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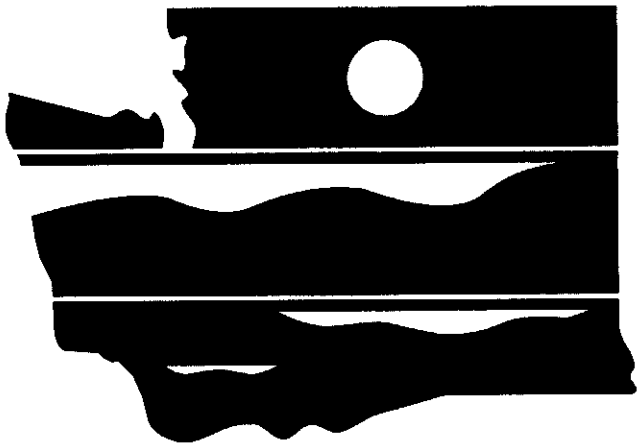
DOCUMENT#	WA7890008967
TITLE	Dangerous Waste Portion of RCRA Permit for Treatment Storage and Disposal of Dangerous Waste (Part 1 of 2)
EDMC#	0054507
SECTION	1 of 4



WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

Revision 7 of the Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Hanford Site

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For the Treatment, Storage, and Disposal of Dangerous Waste

February 2001
Publication No. 94-05-001

Revision 7 of the Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Hanford Site

For the Treatment, Storage, and Disposal of Dangerous Waste

Prepared by: Laura Ruud

Washington State Department of Ecology
Nuclear Waste Program

February 2001
Publication No. 94-05-001

For additional copies of this permit contact:

Department of Ecology
Nuclear Waste Program
1315 W. 4th Ave.
Kennewick, WA 99336
(509) 735-7581

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Department of Ecology Headquarters telecommunications device for the deaf (TDD) number is (360) 407-6006.

DANGEROUS WASTE PORTION OF THE RESOURCE CONSERVATION AND RECOVERY ACT PERMIT FOR THE TREATMENT, STORAGE, AND DISPOSAL OF DANGEROUS WASTE

Washington State Department of Ecology
Nuclear Waste Program
1315 West Fourth Avenue
Kennewick, Washington 99336-6018
Telephone: (509) 735-7581

Issued in accordance with the applicable provisions of the Hazardous Waste Management Act, Chapter 70.105 RCW, and the regulations promulgated thereunder in Chapter 173-303 WAC.

ISSUED TO:

U.S. Department of Energy
Richland Operations Office
(Owner/Operator)
P.O. Box 550
Richland, Washington 99352
Telephone: (509) 376-7395

Bechtel Hanford, Inc.
(Co-operator)
P.O. Box 969
Richland, Washington 99352
Telephone: (509) 376-4646

Fluor Daniel Hanford, Inc.
(Co-operator)
P.O. Box 1000
Richland, Washington 99352
Telephone: (509) 372-2886

Pacific Northwest National Laboratory
(Co-operator)
P.O. Box 999
Richland, Washington 99352
Telephone: (509) 375-6600

CH2M HILL Hanford Group, Inc.
(Co-operator)
P.O. Box 1500
Richland, Washington 99352
Telephone: (509) 372-8061

This Permit, as modified on February 28, 2001, is effective as of March 30, 2001, and shall remain in effect through September 27, 2004, unless revoked and reissued under WAC 173-303-830(3), terminated under WAC 173-303-830(5), or continued in accordance with WAC 173-303-806(7). The Internet address for this Permit is http://www.hanford.gov/docs/wa7890008967/index.htm.

ISSUED BY: **WASHINGTON STATE DEPARTMENT OF ECOLOGY**

Jay Jerue for Mike Wilson Date: 2-27-01

Michael Wilson, Manager
Nuclear Waste Program, Department of Ecology

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LIST OF ATTACHMENTS

The following listed documents are attached in their entirety. However, only those portions of the attachments specified in Parts I through VI are enforceable conditions of this Permit and subject to the permit modification requirements of Condition I.C.3. Changes to portions of the attachments, which are not subject to the permit modification process, shall be addressed in accordance with Conditions I.E.8., I.E.11., I.E.13., I.E.15. through I.E.20., and I.E.22. Ecology has, as deemed necessary, modified specific language in these attachments. These modifications are described in the conditions (Parts I through VI), and thereby supersede the language of the attachment.

Attachment 1	Hanford Federal Facility Agreement and Consent Order, (as amended)
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Attachment 3	Permit Applicability Matrix, (as revised on March 22, 2000)
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1		modifications
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4	Attachment 20	218-E-8 Borrow Pit Demolition Site Closure Plan, DOE/RL-92-53, Revision 1, October 1994 **(Clean Closed, November 28, 1995)**
6	Attachment 21	200 West Ash Pit Demolition Site Closure Plan, DOE/RL-92-54, Revision 1, September 1994 **(Clean Closed, November 28, 1995)**
8	Attachment 22	2101-M Pond Closure Plan, DOE/RL-88-41, Revision 2A, July 1993 **(Clean Closed, November 28, 1995)**
10	Attachment 23	216-B-3 Expansion Ponds Closure Plans, DOE/RL-89-28, Revision 2, October 1994 **(Clean Closed, July 31, 1995)**
12	Attachment 24	Hanford Patrol Academy Demolition Sites Closure Plan, DOE/RL-92-39, Revision 1, December 1994 **(Clean Closed, November 28, 1995)**
14	Attachment 25	105-DR Large Sodium Fire Facility Closure Plan, DOE/RL-90-25, Revision 2, March 1995 **(Partial Closure Plan Completed October 1, 1996)**
16	Attachment 26	304 Concretion Facility Closure Plan, DOE/RL-90-03, Revision 2A, March 1995 **(Clean Closed, January 21, 1996)**
18	Attachment 27	Permit Modification Schedule (as revised on May 18, 1999)
19	Attachment 28	PUREX Storage Tunnels Part A, Form 3, Revision 5, October 1996, and Part B, DOE/RL-90-24, Revision 4, April 1997, and approved modifications
21	Attachment 29	4843 Alkali Metal Storage Facility Closure Plan, DOE/RL-90-49, Revision 1, September 1995 **(Clean Closed, April 14, 1997)**
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37	Attachment 36	325 Hazardous Waste Treatment Units Part A, Form 3, Revision 4, June 1997, and Part B Permit Application, DOE/RL-92-35, Revision 1, July 1997, and approved modifications
40	Attachment 37	183-H Solar Evaporation Basins Post-Closure Plan, DOE/RL-97-48, Revision 0, June 1997

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INTRODUCTION

Pursuant to Chapter 70.105 Revised Code of Washington (RCW), the Hazardous Waste Management Act (HWMA) of 1976, as amended, Chapter 70.105D RCW, the Model Toxics Control Act (MTCA), and regulations promulgated thereunder by the Washington State Department of Ecology (hereafter called Ecology), codified in Chapter 173-303 Washington Administrative Code (WAC), Dangerous Waste Regulations, a Dangerous Waste Permit is issued to the United States Department of Energy - Richland Operations Office (USDOE-RL), [owner/operator], and its contractors, Fluor Daniel Hanford, Inc. (FDH), [co-operator], Pacific Northwest National Laboratory (PNNL), [co-operator], CH2M HILL Hanford Group, Inc. (CHG), [co-operator], and Bechtel Hanford, Incorporated (BHI), [co-operator], hereafter called the Permittees, for the treatment, storage, and disposal of dangerous waste at the Hanford Facility.

This Dangerous Waste Permit, issued in conjunction with the United States Environmental Protection Agency's (hereafter called EPA) Hazardous and Solid Waste Amendments Portion of the Resource Conservation and Recovery Act (RCRA) Permit for the Treatment, Storage, and Disposal (TSD) of Hazardous Waste (HSWA Permit), constitutes the RCRA Permit for the Hanford Facility. Use of the term "Permit" within the Dangerous Waste Permit shall refer to the Dangerous Waste Permit, while use of the term "Permit" within the HSWA Permit, shall refer to the HSWA Permit. Use of the same term in both the Dangerous Waste Permit and the HSWA Permit, shall have the standard meaning associated with the activities addressed by the permit in which the term is used. Such meanings shall prevail, except where specifically stated otherwise.

The Permittees shall comply with all terms and conditions set forth in this Permit and those portions of the Attachments that have been specifically incorporated into this Permit. When the Permit and the Attachments (except Attachment 1) conflict, the wording of the Permit will prevail. The Permit is intended to be consistent with the terms and conditions of the Hanford Federal Facility Agreement and Consent Order (FFACO, Attachment 1). The Permittees shall also comply with all applicable state regulations, including Chapter 173-303 WAC.

Applicable state regulations are those which are in effect on the date of issuance, or as specified in subsequent modifications of this Permit. In addition, applicable state regulations include any self-implementing statutory provisions and related regulations which, according to the requirements of the HWMA, as amended, or other law(s), are automatically applicable to the Permittees' dangerous waste management activities, notwithstanding the conditions of this Permit.

This Permit is based upon the Administrative Record, as required by WAC 173-303-840. The Permittees' failure in the application, or during the Permit issuance process, to fully disclose all relevant facts, or the Permittees' misrepresentation of any relevant facts at any time, shall be grounds for the termination or modification of this Permit and/or initiation of an enforcement action, including criminal proceedings. The Permittees shall inform Ecology of any deviation from the Permit conditions, or changes in the information on which the application is based, which would affect either the Permittees' ability to comply, or actual compliance with the applicable regulations or the Permit conditions, or which alters any condition of this Permit in any way.

Ecology shall enforce all conditions of this Permit for which the State of Washington is authorized, or which are "state-only" provisions (i.e., conditions broader in scope or more stringent than the federal RCRA program). Any challenges of any Permit condition may be appealed in accordance with WAC 173-303-845. In the event that any Permit condition is challenged by any Permittee under WAC 173-303-845, Ecology may stay any such Permit condition as it pertains to all Permittees, in accordance with the same terms of any stay it grants to the challenging Permittee. If such a stay is granted, it will constitute a "stay by the issuing agency" within the meaning of RCW 43.21B.320(1).

This Permit has been developed to allow a step-wise permitting process of the Hanford Facility to ensure the proper implementation of the FFACO. In order to accomplish this, this Permit consists of six (6) parts.

Part I, **Standard Conditions**, contains conditions which are similar to those appearing in all dangerous waste permits.

Part II, **General Facility Conditions**, combines typical dangerous waste permit conditions with those conditions intended to address issues specific to the Hanford Facility. Where appropriate, the general facility conditions apply to all final status dangerous waste management activities at the Facility. Where appropriate, the general facility conditions also address dangerous waste management activities which may not be directly associated with distinct TSD units, or which may be associated with many TSD units (i.e., spill reporting, training, contingency planning, etc.). Part II also includes conditions that address corrective action at solid waste management units and areas of concern.

Part III, **Unit-Specific Conditions for Operating Units,** contains those Permit requirements that apply to each individual TSD unit operating under final status. Conditions for each TSD unit are found in a chapter dedicated to that TSD unit. These unit-specific chapters contain references to Standard Conditions (Part I) and General Conditions (Part II), as well as additional requirements which are intended to ensure that each TSD unit is operated in an efficient and environmentally protective manner. Additional requirements may also be added when an operating unit ceases operations and undergoes closure.

Part IV, **Unit-Specific Conditions for Corrective Action,** contains those permit requirements which apply to specific RPP units that are undergoing corrective action under the FFACO. RPP units may include solid waste management units and other areas of concern (i.e., releases that are not at solid waste management units and do not constitute a solid waste management unit) that are undergoing corrective action. For The Comprehensive Environmental Response, Conservation, and Liability Act (CERCLA) and RCRA past practice (RPP) units identified in the FFACO, the corrective action conditions are structured around continued coordination with, and reliance on, the investigation and cleanup requirements established under the FFACO. For TSD units identified in the FFACO, the corrective action conditions contemplate use of closure and post-closure processes to satisfy corrective action.

Part V, **Unit-Specific Conditions for Units Undergoing Closure**, contains those requirements which apply to those specific TSD units, included in this part, that are undergoing closure. In accordance with Section 5.3. of the Action Plan of the FFACO, all TSD units that undergo closure, irrespective of permit status, shall be closed pursuant to the authorized State Dangerous Waste Program in accordance with WAC 173-303-610. Requirements for each TSD unit undergoing closure are found in a chapter dedicated to that TSD unit. These unit-specific chapters contain references to Standard Conditions (Part I) and General Conditions (Part II), as well as additional requirements which are intended to ensure that each TSD unit is closed in an efficient and environmentally protective manner.

Part VI, **Unit-Specific Conditions for Units in Post-Closure,** contains those requirements which apply to those specific units in this part that have completed modified or landfill closure requirements, and now only need to meet Post-Closure Standards. As set forth in Section 5.3. of the Action Plan of the FFACO, certain TSD units shall be permitted for post-closure care pursuant to the authorized State Dangerous Waste Program (173-303 WAC) and the Hazardous and Solid Waste Amendments. Requirements for each unit undergoing post-closure care are found in a chapter, within this part, dedicated to that unit. These unit specific chapters may contain references to Standard Conditions (Part I) and General Conditions (Part II), as well as the unit specific conditions, all of which are intended to ensure the unit is managed in an efficient, environmentally protective manner.

DEFINITIONS

Except with respect to those terms specifically defined below, all definitions contained in the FFACO, May 1989, as amended, and in WAC 173-303-040 and other portions of Chapter 173-303 WAC are hereby incorporated, in their entirety, by reference into this Permit. For terms defined in both Chapter 173-303 WAC and the FFACO, the definitions contained in Chapter 173-303 WAC shall control within this Permit. Nonetheless, this Permit is intended to be consistent with the FFACO.

Where terms are not defined in the regulations, the Permit, or the FFACO, a standard dictionary reference, or the generally accepted scientific or industrial meaning of the terms shall define the meaning associated with such terms.

As used in this Permit, words in the masculine gender also include the feminine and neuter genders, words in the singular include the plural, and words in the plural include the singular.

The following definitions apply throughout this Permit:

a. The term **"Area of Concern"** means any area of the Facility where a release of dangerous waste or dangerous constituents has occurred, is occurring, is suspected to have occurred, or threatens to occur.

b. The term **"Contractor(s)"** means, unless specifically identified otherwise in this Permit, or Attachments, Fluor Daniel Hanford, Inc. (FDH), Pacific Northwest National Laboratory (PNNL), Bechtel Hanford, Inc. (BHI), and CH2M HILL Hanford Group, Inc. (CHG).

c. The term **"Critical Systems,"** as applied to determining whether a Permit Modification is required, means those specific portions of a TSD unit's structure, or equipment, whose failure could lead to the release of dangerous waste into the environment, and/or systems which include processes which treat, transfer, store, or dispose of regulated wastes. A list identifying the critical systems of a specific TSD unit may be developed and included in Part III, V, and/or VI of this Permit. In developing a critical system list, or in the absence of a critical system list, WAC 173-303-830 Modifications shall be considered.

d. The term **"Dangerous Constituent"** means any constituent identified in WAC 173-303-9905 or 40 CFR Part 264 Appendix IX, any constituent which caused a waste to be listed or designated as dangerous under Chapter 173-303 WAC, and any constituents within the meaning of hazardous substance at RCW 70.105D.020(7).

e. The term **"Dangerous Waste"** means those solid wastes designated under Chapter 173-303 WAC as dangerous or extremely hazardous waste. As used in the Permit, the phrase "dangerous waste" shall refer to the full universe of wastes regulated by Chapter 70.105 RCW and Chapter 173-303 WAC (including dangerous waste, hazardous waste, extremely hazardous waste, mixed waste, and acutely hazardous waste).

f. The term **"Days"** means calendar days, unless specifically identified otherwise. Any submittal, notification, or recordkeeping requirement that would be due, under the Conditions of this Permit, on a Saturday, Sunday, or federal, or state holiday, shall be due on the following business day, unless specifically stated otherwise in the Permit.

g. The term **"Director"** means the Director of the Washington State Department of Ecology, or a designated representative. The Program Manager of the Nuclear Waste Program (with the address as specified on page one [1] of this Permit) is a duly authorized and designated representative of the Director for purposes of this Permit.

h. The term **"Ecology"** means the Washington State Department of Ecology (with the address as specified on page one [1] of this Permit).

i. The term **"Facility"** means all contiguous land, structures, other appurtenances, and improvements on the land used for recycling, reusing, reclaiming, transferring, storing, treating, or disposing of

dangerous waste. The legal and physical description of the Facility is set forth in Attachment 2 of this Permit.

j. The term **"Facility"** for the purposes of corrective action under Condition II.Y, means all contiguous property under the control of the Permittees and all property within the meaning of "facility" at RCW 70.105D.020(3) as set forth in Attachment 2 to this Permit.

k. The term "**FFACO**" means the Hanford Federal Facility Agreement and Consent Order, as amended (Commonly referred to as Tri-Party Agreement [TPA]).

l. The term "**Permittees**" means the United States Department of Energy (owner/operator), Fluor Daniel Hanford, Inc. (Co-operator), Bechtel Hanford, Inc. (Co-operator), CH2M HILL Hanford Group, Inc. (Co-operator) and Pacific Northwest National Laboratory (Co-operator).

m. The term "**Permittees**" for purposes of corrective action under Condition II.Y means only the United States Department of Energy (owner/operator).

n. The term "**Raw Data**" means the initial value of analog or digital instrument output, and/or manually recorded values obtained from measurement tools or personal observation. These values are converted into reportable data (e.g., concentration, percent moisture) via automated procedures and/or manual calculations.

o. The term "**RCRA Permit**" means the Dangerous Waste Portion of the RCRA Permit for the Treatment, Storage, and Disposal of Dangerous Waste (Dangerous Waste Permit) issued by the Washington State Department of Ecology, pursuant to Chapter 70.105 RCW and Chapter 173-303 WAC, coupled with the HSWA Portion of the RCRA Permit for the Treatment, Storage, and Disposal of Hazardous Waste (HSWA Permit) issued by EPA, Region 10, pursuant to 42 U.S.C. 6901 et seq. and 40 CFR Parts 124 and 270.

p. The term "**Reasonable Times**" means normal business hours; hours during which production, treatment, storage, construction, disposal, or discharge occurs, or times when Ecology suspects a violation requiring immediate inspection.

q. The term **"Release"** means any intentional or unintentional spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of dangerous constituents into the environment and includes the abandonment or discarding of barrels, containers, and other receptacles containing dangerous waste or dangerous constituents, and includes any releases within the meaning of release at RCW 70.105D.020(20).

r. The term "**Significant Discrepancy**" in regard to a manifest or shipping paper, means a discrepancy between the quantity or type of dangerous waste designated on the manifest, or shipping paper, and the quantity or type of dangerous waste a TSD unit actually receives. A significant discrepancy in quantity is a variation greater than ten (10) percent in weight for bulk quantities (e.g., tanker trucks, railroad tank cars, etc.), or any variation in piece count for nonbulk quantities (i.e., any missing container or package would be a significant discrepancy). A significant discrepancy in type is an obvious physical or chemical difference which can be discovered by inspection or waste analysis (e.g., waste solvent substituted for waste acid).

s. The term **"Solid Waste Management Unit (SWMU)"** means any discernible location at the Facility where solid wastes have been placed at any time, irrespective of whether the location was intended for the management of solid or dangerous waste, and includes any area at the Facility at which solid wastes have been routinely and systematically released (for example through spills), and includes dangerous waste treatment, storage, and disposal units.

t. The term **"Unit" (or "TSD unit")**, as used in Parts I through VI of this Permit, means the contiguous area of land on or in which dangerous waste is placed, or the largest area in which there is a significant likelihood of mixing dangerous waste constituents in the same area. A TSD unit, for purposes of this

Permit, is a subgroup of the Facility which has been identified in a Hanford Facility Dangerous Waste Part A Permit Application Form 3.

ACRONYMS

ALARA	As Low As Reasonably Achievable
AMSF	Alkali Metal Storage Facility
APDS	Ash Pit Demolition Site
APP	Used to Denote Appendix Page Numbers
APT	Area Process Trenches
ARAR	Applicable, Relevant, and Appropriate Requirements
BHI	Bechtel Hanford, Inc.
BPDS	Borrow Pit Demolition Site
CD/RR	Chemical Disposal/Recycle Request
CERCLA	Comprehensive Environmental Response Compensation and Liability Act of 1980 (as Amended by the Superfund Reauthorization Act of 1986)
CFR	Code of Federal Regulations
CHG	CH2M HILL Hanford Group, Inc.
CIP	Construction Inspection Plan
CLARC	Cleanup Levels and Risk Calculations
CLP	Contract Laboratory Program
COC	Chemical Contaminants of Concern
CPP	CERCLA Past Practice
DOE-RL	U.S. Department of Energy, Richland Operations Office
DQO	Data Quality Objective
DSC	Differential Scanning Colorimetry
EC	Emergency Coordinator
ECN	Engineering Change Notice
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
ERA	Expedited Response Action
ERDF	Environmental Restoration and Disposal Facility
ETF	200 Area Effluent Treatment Facility
FFACO	Hanford Federal Facility Agreement and Consent Order
FH	Fluor Hanford
GW	Ground Water
HPADS	Hanford Patrol Academy Demolition Site
HSWA	Hazardous and Solid Waste Amendments of 1984

1	HWMA	Hazardous Waste Management Act
2	ID	Identification
3	IRM	Interim Remedial Measure
4	LDR	Land Disposal Restrictions
5	LERF	Liquid Effluent Retention Facility
6	LSFF	105-DR Large Sodium Fire Facility
7	MTCA	Model Toxics Control Act
8	NCR	Non-conformance Report
9	OSWER	Office of Solid Waste and Emergency Response
10	PNNL	Pacific Nothwest National Laboratory
11	QA	Quality Assurance
12	QAPP	Quality Assurance Project Plan
13	QC	Quality Control
14	RCRA	Resource Conservation and Recovery Act of 1976
15	RCW	Revised Code of Washington
16	ROD	Record of Decision
17	RPD	Relative Percent Difference
18	RPP	RCRA Past Practice
19	SAP	Sampling and Analysis Plan
20	SARA	Superfund Amendments and Reauthorization Act of 1986
21	SCD	Security Control Devices
22	SHLWS	Simulated High Level Waste Slurry
23	SOP	Standard Operating Procedure
24	SWMU	Solid Waste Management Unit
25	TCLP	Toxicity Characteristic Leaching Procedure
26	TSD	Treatment, Storage, and/or Disposal
27	USDOE	United States Department of Energy
28	WAC	Washington Administrative Code
29	WAP	Waste Analysis Plan
30	183-H	183-H Solar Evaporation Basins
31	242-A	242-A Evaporator
32	300 APT	300 Area Process Trenches
33	300 ASE	300 Area Solar Evaporator
34	303-K	303-K Storage Facility

1	305-B	305-B Storage Facility
2	325 HWTUs	325 Hazardous Waste Treatment Units
3	616-NRDWSF	616 Nonradioactive Dangerous Waste Storage Facility

PART I - STANDARD CONDITIONS

I.A EFFECT OF PERMIT

I.A.1. The Permittees are authorized to treat, store, and dispose of dangerous waste in accordance with the Conditions of this Permit and in accordance with the applicable provisions of Chapter 173-303 WAC (including provisions of the Chapter as they have been applied in the FFACO). Any treatment, storage, or disposal of dangerous waste by the Permittees at the Facility that is not authorized by this Permit, or by WAC 173-303-400 (including provisions of this regulation as they have been applied in the FFACO), for those TSD units not subject to this Permit, and for which a Permit is required by Chapter 173-303 WAC, is prohibited.

