1200-1-11-.07(9)(c), a permit modification will be initiated by the Commissioner after recommendation of a remedy under paragraph III.H.1. This modification will serve to incorporate a final remedy, including a CAMU if necessary, into this permit.

**I. MODIFICATION OF CORRECTIVE ACTION SCHEDULE OF COMPLIANCE**

1. If at any time the Commissioner determines that modification of a corrective action schedule is necessary, the Commissioner may initiate a modification. All corrective action schedules in this permit section are summarized in the Schedule of Compliance in Attachment 1, Appendix D.
2. Modifications that are initiated and finalized by the Commissioner will be in accordance with the applicable provisions of Rule 1200-1-11-.07(9). The permittee may also request a permit modification in accordance with 1200-1-11-.07(9) to change the Schedule of Compliance.

**J. WORK PLAN AND REPORT REQUIREMENTS**

1. All work plans and schedules shall be subject to approval by the Commissioner prior to implementation to assure that such work plans and schedules are consistent with the requirements of this permit and with applicable regulations and guidance. The permittee shall revise all submittals and schedules as specified by the Commissioner. Upon approval, the permittee shall implement all work plans and comply with all schedules as written.
2. All work plans and reports shall be submitted in accordance with the approved schedule. Extension of the due date for any corrective action submittal may be granted by the Commissioner based on the permittee's demonstration that sufficient justification for the extension exists.
3. If the permittee at any time determines that the SAR information required under paragraph III.B.3, the CS Work Plan under paragraph III.D.1, or RFI Work Plan(s) required under subparagraph III.E.1(b) no longer satisfy the requirements of Rule 1200-1-11-.06(6)(l) or this permit for prior or continuing releases of hazardous waste or hazardous constituents from solid waste management units and/or areas of concern, the permittee shall submit an amended Work Plan(s) to the Commissioner within ninety (90) calendar days of such determination.
4. Three (3) hard copies and one (1) electronic copy of all corrective action reports and work plans shall be provided by the permittee to the Commissioner in care of Mike Apple at the following address:

Mr. Mike Apple, Director  
Tennessee Division of Solid Waste Management  
5th Floor, L&C Tower  
401 Church Street  
Nashville, Tennessee 37243-1535

**K. APPROVAL/DISAPPROVAL OF SUBMITTALS**

The Commissioner will review the work plans, reports, schedules, and other documents ("submittals") which require the Commissioner's approval in accordance with the conditions of this permit. The Commissioner will notify the permittee in writing of any submittal that is disapproved, and the basis therefore. Subsection III.L shall apply only to submittals that have been disapproved and revised by the Commissioner or that have been disapproved by the Commissioner, then revised and resubmitted by the permittee, and again disapproved by the Commissioner.

**L. DISPUTE RESOLUTION**

The Commissioner and the permittee shall use their best effort to resolve any disputes concerning the proper application of statutory or regulatory provisions informally and in good faith. If a disagreement cannot be resolved informally, the parties jointly or individually may pursue the matter formally by requesting a Declaratory Ruling by the Tennessee Solid Waste Disposal Control Board.

## ATTACHMENT 1, APPENDIX A

### REQUIREMENTS FOR SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN

**Table A-1 List of solid waste management units (SWMUs) and areas of concern (AOCs) that all corrective action activities have been deferred to CERCLA and the Federal Facilities Agreement:**

Attached to this Appendix is DOE's *Table A-1: List of SWMUs and AOCs Requiring Further Investigation/Action Under the FFA*. Permittee is required to submit an update to this list by January 30, of each year.

**Table A-2 List of solid waste management units (SWMUs) and areas of concern (AOCs) that require No Further Action under this permit at this time:**

Attached to this Appendix is DOE's *Table A-2: List of SWMUs and AOCs Requiring No Further Action/Investigation*. Permittee is required to submit an update to this list by January 30, of each year.

**Table A-3 List of solid waste management units (SWMUs) and areas of concern (AOCs) that require Confirmatory Sampling (CS):**

As of permit issuance, there are no units identified as requiring Confirmatory Sampling.

**Table A-4 List of solid waste management units (SWMUs) and areas of concern (AOCs) that require a RCRA Facility Investigation (RFI):**

As of permit issuance, there are no units identified as requiring a RCRA Facility Investigation.

**Table A-5 List of solid waste management units (SWMUs) and areas of concern (AOCs) that require Interim Measures (IM):**

As of permit issuance, there are no units identified as requiring Interim Measures.

**Table A-6 List of solid waste management units (SWMUs) and areas of concern (AOCs) that require a Corrective Measures Study (CMS):**

As of permit issuance, there are no units identified as requiring a Corrective Measures Study.

**Table A-7 List of solid waste management units (SWMUs) and areas of concern (AOCs) that require a Corrective Action Remedy:**

As of permit issuance, there are no units identified as requiring a Corrective Action Remedy.