TSD units operating or closing under interim status shall maintain interim status until that TSD unit is incorporated into Part III, V, and/or VI of this Permit, or until interim status is terminated under WAC 173-303-805(8). Interim status units shall be incorporated into this Permit through the Permit Modification process. (Refer to Attachment 27 for TSD unit incorporation).

I.A.2. The Conditions of this Permit shall be applied to the Facility as defined by the Permit Applicability Matrix (Attachment 3).

I.A.3. USDOE is responsible for activities which include, but are not limited to, the overall management and operation of the Facility.

FDH is identified as a Permittee for activities subject to the Conditions of this Permit where its agents, employees, or subcontractors have operational and/or management responsibilities and control.

PNNL is identified as a Permittee for activities subject to the Conditions of this Permit where its agents, employees, or subcontractors have operational and/or management responsibilities and control.

BHI is identified as a Permittee for activities subject to the Conditions of this Permit where its agents, employees, or subcontractors have operational and/or management responsibilities and control.

I.A.4. Coordination With The FFACO

Each TSD unit shall have an application for a final status Permit or closure/post-closure plan submitted to Ecology in accordance with the schedules identified in the FFACO (Milestone M-20-00). After completion of the Permit application or closure plan review, a final Permit decision will be made pursuant to WAC 173-303-840. Specific Conditions for each TSD unit shall be incorporated into this Permit in accordance with the Class 3 Permit Modification procedure identified in Condition I.C.3., at the time identified in the five (5) year Permit Modification Schedule in Attachment 27.

I.B PERSONAL AND PROPERTY RIGHTS

This Permit does not convey property rights of any sort, or any exclusive privilege; nor does it authorize any injury to persons or property, or any invasion of other private rights, or any violation of federal, state, or local laws or regulations.

I.C PERMIT ACTIONS

I.C.1 Modification, Revocation, Reissuance, or Termination

This Permit may be modified, revoked and reissued, or terminated by Ecology for cause as specified in WAC 173-303-830(3),(4), and (5).

I.C.2 Filing of a Request

The filing of a request for a Permit Modification, or revocation and reissuance, or termination, or a notification of planned changes, or anticipated noncompliance on the part of the Permittees, shall not stay the applicability or enforceability of any Condition except as provided in WAC 173-303-830(3), (4), and (5).

I.C.3 Modifications

Except as provided otherwise by specific language in this Permit, the Permit Modification procedures of WAC 173-303-830 shall apply to Modifications or changes in design or operation of the Facility, or any Modification or change in dangerous waste management practices covered by this Permit. As an exception, the Permittees shall provide notifications to Ecology required by WAC 173-303-830(4)(a)(i)(A) on a quarterly basis. Each quarterly notification shall be submitted within ten (10) days of the end of the quarter, and provide the required information for all such Modifications put into effect during that reporting period. Quarterly reporting periods shall be based upon the state Fiscal Year.

I.D SEVERABILITY

I.D.1 Effect of Invalidation

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 contested and/or held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. Invalidation of any state statutory or regulatory provision which forms the basis for any Condition of this Permit does not affect the validity of any other state statutory or regulatory basis for said Condition.

I.D.2 Final Resolution

In the event that a Condition of this Permit is stayed for any reason, the Permittees shall continue to comply with the related applicable and relevant interim status standards in WAC 173-303-400 until final resolution of the stayed Condition, unless Ecology determines compliance with the related applicable and relevant interim status standards would be technologically incompatible with compliance with other Conditions of this Permit, which have not been stayed, or unless the FFACO authorizes an alternative action, in which case the Permittees shall comply with the FFACO.

I.E DUTIES AND REQUIREMENTS

I.E.1 Duty to Comply

The Permittees shall comply with all Conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency Permit issued under WAC 173-303-804. Any Permit noncompliance other than noncompliance authorized by an emergency Permit constitutes a violation of Chapter 70.105 RCW, as amended, and is grounds for enforcement action, Permit termination, Modification or revocation and reissuance of the Permit, and/or denial of a Permit renewal application.

I.E.2 Compliance Not Constituting Defense

Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Section 3007, 3008, 3013, or 7003 of RCRA (42 U.S.C. Sections 6927, 6928, 6934, and 6973), Section 104, 106(a) or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) [42 U.S.C. Sections 9604, 9606(a), and 9607], as amended by the Superfund Amendments and

Reauthorization Act of 1986 (42 U.S.C. 9601 et seq.), or any other federal, state, or local law governing protection of public health, or the environment; provided, however, that compliance with this Permit during its term constitutes compliance at those areas subject to this Permit for the purpose of enforcement with WAC 173-303-140, WAC 173-303-180, WAC 173-303-280 through -395, WAC 173-303-600 through -680, WAC 173-303-810, and WAC 173-303-830, except for Permit Modifications and those requirements not included in the Permit that become effective by statute, or that are promulgated under 40 CFR Part 268 restricting the placement of dangerous waste in or on the land.

I.E.3 Duty to Reapply

If the Permittees wish to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittees must apply for, and obtain a new Permit, in accordance with WAC 173-303-806(6).

I.E.4 Permit Expiration and Continuation

This Permit, and all Conditions herein, will remain in effect beyond the Permit's expiration date until the effective date of the new Permit, if the Permittees have submitted a timely, complete application for renewal per WAC 173-303-806 and, through no fault of the Permittees, Ecology has not made a final Permit determination as set forth in WAC 173-303-840.

I.E.5 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense in the case of 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.

I.E.6 Duty to Mitigate

In the event of noncompliance with the Permit, the Permittees shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to minimize or correct adverse impacts on human health and the environment.

I.E.7 Proper Operation and Maintenance

The Permittees shall at all times properly operate and maintain all facilities and systems of treatment and control, which are installed or used by the Permittees, 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/quality control procedures. This provision requires the operation of backup or auxiliary facilities, or similar systems only when necessary to achieve compliance with the Conditions of the Permit.

I.E.8 Duty to Provide Information

The Permittees shall furnish to Ecology, within a reasonable time, any relevant information which Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittees shall also furnish to Ecology, upon request, copies of records required to be kept by this Permit.

I.E.9 Inspection and Entry

The Permittees shall allow Ecology, or authorized representatives, upon the presentation of Ecology credentials, to:

I.E.9.a During operating hours, and at all other reasonable times, enter and inspect the Facility or any unit or area within the Facility, where regulated activities are located or conducted, or where records must be kept under the Conditions of this Permit;

I.E.9.b Have access to, and copy, at reasonable times, any records that must be kept under the Conditions of this Permit;

I.E.9.c Inspect at reasonable times any portion of the Facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,

I.E.9.d Sample or monitor, at reasonable times, for the purposes of assuring Permit compliance, or as otherwise authorized by state law, as amended, for substances or parameters at any location.

I.E.10 Monitoring and Records

I.E.10.a Samples and measurements taken by the Permittees for the purpose of monitoring required by this Permit shall be representative of the monitored activity. Sampling methods shall be in accordance with WAC 173-303-110 or 40 CFR 261, unless otherwise specified in this Permit, or agreed to in writing by Ecology. Analytical methods shall be as specified in the most recently published test procedure of the documents cited in WAC 173-303-110(3)(a) through (d), unless otherwise specified in this Permit, or agreed to in writing by Ecology.

I.E.10.b The Permittees shall retain at the TSD unit(s), or other locations approved by Ecology, as specified in Parts III, V, and/or VI of this Permit, records of monitoring information required for compliance with this Permit, including calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of reports and records required by this Permit, and records of data used to complete the application for this Permit for a period of at least ten (10) years from the date of the sample, measurement, report, or application, unless otherwise required for certain information by other Conditions of this Permit. This information may be retained on electronic media.

I.E.10.c The Permittees shall retain at the Facility, or other approved location, records of all monitoring and maintenance records, copies of all reports and records required by this Permit, and records of all data used to complete the application for this Permit, which are not associated with a particular TSD unit, for a period of at least ten (10) years from the date of certification of completion of post-closure care, or corrective action for the Facility, whichever is later. This information may be retained on electronic media.

I.E.10.d The record retention period may be extended by request of Ecology at any time by notification, in writing, to the Permittees, and is automatically extended during the course of any unresolved enforcement action regarding this Facility to ten (10) years beyond the conclusion of the enforcement action.

I.E.10.e Records of monitoring information shall include:

i. The date, exact place and time of sampling or measurements;

ii. The individual who performed the sampling or measurements and their affiliation;

iii. The dates the analyses were performed;

iv. The individual(s) who performed the analyses and their affiliation;

v. The analytical techniques or methods used; and,

vi. The results of such analyses.

I.E.11 Reporting Planned Changes

The Permittees shall give notice to Ecology, as soon as possible, of any planned physical alterations, or additions to the Facility subject to this Permit. Such notice does not authorize any noncompliance with, or Modification of, this Permit.

I.E.12 Certification of Construction or Modification

The Permittees may not commence treatment, storage, or disposal of dangerous wastes in a new or modified portion of TSD units subject to this Permit until:

i. The Permittees have submitted to Ecology, by certified mail, overnight express mail, or hand delivery, a letter signed by the Permittees, and a registered professional engineer, stating that the TSD unit has been constructed or modified in compliance with the Conditions of this Permit; and,

ii. Ecology has inspected the modified or newly constructed TSD unit, and finds that it is in compliance with the Conditions of this Permit; or

iii. Within fifteen (15) days of the date of receipt of the Permittees' letter, the Permittees have not received notice from Ecology of its intent to inspect, prior inspection is waived, and the Permittees may commence treatment, storage, and disposal of dangerous waste.

I.E.13 Anticipated Noncompliance

The Permittees shall give at least thirty (30) days advance notice to Ecology of any planned changes in the Facility subject to this Permit, or planned activity which might result in noncompliance with Permit requirements.

If thirty (30) days advance notice is not possible, then the Permittees shall give notice immediately after the Permittees become aware of the anticipated noncompliance. Such notice does not authorize any noncompliance with, or Modification of, this Permit.

I.E.14 Transfer of Permits

This Permit may be transferred to a new owner only if it is modified, or revoked and reissued, pursuant to WAC 173-303-830(3)(b). The Permit may be transferred to a new Co-operator in accordance with the provisions of WAC 173-303-830(2). Before transferring ownership or operation of the Facility during its operating life, the Permittees shall notify the new owner or Co-operator, in writing, of the requirements of WAC 173-303-600 and -806, and this Permit.

I.E.15 Immediate Reporting

I.E.15.a The Permittees shall verbally report to Ecology any release of dangerous waste or hazardous substances, or any noncompliance with the Permit which may endanger human health or the environment. Any such information shall be reported immediately after the Permittees become aware of the circumstances.

I.E.15.b The immediate verbal report shall contain all the information needed to determine the nature and extent of any threat to human health and the environment, including the following:

i. Name, address, and telephone number of the Permittee responsible for the release or noncompliant activity;

ii. Name, location, and telephone number of the unit at which the release occurred;

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 hazard to the environment and human health, where this is applicable;

vii. Estimated quantity of released material that resulted from the incident; and,

viii. Actions which have been undertaken to mitigate the occurrence.

I.E.15.c The Permittees shall report, in accordance with Conditions I.E.15.a. and I.E.15.b., any information concerning the release, or unpermitted discharge, of any dangerous waste or hazardous substances that may cause an endangerment to drinking water supplies, or ground or surface waters, or of a release, or discharge of dangerous waste, or hazardous substances, or of a fire or explosion at the Facility, which may threaten human health or the environment. The description of the occurrence and its cause shall include all information necessary to fully evaluate the situation and to develop an appropriate course of action.

I.E.15.d For any release or noncompliance not required to be reported to Ecology immediately, a brief account must be entered within two (2) working days, into the TSD Operating Record, for a TSD unit, or into the Facility Operating Record, inspection log, or separate spill log, for non-TSD units. This account must include: the time and date of the release, the location and cause of the release, the type and quantity of material released, and a brief description of any response actions taken or planned.

I.E.15.e All releases, regardless of location of release, or quantity of release, shall be controlled and mitigated, if necessary, as required by WAC 173-303-145(3).

I.E.16 Written Reporting

Within fifteen (15) days after the time the Permittees become aware of the circumstances of any noncompliance with this Permit, which may endanger human health or the environment, the Permittees shall provide to Ecology a written report. The written report shall contain a description of the noncompliance and its cause (including the information provided in the verbal notification); the period of noncompliance including exact dates and times; the anticipated time noncompliance is expected to continue, if the noncompliance has not been corrected; corrective measures being undertaken to mitigate the situation, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

I.E.17 Manifest Discrepancy Report

I.E.17.a For dangerous waste received from outside the Facility, whenever a significant discrepancy in a manifest is discovered, the Permittees shall attempt to reconcile the discrepancy. If not reconciled within fifteen (15) days of discovery, the Permittees shall submit a letter report in accordance with WAC 173-303-370(4), including a copy of the applicable manifest or shipping paper, to Ecology.

I.E.17.b For dangerous waste which is being transported within the Facility (i.e., shipment of on-site generated dangerous waste), whenever a significant discrepancy in the shipping papers (see Condition II.Q.1.) is discovered, the Permittees shall attempt to reconcile the discrepancy. If not reconciled within fifteen (15) days of discovery, the Permittees shall note the discrepancy in the receiving unit's Operating Record.

I.E.18 Unmanifested Waste Report

The Permittees shall follow the provisions of WAC 173-303-370 for the receipt of any dangerous waste shipment from off-site. The Permittees shall also submit a report in accordance with WAC 173-303-390(1) to Ecology within fifteen (15) days of receipt of any unmanifested dangerous waste shipment received from off-site sources.

I.E.19 Other Noncompliance

The Permittees shall report to Ecology all instances of noncompliance, not otherwise required to be reported elsewhere in this Permit, at the time the Annual Dangerous Waste Report is submitted.

I.E.20 Other Information

Whenever the Permittees become aware that they have failed to submit any relevant facts in a Permit application, closure plan, or post-closure plan, or submitted incorrect information in a Permit application, closure plan, or post-closure plan, or in any report to Ecology, the Permittees shall promptly submit such facts or corrected information.

I.E.21 Reports, Notifications, and Submissions

All written reports, notifications or other submissions, which are required by this Permit to be sent, or given to the Director or Ecology, should be sent certified mail, overnight express mail, or hand delivered, to the current address and telephone number shown below. This address and telephone number may be subject to change.

Department of Ecology
1315 West Fourth Avenue
Kennewick, Washington 99336
Telephone: (509) 735-7581

Telephonic and oral reports/notifications also need to be provided to Ecology's Kennewick Office.

Ecology shall give the Permittees written notice of a change in address or telephone number. It is the responsibility of the Permittees to ensure any required reports, notifications, or other submissions are transmitted to the addressee listed in this Condition. However, the Permittees shall not be responsible for ensuring verbal and written correspondence reaches a new address or telephone number until after their receipt of Ecology's written notification.

I.E.22 Annual Report

The Permittees shall comply with the annual reporting requirements of WAC 173-303-390(2)(a) through (e), and (g).

I.F SIGNATORY REQUIREMENT

All applications, reports, or information submitted to Ecology, which require certification, shall be signed and certified in accordance with WAC 173-303-810(12) and (13). All other reports required by this Permit and other information requested by Ecology shall be signed in accordance with WAC 173-303-810(12).

I.G CONFIDENTIAL INFORMATION

The Permittees may declare as confidential any information required to be submitted by this Permit, at the time of submission, in accordance with WAC 173-303-810(15).

I.H DOCUMENTS TO BE MAINTAINED AT FACILITY SITE

The Permittees shall maintain at the Facility, or some other location approved by Ecology, the following documents and amendments, revisions, and modifications to these documents:

1. This Permit and all Attachments;

2. All dangerous waste Part B Permit applications, post-closure Permit applications;and closure plans; and

3. The Facility Operating Record.

These documents shall be maintained for ten (10) years after post-closure care or corrective action for the Facility, whichever is later, has been completed and certified as complete.

PART II - GENERAL FACILITY CONDITIONS

II.A FACILITY CONTINGENCY PLAN

II.A.1 The Permittees shall immediately carry out applicable provisions of the Hanford Emergency Management Plan as provided in Attachment 4, pursuant to WAC 173-303-360(2), whenever there is a release of dangerous waste, or dangerous waste constituents, or other emergency circumstance, either of which threatens human health or the environment.

II.A.2 The Permittees shall comply with the requirements of WAC 173-303-350(4), as provided in The Hanford Emergency Management Plan (Attachment 4). The Hanford Emergency Management Plan provides reference to the need for unit-specific contingency documentation included in Part III of this Permit.

II.A.3 The Permittees shall review and amend, if necessary, the applicable portions of the Hanford Emergency Management Plan, as provided in Attachment 4, pursuant to WAC 173-303-350(5), and in accordance with the provisions of WAC 173-303-830(4). The Permittees shall be able to demonstrate how Amendments to the applicable portions are controlled. The plan shall be amended within a period of time agreed upon by Ecology.

II.A.4 The Permittees shall comply with the requirements of WAC 173-303-350(3) and –360(1) concerning the emergency coordinator, except the names and home telephone numbers will be on file with the single point-of-contact, phone number (509) 373-3800 or 375-2400 (for PNNL units) as described in the Hanford Emergency Management Plan.

II.B PREPAREDNESS AND PREVENTION

II.B.1 The Permittees shall equip the Facility with the equipment specified in WAC 173-303-340(1) as specified in the Hanford Emergency Management Plan (Attachment 4). Unit-specific preparedness and prevention provisions are included in Parts III, V, and/or VI of this Permit.

II.B.2 The Permittees shall test and maintain the equipment specified in the previous Condition as necessary to assure proper operation in the event of emergency.

II.B.3 The Permittees shall maintain access to communications or alarms pursuant to WAC 173-303-340(2), as provided in the Hanford Emergency Management Plan (Attachment 4) and unit-specific contingency plans.

II.B.4 The Permittees shall comply with WAC 173-303-340(4) and WAC 173-303-355(1) pertaining to arrangements with local authorities.

II.C PERSONNEL TRAINING

II.C.1 The Permittees shall conduct personnel training as required by WAC 173-303-330. The Permittees shall maintain documents in accordance with WAC 173-303-330(2) and (3). Training records may be maintained in the Hanford Facility Operating Record, or on electronic data storage.

II.C.2 All Hanford Facility personnel shall receive general Facility training within six (6) months of hire. This training shall provide personnel with orientation of dangerous waste management activities being conducted at the Hanford Facility. This training shall include:

II.C.2.a. Description of emergency signals and appropriate personnel response;

II.C.2.b. Identification of contacts for information regarding dangerous waste management activities;

II.C.2.c. Introduction to waste minimization concepts;

II.C.2.d. Identification of contact(s) for emergencies involving dangerous waste; and

II.C.2.e. Familiarization with the applicable portions of the Hanford Emergency Management Plan.

II.C.3 Description of training plans for personnel assigned to TSD units subject to this Permit are delineated in the unit-specific Chapters in Parts III, V, and/or VI of this Permit.

II.C.4 The Permittees shall provide the necessary training to non-Facility personnel (i.e., visitors, sub-contractors), as appropriate, for the locations of such personnel, and the activities that will be undertaken. At a minimum, this training shall describe dangerous waste management hazards at the Facility.

II.D WASTE ANALYSIS

II.D.1 All waste analyses required by this Permit shall be conducted in accordance with a written waste analysis plan (WAP), or sampling and analysis plan (SAP). Operating TSD units shall have a WAP, which shall be approved through incorporation of the TSD unit into Part III of this Permit. Closing TSD units, and units in post-closure, should have a SAP and, if necessary, a WAP, which shall be approved through incorporation of the TSD unit into Part V and/or VI of this Permit.

II.D.2 Until a WAP is implemented in accordance with Condition II.D.1., any unit(s) identified in Parts III, V, and/or VI of this Permit, without a unit-specific WAP approved by Ecology, shall not treat, store, or dispose of dangerous waste, unless specified otherwise by Ecology in writing.

II.D.3 Each TSD unit WAP shall include:

i. The parameters for which each dangerous waste will be analyzed, and the rationale for selecting these parameters; (i.e., how analysis for these parameters will provide sufficient information on the waste properties to comply with WAC 173-303-300(1), (2), (3), and (4);

ii. The methods of obtaining or testing for these parameters;

iii. The methods for obtaining representative samples of wastes for analysis (representative sampling methods are discussed in WAC 173-303-110(2);

iv. The frequency with which analysis of a waste will be reviewed, or repeated, to ensure that the analysis is accurate and current;

v. The waste analyses which generators have agreed to supply;

vi. Where applicable, the methods for meeting the additional waste analysis requirements for specific waste management methods, as specified in WAC 173-303-140(4)(b), 173-303-395(1), 173-303-630 through 173-303-670, and 40 CFR 264.1034, 264.1063, 284(a), and 268.7, for final status facilities;

vii. For off-site facilities, the procedures for confirming that each dangerous waste received matches the identity of the waste specified on the accompanying manifest, or shipping paper. This includes at least:

(1) The procedure for identifying each waste movement at the Facility; and,

(2) The method for obtaining a representative sample of the waste to be identified, if the identification method includes sampling.

viii. For surface impoundments exempted from Land Disposal Restrictions (LDR) under 40 CFR 268.4(a), incorporated by reference in WAC 173-303-140(2), the procedures and schedules for:

- The sampling of impoundment contents;
- The analysis of test data; and
- The annual removal of residues that are not delisted under 40 CFR 260.22, or which exhibit a characteristic of hazardous waste and either;

A) Do not meet applicable treatment standards of 40 CFR Part 268, Subpart D; or

B) Where no treatment standards have been established:

i) Such residues are prohibited from land disposal under 40 CFR 268.32, or RCRA section 3004(d); or

ii) Such residues are prohibited from land disposal under 40 CFR 268.33(f); and

ix. For off-site facilities, the procedures for confirming that each dangerous waste received matches the identity of the waste specified on the accompanying manifest, or shipping paper. This includes, at least:

(1) The procedure for identifying each waste movement at the Facility; and

(2) The method for obtaining a representative sample of the waste to be identified, if the identification method includes sampling.

II.D.4 Should waste analysis be required by this Permit at a location on the Facility, other than at a TSD unit, a SAP shall be maintained by the Permittees, and made available upon request from Ecology. Any SAP required by this Permit, not associated with a particular TSD unit, shall include the elements of Conditions II.D.3.(i) through II.D.3.(iv).

II.E QUALITY ASSURANCE/QUALITY CONTROL

II.E.1 All WAPs and SAPs required by this Permit shall include a quality assurance/quality control (QA/QC) plan, or equivalent, to document all monitoring procedures so as to ensure that all information, data, and resulting decisions are technically sound, statistically valid, and properly documented. Each QA/QC plan shall include, or contain a reference to another document, which will be used and includes, the elements defined in Conditions II.E.2. and II.E.3. The QA/QC plan may be part of a SAP, WAP, or equivalent.

II.E.2 Each QA/QC plan shall contain a Data Quality Assurance Plan which includes the following:

II.E.2.a Data Collection Strategy section including, but not limited to, the following:

i. A description of the intended uses for the data, and the necessary level of precision and accuracy for those intended uses; and,

ii. A description of methods and procedures to be used to assess the precision, accuracy, and completeness of the measurement data;

II.E.2.b A Sampling section which shall include or describe, and reference or cite:

i. Sampling methods including the identification of sampling equipment, a description of

purging procedures, and a description of decontamination procedures to be used;

ii. Criteria for selecting appropriate sampling locations, depths, etc., or identification and justification of sample collection points and frequencies;

iii. Criteria for providing a statistically sufficient number of samples as defined in EPA guidance, or criteria for determining a technically sufficient number of measurements to meet the needs of the project as determined through the Data Quality Objective (DQO) planning process;

iv. Methods for, or specification of, measuring all necessary ancillary data;

v. Criteria for, or specification of, determining conditions under which sampling should be conducted;

vi. Criteria for establishing, or specification of, which parameters are to be measured at each sample collection point, and the frequency that each parameter is to be measured;

vii. Criteria for, or specification of, identifying the type of sampling (e.g., composites vs. grabs), and number of samples to be collected;

vii. Criteria for, or specification of, measures to be taken to prevent contamination of the sampling equipment and cross contamination between sampling points;

ix. Methods and documentation of field sampling operations and procedure descriptions, as appropriate, including:

(1) Documentation of procedures for preparation of reagents or supplies, which become an integral part of the sample (e.g., filters and absorbing reagents);

(2) Procedure descriptions and forms for recording the exact location, sampling conditions, sampling equipment, and visual condition of samples;

(3) Documentation of specific sample preservation method;

(4) Calibration of field devices;

(5) Collection of replicate samples;

(6) Submission of field-biased blanks, where appropriate;

(7) Potential interferences present at the facility;

(8) Field equipment listing and sample containers;

(9) Sampling order; and,

(10) Descriptions of decontamination procedures.

x. Selection of appropriate sample containers, as applicable;

xi. Sample preservation methods, as applicable; and,

xii. Chain-of-custody procedure descriptions as applicable, including:

(1) Standardized field tracking reporting forms to establish sample custody in the field prior to, and during shipment; and,

(2) Pre-prepared sample labels containing all information necessary for effective sample tracking, except where such information is generated in the field, in which case, blank spaces shall be provided on the pre-prepared sampling label.

II.E.2.c Where applicable, a field measurements section which shall address:

i. Selecting appropriate field measurement locations, depths, etc.;

ii. Providing a statistically sufficient number of field measurements as defined in EPA guidance, or criteria for determining a technically sufficient number of measurements to meet the needs of the project as determined through the DQO process;

iii. Measuring all necessary ancillary data;

iv. Determining conditions under which field measurements should be conducted;

v. Determining which media are to be addressed by appropriate field measurements (e.g., ground water, air, soil, sediment, etc.);

vi. Determining which parameters are to be measured and where;

vii. Selecting the frequency of field measurement and length of field measurement period; and,

viii. Documenting field measurement operations and procedures, including:

(1) Descriptions of procedures and forms for recording raw data and the specific location, time, and sampling conditions;

(2) Calibration of field devices;

(3) Collection of replicate measurements;

(4) Submission of field-biased blanks, where appropriate;

(5) Potential interferences present at the facility;

(6) Field equipment listing; and,

(7) Descriptions of decontamination procedures.

II.E.2.d Where applicable, a Sample Analysis Section which shall specify the following:

i. Chain-of-custody procedures, including:

(1) Certification that all samples obtained for analysis will be delivered to a responsible person, at the recipient laboratory, who is authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records;

(2) Provision for a laboratory sample custody log; and,

(3) Specification of chain-of-custody procedures for sample handling, storage, and disbursement for analysis.

ii. Sample storage procedure descriptions and storage times;

iii. Sample preparation methods;

iv. Descriptions of analytical procedures, including:

(1) Scope and application of the procedure;

(2) Sample matrix;

(3) Potential interferences;

(4) Precision and accuracy of the methodology; and,

(5) Method detection limits.

v. Descriptions of calibration procedures and frequency;

vi. Data reduction, validation, and reporting;

vii. Internal laboratory quality control checks, laboratory performance, and systems audits and frequency, including:

(1) Method blank(s);

(2) Laboratory control sample(s);

(3) Calibration check sample(s);

(4) Replicate sample(s);

(5) Matrix-spiked sample(s);

(6) "Blind" quality control;

(7) Control charts;

(8) Surrogate samples;

(9) Zero and span gases; and,

(10) Reagent quality control checks.

II.E.3 Each QA/QC plan shall include a Data Management Plan, or equivalent, to document and track data and results. This plan shall identify and establish data documentation materials and procedures, project or unit file requirements, and project-related progress reporting procedures and documents. The storage location for the raw data shall be identified. The plan shall also provide the format to be used to record and, for projects, present the validated and invalidated data and conclusions. The Data Management Plan shall include the following as applicable:

II.E.3.a A data record including the following:

i. Unique sample or field measurement code;

ii. Sampling or field measurement location including surveyed horizontal coordinates and elevation of the sample location, and sample or measurement type;

iii. Sampling or field measurement raw data;

iv. Laboratory analysis identification (ID) number;

v. Result of analysis (e.g., concentration);

vi. Elevations of reference points for all ground water level measurements, including water level elevation, top of casing elevation, and ground surface elevation; and,

vii. Magnetic computer records of all ground water, soil, surface water, and sediment analytical data.

II.E.3.b Tabular displays, as appropriate, illustrating:

i. Unsorted validated and invalidated data;

ii. Results for each medium and each constituent monitored;

iii. Data reduction for statistical analysis;

iv. Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and,

v. Summary data.

II.E.3.c Graphical displays (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.), as appropriate, presenting the following:

i. Displays of sampling location and sampling grid;

ii. Identification of boundaries of sampling area and areas where more data is required;

iii. Displays of concentrations of contamination at each sampling location;

iv. Displays of geographical extent of contamination;

v. Aerial and vertical displays of contamination concentrations, concentration averages, and concentration maxima, including isoconcentration maps for contaminants found in environmental media at the Facility;

vi. Illustrations of changes in concentration in relation to distance from the source, time, depth, or other parameters;

vii. Identification of features affecting intramedia transport and identification of potential receptors;

viii. For each round of ground water level measurements, maps showing the distribution of head measurements in each aquifer; and,

ix. For each well, provide a hydrograph that shows the distribution of water level measurements taken during the time interval of the investigation.

II.E.4 Unless otherwise agreed upon in writing by Ecology, the Permittees shall provide notification of availability to Ecology of all data obtained pursuant to this Permit within thirty (30) days of receipt by the Permittees, or after completion of QA/QC activities, if applicable. If Ecology agrees that data will be obtained on a routine basis for a particular unit, the Permittees shall only be required to provide notification of data availability within thirty (30) days of first availability, along with a statement as to expected frequency of future data. If routine data is not acquired at the stated expected frequency, the Permittees shall notify Ecology within thirty (30) days with an explanation and revision, if applicable. This notification requirement shall also apply to any other information obtained from activities conducted, or data obtained, that may influence activities pursuant to this Permit.

II.E.5 The level of QA/QC for the collection, preservation, transportation, and analysis of each sample which is required for implementation of this Permit, may be based upon Ecology approved DQO for the sample. These DQOs shall be approved by Ecology, in writing, or through incorporation of unit plans and Permits into Parts III, V, and/or VI of this Permit.

II.F GROUND WATER AND VADOSE ZONE MONITORING

The Permittees shall comply with the ground water monitoring requirements of WAC 173-303-645. This Condition shall apply only to those wells the Permittees use for the ground water monitoring programs applicable to the TSD units incorporated into Parts III, V, and/or VI of this Permit. Where releases from TSD units subject to this Permit have been

documented or confirmed by investigation, or where vadose zone monitoring is proposed for integration with ground water monitoring, the Permittees shall evaluate the applicability of vadose zone monitoring. The Permittees shall consult with Ecology regarding the implementation of these requirements. If agreed to by Ecology, integration of ground water and vadose zone monitoring, for reasons other than this Permit, may be accommodated by this Permit. Results from other investigation activities shall be used whenever possible to supplement and/or replace sampling required by this Permit.

II.F.1 Purgewater Management

Purgewater shall be handled in accordance with the requirements set forth in Attachment 5, *Purgewater Management Plan*.

II.F.2 Well Remediation and Abandonment

II.F.2.a The Permittees shall inspect the integrity of active resource protection wells as defined by WAC 173-160-030, subject to this Permit, at least once every five (5) years. These inspections shall be recorded in the Operating Record. The Permittees shall prepare and maintain a plan and schedule by January 26, 1995, specifying the schedule and technical standards for this program. The Permittees shall provide a copy of this plan upon the request of Ecology.

II.F.2.b The Permittees shall evaluate resource protection wells subject to this Permit according to Sections 4.0 and 5.0 of the *Hanford Well Maintenance Inspection Plan* (Attachment 6) and the Policy on Remediation of Existing Wells and Acceptance Criteria for RCRA and CERCLA, June 1990 (Attachment 7), to determine if a well has a potential use as a qualified well. The Permittees shall abandon or remediate unusable wells according to the requirements of Chapter 18.104 RCW, Chapter 173-160 WAC, and Chapter 173-162 WAC to ensure that the integrity of wells subject to this Permit is maintained. The time frame for this remediation will be specified in Parts III, V, and/or VI of this Permit.

II.F.2.c Ecology shall receive notice in writing at least seventy-two (72) hours before the Permittees remediate (excluding maintenance activities), or abandon any well subject to this Permit.

II.F.2.d For wells subject to this Permit, the Permittees shall achieve full compliance with Chapter 173-160 WAC and Chapter 18.104 RCW consistent with a rolling five (5) year schedule agreed to by Ecology and the Permittees. This process shall be completed by the year 2012.

II.F.3 Well Construction

All wells constructed pursuant to this Permit shall be constructed in compliance with Chapter 173-160 WAC.

II.G SITING CRITERIA

The Permittees shall comply with the applicable notice of intent and siting criteria of WAC 173-303-281 and WAC 173-303-282, respectively.

II.H RECORDKEEPING AND REPORTING

In addition to the recordkeeping and reporting requirements specified elsewhere in this Permit, the Permittees shall comply with the following:

II.H.1 Cost Estimate for Facility Closure

The Permittees shall submit an annual report updating projections of anticipated costs for closure and post-closure of TSD units incorporated into Parts III, V, and/or VI of this Permit. This report will be submitted annually, by October 31, to Ecology and reflect cost updates as of September 30, of the past Fiscal Year.

II.H.2 Cost Estimate for Post-Closure Monitoring and Maintenance

The Permittees shall submit an annual report updating projections of anticipated costs for post-closure monitoring and maintenance for TSD units incorporated into Parts III, V, and/or VI of this Permit. This report will be submitted annually, by October 31, to Ecology and reflect cost updates as of September 30, of the past Fiscal Year.

II.H.3 The Permittees are exempt from the requirements of WAC 173-303-620

II.I FACILITY OPERATING RECORD

II.I.1 The Permittees shall maintain a written Facility Operating Record until ten (10) years after post-closure, or corrective action is complete and certified for the Facility, whichever is later. Except as specifically provided otherwise in this Permit, the Permittees shall also record all information referenced in this Permit in the Facility Operating Record within seven (7) working days after the information becomes available. A TSD unit-specific Operating Record shall be maintained for each TSD unit at a location identified in Parts III, V, and VI of this Permit. This information may be maintained on electronic media. Each TSD unit-specific Operating Record shall be included by reference in the Facility Operating Record. Information required in each TSD unit-specific Operating Record is identified on a unit-by-unit basis in Part III, V, or VI of this Permit. The Facility Operating Record shall include, but not be limited to, the following information:

II.I.1.a A description of the system(s) currently utilized to identify and map solid waste management units and their locations. The description of the system(s) is required to include an identification of on-site access to the system's data, and an on-site contact name and telephone number. In addition to, or as part of, this system(s), the Permittees shall also maintain a list identifying active ninety (90)-day waste storage areas, and dangerous waste satellite accumulation areas and their locations. The list shall identify the location, the predominant waste types managed at the area, and a date identifying when the list was compiled. Maps shall be provided by the Permittees upon request by Ecology;

II.I.1.b Records and results of waste analyses required by WAC 173-303-300;

II.I.1.c An identification of the system(s) currently utilized to generate Occurrence Reports. The identification of the system(s) is required to include a description, an identification of an on-site location of hard-copy Occurrence Reports, an identification of on-site access to the system's data, and an on-site contact name and telephone number;

II.I.1.d Copies of all unmanifested waste reports;

II.I.1.e The Hanford Emergency Management Plan, as well as summary reports, and details of all incidents that require implementing the contingency plan, as specified in WAC 173-303-360(2)(k);

II.I.1.f An identification of the system(s) currently utilized and being developed to record personnel training records and to develop training plans. The identification of the system(s) is required to include a description, an identification of on-site access to the system's data, and an on-site contact name and telephone number;

II.I.1.g Preparedness and prevention arrangements made pursuant to WAC 173-303-340(4) and documentation of refusal by state or local authorities that have declined to enter into agreements in accordance with WAC 173-303-340(5);

II.I.1.h Reserved Condition;

II.I.1.i An identification and description of the report containing closure and post-closure cost estimates required by Conditions II.H.1. and II.H.2. The identification shall provide the on-site location and document number of the report;

II.I.1.j Documentation (e.g., waste profile sheets) of all dangerous waste transported to or from any TSD unit subject to this Permit. This documentation shall be maintained in the receiving unit's Operating Record from the time the waste is received;

II.I.1.k An identification of the system(s) currently utilized to cross-reference waste locations to specific manifest document numbers. The identification of the system(s) is required to include a thorough description, an identification of an on-site location of a hard-copy data report, an identification of on-site access to the system's data, and an on-site contact name and telephone number;

II.I.1.l Reserved Condition;

II.I.1.m Annual Reports required by this Permit;

II.I.1.n An identification of all systems currently utilized to record monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation. The identification of systems shall include a description of the systems. The descriptions shall include a confirmation that the criteria of Condition I.E.10.e. is provided by the utilization of the system. The identification of the systems shall also include an identification of on-site access to the system's data, an on-site contact name and telephone number;

II.I.1.o Reserved Condition;

II.I.1.p Summaries of all records of ground water corrective action required by WAC 173-303-645;

II.I.1.q An identification of the system(s) currently being utilized and being developed to evaluate compliance with the Conditions of this Permit and with Chapter 173-303 WAC. The identification of the system(s) shall include a description of the system(s), an identification of on-site access to the system's data, and an on-site contact name and telephone number. The description of the system(s) shall also include a definition of which portion(s) of the system(s) is accessible to Ecology;

II.I.1.r All deed notifications required by this Permit (to be included by reference);

II.I.1.s All inspection reports required by this Permit; and

II.I.1.t All other reports as required by this Permit, including ECNs and NCRs.

II.I.2 The descriptions of systems and/or reports required in Conditions II.I.1.a., II.I.1.c., II.I.1.f., II.I.1.i., II.I.1.k., II.I.1.n., and II.I.1.q., shall be placed in the Facility Operating Record, by September 28, 1995.

II.J FACILITY CLOSURE

II.J.1 Final closure of the Hanford Facility will be achieved when closure activities for all TSD units have been completed, as specified in Parts III, IV, V, or VI of this Permit. Completion

of these activities shall be documented using either certifications of closure, in accordance with WAC 173-303-610(6), or certifications of completion of post-closure care, in accordance with WAC 173-303-610(11).

II.J.2 The Permittees shall close all TSD units as specified in Parts III, V, and/or VI of this Permit.

II.J.3 The Permittees shall submit a written notification of, or request for, a Permit Modification in accordance with the provisions of WAC 173-303-610(3)(b), whenever there is a change in operating plans, facility design, or the approved closure plan. The written notification or request must include a copy of the amended closure plan for review, or approval, by Ecology.

II.J.4 The Permittees shall close the Facility in a manner that:

II.J.4.a. Minimizes the need for further maintenance;

II.J.4.b. Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of dangerous waste, dangerous constituents, leachate, contaminated run-off, or dangerous waste decomposition products, to the ground, surface water, ground water, or the atmosphere; and

II.J.4.c. Returns the land to the appearance and use of surrounding land areas to the degree possible, given the nature of the previous dangerous waste activity.

II.J.4.d. Meets the requirements of WAC 173-303-610(2)(b).

II.K SOIL/GROUND WATER CLOSURE PERFORMANCE STANDARDS

II.K.1 For purposes of Condition II.K., the term "clean closure" shall mean the status of a TSD unit at the Facility which has been closed to the cleanup levels prescribed by WAC 173-303-610(2)(b), provided certification of such closure has been accepted by Ecology.

II.K.2 The Permittees may close a TSD unit to background levels as defined in Ecology approved Hanford Site Background Documents, if background concentrations exceed the levels prescribed by Condition II.K.1. Closure to these levels, provided the Permittees comply with all other closure requirements for a TSD unit as identified in Parts III, V, and/or VI of this Permit, shall be deemed as "clean closure."

II.K.3 Except for those TSD units identified in Conditions II.K.1., II.K.2., or II.K.4., the Permittees may close a TSD unit to a cleanup level specified under Method C of Chapter 173-340 WAC. Closure of a TSD unit to these levels, provided the Permittees comply with all other closure requirements for the TSD unit as specified in Parts III, V, and/or VI of the Permit, and provided the Permittees comply with Conditions II.K.3.a. through II.K.3.c., shall be deemed as a "modified closure."

II.K.3.a For "modified closures," the Permittees shall provide institutional controls in accordance with WAC 173-340-440 which restricts access to the TSD unit for a minimum of five (5) years following completion of closure. The specific details and duration of institutional controls shall be specified in Parts III, V, and/or VI of this Permit for a particular TSD unit.

II.K.3.b For "modified closures," the Permittees shall provide periodic assessments of the TSD unit to determine the effectiveness of the closure. The specific details of the periodic assessments shall be specified in Parts III, V, and/or VI of this Permit. The periodic assessments shall include, as a minimum, a compliance monitoring plan in accordance with WAC 173-340-410 that will address the assessment requirements on a unit-by-unit basis. At least one (1) assessment activity shall take place after a period of five (5) years from the completion of

closure, which will demonstrate whether the soils and ground water have been maintained at or below the allowed concentrations as specified in Parts III, V, or VI of this Permit. Should the required assessment activities identify contamination above the allowable limits as specified in Parts III, V, and/or VI, the TSD unit must be further remediated, or the requirements of II.K.4. must be followed. Should the required assessment activities demonstrate that contamination has diminished, or remained the same, the Permittees may request that Ecology reduce, or eliminate the assessment activities and/or institutional controls.

II.K.3.c For "modified closures," the Permittees shall specify the particular activities required by this Condition in a Post-Closure Permit application.

II.K.4 Any TSD unit for which Conditions II.K.1., II.K.2., or II.K.3., are not chosen as the closure option, closing the TSD unit as a landfill may be selected. Closure and post-closure of the TSD unit as a landfill, must follow the procedures and requirements specified in WAC 173-303-610.

II.K.5 The cleanup option selected shall be specified in Parts III, V, and/or VI of this Permit, and shall be chosen with consideration of the potential future site use for that TSD unit/area. Definitions contained within Chapter 173-340 WAC shall apply to Condition II.K. Where definitions are not otherwise provided by this Permit, the FFACO, or Chapter 173-303 WAC.

II.K.6 Deviations from a TSD unit closure plan required by unforeseen circumstances encountered during closure activities, which do not impact the overall closure strategy, but provide equivalent results, shall be documented in the TSD unit-specific Operating Record and made available to Ecology upon request, or during the course of an inspection.

II.K.7 Where agreed to by Ecology, integration of other statutorily or regulatory mandated cleanups may be accommodated by this Permit. Results from other cleanup investigation activities shall be used whenever possible to supplement and/or replace TSD unit closure investigation activities. All, or appropriate parts of, multipurpose cleanup and closure documents can be incorporated into this Permit through the Permit Modification process. Cleanup and closures conducted under any statutory authority, with oversight by either Ecology or the EPA, which meet the equivalent of the technical requirements of Conditions II.K.1. through II.K.4., may be considered as satisfying the requirements of this Permit.

II.L DESIGN AND OPERATION OF THE FACILITY

II.L.1 Proper Design and Construction

The Permittees shall design, construct, maintain, and operate the Facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous substances to air, soil, ground water, or surface water, which could threaten human health, or the environment.

II.L.2 Design Changes, Nonconformance, and As-Built Drawings

II.L.2.a The Permittees shall conduct all construction subject to this Permit in accordance with the approved designs, plans and specifications that are required by this Permit, unless authorized otherwise in Conditions II.L.2.b. or II.L.2.c. For purposes of Conditions II.L.2.b. and II.L.2.c., an Ecology construction inspector, or TSD unit manager, are designated representatives of Ecology.

II.L.2.b During construction of a project subject to this Permit, changes to the approved designs, plans

and specifications shall be formally documented with an Engineering Change Notice (ECN). All ECNs shall be maintained in the TSD unit-specific Operating Record and shall be made available to Ecology upon request or during the course of an inspection. The Permittees shall provide copies of ECNs affecting any critical system to Ecology within five (5) working days of initiating the ECN. Identification of critical systems shall be included by the Permittees in each TSD unit-specific dangerous waste Permit application, closure plan or Permit Modification, as appropriate. Ecology will review an ECN modifying a critical system, and inform the Permittees in writing within two (2) working days, whether the proposed ECN, when issued, will require a Class 1, 2, or 3 Permit Modification. If after two (2) working days Ecology has not responded, it will be deemed as acceptance of the ECN by Ecology.

II.L.2.c During construction of a project subject to this Permit, any work completed which does not meet or exceed the standards of the approved design, plans and specifications shall be formally documented with a Nonconformance Report (NCR). All NCRs shall be maintained in the TSD unit-specific Operating Record and shall be made available to Ecology upon request, or during the course of an inspection. The Permittees shall provide copies of NCRs affecting any critical system to Ecology within five (5) working days after identification of the nonconformance. Ecology will review a NCR affecting a critical system and inform the Permittees in writing, within two (2) working days, whether a Permit Modification is required for any nonconformance, and whether prior approval is required from Ecology before work proceeds, which affects the nonconforming item. If Ecology does not respond within two (2) working days, it will be deemed as acceptance and no Permit Modification will be required.

II.L.2.d Upon completion of a construction project subject to this Permit, the Permittees shall produce as-built drawings of the project which incorporate the design and construction modifications resulting from all project ECNs and NCRs, as well as modifications made pursuant to WAC 173-303-830. The Permittees shall place the drawings into the Operating Record within twelve (12) months of completing construction, or within an alternate period of time specified in a unit-specific Condition in Part III or V of this Permit.

II.L.3 Facility Compliance

The Permittees in receiving, storing, transferring, handling, treating, processing, and disposing of dangerous waste, shall design, operate, and/or maintain the Facility in compliance with all applicable federal, state, and local laws and regulations.

II.M SECURITY

The Permittees shall comply with the security provisions of WAC 173-303-310. The Permittees may comply with the requirements of WAC 173-303-310(2) on a unit-by-unit basis.

II.N RECEIPT OF DANGEROUS WASTES GENERATED OFF-SITE

II.N.1 Receipt of Off-Site Waste

The Permittees shall comply with Conditions II.N.2. and II.N.3. for any dangerous wastes which are received from sources outside the United States, or from off-site generators.

II.N.2 Waste From Sources Outside the United States

The Permittees shall meet the requirements of WAC 173-303-290(1) for waste received from outside the United States.

II.N.3 Notice to Generator

For waste received from off-site sources (except where the owner/operator is also the generator), the Permittees shall inform the generator in writing that they have the appropriate Permits for, and will accept, the waste the generator is shipping, as required by WAC 173-303-290(3). The Permittees shall keep a copy of this written notice as part of the TSD unit-specific Operating Record.

II.O GENERAL INSPECTION REQUIREMENTS

II.O.1 The Permittees shall inspect the Facility to prevent malfunctions and deterioration, operator errors, and discharges, which may cause or lead to the release of dangerous waste constituents to the environment, or threaten human health. Inspections must be conducted in accordance with the provisions of WAC 173-303-320(2). In addition to the TSD unit inspections specified in Parts III, V, and/or VI, the following inspections will also be conducted:

II.O.1.a The 100, 200 East, 200 West, 300, and 400 areas shall be inspected annually.

II.O.1.b The Permittees shall inspect the banks of the Columbia River, contained within the Facility boundary, two (2) times yearly. One (1) inspection shall occur at the low water mark of the year and one (1) inspection shall occur at a time chosen by the Permittees. These inspections shall be performed from the river, by boat, and the inspectors shall follow the criteria in Condition II.O.1.c.

II.O.1.c The Permittees shall visually inspect the areas identified in Conditions II.O.1.a. and II.O.1.b. for malfunctions, deterioration, operator errors, and discharges which may cause or lead to the release of dangerous waste constituents to the environment, or that threaten human health. Specific items to be noted are as follows:

i. Remains of waste containers, labels, or other waste management equipment;

ii. Solid waste disposal sites not previously identified for remedial action;

iii. Uncontrolled waste containers (e.g., orphan drums);

iv. Temporary or permanent activities that could generate an uncontrolled waste form; and

v. Unpermitted waste discharges.

II.O.1.d The Permittees shall notify Ecology at least seven (7) days prior to conducting these inspections in order to allow representatives of Ecology to be present during the inspections.

II.O.2 If the inspection by the Permittees, conducted pursuant to Condition II.O.1., reveals any problems, the Permittees shall take remedial action on a schedule agreed to by Ecology.

II.O.3 The inspection of high radiation areas will be addressed on a case-by-case basis in either Part III of this Permit, or prior to the inspections required in Condition II.O.1.

II.P MANIFEST SYSTEM

II.P.1 The Permittees shall comply with the manifest requirements of WAC 173-303-370 for waste received from off-site and WAC 173-303-180 for waste shipped off-site.

II.P.2 Transportation of dangerous wastes along State Highways 240, 24, and 243, and Route 4 South (Stevens Drive) south of the Wye Barricade, if such routes are not closed to general public access at the time of shipment, shall be manifested pursuant to Condition II.P.1.

II.Q ON-SITE TRANSPORTATION

II.Q.1 Documentation must accompany any on-site dangerous waste which is transported to or from any TSD unit subject to this Permit, through or within the 600 Area, unless the roadway is

closed to general public access at the time of shipment. Waste transported by rail or by pipeline is exempt from this Condition. This documentation shall include the following information, unless other unit-specified provisions are designated in Part III or V of this Permit:

II.Q.1.a Generator's name, location, and telephone number;

II.Q.1.b Receiving TSD unit's name, location, and telephone number;

II.Q.1.c Description of waste;

II.Q.1.d Number and type of containers;

II.Q.1.e Total quantity of waste;

II.Q.1.f Unit volume/weight;

II.Q.1.g Dangerous waste number(s); and

II.Q.1.h Any special handling instructions.

II.Q.2 All non-containerized solid, dangerous waste transported to or from TSD units, subject to this Permit, shall be covered to minimize the potential for material to escape during transport.

II.R EQUIVALENT MATERIALS

II.R.1 The Permittees may substitute an equivalent or superior product for any equipment or materials specified in this Permit. Use of equivalent or superior products shall not be considered a Modification of this Permit. A substitution will not be considered equivalent unless it is at least as effective as the original equipment or materials in protecting human health and the environment.

II.R.2 The Permittees shall place in the Operating Record (within seven [7] days after the change is put into effect) the substitution documentation, accompanied by a narrative explanation, and the date the substitution became effective. Ecology may judge the soundness of the substitution.

II.R.3 If Ecology determines that a substitution was not equivalent to the original, it will notify the Permittees that the Permittees' claim of equivalency has been denied, of the reasons for the denial, and that the original material or equipment must be used. If the product substitution is denied, the Permittees shall comply with the original approved product specification, or find an acceptable substitution.

II.S LAND DISPOSAL RESTRICTIONS (LDR)

Unless specifically identified otherwise in the FFACO, the Permittees shall comply with all LDR requirements as set forth in WAC 173-303-140.

II.T ACCESS AND INFORMATION

To the extent that work required by this Permit must be done on property not owned or controlled by the Permittees, the Permittees must utilize their best efforts to obtain access and information at these locations.

II.U MAPPING OF UNDERGROUND PIPING

II.U.1 By September 30, 1996, the Permittees shall submit a report to Ecology, which describes the procedures proposed to be used to compile the information required by Conditions II.U.2., II.U.3., and II.U.4. The report shall describe the methods which will be used to retrieve the

piping information, the estimated accuracy of the data to be provided, QA/QC control techniques to be employed, including field verification activities (i.e., surveying, ground penetrating radar, etc.), to support information gathered from existing drawings, and conceptual examples of the product which will be submitted.

II.U.2 By September 29, 1997, the Permittees shall make an initial submittal to Ecology of maps showing the location of dangerous waste underground pipelines (including active, inactive, and abandoned pipelines which contain or contained dangerous waste subject to the provisions of Chapter 173-303 WAC), on the Facility, which are located outside of the fences enclosing the 200 East, 200 West, 300, 400, 100N, and 100K Areas. These maps shall identify the origin, destination, size, depth, and type (i.e., reinforced concrete, stainless steel, cast iron, etc.), of each pipe and the location of their diversion boxes, valve pits, seal pots, catch tanks, receiver tanks, and pumps, utilizing Washington State Plane Coordinates, NAD 83(91), meters. If the type of pipe material is not documented on existing drawings, the most probable material type shall be provided. These maps shall be accompanied by a description of the QA/QC control measures used to compile the maps.

The age of all pipes required to be identified pursuant to this Condition, shall be documented in an Attachment to the submittal. If the age cannot be documented, an estimate of the age of the pipe shall be provided, based upon best engineering judgment.

These maps, and any Attachments, shall be maintained in the Facility Operating Record and updated annually, after the initial submittal, with new or revised information. Each map submittal required by this Condition shall incorporate information available six (6) months before the scheduled submittal date.

II.U.3 By September 28, 1998, the Permittees shall make an initial submittal to Ecology of piping schematics for dangerous waste underground pipelines (including active, inactive, and abandoned pipelines, which contain or contained dangerous waste subject to the provisions of Chapter 173-303 WAC) within the 200 East, 200 West, 300, 400, 100N, and 100K Areas. The piping schematics shall identify the origin, destination, and direction of flow for each pipe, as well as whether the pipe is active, inactive, or abandoned. These schematics need not include the pipes within a fenced tank farm, or within a building/structure. These schematics shall be accompanied by a description of the QA/QC control measures used to compile the maps.

These schematics and any Attachments, shall be maintained in the Facility Operating Record and updated annually, after the initial submittal, with new or revised information. Each map submittal required by this Condition shall incorporate information available six (6) months before the scheduled submittal date.

II.U.4 By September 28, 1998, the Permittees shall make an initial submittal, to Ecology, of maps showing the location of dangerous waste underground pipelines (including active, inactive, and abandoned pipelines, which contain or contained dangerous waste, subject to the provisions of Chapter 173-303 WAC) within the 200 East, 200 West, 300, 400, 100N, and 100K Areas. These maps will incorporate information available six (6) months prior to the scheduled submittal date. Thereafter, the maps will be updated on an annual basis to incorporate additional information, as such information becomes available in accordance with the FFACO milestone schedule. A schedule for the provision of map input shall be included in the report specified in Condition II.U.1.

The maps shall identify the origin, destination, size, depth and type (i.e., reinforced concrete, stainless steel, cast iron, etc.), of each pipe, and the location of their diversion boxes, valve pits, seal pots, catch tanks, receiver tanks, and pumps, and utilize Washington State Plane Coordinates, NAD 83(91), meters. If the type of pipe material is not documented on existing drawings, the most probable material type shall be provided. These maps need not include the pipes within a fenced tank farm or within a building/structure. These maps shall be accompanied by a description of the QA/QC control used to compile the maps.

The age of all pipes required to be identified pursuant to this Condition shall be documented in an Attachment to the submittal. If the age cannot be documented, an estimate of the age of the pipe shall be provided based upon best engineering judgment.

These maps, and any Attachments, shall be maintained in the Facility Wide Operating Record and updated annually, after the initial submittal, with new or revised information.

II.V MARKING OF UNDERGROUND PIPING

By September 29, 1997, the Permittees shall mark the underground pipelines identified in Condition II.U.2. These pipelines shall be marked at the point they pass beneath a fence enclosing the 200 East, 200 West, 300, 400, 100N, or 100K Areas, at their origin and destination, at any point they cross an improved road, and every 100 meters along the pipeline corridor where practicable. The markers shall be labeled with a sign that reads "Buried Dangerous Waste Pipe" and shall be visible from a distance of fifteen (15) meters.

II.W OTHER PERMITS AND/OR APPROVALS

II.W.1 The Permittees shall be responsible for obtaining all other applicable federal, state, and local Permits authorizing the development and operation of the Facility. To the extent that work required by this Permit must be done under a Permit and/or approval pursuant to other regulatory authority, the Permittees shall use their best efforts to obtain such Permits. Copies of all documents relating to actions taken, pursuant to this Condition, shall be kept in the Operating Record.

II.W.2 All other Permits related to dangerous waste management activities are severable and enforceable through the permitting authority under which they are issued.

II.W.3 All air emissions from TSD units subject to this Permit shall comply with all applicable state and federal regulations pertaining to air emission controls, including but not limited to, Chapter 173-400 WAC, General Regulations for Air Pollution Sources; Chapter 173-460 WAC, Controls for New Sources of Toxic Air Pollutants; and Chapter 173-480 WAC, Ambient Air Quality Standards and Emission Limits for Radionuclides.

II.X SCHEDULE EXTENSIONS

II.X.1 The Permittees shall notify Ecology in writing, as soon as possible, of any deviations or expected deviations, from the schedules of this Permit. The Permittees shall include with the notification all information supporting their claim that they have used best efforts to meet the required schedules. If Ecology determines that the Permittees have made best efforts to meet the schedules of this Permit, Ecology shall notify the Permittees in writing by certified mail, that the Permittees have been granted an extension. Such an extension shall not require a Permit Modification under Condition I.C.3. Should Ecology determine that the Permittees have not made best efforts to meet the schedules of this Permit, Ecology may take such action as deemed necessary.

Copies of all correspondence regarding schedule extensions shall be kept in the Operating Record.

II.X.2 Any schedule extension granted through the approved change control process identified in the FFACO shall be incorporated into this Permit. Such a revision shall not require a Permit Modification under Condition I.C.3.

II.Y CORRECTIVE ACTION

In accordance with WAC 173-303-646 and WAC 173-303-815(2)(b)(ii), the Permittee must conduct corrective action, as necessary to protect human health and the environment, for releases of dangerous waste and dangerous constituents from solid waste management units and areas of concern at the facility, including releases that have migrated beyond the facility boundary. The Permittee may be required to implement measures within the facility to address releases which have migrated beyond the facility's boundary.

II.Y.1. Compliance with Chapter 173-340 WAC

In accordance with WAC 173-303-646, the Permittee must conduct corrective action "as necessary to protect human health and the environment." To ensure that corrective action will be conducted as necessary to protect human health and the environment, except as provided in Condition II.Y.2, the Permittee must conduct corrective action in a manner that complies with the following requirements of Chapter 173-340 WAC:

II.Y.1.a. As necessary to select a cleanup action in accordance with WAC 173-340-360 and WAC 173-340-350 State Remedial Investigation and Feasibility Study;

II.Y.1.b. WAC 173-340-360 Selection of Cleanup Actions;

II.Y.1.c. WAC 173-340-400 Cleanup Actions;

II.Y.1.d. WAC 173-340-410 Compliance Monitoring Requirements;

II.Y.1.e. WAC 173-340-420 Periodic Site Reviews;

II.Y.1.f. WAC 173-340-440 Institutional Controls; and

II.Y.1.g. WAC 173-340-700 through -760 Cleanup Standards.

II.Y.2. Acceptance of Work Under Other Authorities or Programs and Integration with the FFACO

Corrective action is necessary to protect human health and the environment for all units identified in Appendix B and Appendix C of the FFACO. Notwithstanding Condition II.Y.1, work under other cleanup authorities or programs, including work under the FFACO, may be used to satisfy corrective action requirements, provided it protects human health and the environment.

II.Y.2.a. For units identified in Appendix C of the FFAOC, as amended, as CERCLA Past Practice (CPP) Units, Ecology accepts work under the FFACO, as amended, and under the CERCLA program, as satisfying corrective action requirements to the extent provided for in, and subject to the reservations and requirements of, Conditions II.Y.a.i through II.Y.a.iv.

i. For any unit identified in Appendix C of the FFACO as a CPP unit, the Permittee must comply with the requirements and schedules related to investigation and cleanup of the of CPP unit(s) developed and approved under the FFACO, as amended. The requirements and schedules related to investigation and cleanup of CPP units currently in place under the FFACO, as amended, and in the future developed and approved under

the FFAOC, as amended, are incorporated into this Permit by this reference and apply under this Permit as if they were fully set forth herein. If the Permittee is not in compliance with requirements of the FFACO, as amended, that relate to investigation or cleanup of CPP unit(s), Ecology may take action to independently enforce the requirements as corrective action requirements under this Permit.

ii. For any unit identified in Appendix C of the FFACO as a CPP unit, in the case of an interim ROD, a final decision about satisfaction of corrective action requirements will be made in the context of issuance of a final ROD.

iii. If EPA and Ecology, after exhausting the dispute resolution process under Section XXVI of the FFACO, cannot agree on requirements related to investigation or cleanup of CPP unit(s), Ecology will notify the Permittee, in writing, of the disagreement. Within sixty (60) days of receipt of Ecology's notice, or within some other reasonable period of time agreed to by Ecology and the Permittee, the Permittee must submit for Ecology review and approval, a plan to conduct corrective action in accordance with Condition II.Y.1. for the subject unit(s). The Permittee's plan may include a request that Ecology evaluate work under another authority or program. Approved corrective action plans under this condition will be incorporated into this Permit in accordance with the Permit Modification Procedures of WAC 173-303-830.

iv. The Permittee must maintain information on corrective action for CPP units covered by the FFACO in accordance with Sections 9.0 and 10.0 of the FFACO Action Plan. In addition, the Permittee must maintain all reports and other information developed in whole, or in part, to implement the requirements of Condition II.Y.2.a, including reports of investigations and all raw data, in the Facility Operating Record in accordance with Condition II.I. Information that is maintained in the Hanford Site Administrative Record may be incorporated by reference into the Facility Operating Record.

II.Y.2.b. For units identified in Appendix C of the FFACO, as amended, as RPP units, Ecology accepts work under the FFACO, as amended, as satisfying corrective action requirements to the extent provided for, and subject to the reservations and requirements of, Conditions II.Y.2.b.i. through II.Y.2.b.iv.

i. For any unit identified in Appendix C of the FFACO, as amended, as RPP unit, until a permit modification is complete under II.Y.2.b.iii., the Permittee must comply with the requirements and schedules related to investigation and cleanup of RPP units developed and approved under the FFACO, as amended. The requirements and schedules related to investigation and cleanup of RPP units currently in place under the FFACO, as amended, and in the future developed and approved under the FFACO, as amended, are incorporated into this Permit by this reference and apply under this Permit as if they were fully set forth herein. Until a permit modification is complete under II.Y.2.b.iii., if the Permittee is not in compliance with requirements and schedules related to investigation and cleanup of RPP units developed and approved under the FFACO, as amended, Ecology may take action to independently enforce the requirements as corrective action requirements under this Permit.

ii. When the Permittee submits a corrective measures study for an individual RPP unit or a group of RPP units, the Permittee must, at the same time, recommend a remedy for the unit(s). The remedy recommendation must contain all the elements of a draft cleanup action plan under WAC 173-340-360(10).

iii. After considering the Permittees' corrective measures study and remedy recommendation, Ecology will make a tentative remedy selection decision and publish the decision for public review and comment. Public review and comment may be accomplished by publishing the tentative decision as a draft Permit under WAC 173-303-840(10), or by a method that provides an equivalent opportunity for public review and participation. Following public review and comment, Ecology will make a final remedy selection decision. Final remedy decisions will be incorporated into the Permit using the Permit Modification Procedures of WAC 173-303-830.

iv. The Permittee must maintain information on corrective action for RPP units covered by the FFACO, as amended, in accordance with Sections 9.0 and 10.0 of the FFACO Action Plan. In addition, the Permittee must maintain all reports and other information developed in whole, or in part, to implement the requirements of Condition II.Y.2.b., including reports of investigations and all raw data, in the Facility Operating Record in accordance with Condition II.I. Information that is maintained in the Hanford Site Administrative Record may be incorporated into the Facility Operating Record by reference.

II.Y.2.c. For each TSD unit or group of units, when the Permittee submits a certification of closure or a certification of completion of post-closure care, or at an earlier time agreed to by Ecology and the Permittee, the Permittee must, at the same time, either:

i. document that the activities completed under closure and/or post-closure satisfy the requirements for corrective action; or

ii. if the activities completed under closure and/or post-closure care do not satisfy corrective action requirements, identify the remaining corrective action requirements and the schedule under which they will be satisfied, if remaining corrective action requirements will be satisfied by work developed and carried out under the FFACO provisions for RPP units or CPP units, a reference to the appropriate RPP or CPP process and schedule will suffice.

iii. Ecology will make final decisions as to whether the work completed under closure and/or post-closure care satisfies corrective action, specify any unit-specific corrective action requirements, and incorporate the decision into this Permit in accordance with the Permit Modification Procedures of WAC 173-303-830.

II.Y.2.d. Notwithstanding any other condition in this Permit, Ecology may directly exercise any administrative or judicial remedy under the following circumstances:

i. Any discharge or release of dangerous waste, or dangerous constituents, which are not addressed by the FFACO, as amended;

ii. Discovery of new information regarding dangerous constituents or dangerous waste management, including but not limited to, information about releases of dangerous waste or dangerous constituents which are not addressed under the FFACO, as amended; or

iii. A determination that action beyond the terms of the FFACO, as amended, is necessary to abate an imminent and substantial endangerment to the public health, or welfare, or to the environment.

II.Y.3. Releases of Dangerous Waste or Dangerous Constituents Not Covered By the FFACO

II.Y.3.a. US Ecology

i. The following solid waste management units are not covered by the FFACO:

A. US Ecology, Inc., SWMU 1: Chemical Trench;

B. US Ecology, Inc., SWMU 2-13: Low-level radioactive waste trenches 1 through 11A; and

C. US Ecology, Inc., SWMU 17: Underground resin tank.

ii. Selected solid waste management units identified in Condition II.Y.3.a.i are currently being investigated by US Ecology in accordance with the *Comprehensive Investigation US Ecology – Hanford Operations Workplan*. Following completion of this investigation, or within one (1) year of the effective date of this Permit Condition, whichever is earlier, Ecology will make a tentative decision as to whether additional investigation or cleanup is necessary to protect human health or the environment for the solid waste management units identified in Condition II.Y.3.a.i, and publish that decision as a draft permit in accordance with WAC 173-303-840(10). Following the associated public comment period, and consideration of any public comments received during the public comment period, Ecology will publish as final permit conditions under WAC 173-303-840(8) either:

A. a decision that corrective action is not necessary to protect human health or the environment;

B. an extension to the schedule established under IIIY.3.a.ii; or

C. a decision that corrective action is necessary to protect human health or the environment.

iii. If Ecology decides under Condition II.Y.3.a.ii that corrective action is necessary to protect human health or the environment, within one hundred and eighty (180) days of the effective date of this decision, the Permittee must submit, for Ecology review and approval, a plan to conduct corrective action in accordance with Condition II.Y.1. Approved corrective action plans under this condition will be incorporated into this Permit in accordance with the Permit Modification Procedures of WAC 173-303-830.

II.Y.3.b. Newly Identified Solid Waste Management Units and Newly Identified Releases of Dangerous Waste or Dangerous Constituents

The Permittee must notify Ecology of all newly-identified solid waste management units and all newly-identified areas of concern at the Facility. For purposes of this condition, a 'newly-identified' solid waste management unit or a 'newly-identified' area of concern is a unit or area not identified in the FFACO, as amended, on the effective date of this condition and not identified by Condition II.Y.3.a. Notification to Ecology must be in writing and must include, for each newly-identified unit or area, the information required by WAC 173-303-806(4)(a)(xxiii) and WAC 173-303-806(4)(a)(xxiv). Notification to Ecology must occur at least once every calendar year, no later than December 31, and must include all units and areas newly identified since the last notification, except that if a newly identified unit or area may present an imminent and substantial endangerment to human health or the environment, notification must occur within five (5) days of identification of the unit or area. If information required by WAC 173-303-806(4)(a)(xxiii) or WAC 173-303-806(4)(a)(xxiv) is already included in the Waste Information Data System, it may be incorporated by reference into the required notification.

PART III - UNIT-SPECIFIC CONDITIONS FOR FINAL STATUS OPERATIONS

CHAPTER 1

616 Nonradioactive Dangerous Waste Storage Facility

The 616 Nonradioactive Dangerous Waste Storage Facility (NRDWSF) is an active storage unit for dangerous wastes that are shipped to off-site commercial treatment or disposal facilities. This Chapter sets forth the closure requirements for this non-active TSD unit.

III.1.A. COMPLIANCE WITH APPROVED CLOSURE PLAN

The Permittees shall comply with all the requirements set forth in the 616 NRDWSF Closure Plan, Chapter 11 of the 616 NRDWSF Part B Permit application, found in Attachment 8 Enforceable portions of the application are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Part A, Form 3, Permit Application, Revision 7, March 1997

Section 2.2	Topographic Maps
Chapter 11.0	Closure and Post-Closure Requirements, from Class 3 Modification, for Revision 7
Section 13.8	Other Requirements
Appendix 4B	Drawing H-6-1553, Architectural Plan, Elevations and Sections, Rev. 4 and 2 ECNs as amended in Class 1 Modification dated July 1998
Appendix 4B	Drawing H-6-1556, Structural Plan and Sections, Revision 4, and six (6) ECNs from Class 1 Modification dated July 1998
Appendix 7A	Building Emergency Plan, HNF-IP-0263-616, dated July 1, 1998, as amended in Class 2 Modification for Revision 5
Appendix 8A	Training Plan, HNF-1276, Rev. 1, dated May 1998, as amended in Class 2 Modification for Revision 5

III.1.B. AMENDMENTS TO THE APPROVED PERMIT APPLICATION

III.1.B.a. Reserved

III.1.B.b. Page 3-16, lines 29 and 30. The following line is added to the end of the paragraph: "The laboratory verification results shall be obtained in accordance with WAC 173-303-110."

III.1.B.c. Page 2-16, lines 25 and 27. The address "7601 West Clearwater, Suite 102" shall be changed to "1315 West Fourth Avenue" and the telephone number "509-546-2990" shall be changed to "509-735-7581."

III.1.B.d. First Comment Package requested deletion

III.1.B.e. Table 7-1, Sections 3.1, 4.0 (first paragraph), 8.2, 8.3, 8.4, 11.0, and 12.0 are added as enforceable portions of Appendix 7A.

III.1.B.f. Portions of DOE/RL-94-02 that are not made enforceable by inclusion in the applicability matrix for that document, are not made enforceable by reference in this document.

III.1.B.g. Within thirty (30) days of issuance of this Permit, the Permittees will revise and submit to Ecology, Section 9.5 of Appendix 7A, to more accurately identify the quantity and capacity of spill control equipment available at the unit.

III.1.B.h. Appendix 7A, add "at 616 NRDWSF" to the titles of Sections 9.2, 9.4, and 9.5.

III.1.B.i. Before any waste is received at the unit, the Permittees will revise and submit to Ecology, Sections 9.2, 9.4, and 9.5 of Appendix 7A, to include emergency equipment needed to identify, measure, monitor, and protect against possible toxic fume hazards described in Section 6.1.5. Upon approval by Ecology, this information shall be incorporated into this Permit as a Class 1 Modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Modification to the Permit.

III.1.B.j. Appendix 7A, Figure 1, revise title to read "616 Nonradioactive Dangerous Waste Storage Facility Evacuation Routes."

III.1.B.k. Appendix 7A, Section 8.2. In the event of a WAC 173-303 emergency, the Owner/Operator must notify Ecology, and appropriate local authorities, that the unit is in compliance with Sections 8.2 and 8.3 of Appendix 7A before operations are resumed in the affected areas.

III.1.B.l. The Permittee must review and immediately amend the emergency response documentation, if necessary, whenever: (a) Applicable regulations, or the facility Permit, are revised, (b) The plan fails in an emergency, (c) The unit changes (in its design, construction, operation, maintenance, or other circumstances) in a way that materially increases the potential for fires, explosions, or releases of dangerous waste constituents, or in a way that changes the response necessary in an emergency, or (d) The list of emergency equipment changes.

III.1.B.m. In first comment package asked to be deleted

III.1.B.n. The approved Waste Analysis Plan (WAP) is compliant for receipt of on-site waste and off-site waste from USDOE owned and operated units (i.e., 712 Building and the Federal Building). The Permittee is not to receive other off-site waste at this unit until the WAP has been revised to include waste acceptance/verification criteria for the receipt of off-site waste.

CHAPTER 2

305-B Storage Facility

The 305-B Storage Facility (305-B) is an active storage unit for dangerous wastes and mixed wastes. These wastes are derived primarily from research and development activities and laboratory activities in the 300 Area. This Chapter sets forth the operating Conditions for this TSD unit.

III.2.A. COMPLIANCE WITH APPROVED PERMIT APPLICATION

The Permittees shall comply with all the requirements set forth in Attachment 18, including all Class 1 Modifications specified below, and the Amendments specified in Condition III.2.B. Enforceable portions of the application are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Part A, Form 3, Permit Application, Revision 1 and from Class 1 Modification for quarter ending June 30, 1998

Section 2.1.2	The 305-B Storage Unit, from Class 1 Modification for quarter ending June 30, 1999
Section 2.2.1	General Requirement, from Class 1 Mod for quarter ending June 30, 1999
Section 2.5	Performance Standard, from Class 1 Modification for quarter ending June 30, 1999
Section 2.6	Buffer Monitoring Zones, from Class 1 Modification for quarter ending June 30, 1999
Section 2.8	Manifest System, from Class 1 Modification for quarter ending June 30, 1999
Chapter 3.0	Waste Characteristics, from Class 1 Modification for quarter ending September 30, 2000
Chapter 4.0	Process Information, from Class 1 Modification for quarter ending March 31, 2000
Chapter 6.0	Procedures to Prevent Hazards, from Class 1 Modification for quarter ending December 31, 1999
Chapter 7.0	Contingency Plan, dated June 1 1998, as amended in Class 2 Modification for Revision 5, and for Class 1 Modifications for quarter ending June 30, 2000
Appendix 7A	Building Emergency Plan for the 305-B Storage Facility, from Class 2 Modification dated June 30, 2000
Chapter 8.0	Personnel Training, from Class 1 Modification for quarter ending December 31, 1999
Chapter 11.0	Closure and Post-Closure Requirements, from Class 1 Modification for quarter ending September 30, 2000
Chapter 12.0	Reporting and Recordkeeping, from Class 1 Modification for quarter ending June 30, 1999
Section 13.8	Toxic Substances Control Act, from Class 1 Modification for quarter ending September 30, 2000

	Section 13.9	Other Requirements, from Class 1 Modification for quarter ending September 30, 2000
	Appendix 2A	Hanford Site and 300-Area Topographic Maps, Plates 2-2 through 2-9

III.2.B. AMENDMENTS TO THE APPROVED PERMIT APPLICATION

III.2.B.a. For all shipments of dangerous waste to or from this TSD unit, except for shipments which occur wholly within the 300 Area, the Permittees shall comply with Conditions II.P. and II.Q. of this Permit regarding dangerous waste shipment manifesting and transportation.

III.2.B.b. Page 3-5, line 41. The following text is added: "The 305-B personnel shall collect from the generating unit(s) the information pursuant to 40 CFR 268.7(a) regarding LDR wastes, the appropriate treatment standards, whether the waste meets the treatment standards, and the certification that the waste meets the treatment standards, if necessary, as well as any waste analysis data that supports the generator's determinations. If this information is not supplied by the generating unit, then the 305-B personnel shall be responsible for completion and transmittal of all subsequent information regarding LDR wastes, pursuant to 40 CFR 268.7(b). All waste streams must be re-characterized at least annually, or when generating unit and/or 305-B personnel have reason to believe the waste stream has changed, to determine compliance with LDR requirements in 40 CFR 268."

III.2.B.c. Page 3-9, line 16. The following is added to the end of this section: "Storage limits for all chemicals are listed in Table 4-1, page 4-18, and 4-19 (Uniform Building Code, Table numbers 9-A and 9-B). This table is incorporated into this Section by reference."

III.2.B.d. Page 3-10, line 27. The following paragraphs are inserted into this section:

"Prior to acceptance of wastes at 305-B, confirmation of designation may be required (Section 3.2.4). The wastes, which shall undergo confirmation of designation, are identified in Condition III.2.B.f. of this Permit and may be divided into two groups; those that easily yield a representative sample (Category I), and those that do not (Category II). The steps for each type are outlined below, along with a description of which wastes fall into each category:

Category I. If a waste which easily yields a representative sample is received, a representative sample will be taken from the waste containers selected. If more than one phase is present, each phase must be tested individually. The following field tests will be performed as appropriate for the waste stream:

- Reactivity - HAZCAT™ oxidizer, cyanide, and sulfide tests. These tests will not be performed on materials known to be organic peroxides, ethers, and/or water reactive compounds.
- Flashpoint/explosivity - by HAZCAT™ flammability procedure, explosive atmosphere meter[1], or a closed cup flashpoint measurement instrument[1].
- pH - by pH meter[1] or pH paper (SW-846-9041)[2]. This test will not be performed on non-aqueous materials.
- Halogenated organic compounds - by Chlor-D-Tect™ kits.
- Volatile organic compounds - by photo or flame ionization tester[1], by gas chromatography with or without mass spectrometry, or by melting point and/or boiling point determination.

[1] These instruments are field calibrated or checked for accuracy daily when in use.

[2] The pH paper must have a distinct color change every 0.5 pH unit and each batch of paper must be calibrated against certified pH buffers, or by comparison with a pH meter calibrated with certified pH buffers.

If the sample data observed meets the parameters specified in its documentation, confirmation of designation is complete and the waste may be accepted. If not, the waste is rejected and returned to the generating unit, for sampling and analysis. The waste will be required to be included with a resubmitted Chemical Disposal/Recycle Request (CD/RR) if generator process knowledge or other information is not available to properly characterize and identify the waste.

When mathematically possible, the Permittees shall perform confirmation on an equal number of Category I and Category II containers.

Category II. If a representative sample is not easily obtained (for example, discarded machinery or shop rags), or if the waste is a labpack or discarded laboratory reagent container, the following steps will be performed:

a. Visually verify the waste. Examine each selected container to ensure that it matches the data provided on the CD/RR form(s) provided to document the waste. Labpacks and combination packages must be removed from the outer container. If the waste matches the description specified in its documentation, confirmation of designation is complete and the waste may be accepted. If not, the waste is rejected and returned to the generating unit, and the generating unit revises and resubmits the documentation to reflect the actual contents. If necessary, the waste shall be re-designated utilizing the designation methods identified in WAC 173-303-070 through 173-303-100."

III.2.B.e. Page 3-10, line 32. The following is added to the end of this section: "Wastes must be analyzed using the Toxicity Characteristic Leaching Procedure (TCLP) in accordance with Appendix II of 40 CFR 261, as amended, in order to provide sufficient information for proper management, and for decisions regarding LDR, pursuant to 40 CFR 268."

III.2.B.f. Page 3-16, lines 24-28. Replace the existing language with: "At least five percent (5%) of the waste containers received at 305-B during a federal fiscal year (October 1 through September 30) will undergo confirmation of designation, pursuant to Sections 3.2.2 and 3.2.3 (Test Methods and Sampling Methods, respectively). The number of containers needed to meet the five percent (5%) requirement is five percent (5%) of the average of containers for the previous three (3) months. For example if two hundred (200) containers are received in January, one hundred eighty (180) in February, and two hundred twenty (220) in March, then ten (10) containers of received waste must undergo confirmation of designation in April. All generating units which ship more than twenty (20) containers through 305-B in a fiscal year will have at least one (1) container sampled and analyzed. Containers for which there is insufficient process knowledge, or analytical information to designate without sampling and analysis, may not be counted as part of the five percent (5%) requirement, unless there is additional confirmation of designation independent of the generator designation. The generating unit's staff shall not select the waste containers to be sampled and analyzed other than identifying containers for which insufficient information is available to designate.

Containers of the following are exempt from the confirmation calculation above: Laboratory reagents or other unused products, such as paint, lubricants, solvent, or cleaning products, whether received for redistribution, recycling, or as waste. To qualify for this exemption, such materials must be received at 305-B in their original containers."

III.2.B.g. The entire document contained in Appendix 7A (DOE/RL 90-01), excluding nuclear safety information, is considered applicable to RCRA requirements and Washington State Dangerous Waste Regulations, as applicable, in WAC 173-303.

CHAPTER 3

PUREX Storage Tunnels

The PUREX Storage Tunnels are mixed waste storage units consisting of two underground railroad tunnels: Tunnel Number 1, designated 218-E-14, and Tunnel Number 2, designated 218-E-15. This Chapter sets forth the operating Conditions for this TSD unit.

III.3.A COMPLIANCE WITH APPROVED PERMIT APPLICATION

The Permittees shall comply with all requirements set forth in Attachment 28, including all Class 1 Modifications specified below, and the Amendments specified in Condition III.3.B, if any exist. Enforceable portions of the application are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Part A, Form 3, Permit Application, Revision 5A, from Class 1 Modification from quarter ending September 30, 2000

Section 2.1	The PUREX Storage Tunnels Description
Section 2.2	Topographic Map, including Class 1 Modifications from quarter ending June 30, 1997
Chapter 3.0	Waste Analysis
Chapter 4.0	Process Information
Chapter 6.0	Procedures to Prevent Hazards
Chapter 7.0	Contingency Plan, dated May 1998, from Class 1 Modification for quarter ending March 31, 2000
Chapter 8.0	Personnel Training
Chapter 10.0	Waste Minimization
Chapter 11.0	Closure and Financial Assurance
Chapter 12.0	Reporting and Recordkeeping
Chapter 13.0	Other Federal and State Laws
Appendix 2A	Topographic Map
Appendix 3A	Waste Analysis Plan for PUREX Storage Tunnels
Appendix 4A	Engineering Drawings, including Class 1 Modifications from quarter ending December 31, 1998
Appendix 7A	Unit-Specific Contingency Plan for the 218-E-14 and 218-E-15 Storage Tunnels, from Class 1 Modification from quarter ending March 31, 2000
Appendix 8A	Dangerous Waste Training Plan for the PUREX Facility

III.3.B AMENDMENTS TO THE APPROVED PERMIT APPLICATION

(None Required)

CHAPTER 4

Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility

This Chapter sets forth the operating Conditions for the Liquid Effluent Retention Facility (LERF) and the Effluent Treatment Facility (ETF).

III.4.A COMPLIANCE WITH APPROVED PERMIT APPLICATION

The Permittees shall comply with all requirements set forth in Attachment 34, including the Amendments specified in Condition III.4.B, if any exist. Enforceable portions of the application are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

LERF Part A, Form 3, Permit Application, Revision 6

ETF Part A, Form 3, Permit Application, Revision 3

Section 2.2	Topographic Map
Section 3.2	Waste Analysis Plan
Chapter 4.0	Process Information, dated May 1998, From Class 1 Modifications for quarter ending December 31, 1999
Chapter 5.0	Ground Water Monitoring, from Class 1 Modifications from quarter ending June 30, 2000
Chapter 6.0	Procedures to Prevent Hazards, from Class 1 Modification for quarter ending September 30, 2000
Chapter 7.0	Contingency Plan, dated May 1998, as amended in Class 2 Modification for Revision 5, and Class 1 Modifications from quarter ending September 30, 2000
Chapter 8.0	Personnel Training
Chapter 11.0	Closure and Financial Assurance
Chapter 12.0	Reporting and Recordkeeping
Chapter 13.0	Other Federal and State Laws
Appendix 2A	Topographic Map
Appendix 3A	Waste Analysis Plan for the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility, dated May 1998, as amended in Class 2 Modification for Revision 5
Appendix 4A	Detailed Drawings for the Liquid Effluent Retention Facility, from Class 1 Modifications for quarter ending March 31, 2000
Appendix 4B	Detailed Drawings for the 200 area Effluent Treatment Facility Container Storage Area and Tank Systems, from Class 1 Modifications for quarter ending March 31, 2000
Appendix 5A	Liquid Effluent Retention Facility Final Ground Water Monitoring Plan, PNNL-11620, See Amendment III.4.B.c.

	Appendix 7A	Building Emergency Plan for the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility, from Class 1 Modifications for quarter ending September 30, 2000. Enforceable portions include Sections 1.5, 3.1, 4.0 (1st paragraph), 7.1, 7.1.1, 7.1.2, 7.2, 7.2.1, 7.2.2, 7.2.3, 7.2.4, 7.2.5, 7.2.5.1, 7.3, 8.2, 8.3, 8.4, 9.0, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 11.0, 12.0, and 13.0.
	Appendix 8A	200 Area Liquid Waste Processing Facilities Administrative Policies, Dangerous Waste Training Plan, dated May 1998, as amended in Class 2 Modification for Revision 5

III.4.B. AMENDMENTS TO THE APPROVED PERMIT APPLICATION

III.4.B.a. Section 4.4.6; add the following paragraph, "All tank systems holding dangerous waste are marked with labels or signs to identify the waste contained in the tanks. The labels or signs are legible at a distance of at least fifty (50) feet and bear a legend that identifies the waste in a manner which adequately warns employees, emergency response personnel, and the public, of the major risk(s) associated with the waste being stored or treated in the tank system(s)."

III.4.B.b. Appendix 3A, Waste Analysis Plan for the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility.

III.4.B.b.1. The Permittees shall comply with all the requirements, subsections, figures, tables, and appendices, included in the "Waste Analysis Plan for Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility," except that the "Wastewater Profile Sheet Form" is included as an example only. The actual Wastewater Profile Sheet format may vary, but will contain the same substantive information as the example form.

III.4.B.b.2. Section 6.1 Dry Powder Waste

The following terms used in this Section, including powder, dry powder, waste powder, and dry waste powder, are equivalent to the term "dry powder waste" as defined in lines 20 through 27 on page 6-1.

III.4.B.b.3. Section 6.3 Other Waste Generated at the 200 Area Effluent Treatment Facility

Insert the phrase "according to Washington State Regulatory Requirements" after the word "designated" in line 44 on page 6-4.

III.4.B.c. Interim status Groundwater Monitoring Plan for the 200 East Area Liquid Effluent Treatment Facility, WHC-SD-EN-AP-024, Rev. 1, is an integral Part of this Permit and is to be added as Appendix 5A to the 200 Area Liquid Waste Complex Permit Application.

CHAPTER 5

242-A Evaporator

The 242-A Evaporator is a mixed waste treatment and storage unit consisting of a conventional forced-circulation, vacuum evaporation system to concentrate mixed-waste solutions. This Chapter sets forth the operating Conditions for this TSD unit.

III.5.A. COMPLIANCE WITH APPROVED PERMIT APPLICATION

The Permittees shall comply with all requirements set forth in Attachment 35, including the Amendments specified in Condition III.5.B, if any exist. Enforceable portions of the application are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Part A, Form 3, Permit Application, Revision 7

Section 2.2	Topographic Map, (non-enforceable sections in Chapter 2 were modified in Class 1 Modification) quarter ending March 31, 2000
Section 3.2	Waste Analysis
Chapter 4.0	Process Information, from Class 1 Modifications for quarter ending March 31, 2000
Chapter 6.0	Procedures to Prevent Hazards, dated May 1998, as amended in Class 2 Modification for Revision 5
Chapter 7.0	Contingency Plan, dated May 1998, as amended in Class 2 Modification for Revision 5, and Class 1 Modifications from quarter ending September 30, 2000
Chapter 8.0	Personnel Training
Chapter 11.0	Closure and Financial Assurance, from Class 1 Modification for quarter ending June 30, 1998
Chapter 12.0	Reporting and Recordkeeping
Chapter 13.0	Other Federal and State Laws
Appendix 2A	Topographic Map
Appendix 3A	Waste Analysis Plan for 242-A Evaporator, from Class 1 Modification from quarter ending March 31, 1998
Appendix 4A	Engineering Drawings, from Class 1 Modifications for quarter ending March 31, 2000
Appendix 4B	The 242-A Evaporator/Crystallizer Tank System Integrity Assessment Report
Appendix 7A	Building Emergency Plan for 242-A Evaporator from Class 1 Modifications for quarter ending September 30, 2000. Enforceable portions include Sections 1.5, 3.1, 4.0 (1st paragraph), 7.1, 7.1.1, 7.1.2, 7.2, 7.2.1, 7.2.2, 7.2.3, 7.2.4, 7.2.5, 7.2.5.1, 7.3, 8.2, 8.3, 8.4, 9.0, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 11.0, 12.0, and 13.0.

	Appendix 8A	200 Area Liquid Waste Processing Facilities Administrative Policies, Dangerous Waste Training Plan from Class 1 Modification for quarter ending June 30, 1998
III.5.B.	AMENDMENTS TO THE APPROVED PERMIT APPLICATION	
III.5.B.a.	Appendix 3A, Waste Analysis Plan (WAP) for 242-A Evaporator	
III.5.B.a.1.	Section 1.1. Purpose	
	The sentence beginning on line 23 of page 1-1 is modified to read as follows: "Sampling and analysis identified in the DQO analysis related to meeting RCRA requirements are included as an integral part of this WAP."	
III.5.B.a.2.	Section 5.0, 242-A Evaporator Acceptance Criteria	
	Table 2, Page 5-4, Line 1, Change title to, "Candidate Feed Tank Limits for Vessel Vent Organic Discharge".	
III.5.B.a.3.	Section 5.0, 242-A Evaporator Acceptance Criteria	
	Table 3, Page 5-5, Add footnote "f" to title of the table; and add footnote "f." This table is used to ensure process condensate generated from candidate feed tank treatment is within LERF liner compatibility limits".	
III.5.B.a.4.	Section 6.1.2. Candidate Feed Tank Sampling QA/QC	
	Delete lines 5 through 6 on page 6-2 ("Trip blanks are analyzed for those constituents detected in the field blanks.") and replace with the following: "Trip blanks are analyzed as independent samples for volatile organics analysis".	
III.5.B.a.5.	Section 6.1.2. Candidate Feed Tank Sampling QA/QC	
	Delete the word "discrete" from line 18 on page 6-2 and insert the word "unique".	
III.5.B.a.6.	Section 6.1.3. Process Condensate Sample Collection	
	Append to lines 32 through 33 on page 6-2 ["Samples of process condensate are collected in a manner consistent with SW-846 procedures (EPA 1986)."] the following text: "...as documented in sampling procedures which are maintained and implemented by unit personnel".	
III.5.B.a.7.	Table 5. Analytes for Candidate Feed Tanks	
	On page 6-4, delete the word "method" and insert the word "technique" in the heading of column 2.	
III.5.B.a.8.	Section 7.3 Laboratory QA/QC	
	In line 40, delete "matrix spike – " and on line 43, replace "accuracy" with "precision" and add a new sentence at the end of the paragraph, "Accuracy for DSC is evaluated by using the laboratory control standard".	
III.5.B.a.9.	Section 7.3 Laboratory QA/QC	
	Add a new paragraph, "The QA/QC program for sampling and analysis related to this unit must, at a minimum, comply with the applicable Hanford Site standard requirements and the regulatory requirements. All analytical data shall be defensible and shall be traceable to specific, related quality control samples and calibrations".	

III.5.B.a.10. Table 7. Quality Assurance Objectives for Candidate Feed Tank Stream Analytes

Delete the word "Objectives" from the title of the table and insert the word "Requirements".

III.5.B.a.11. Table 7. Quality Assurance Objectives for Candidate Feed Tank Stream Analytes

In column 4, delete the words "matrix spike," so the heading reads as follows: "Precision (RPD between duplicates), %".

III.5.B.a.12. Table 7. Quality Assurance Objectives for Candidate Feed Tank Stream Analytes. Delete Footnote 1 and replace with "Reserved".

III.5.B.a.13. Table 7. Quality Assurance Objectives for Candidate Feed Tank Stream Analytes. In line 6, under "Accuracy" column, add "4" to table entry "N/A" and add to the end of footnote 4, "Accuracy for DSC is evaluated by using the laboratory control standard".

III.5.B.a.14. Table 7-1, Sections 3.1, 4.0 (first paragraph), 8.2, 8.3, 8.4, 11.0, and 12.0 are added as enforceable portions of Appendix 7A.

III.5.B.a.15. Portions of DOE/RL-94-02 that are not made enforceable by inclusion in the applicability matrix for that document, are not made enforceable by reference in this document.

CHAPTER 6

325 Hazardous Waste Treatment Units

The 325 Hazardous Waste Treatment Units (HWTUs) consist of three (3) units within the 325 Building, i.e., the Shielded Analytical Laboratory, the Hazardous Waste Treatment Unit, and the Collection/Loadout Station Tank. The units store and treat a variety of dangerous wastes related to research and operations. This chapter sets forth the operating Conditions for this TSD unit.

III.6.A. COMPLIANCE WITH APPROVED PERMIT APPLICATION

The Permittees shall comply with all requirements set forth in Attachment 36, including the Amendments specified in Condition III.6.B. Enforceable portions of the application are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Part A, Form 3, Permit Application, Revision 4A, from Class 1 Modification for quarter ending June 30, 2000

Chapter 2.2	Topographic Map from Class 1 Modification for quarter ending June 30, 1998
Chapter 3.0	Waste Characteristics
Chapter 4.0	Process Information from Class 1 Modification for quarter ending September 30, 1999
Chapter 6.0	Procedures to Prevent Hazards from Class 1 Modification for quarter ending June 30, 1999
Chapter 7.0	Contingency Plan, dated June 1, 1998, as amended in Class 2 Modification for Revision 5, and Class 1 Modifications from quarter ending June 30, 2000
Chapter 8.0	Personnel Training
Chapter 11.0	Closure and Financial Assurance, from Class 1 Modification for quarter ending March 31, 2000
Chapter 12.0	Reporting and Recordkeeping
Chapter 13.0	Other Relevant Laws
Appendix 3A	325 HWTUs Waste Analysis Plan from Class 1 Modification for quarter ending June 30, 1999
Appendix 4A	Engineering Drawings
Appendix 7A	Building Emergency Plan for the 325 HWTUs, dated June 1, 1998, as amended in Class 2 Modification for Revision 5, and Class 1 Modifications from quarter ending June 30, 2000
Appendix 8A	Training from Class 1 Mod for quarter ending September 30, 1999

III.6.B. AMENDMENTS TO THE APPROVED PERMIT APPLICATION

III.6.B.a. Only treatment specifically identified in the enforceable portions of the application and these Permit Conditions may be performed at this TSD unit.

III.6.B.b. Twenty (20) months after inclusion in the Permit, this Chapter shall be modified to reflect

changes to waste streams shipped into, and out from, this unit, TSD unit operations, and the addition of a new storage tank.

III.6.B.c. For all shipments of dangerous waste to or from the 325 HWTUs, the Permittees shall comply with the applicable information in Conditions II.Q.1.h. and II.Q.2. of the Permit. For clarification, all dangerous waste must be transported in accordance with the unit specific provisions as outlined in the PNNL Operating Procedure for the 325 Building, in effect at the date of the transfer. With exception to, and in addition to, the packaging and transporting operations, shall be as follows:

The acceptance of all dangerous waste received at the 325 TSD Units will be dependent upon their packaging. Liquid waste containers accepted from other buildings to the 325 HWTUs shall have secondary containment with absorbent materials packed around the contents.

III.6.B.d. The Permittee must conduct integrity assessments over the life of the two (2) tank systems in this TSD unit, to ensure that the tanks retain structural integrity per WAC 173-303-640. Records must be maintained in the Operating Record for this TSD unit. Within thirty (30) days of completion of each assessment, data relating to each tank system shall be made available, upon request, to Ecology for review.

III.6.B.e. Within three (3) months of final installation of the new tank, the Permittee shall submit to Ecology a written integrity assessment, which has been reviewed and certified by an independent, qualified, registered professional engineer, in accordance with WAC 173-303-810 (13)(a).

III.6.B.f. The TSD unit shall comply with all applicable Subpart AA and BB requirements of the Air Emission Standards.

III.6.B.g. In response to the request in Chapter 11.0, Section 11.7, of Attachment 36, the Permittees are granted two (2) years to close the TSD unit. This time period is necessitated by the high levels of radioactivity in the materials that are present, particularly in the six (6) interconnected hot cells. Removal of waste inventory from the TSD unit is an activity of closure.

III.6.B.h. All process knowledge and analytical data that are used for waste characterization, LDR determination, and/or treatment activities at this TSD unit shall be documented and placed in the Operating Record.

III.6.B.i. Shipments of waste shall not be accepted from any on-site generator without information required by the 325 HWTUs WAP, accompanying the first shipment of any waste stream. The TSD unit staff shall obtain, from the on-site generator, the information necessary to determine the waste code, treatability group (i.e., wastewater versus non-wastewater), subcategory, and identification of underlying hazardous constituents for certain characteristic waste. A member of the TSD unit staff may sign the LDR certification as a representative of the generator.

III.6.B.j. Shipments of waste shall not be accepted from any off-site generator without LDR certification, if applicable, accompanying each shipment. For waste received from off-site generators, the TSD unit shall receive the information pursuant to 40 CFR 268 regarding LDR wastes. The generator must sign the LDR certification.

III.6.B.k. The QA/QC control program for sampling and analysis related to this TSD unit must, at a minimum, comply with the applicable Hanford Site standard requirements and regulatory requirements. All analytical data shall be defensible and shall be traceable to specific, related

		quality control samples and calibrations.
	III.6.B.l.	By April 28, 1998, the Permittees shall submit the following for review and approval by Ecology: for each parameter, the respective accuracy, precision, and quantitation limit (or minimum detectable activity) necessary to meet the regulatory or decision limit. These data quality requirements shall be added to the WAP and become enforceable Conditions of the Permit. For determining the toxicity characteristics, SW-846 Method 1311should be followed wherever possible. The Permittee may use the total metals test and assumption of complete extractability as described in Method 1311. A reduced sample size may also be utilized for As Low As Reasonably Achievable (ALARA) purposes as recommended by the "*Joint NRC/EPA Guidance on Testing Requirements of Mixed Radioactive and Hazardous Waste*" (62 FR 62079).
	III.6.B.m.	For a given parameter, analytical methods are selected and may be modified as long as the applicable precision, accuracy, and quantitation limit (or minimum detectable activity) necessary to meet the regulatory or decision limit can be met or improved. (Note: the Permittee submission described in Condition III.6.B.l. will define these data quality requirements for this TSD unit.)
	III.6.B.n.	Chapter 2.0, Page 2-5, line 41. Change Figure 2-3b, to read "Figure 2.3b."
	III.6.B.o.	Appendix 7A, Sections 3.2, 4.0, 5.0, and 6.0 are added as enforceable Sections.
	III.6.B.p.	Deleted.
	III.6.B.q.	Chapter 6, at the end of the paragraph, add "by Ecology and shall follow WAC 173-303-360, where applicable"
	III.6.B.r.	Portions of DOE/RL-94-02 that are not made enforceable by inclusion in the applicability matrix for that document, are not made enforceable by reference in this document.

CHAPTER 7

Waste Receiving and Processing Facility

This chapter sets forth the operating conditions for the Waste Receiving and Processing (WRAP) Facility.

III.7.A. COMPLIANCE WITH APPROVED PERMIT APPLICATION

The Permittees shall comply with all requirements set forth in the Waste Receiving and Processing Facility Permit Application, Rev. 1 and 1A, as found in Attachment 43, including the amendments specified in Condition III.7.B. Enforceable portions of the application are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Part A, Form 3, Permit Application, Revision 3, June 28, 1999

Section 2.2	Topographic Map
Chapter 3	Waste Analysis
Chapter 4	Process Information
Chapter 6	Procedures to Prevent Hazards
Chapter 7	Contingency Plan
Chapter 8	Personnel Training
Chapter 11	Closure and Financial Assurance
Chapter 12	Reporting and Recordkeeping
Appendix 2A	Topographic Map
Appendix 3A	Waste Analysis Plan
Appendix 4A	Engineering Drawings
Appendix 7A	Building Emergency Plan
Appendix 8A	Training Plan
Attachment 45	Selecting a Laboratory and Quality Assurance/Quality Control

III.7.B. AMENDMENTS TO THE APPROVED PERMIT APPLICATION

III.7.B.a. Chapter 1

III.7.B.a.1. Page 1-1, Line 40, delete the number "14" and insert the number "35".

III.7.B.b. Chapter 2

III.7.B.b.1. (reserved)

III.7.B.b.2. Page 2-1, Line 22, at the end of the paragraph, after the word "...basis..." insert "provided that procedures are implemented resulting in the safe management of these boxes at WRAP. Prior to acceptance at WRAP, boxes weighing more than 3,175 kilograms will be evaluated to determine if appropriate restrictions and protective measures can be implemented to ensure safe processing can occur at WRAP. Documentation of this evaluation will be retained as part of the operating record." Move this condition, as well as the sentence on page 2-1, lines 21 through 22, beginning with "The maximum..." to Chapter 4, Section 4.1.2.

III.7.B.b.3. (reserved)

III.7.B.b.4. (reserved)

III.7.B.b.5. Physical and chemical screening may be performed at WRAP for other on-site TSD units provided that the waste number for the waste being screened is identified on the WRAP Part A, Form 3, and the waste can be safely and properly managed at WRAP. In addition, if WRAP is performing physical and chemical screening activities for another onsite TSD unit, that waste shall be considered to be undergoing verification for acceptance at WRAP.

III.7.B.b.6. Page 2-2, Line 24 through 25, delete the following text: "...equipment and waste containers is performed throughout the various areas when necessary." and replace with the following text: "...waste containers and waste process equipment may be performed in the Process, NDE/NDA, and Shipping and Receiving areas. In addition, fixed equipment, such as the air emission control system, may be decontaminated in situ, when necessary. Decontamination practices must be managed to prevent releases to the environment and must be compliant with all applicable regulations."

III.7.B.b.7. Page 2-2, Line 46, add the following text as an additional bulleted item: "Retrieved waste with the potential to be incompatible with other waste stored at WRAP shall be managed in accordance with the special requirements of WAC 173-303-630(9) for incompatible waste. Retrieved waste that is sufficiently characterized to ensure compatibility with other waste is not subject to this requirement." Copy this condition, as well as Page 2-2, Lines 32 through 49 to Page 4-2, Line 34, of the section "Container Management Practices" (Section 4.1.2) in Chapter 4.

III.7.B.b.8. Page 2-3, Line 5, delete the word "stored" and replace with "managed."

III.7.B.b.9. Page 2-3, Line 5, after "...throughout WRAP" insert the phrase "(e.g., shipping, receiving, stacker retriever, NDE, NDA, process gloveboxes)."

III.7.B.b.10. Replace the text on Page 2-3, Lines 10 and 11 with the following: "After processing at WRAP, dangerous waste, mixed (low-level) waste, mixed (transuranic) waste, or radioactive (i.e., either low-level or transuranic only) ready for treatment, storage, or disposal will be transported to a permitted unit or facility."

III.7.B.b.11. Page 2-3, Footnote 3, delete the phrase "and does not refer to noncompliance with WAC 173-303" and replace with "and/or waste that is not compliant with WAC 173-303."

III.7.B.b.12. Page 2-6, Line 39, delete "Drawing H-13-000003" and replace with "Drawing H-13-000002."

III.7.B.c. Chapter 3

III.7.B.c.1. Page 3-1, Line 5, delete the word "stored" and replace with "managed."

III.7.B.c.2. Page 3-1, Line 5, delete the word "storage" and replace with "management."

III.7.B.c.3. Dangerous and/or mixed waste with waste numbers not identified on the WRAP Part A, Form 3, will not be managed at WRAP.

III.7.B.c.4. Page 3-1, Line 13, delete the word "normally."

III.7.B.c.5. Page 3-1, Line 15, delete the word "manufactures" and replace with "manufacturers."

III.7.B.c.6. Deleted.

III.7.B.c.7. The Permittees shall prepare an attachment to the WAP which describes the waste tracking procedures specified in lines 33 and 34 on page 3-1. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology, the description will be added to the text of Section 1.1.1 of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

III.7.B.c.8. Waste transfers between WRAP, T Plant, and Central Waste Complex do not require the development of a new waste profile because the waste has already been accepted at one of these TSD units under the original waste profile and is being transferred for waste management purposes. However, reprofiling may be necessary if treatment renders the original profile obsolete.

III.7.B.d. Appendix 3A

III.7.B.d.1. The enclosures in the process area for opening and sorting the waste in containers and for performing limited treatment as identified on page 1-1, lines 17 and 23 of Appendix 3A, Attachment 43, are containment enclosures commonly called gloveboxes. These are the same gloveboxes as mentioned on page 1-1, lines 35 and 36.

III.7.B.d.2. Page 1-1, Line 33, replace the phrase "could be" with the word "is" to read as follows: "Waste...is examined by NDA or NDE or sent directly to the process area ..."

III.7.B.d.3. Page 1-1, delete Footnotes 1, 2, and 3.

III.7.B.d.4. Page 1-2, Line 19, after the word "sections," insert the phrase "and the flowchart on Page F2-1" to read as follows: "The following sections and the flowchart on Page F2-1 describe the process for waste acceptance..."

III.7.B.d.5. Page 1-2, Line 35, delete the reference to Section 4.5 in the parenthetical phrase and revise the phrase to read as follows: "(Sections 2.1.3.2 and 7.4)."

III.7.B.d.6. Page 1-3, Lines 9 through 13, delete the text and replace with the following: "Verification: Verification activities include container receipt inspection, physical screening, and chemical screening. All waste shipments and containers are subject to receipt inspection during the waste shipment acceptance process. In addition, a percentage of waste containers in each shipment is selected for physical screening. Containers are opened and inspected visually or verified by NDE, NDA, or dose rate profile. A percentage of those containers subjected to physical screening is required to be sampled for field or laboratory analysis. All information and data are evaluated to confirm that the waste matches the waste profile and container data/information supplied by the generator. Any discrepancies between..."

III.7.B.d.7. Page 1-4, Line 1, delete " A PES" and insert the following: "The Performance Evaluation System (PES)".

III.7.B.d.8. The Permittees shall prepare an adequate description of the procedure for using conformance reports to evaluate the generator and to adjust the physical screening rate. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology, the description will replace the text on Page 1-4, Lines 37 through 40, beginning with "The WRAP..." of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification. If said

adequate description is not provided as specified herein, the following text shall be an enforceable condition:

"Page 1-4, Lines 37 through 40, delete the text beginning with "The WRAP..." and replace with the following: "Conformance reports are used to complete an evaluation of the generator and to adjust the physical screening rate as indicated. At a minimum, a quarterly evaluation according to the following criteria shall be performed and the indicated scores shall be assigned based upon severity and justification:

1. Designation conformance issues
   - Regulatory violation, 7 – 10
   - Mismanagement of waste (conditions which would or did lead to placement of waste in the wrong storage location, the wrong treatment path, etc.), 4 – 6
   - No mismanagement of waste, 1 – 3
2. Characterization conformance issues
   - Safety issue, 7 – 10
   - Mismanagement of waste (see above), 4 – 6
   - No mismanagement of waste, 1 –3
3. Paperwork inconsistencies
   - LDR form, 1 – 3
   - Shipping papers or waste tracking forms, 1 – 3
   - Waste profile discrepancies, 1 – 3
   - Incomplete shipment and/or transfer information, 1 – 3
4. Screening conformance issues
   - Regulatory violation and/or safety issue, 7 – 10
   - Mismanagement of waste (see above), 4 – 6
   - No mismanagement of waste, 1 – 3
5. Receipt conformance issues
   - Regulatory violation and/or safety issue, 7 – 10
   - Mismanagement of waste (see above), 4 – 6
   - No mismanagement of waste, 1 – 3

A generator receiving a score of 10 or greater has demonstrated less than satisfactory performance and must be evaluated for corrective action by the WRAP operating organization. The physical screening rate is increased for that generator based upon the following criteria:

- A score of 10 to 15 – the physical screening frequency is increased to a minimum of 15%.
- A score of 16 to 20 – the physical screening frequency is increased to a minimum of 50%.
- A score greater than 20 – the physical screening frequency is increased to 100%."

III.7.B.d.9. Paperwork inconsistencies or improperly completed and/or incorrect information must be corrected and resolved prior to acceptance of waste for management at this TSD unit.

III.7.B.d.10. Approved waste profiles and all supporting documentation from the initial submission through all re-evaluations must be retained in the TSD unit operating record as required by Condition II.I.1. for waste managed, i.e., stored and/or treated, at this TSD unit. This documentation also must be retained in the WRAP operating record on the same schedule for those containers submitted by other TSD units for chemical screening by

nondestructive testing only. Supporting documentation includes, but is not limited to, process knowledge, records of telephone calls related to completing or correcting waste profile information, certification of representative sample, analytical laboratory results. Not all documentation will be obtained for each waste profile; however, all that is obtained must be retained.

III.7.B.d.11. Within thirty (30) days of the effective date of this Permit, the Permittees are required to submit, to Ecology for review and approval, text describing all constraints which apply to the acceptance of waste at this TSD unit for any purpose, including physical examination and temporary storage in any portion of the building or within the boundaries of the TSD unit. Subsequent to any revisions required by Ecology, the description will be added to the text of Section 1.1.3 of the WAP as a Class 1 permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

III.7.B.d.12. The Permittees shall prepare an adequate description of the procedure for reducing the physical screening frequency for acceptance of waste at this TSD unit. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology, the description will replace the text on Page 1-5, Lines 27 through 46, of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification. If said adequate description is not provided as specified herein, the following text shall be an enforceable condition:

"Page 1-5, Lines 27 through 46, delete the text and replace with the following: "After the initial screening frequency has been established for a generator or that frequency has been adjusted due to poor performance, the physical screening frequency can be reduced in accordance with the following:

- The physical screening frequency will be stepped down in three steps based upon the ability of the generator to implement the corrective action plan and/or demonstrate an ability to appropriately manage waste. At no time shall the physical screening frequency be reduced below 5% for onsite generators or below 10% for offsite generators.

  Step 1) Reduce frequency by 66% the first month.

  Step 2) Reduce frequency established in Step 1 by 50% or to the minimum allowable whichever results in a greater frequency.

  Step 3) Reduce frequency to the minimum allowable.

- The reduction will be determined during the periodic evaluation process; however, the following minimum criteria must be met prior to reduction of the frequency:

  (1) Five (5) containers from the waste stream in question (defined by a single waste profile) must pass verification, and

  (2) The TSD unit must document an acceptable evaluation of the corrective action plan or that the generator's new waste management program has been implemented and is effective.

If the screening frequency was increased based upon conformance issues at the time of waste receipt, the corrective action plan must be fully implemented before the generator may return

to the minimum physical screening frequency. However, waste streams from the same generator, which did not have conformance issues upon receipt at this TSD unit, may return to the minimum verification frequency if the TSD unit operating organization determines that the specific conformance issue is unlikely to affect the generator's other waste streams."

III.7.B.d.13. Page 1-6, Lines 24 through 28, add the following waste types to the list of wastes prohibited from management at this TSD unit:

- "Bulk solids in trucks or roll-off boxes."

III.7.B.d.14. Page 1-6, Line 24, replace the phrase "Bulk liquid waste" with the following: "Bulk liquid waste in tankers or drums."

III.7.B.d.15. Page 1-7, Lines 8 through 41, delete the text regarding Alternative Waste Management Plan.

III.7.B.d.16. Page 2-1, Lines 3 through 13, delete the text beginning with "The requirement..."

III.7.B.d.17. Page 2-2, Lines 39 and 40, delete the phrase "or its representative."

III.7.B.d.18. Page 2-2, Line 46, delete the phrase "the information is accurate", and replace with the following: "the waste to be shipped to WRAP is as described by the waste profile."

III.7.B.d.19. Page 2-3, Lines 8 through 33, delete the text and replace with text that is adequate to describe how containers are chosen for physical and chemical screening. Within thirty (30) days of the effective date of this Permit, a description of this procedure must be submitted to Ecology for review and approval; subsequent to any revisions required by Ecology, the description will be added to the text of Section 2.1.2 of this WAP as a Class 1 permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

III.7.B.d.20. Page 2-4, Lines 4 through 7, delete the text and replace with the following: "When the available information does not qualify as acceptable knowledge or is not sufficient to characterize a waste for management, the sampling and testing methods outlined in WAC 173-303-110 are used by the generator to determine whether a waste designates as ignitable, corrosive, reactive, and/or toxic and whether the waste contains free liquids. If the analysis is performed to complete characterization after acceptance of the waste by the TSD unit, then this Permit governs the sampling and testing requirements."

III.7.B.d.21. Page 2-4, Line 26 and Page 2-5, Line 3, correct the WAC citations to read as follows: "173-303-380(1) (j), -(k), -(n), and -(o)."

III.7.B.d.22. Page 2-4, Lines 31 through 42, delete the text beginning with the following: "In some situations ..." Replace it with: "The following waste knowledge exceptions apply to waste accepted for management at the WRAP TSD unit:

- Hazardous debris as defined in WAC 173-303-040 that is managed in accordance with 40 CFR 268.45 (the "Debris Rule") is not required to be sampled. Management of debris in this manner is not dependent on the quantification of constituents to be federal and State-only LDR regulated.
- Wastes generated on-site may be shipped to the WRAP TSD unit provided the waste has been characterized for storage and a representative sample has been taken to characterize the waste for treatment and/or disposal.
- Waste which was previously disposed and then retrieved may be transferred to the WRAP TSD unit with only the necessary information to properly manage the waste at the storage unit.

- Waste which was received prior to the implementation of this guidance and has been characterized for storage only may be transferred between WRAP and permitted storage units without re-characterization; however, the pre-shipment review and verification requirements must be met.
- On-site generators may ship waste, that cannot be sampled by the generator, to the WRAP TSD unit for completion of characterization provided that the waste is characterized for storage."

III.7.B.d.23. Page 2-5, Lines 45 through 47 and Page 2-6, Lines 1 through 5 (Section 2.2.1), delete the text and replace with the following: " . . . 100 percent of each shipment (including onsite transfers) are inspected at the TSD unit for possible damage or leaks, complete labeling, intact tamper seals (if waste has been subjected to physical or chemical screening at another location), and piece count. This is to ensure that the shipment: (1) is received at the TSD unit in good condition, (2) is the waste indicated on the manifest or shipping papers, (3) has not been opened after physical and/or chemical screening was performed, and (4) is complete. Any issue resolution, including correction of document discrepancies, re-labeling, overpacking of leaking or deteriorated drums, must occur before verification activities may continue. Documentation of issue resolutions must be maintained in the TSD unit operating record. Any paperwork discrepancies for shipments from both offsite and onsite generators must be resolved as required by WAC 173-303-370(4)."

III.7.B.d.24. Ecology recognizes that the generator may hire the WRAP operating organization to treat waste, including sorting and repackaging, and thereby correct discrepancies and problems identified during the waste acceptance process. If correction of these discrepancies and problems are not accomplished within two (2) months of receipt of the waste shipment, the Permittees shall contact Ecology (specifically the Ecology Project Manager). Ecology will establish a compliance schedule for treatment of the waste shipment.

III.7.B.d.25. The Permittees shall prepare an adequate description of the procedure for performing physical screening by visual inspection or NDE before waste is sent to the TSD unit. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology, the description will replace the text on Page 2-6, Lines 11 through 14 (Section 2.2.2) of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification. If said adequate description is not provided as specified herein, the following text shall be an enforceable condition:

"Page 2-6, Lines 11 through 14 (Section 2.2.2), delete the text and replace with the following: "as a verification activity. Physical screening by visual inspection or NDE could be performed by the WRAP operating organization before the waste is shipped to WRAP. In this case, the visual inspection is performed by observation of the generator filling empty containers with waste or examining the container contents at the location. NDE is performed using mobile equipment which meets the performance requirements identified in the Permit. When visual inspection or NDE is performed at a location other than WRAP, at least one tamper-resistant seal is applied to each container examined and verified as acceptable, so that the container may not be reopened unless the seal is broken. These seals are the same as custody seals and are subject to the same evidentiary requirements as custody seals. Each seal must be placed by the observer/verifier before the container leaves his/her sight on the day the observation occurs. The seal must be uniquely identified and controlled, e.g., signed

and dated or uniquely numbered and tracked in a logbook. In addition, the seal must be easily differentiated from tamper-resistant seals used for other purposes. The verification must be documented in the paperwork that accompanies the waste shipment to WRAP and that paperwork must be placed in the TSD unit operating record. Also, the transfer documentation must identify whether the container required verification and the result of that verification. As long as the tamper-resistant seal remains intact, those containers of waste may be moved within the Hanford Solid Waste Complex without further physical screening, although container receipt inspections are required for all waste shipments, including transfers. The waste may still be subject to chemical screening."

III.7.B.d.26. Add the following text to Section 2.2.2: "Selection and interpretation of the appropriate physical screening method(s) are conducted by personnel who are qualified as described in the Training Plan (Appendix 8A) as amended by any Permit conditions. Each physical screening method is performed by qualified personnel."

III.7.B.d.27. Page 2-6, Line 18, add a reference to the text to read as follows: "(See Section 3.1 for the criteria for choosing a physical screening method.)."

III.7.B.d.28. Page 2-6, Line 30, insert the phrase "The minimum" at the beginning of the sentence, so that the sentence reads as follows: "The minimum physical screening frequency is 5 percent for onsite generating units, ..."

III.7.B.d.29. Page 2-6, Line 40, add a reference to Section 1.1.1.3. to the sentence, so the sentence reads as follows: "All failed containers and shipments are dispositioned via the PES, as described in Section 1.1.1.3. of this WAP."

III.7.B.d.30. Page 2-7, Line 14, delete "authorized independent agent are" and replace with "is".

III.7.B.d.31. Page 2-7, Lines 17 and 18, delete "or Pacific Northwest National Laboratory (PNNL) packaged waste that is transferred to PNNL operated TSD units]".

III.7.B.d.32. Page 2-7, Lines 24 through 26, delete the text and replace with the following: "frequency, and exceptions for chemical screening. Chemical screening may be performed by the WRAP operating organization before the waste is shipped to WRAP. After chemical screening is done, tamper-resistant seals are applied over the container opening on each outer container screened. The requirements described for tamper-resistant seals used for visual examination apply for chemical screening, as well. Any requirement elsewhere in this Waste Analysis Plan or Permit related to chemical screening also applies for chemical screening performed before the waste is received at WRAP."

III.7.B.d.33 Page 2-7, Line 28, delete the first sentence and replace with the following text: "Selection and interpretation of the appropriate chemical screening method(s) are conducted by personnel who are qualified as described in the Training Plan (Appendix 8A) as amended by any permit conditions. Each chemical screening method is performed by qualified personnel."

III.7.B.d.34. Page 2-7, Lines 29 through 30, delete the text which reads: "The objective . . . documentation." and replace with the following: "The objective of chemical screening is to obtain reasonable assurance that the waste received by the TSD unit is consistent with the description of the waste on the waste profile and to provide information that will be used to safely manage the waste at the TSD unit."

III.7.B.d.35. Deleted.

III.7.B.d.36. Page 2-7, Line 42, delete "Headspace testing" and replace with "Ignitability/headspace screening for volatile compounds."

III.7.B.d.37. Page 2-7, Line 45, delete "Paint filter" and replace with "Paint Filter Liquids Test."

III.7.B.d.38. Page 2-8, Line 3, correct the reference to read as follows: "Section 2.2.5.2."

III.7.B.d.39. Page 2-8, Line 28, delete ", etc."

III.7.B.d.40. Page 2-8, Line 41, delete "special-case" and replace with: "special cases."

III.7.B.d.41. Page 2-8, Lines 45 through 47 and Page 2-9, Line 1, delete all text to the word "...contamination" and replace with: "Sampling is performed in accordance with WAC 173-303-110(2). A representative sample is obtained for chemical screening."

III.7.B.d.42. Page 2-9, Line 11, delete the phrase "shipping documentation" and replace it with "waste profile."

III.7.B.d.43. All confirmation activities shall be governed by TSD unit-specific controlling documentation and performed in a consistent manner. Confirmation records shall be kept in a traceable, defensible manner. As part of the TSD unit-specific Operating Record, these records must be maintained in a protective manner (e.g., protected from fire, water, access and/or tampering by unauthorized personnel). In addition, electronic records must be protected from electromagnetic damage. A modification to the WAP must be submitted within thirty (30) days following the effective date of this Permit, to identify the location of WAP components of the TSD unit-specific Operating Record. Upon approval by Ecology, this information shall be incorporated as a Class 1 Permit modification or, if necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

III.7.B.d.44. If a false negative occurs as described in line 24, page 2-9, the corrective actions mentioned in line 26 must include the re-evaluation of all affected video tapes/records since the previous acceptable QC check. If any results are questionable, those affected drums must be reevaluated and handled appropriately.

III.7.B.d.45. Page 2-9, in Section 2.2.5.1, note that quality control has not been presented for non-destructive assay (NDA) or for dose rate profile. Until such time that text describing those physical screening options is provided to Ecology for review and approval, the required revisions are made, the public comment conducted, and the text becomes an enforceable condition of this WAP, all physical screening must be by visual observation and NDE only, subject to other enforceable conditions of this Permit.

III.7.B.d.46. The equipment requirements of Table 4-1, as amended by any Permit conditions, apply to sampling for chemical screening. In addition, the following sampling equipment may be used in sampling for chemical screening: (1) For liquids and slurries – dip, tank, bomb, and bailer samplers, as well as tube-type samplers (e.g., thin-walled Shelby tubes, split spoons, probes), and (2) For sludges and solids – Tube-type samplers (as above) and augers; for small containers, a spoon may be used in place of a scoop.

III.7.B.d.47. The required quality control for chemical screening includes, but is not limited to, the following:

- Containers and equipment of the appropriate size that are chemically compatible with the waste and all testing reagents shall be used.
- A documented source of reagent water shall be used.

- All chemicals and test kits shall be identified in the logbook/operating record by manufacturer; lot number(s) or, if no lot number is present, by date of manufacture; date of receipt; and expiration date (if none provided or not applicable, so indicate). All chemicals and test kits must be labeled so that they are traceable to the logbook/operating record.
- All chemical preparations, i.e., chemical mixtures or solutions, shall be documented in logbook/operating record by the method of preparation, e.g., weight or volume of chemical(s), identity of solute, volume or weight of solute, final concentration, as well as the name of the preparer, preparation date, expiration date. They must be labeled completely and traceable to the preparation.
- One in 20 analyses at a minimum shall be performed in duplicate.
- The results of quality control checks for each test kit lot or periodic testing and for daily quality control checks including equipment calibration, shall be recorded in a defensible manner.

III.7.B.d.48. The Permittees shall provide an adequate description of quality control for chemical screening. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology, the description will replace the text on Page 2-10, Lines 6 through 9, under a new bulleted heading "Equipment and Quality Control Checks" of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification. If said adequate description is not provided as specified herein, the following text shall be an enforceable condition:

"Page 2-10, Lines 6 through 9, delete the text and insert the following under a new bulleted heading "Equipment and Quality Control Checks":

"The WRAP operating organization will perform the following quality control checks on each new test kit or reagent lot to be followed by rechecks on at least a six-month interval, unless a more frequent period is specified in the test kit instructions or the quality control check method.

(a) Ignitability/Headspace Screening for Volatile Organic Compounds: Headspace screening equipment shall be calibrated using known standards in accordance with the manufacturer's instructions. In addition, the equipment will be quality control checked on each day of use by sampling the headspace of a reagent containing hexane. If it does not perform as expected, the equipment will be recalibrated.

(b) Peroxide Screening: The quality control check for the peroxide test paper is as follows: (1) Moisten the test paper with water. Add two drops of 3% hydrogen peroxide solution to the test paper. The test paper should turn blue. If it does not, replace the test paper or reject the lot. (2) Add a drop of potassium dichromate solution to approximately ½-inch of water in a test tube. Place the peroxide test paper in the solution. The test paper should not turn blue. If it changes color, replace the test paper or reject the lot. (3) Add one drop of nitric acid to the test paper. The paper should turn yellow. If it does not, replace the test paper or reject the lot.

(c) Paint Filter Liquids Test: The quality control check consists of visually inspecting each filter, prior to performing each test, to ensure that it is in good condition and is not torn or ripped. If it is damaged, the filter shall be replaced.

(d) pH Screen: The quality control check for the pH test paper is as follows: (1) Place a drop of concentrated hydrochloric acid onto the test paper; the pH should be 0±1. (2) Place a drop of acetic acid onto the test paper; the pH should be 2 to 3±1. (3) Place a drop of reagent water onto the test paper; the pH should be 7±1. (4) Place a drop of ammonium hydroxide onto the test paper; the pH should be 11 to 12±1. (5) Place a drop of sodium hydroxide onto the test paper; the pH should be 14±1. If the pH on most of these tests is not as specified, replace or reject the pH paper. If only one test produces results that are different than stated, check or replace the reagents. The most important check is the reagent water, although it frequently will have a slightly acidic pH. All of the stated pH checks also may be performed using pH buffer solutions.

(e) Oxidizer Screen: The quality control check for the oxidizer test paper is as follows: Moisten the test paper with 3M hydrochloric acid. Add two drops of potassium dichromate solution to the paper. The paper should turn black. If the test is negative, replace the paper or reject the lot.

(f) Water Reactivity Screen: The quality control check consists of testing the pH of the reagent water. If the pH is not 7±1, the reagent water shall be replaced. Note that this check may be performed as part of the pH quality control check.

(g) Cyanide Screen: The ferrous ammonium citrate reagent is the most unstable reagent used in this test. The ferrous ion will oxidize to ferric upon standing for even a short period of time. If the reagent has a thick opaque color or if there are particulates floating in the solution, the reagent should be replaced. To check the ferrous ammonium citrate, perform both of the following tests: (1) Add a pinch of ferrous ammonium sulfate to ¼-inch of the ferrous ammonium citrate reagent in a test tube. Add a drop of 1,10-phenanthroline to the test tube. The solution should turn blood red. (2) Add a pinch of ferrous ammonium sulfate to ¼-inch of the ferrous ammonium citrate reagent in a test tube (this is solution 1). Add a small amount of potassium ferrocyanide to a test tube of water (this is solution 2). Add a small amount of solution 1 to solution 2 to form solution 3. Add a ¼-inch of 3 Normal (i.e., 3N or 3M) hydrochloric acid to solution 3. The solution should turn dark blue. If either test is negative, replace the reagent or reject the lot.

(h) Sulfide Screen: The quality control check for the sulfide test paper is as follows: (1) Add 1 to 2 drops of reagent water to the sulfide test paper. (2) Add two drops of 3 Normal (3N or 3M) hydrochloric acid to two sodium sulfide flakes in a disposable watch glass or weighing boat. (3) Touch the sulfide test paper to the flakes. The test paper should turn brown, black, or silvery. If the test is negative, replace the test paper or reject the lot.

(i) HOC Screen: The quality control check is to perform the test according to the test kit instruction on a reagent containing approximately 50 ppm of a chlorinated organic compound. If the test does not indicate a positive result, replace or reject the lot. If two or more test kit lots do not indicate a positive result, replace and/or test the reagent and retest the test kit lots."

III.7.B.d.49. The phrase "shipping documentation" is used throughout Section 3.0. The Permit requires that the shipping documentation be evaluated against the "waste profile" so that only approved waste is received by the TSD unit. Therefore, ultimately each physical and chemical screening result must be in agreement with the waste profile to determine the acceptability of the result and, thereby, whether or not the container fails.

III.7.B.d.50. The result of failure (i.e., "a container fails...") as described in Section 3.1, Physical Screening Parameters, under the heading "Failure criteria" may be a return to the generator, a re-profiling of the waste stream, or treatment (processing or reprocessing) at the WRAP TSD unit. The result of failure for chemical screening (e.g., failing the test, constitutes failure), as described in Section 3.2, Chemical Screening Parameters, under the heading "Tolerance" may be the same outcomes as for physical screening. In addition, a failure of the chemical screening may be the expected outcome of the test, dependent upon the waste profile.

III.7.B.d.51. Page 3-1, Lines 2 and 3, delete the text and replace with the following: "Physical and chemical screening parameters for verification must be chosen from those in Sections 3.1 and 3.2. Parameters for waste designation and to meet LDR requirements are addressed in Section 3.3."

III.7.B.d.52. Page 3-1, Line 7, replace the phrase "could be used to perform" with the phrase "are approved for use in performing" so that the sentence reads as follows: "The following methods are approved for use in performing physical screening."

III.7.B.d.53. Page 3-1, Line 17, replace the phrase "could be" with the word "are" so the sentence reads as follows: "Homogenous loose solids are probed to determine the presence of material not documented . . . "

III.7.B.d.54. Page 3-1, Lines 35 through 38, delete the text and replace with the following text: "The container is scanned top-to-bottom and side-to-side with a non-destructive examination (NDE) system according to documented and approved procedures. At a minimum, the lifts, conveyors rotators, and manipulators for the real-time imaging systems shall be capable of handling drums up to 85-gallons in size and up to 1000 pounds in weight and boxes up to 7000 pounds in weight. The minimum image quality, X-ray system performance, and system operator requirements shall be in accordance with the documented specifications for operating the NDE system. The X-ray components shall include the following: (1) a nine-inch (diagonal) entrance field image intensifier, or equivalent, (2) a twelve-inch, high resolution video display monitor, (3) a video printer, and (4) a high-performance, broadcast quality, S-VHS/VHS recorder/player. Quality assurance measures that indicate X-ray imaging quality shall be utilized and documented during equipment startup. For verification activities by NDE, data are observed on a video monitor and captured on video tape to provide a record. Personnel experienced in the interpretation of NDE imagery will record their observations. These observations are then compared to the inventory of container contents on the shipping documentation and also must be in agreement with the waste profile."

III.7.B.d.55. Page 3-2, Line 43, replace the phrase "could be used to perform" with the phrase "are approved for use in performing" so the sentence reads as follows: "The following methods are approved for use in performing chemical screening."

III.7.B.d.56. Page 3-3, Lines 28 and 29, in addition to the text provided, the following condition applies: The required method for the Paint Filter Liquids Test is Method 9095 in the U.S. Environmental Protection Agency (EPA), SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (the most recently promulgated version).

III.7.B.d.57. Page 3-3, Lines 41 through 44, delete the text and replace with the following: "Method: Full range pH paper with a stated precision of 1.0 pH unit and a corresponding color chart is used for testing. For aqueous samples, a representative test portion of the sample is introduced onto the strip of pH paper. For solids, sludges, and non-aqueous liquids, a representative test

portion is mixed with an approximately equal amount of water. The aqueous portion (extractant) of this mixture is then introduced onto the strip of pH paper. The paper is compared visually to the color chart to determine the best color match. The pH is recorded to the nearest whole pH unit."

III.7.B.d.58. Page 3-4, Lines 7 and 8, delete the text and replace with the following: "Method: Potassium iodide (KI) starch test paper is used for testing. KI oxidizes to iodine (I_2) in the presence of starch to yield a dark blue-black coloration on the test paper. A representative test portion of the sample is placed on a disposable watch dish or weighing boat. The KI test paper strip is acidified with 3M hydrochloric acid (HCl) and placed in contact with the test portion. A darkening of the test paper is a positive indication of the oxidizing properties of the sample."

III.7.B.d.59. Page 3-4, Lines 19 through 21, delete the text and replace with the following: "Method: Water reactivity of waste is determined by adding a representative test portion to an approximately equal volume of water in a disposable watch glass or weighing boat. The mixture is observed for positive indications of water reactivity such as temperature change (increase or decrease), gas evolution, gelling or polymerization."

III.7.B.d.60. Page 3-4, Lines 32 through 35, delete the text and replace with the following: "Method: A ferrous ammonium citrate solution is used as a colorimetric indicator of free cyanides and some complex cyanides. The reagent turns a dark Prussian blue color due to the formation of blue iron ferrocyanide in the presence of cyanide under acidic conditions. A representative test portion is placed on a disposable watch glass or weighing boat. An approximately equal amount of water is added to solid matrices. The ferrous ammonium citrate solution is added and mixed into the test portion. The mixture is then acidified with 3M hydrochloric acid (HCl). A dark blue color, if present, indicates the presence of cyanides."

III.7.B.d.61. Page 3-4, Lines 46 through 49, delete the text and replace with the following: "Method: Lead acetate test paper strips are used for testing. Under acidic conditions, sulfide compounds release hydrogen sulfide (H_2S) and, in the presence of this H_2S, the lead acetate paper changes to a silvery brown or black color due to the formation of lead sulfide (PbS). A representative test portion is place on a disposable watch glass or weighing boat. The test portion is acidified with 3M hydrochloric acid (HCl). A lead acetate test paper strip is dampened with water and placed near the acidified test portion. A darkening of the test paper is a positive indication of the presence of sulfides in the test portion."

III.7.B.d.62. Page 3-5, Lines 11 through 14, delete the text and replace with the following: "Method: A precise amount of oil (i.e., the test portion) is placed into the first of two disposable test tubes provided with the test kit. An ampule containing a colorless catalyst is broken and the contents are mixed thoroughly with the test portion. A second ampule containing metallic sodium is broken and the sodium, activated by the catalyst, strips chlorine from any chlorinated organic compounds present to form sodium chloride. An aqueous buffer solution is added to the test portion. This neutralizes the excess sodium and extracts the sodium chloride into the water. The water layer is then separated from the oil and decanted into the second test tube. An ampule containing a precise amount of reagent is broken and the contents mixed with the water. An ampule containing an indicator is then broken and the contents mixed with the water. The color of the mixture is dependant on the amount of chlorinated organic compounds in the original test portion of oil."

III.7.B.d.63. The Permittees shall prepare an adequate description of "Tolerance" for the HOC chemical screening. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology,

the description will replace the text on Page 3-5, Lines 16 through 17 of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

III.7.B.d.64. Page 3-5, Line 20, delete the phrase "Sample and".

III.7.B.d.65. Page 3-5, Lines 21 and 22, delete the text and replace with the following: "Parameters needed to meet designation, characterization, and LDR requirements for waste stored and/or treated at WRAP are identified in Appendix A of this WAP."

III.7.B.d.66. Delete the title of Section 4.0 and replace it with the following: "Selecting Sampling Procedures." The content of this section, as amended, applies to all sampling that is done by or at the direction of the TSD unit for (1) characterization of waste after processing, (2) LDR of treated waste, or (3) additional characterization, if needed, for treatment or disposal.

III.7.B.d.67. Page 4-2, Lines 7 through 8, delete the text "or other approved sample preservation method for waste in accordance with 62 FR 62079" and replace with the following: "except as amended by the Permit."

III.7.B.d.68. The following condition applies for the preservation and holding times for samples and for laboratory extracts of the samples. Waste samples are treated and preserved as necessary to protect the sample. Tables 2-36 and 4-1 in SW-846 contains recommended treatment/preservative and holding times. Not all samples require preservation and placing a holding time on a sample may not always be appropriate. Samples with a high concentration of the analyte or non-LDR samples may not require preservation, whereas aqueous samples and samples with low concentrations of the analyte or LDR samples require preservation. If the required preservation interferes with some of the analytes requested, then multiple aliquots of sample may need to be obtained for analysis. Samples taken for analysis of a persistent constituent or non-biologically degradable constituent may not require a holding time. For example, a sample for PCB analysis does not require a holding time (although the laboratory extractant is subject to a holding time). The recommended holding time and preservation for hexavalent chromium (Cr^{+6}) listed in the Tables are required for all sample matrices unless the hexavalent chromium concentration is assumed to be represented by the total chromium in the sample. The recommended preservation and holding time for mercury (Hg) is required in all sample matrices. For the laboratory-prepared organic extracts (e.g., semi-volatile organic analysis and PCBs) the holding times listed in the Tables are required to be met for each extract.

III.7.B.d.69. Page 4-2, Line 11, delete the title of Section 4.5 and replace it with the following: "Establishing Quality Assurance and Quality Control Procedures for Sampling."

III.7.B.d.70. Page 4-2, Line 19, the phrase "appropriate personnel" is defined as the sampler or a person who is directed by the sampler.

III.7.B.d.71. Page 4-2, insert the following after the sentence in line 20: "If sampling is conducted in a posted radiological zone, then the logbook entries may be made by a person who is outside the zone or by the sampler immediately after the sampling is completed."

III.7.B.d.72. Page 4-2, Lines 20 through 21, delete the phrase "or copies of logs are maintained by the appropriate personnel after completion of sampling activities" and replace with the following: "are permanent records of the TSD unit and must be retained in the TSD unit operating record."

III.7.B.d.73. The Permittees shall prepare an adequate procedural description of recordkeeping for sampling. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology, the description will be inserted on Page 4-2 after Line 21 as a new paragraph of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification. If adequate description is not provided as specified herein, the following text shall be an enforceable condition:

"Page 4-2, insert the following text after line 21 as a new paragraph: "The log of sampling activities is kept in an inventoried, uniquely numbered, bound logbook with sequentially numbered pages. Any affixed information, e.g., pictures, copies of chain-of-custody documentation, shall be permanently attached to a logbook page and initialed and dated across the edge of the attached material onto the logbook page so that removal or tampering with the attachment(s) can be identified. No affixed material may be placed over any other affixed items or written entries. The requirements for defensible data recording apply, including correction of entries by single line cross-out, initial and date, and give reason for the change. A signature is required rather than initials if the correction is made by someone other than the original recorder. No entries shall be obliterated, e.g., "white out" must not be used. The identity of the person who is initialing the record must be easily determined.""

III.7.B.d.74. The Permittees shall prepare an adequate description of the procedure for chain of custody for this TSD unit. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. If said description is not adequate and Ecology approval is not granted, the original text shall be the enforceable condition. Subsequent to any revisions required by Ecology, the description will replace the text on Page 4-2, Lines 23 through 26 of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

III.7.B.d.75. Section 5.0 is deleted in entirety and replaced by the text of Attachment 45.

III.7.B.d.76. Deleted.

III.7.B.d.77. Deleted.

III.7.B.d.78. Page 6-1, Lines 2 through 10, delete the text and replace with the following: "The frequency to re-evaluate the waste profile and supporting data and documentation is each twelve (12) months, at a minimum, or more often if the generator has informed the TSD unit of a change in the waste generation process or if the TSD unit has identified that the waste received at the TSD unit or the description on the manifest or shipping papers does not match the waste profile. If the generator has informed the TSD unit of a change in the waste generation process, the waste re-enters the waste stream approval process described in Section 2.1.1. as amended by any Permit conditions. The TSD unit will evaluate verification data against the waste profile to identify any waste streams for which a change in waste generation process is suspect. If a waste stream is suspect, that waste stream also will re-enter the approval process described in Section 2.1.1 as amended by any Permit condition."

III.7.B.d.79. Page 7-1, Lines 7 and 8, delete the sentence beginning with "Differences include . . . " and replace with the following text: "Differences include, but are not limited to, the following: (1) physical and chemical screening frequencies for verification (minimum percentages of 5% for waste from on-site generator units and 10% for waste from off-site generators (note that

chemical screening frequency is dependent upon the physical screening frequency), (2) shipping documentation (Uniform Hazardous Waste Manifests are used for waste from off-site generators and waste tracking forms are used for waste from on-site generator units), and (3) LDR documentation requirements (notification for waste from off-site generators and the information contained in the notice for waste from on-site generator units)."

III.7.B.d.80. Page 7-1, Line 38, delete the phrase "and not per Section 1.1.1.1"

III.7.B.d.81. Page 7-1, Line 43, correct the WAC citation to read as follows: "WAC 173-303-380(1)(j), -(k), -(l), -(m), -(n), or -(o)."

III.7.B.d.82. Page 7-3, Line 28, delete the word "an" and replace with the phrase "that a federal."

III.7.B.d.83. Page 7-3, Line 29, delete the phrase "or equivalent."

III.7.B.d.84. Page 7-3, Line 30, delete the phrase "or any other reliable method allowed by regulations."

III.7.B.d.85. Page 7-3, Line 34, delete the phrase "or any other method allowed by regulations" and replace with the phrase "WAC 173-303-110, or this Permit."

III.7.B.d.86. Page 7-3, Line 39, delete the word "sample" and replace with the word "analytical."

III.7.B.d.87. Page 7-3, Line 41, delete the phrase "by WRAP."

III.7.B.d.88. Page 7-3, Line 42, add the following text: "A copy of the certification is placed in the WRAP operating record."

III.7.B.d.89. Page 7-3, Line 44, delete the word "Where" and replace with the word "When."

III.7.B.d.90. Page 7-3, Line 47, correct the WAC citation to read as follows: "WAC 173-303-380(l)(k), -(n), -(o)."

III.7.B.e. Chapter 4

III.7.B.e.1. (reserved)

III.7.B.e.2. (reserved)

III.7.B.e.3. Page 4-1, Line 29, after "...TSD requirements." add the following: "Materials used to sorb waste destined for land disposal must meet LDR requirements in accordance with WAC 173-303-140(4)(b)."

III.7.B.e.4. Page 4-1, Line 40, delete "approved" and replace with "appropriate."

III.7.B.e.5. Page 4-2, Line 45, delete the phrase "as previously discussed" and replace with the following: "according to the same regulations as other containers."

III.7.B.e.6. Page 4-3, Lines 6 through 8, move the text in Section 4.1.4.1. to Page 4-1, Line 33.

III.7.B.e.7. Page 4-3, Line 6, add the following: "The WRAP floors and curbing serve as the secondary containment for any spills that might occur inside the building."

III.7.B.e.8. The Permittees shall submit to Ecology an annual report documenting the annual inspection and repair of panel delaminations at Building 2336-W. The inspection shall occur during the hottest period of each summer. The report must include the following:

(a) Scaled drawings (sized to one scale) indicating current panel delaminations, excluding previous successfully repaired delaminations.
(b) A record of repairs made subsequent to each year's inspection.

(c) A listing of current panel delaminations, including location on building (i.e., specific portion of roof or wall), size, history of repair, moisture content, and location on panel (i.e., relative to edges).
(d) Any delaminations identified on a panel during each inspection shall be listed sequentially, relative to previous panel delaminations for that panel.
(e) A listing of all panel seal failures including location on building, size, and repair information.

This information shall be submitted to Ecology within ninety (90) days of inspection. All scaled drawings must be of the same scale and scaled to match all previous panel delamination drawings in order to compare changes in panel delamination rates.

III.7.B.e.9. Page 4-4, Line 21, delete the word "only" and replace with the word "main."

III.7.B.e.10. Page 4-4, Line 22, add the following text: "The estimated amount of water discharged by the fire suppression system during a twenty (20) minute discharge is 13,758 gallons for the Shipping and Receiving Area; 8,626 gallons for the NDE/NDA Area; and 8,412 gallons for the Process Area."

III.7.B.e.11. Page 4-4, Line 33, delete the phrase "(Chapter 7)" and insert the following: "in Section 7.2.5. of Appendix 7A."

III.7.B.e.12. Page 4-4, Line 39, insert the following text as a bullet: "Normally solids are removed using a vacuum system and/or a broom. After all the material is removed, the area is decontaminated using a method appropriate for the material spilled."

III.7.B.e.13. Page 4-4, Line 47, delete the text from the bullet and replace with the following: "If the waste is unknown, samples are taken and analyzed to identify dangerous constituents and for designation, treatment, and disposal purposes."

III.7.B.e.14. Page 4-5, Line 27, insert the following text: "Records of all spills and releases of hazardous substances, including radiation survey results, shall be maintained as part of the WRAP operating record. These records include, but are not limited to, electronic and paper records. These records will eventually be utilized during closure activities at WRAP, as noted in Chapter 11 of this Permit."

III.7.B.e.15. Page 4-6, Line 35, after the phrase " ...TSD unit" add the following: "other than WRAP."

III.7.B.e.16. Page 4-7, Lines 43 - 44, delete the words "However," and "exempt" and after the phrase "...of mixed waste are" insert the following: "managed in accordance with all applicable regulations under the authority of the Atomic Energy Act and the Nuclear Waste Policy Act."

III.7.B.e.17. Page 4-8, Line 29, delete the phrase ", and other areas within WRAP if needed" and replace with the following: "and the low-level and TRU gloveboxes."

III.7.B.e.18. Page 4-8, Line 30, add the following: "Treatment by macroencapsulation is permitted to occur in the Shipping and Receiving area."

III.7.B.e.19. Page 4-8, Line 30, add the following "Refer to Appendix 3A for additional description of waste treatment at WRAP."

III.7.B.e.20. Permittees shall identify critical systems for safe management of dangerous waste and mixed waste at WRAP as required in Facility Condition II.L.2.b.of this Permit. The Permittees shall describe the location and function of each critical system identified. This information shall be submitted to Ecology within one hundred and eighty (180) days of the effective date of this

Permit and, upon approval by Ecology, incorporated as a Class 1 modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 permit modification.

III.7.B.f. Chapter 6

III.7.B.f.1. Page 6-i, Line 9, at the end of the heading, add the following: "[F-1a(1)]."

III.7.B.f.2. Page 6-1, Line 7, after the word "...personnel," add the following: "to dangerous and mixed waste."

III.7.B.f.3. Page 6-1, Line 8, add the following: "Procedures to prevent hazards at WRAP will comply with all applicable federal, state, and local regulatory requirements."

III.7.B.f.4. Page 6-2, Line 6, add the following "The Permittees shall ensure that WRAP is maintained in accordance with WAC 173-303-630(7). The Permittees shall ensure that WRAP inspections, at a minimum, meet the requirements of WAC 173-303-320(2) and WAC 173-303-630(6)."

III.7.B.f.5. Add the following sentence to Page 6-2, Line 23, "The inspections are performed by personnel adequately trained to inspect the WRAP TSD unit and operations."

III.7.B.f.6. Page 6-3, Line 11, after the phrase "resultant liquid," add the following: "and/or contaminated material."

III.7.B.f.7. Page 6-3, Line 19, add the following: "The schedule for remedial action for problems revealed during inspections will depend on the potential risk to human health and the environment. The Permittees must maintain at the WRAP facility a schedule for correction of problems revealed during inspections. The schedule must correlate inspection deficiencies with corrective measures. The Permittees must remedy any problems revealed by the inspection on a schedule which prevents hazards to the public health and the environment. Where a hazard is imminent or has already occurred, remedial action must be taken immediately."

The Permittees shall retain all records related to correction of problems revealed in the WRAP operating record for a period of no less than five (5) years in accordance with WAC 173-303-380."

III.7.B.f.8. In addition to the items listed in the application, Section 6.2.3. shall be revised to include, at a minimum, the following categories of items:

(a) All process line equipment

(b) NDE/NDA equipment

(c) Remote waste handling equipment

(d) Waste storage equipment

(e) Emergency equipment, including spill cleanup supplies

(f) Ventilation equipment detailing all portions that serve the process area, gloveboxes, and Building 2336-W

(g) Aisle space requirements

(h) Safe storage of incompatible and ignitable wastes

For all items listed in Section 6.2.3, including the above listed items, the Permittees shall identify the types of problems to look for during inspections, as well as the frequency of inspections for each item. The frequency of inspection for specific items on the schedule

should be based on the rate of possible deterioration of equipment and/or the probability of an environmental or human health incident, if the deterioration, malfunction, or operator error goes undetected between inspections. In many cases, state or federal rules specify the frequency. State the frequency of inspections as, for instance, "weekly" or "monthly." This information shall be submitted to Ecology within thirty (30) days of the effective date of this Permit and, upon approval by Ecology, incorporated as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

III.7.B.f.9. Page 6-6, Line 41, add the following bullet: "Containers will not be stored in the shipping/receiving area in a way that would interfere with loading and unloading operations."

III.7.B.f.10. Page 6-7, Line 14, delete the word "provided" and replace with the word "provide."

III.7.B.f.11. Page 6-7, Line 36, insert the following: "WRAP systems and structures are inherently safe during power failures."

III.7.B.f.12. Page 6-8, Line 45, after the phrase "any two wastes" insert the following: "(see Appendix 3A for details)."

III.7.B.f.13. Page 6-9, Lines 2 and 3, delete the text and replace with the following: "At least yearly, the areas where ignitable or reactive waste is stored shall be inspected in accordance with WAC 173-303-395(1)(d) by facility personnel in the presence of a professional person who is familiar with the Uniform Fire Code or in the presence of the Hanford Fire Marshal."

III.7.B.f.14. Page 6-9, Lines 19 and 21, after the phrase "restricted waste management" insert the word "gloveboxes."

III.7.B.f.15. Page 6-9, Line 32, after the phrase "waste containers" insert the phrase "or over-pack containers."

III.7.B.f.16. Page 6-9, Line 41, delete the phrase "(Chapter 8.0)" and add the following: "Relevant employees will receive the required training in order to properly manage ignitable or reactive waste at WRAP, as detailed in Chapter 8.0."

III.7.B.g. Chapter 7

III.7.B.g.1. The following condition supercedes any limitation stated or implied in Chapter 7 or Table 7-1: The requirements of WAC 173-303-350(3)(b) are hereby required for all damaged or unacceptable dangerous/mixed waste shipments which arrived at this TSD unit, whether from offsite (i.e., manifested) or from onsite (i.e., under shipping papers) from both generators and/or other TSD units and facilities.

III.7.B.g.2. Table 7-1. The first paragraph of Attachment 4 to the Hanford Facility RCRA Permit (Dangerous Waste Portion) and the following sections of Attachment 4 to the Hanford Facility RCRA Permit (Dangerous Waste Portion) are added as applicable Sections of Appendix 7A of this TSD unit-specific Chapter 7: Sections 3.1, 7.3, 9.2, 8.4, 11.0, 12.0 and 13.0.

In addition delete Section 1.3.2 and replace with Section 1.3.4.

III.7.B.g.3. Those portions of DOE/RL-94-02 which are not made enforceable by inclusion in the application matrix of that document are not made enforceable by reference in this document.

III.7.B.h. Appendix 7A

III.7.B.h.1. (reserved)

III.7.B.h.2. Page 5, seventh Paragraph, insert the word "non-waste" between "other" and "materials."

III.7.B.h.3. Page 5, eighth paragraph, delete the phrase "the various" and replace with the word "appropriate."

III.7.B.h.4. Page 9, Section 6.1.3., delete the phrase "Examples of the gases placed" and replace with the phrase "Routinely used gases"

III.7.B.h.5. Page 9, Section 6.1.3., delete the word "acetylene."

III.7.B.h.6. Page 15, Section 7.1.2., first paragraph, after the phrase "Take Cover Alarm" and before the phrase "is activated" insert the following: "(wavering siren)."

III.7.B.h.7. Page 16, Section 7.2.1., provide additional text describing procedures to safely shut down WRAP operations in the event of loss of utilities such as electrical power, compressed air, and process ventilation. Describe measures to be taken to either shut down or maintain utilities at WRAP in order to ensure that fires, explosions, and releases do not occur or spread to other dangerous/mixed waste. Describe measures to be taken to safely shut down equipment, processes, and/or operations including but not limited to waste treatment operations, loading operations, process lines, automated container storage and handling equipment, computer control systems, and NDE/NDA equipment. Describe procedures for collecting/containing released waste, and/or removing or isolating containers. Describe how leaks, pressure buildup, gas generation or ruptures in valves, pipes, or other equipment will be monitored at WRAP.

Page 16, Section 7.2.2., provide additional text describing procedures to safely shut down WRAP operations in the event of a major process disruption/loss of plant control. Provide WRAP-specific examples of such events. Describe measures to be taken to safely shut down equipment, process, and/or operations at WRAP in order to ensure that fires, explosions, and releases do not occur or spread to other dangerous/mixed waste. The equipment, processes, and/or operations would include but not be limited to waste treatment operations, loading operations, process lines, automated container storage and handling equipment, computer control systems, and NDE/NDA equipment. Describe procedures for collecting/containing released waste, and/or removing or isolating containers. Describe how leaks, pressure buildup, gas generation or ruptures in valves, pipes, or other equipment will be monitored at WRAP.

This information shall be submitted to Ecology within thirty (30) days of the effective date of this Permit and, upon approval by Ecology, incorporated as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

III.7.B.h.8. Page 25, Section 7.5.3., second paragraph, after the phrase "affected WRAP" insert the word "building(s)."

III.7.B.h.9. Page 26, Section 8.2, second bullet, delete the word "clean" and replace with the word "cleaned."

III.7.B.h.10. Section 9.2 Portable Emergency Equipment: The following text is added: "Diagrams, indicating the specific locations of fire extinguishers will be posted at strategic locations for each area of WRAP so that employees can easily determine the location(s) of the nearest or most accessible fire extinguisher(s)." These diagrams shall be posted at WRAP within thirty (30) days of the effective date of this Permit.

III.7.B.h.11. The Permittees will submit to Ecology a revised Section 9.4 that enumerates the specific Personal Protective Equipment (PPE), its location, and capabilities. This information shall be submitted to Ecology within thirty (30) days of the effective date of this Permit and, upon approval by Ecology, be incorporated as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

III.7.B.h.12. The Permittees will submit to Ecology a revised Section 9.5 stating that portable spill response carts are located in the shipping/receiving area and in the process area. Accurately describe the location of the spill response locker [i.e., that the spill response locker is located only in the 2336-W material preparation area room (room 152) and not in the process area]. List the contents of the portable spill response carts and spill response locker, that is, address the emergency equipment available. Include a physical description of each item on the list, as well as a brief outline or description of its capabilities. This information shall be submitted to Ecology within thirty (30) days of the effective date of this Permit and, upon approval by Ecology, be incorporated as a Class 1permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 permit modification.

III.7.B.h.13. The Permittees must review and immediately amend the emergency response documentation, if necessary, whenever: (a) Applicable regulations are revised; (b) The plan fails in an emergency; (c) The unit changes (in its design, construction, operation, maintenance, or other circumstances) in a way that materially increases the potential for fires, explosions, or releases of dangerous waste constituents, or in a way that changes the response necessary in an emergency; and (d) The list of emergency equipment changes.

III.7.B.h.14. The Permittees must note in the WRAP operating record the time, date, and details of any incident that requires implementing the Contingency Plan. Within fifteen (15) days after the incident, the Permittees must submit a written report to Ecology. The report must, at a minimum, include:

(1) Name, address, and telephone number of the Permittees;
(2) Name and telephone number of the TSD unit;
(3) Date, time, and type of incident;
(4) Name and quantity of material(s) involved;
(5) Extent of injuries;
(6) An assessment of actual or potential hazards to human health or the environment, where this is applicable;
(7) Estimated quantity and disposition of recovered material that resulted from the incident;
(8) Cause of the incident; and
(9) Description of corrective actions taken to prevent recurrence of the incident.

III.7.B.i. Chapter 8 (reserved)

III.7.B.j. Appendix 8A

III.7.B.j.1. Page 1, Section 2.0, after the phrase "and/or mixed waste." add the following: "The WRAP DWTP ensures personnel responsible for dangerous waste management are trained to perform the job duties pertinent to handling, treatment, storage, and/or disposal of dangerous waste."

III.7.B.j.2. Page 1, Section 4.0, insert the following text: "A Facility Manager for the WRAP operating organization must ensure that personnel performing the various TSD unit and TSD unit-related activities have received appropriate on-the-job training (OJT). The OJT must be provided by an individual proficient in the specific activity or activities. That individual must

certify that personnel, who successfully complete their OJT, are proficient before they can be assigned to perform the activity independently (i.e., without close supervision)."

III.7.B.j.3. Page 1, Section 4.1, in the last sentence, delete the following text: "Because" and "the Facility Manager is involved in directing training."

III.7.B.j.4. Page 2, Section 4.5, delete the phrase "WRAP and" and replace with the following: "All WRAP employees and."

III.7.B.j.5. Page 4, Section 5.3.4., the categories of General Manager positions do not completely match the categories of General Manager positions listed in Attachment 2. Revise either Section 5.3.4, or Attachment 2, or both to match the General Manager descriptions and required training courses. The revised text shall be submitted to Ecology within thirty (30) days of the effective date of this Permit and, upon approval by Ecology, be incorporated as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

III.7.B.j.6. Page 7, Section 5.5, delete the word "some" and replace with the word "non-facility."

III.7.B.j.7. Page 7, Section 5.7, delete the abbreviation "WMH" and replace with "Waste Management."

III.7.B.k. Chapter 11

III.7.B.k.1. Within sixty (60) days of the effective date of the permit, Ecology and the Permittees shall initiate meetings to establish scope and data quality objectives for a revised closure plan. No later than three hundred sixty-five (365) days after the effective date of the Permit, the Permittees shall submit a revised closure plan that follows all applicable Ecology regulations and that considers applicable Ecology guidance. The revised closure plan shall be subject to Ecology review with issuance of notice(s) of deficiency, revision by the Permittees, and issuance of draft permit conditions, if such conditions are necessary. The revised closure plan shall be considered a Class 3 Permit modification to allow the public to comment on all aspects of the closure, including any proposed permit conditions. The closure plan and conditions shall be issued as required by the applicable regulations, except as noted herein.

III.7.B.k.2. Page 11-1, Line 25, delete the word "particle" and replace with the phrase "solid phase."

III.7.B.k.3. Page 11-1, Line 33, delete the phrase "any contaminated soil within the TSD unit boundary (Appendix 2A details TSD unit boundary)" and replace with the following: "all soil contaminated by WRAP operations in accordance with the Hanford Federal Facility Agreement and Consent Order approach to closure, Section 6.3, Treatment, Storage, and Disposal Closure Process."

III.7.B.k.4. Page 11-1, Lines 41 through 42, delete the phrase "and disposed of accordingly." After the phrase "will be designated" add the following: "and disposed of."

III.7.B.k.5. Page 11-2, Line 1, after the phrase "sampling program" add the following "subject to approval by the Department of Ecology."

III.7.B.k.6. Page 11-6, Lines 43 and 44, delete the sentence beginning with "In addition,..."

III.7.B.k.7. Page 11-7, Line 15, revise the text to read as follows: "Within sixty (60) days of completion of closure activities, a copy of the PE..."

III.7.B.k.8. Page 11-7, Lines 18 through 20, delete the text beginning with "The PE is not..."

III.7.B.l. Chapter 12

III.7.B.1.1 Page 12-1, Line 4, delete the phrase "could be" and replace with the word "are." Also, after "...Facility are..." insert the word "as."

III.7.B.1.2. Page 12-1, Line 8, delete "...are summarized as follows:" and replace with the following text "...include, but are not limited to, the following:"

III.7.B.1.3. Within thirty (30) days of the effective date of the Permit, the Permittees shall notify Ecology in writing of the locations where WRAP records are maintained. In addition, Ecology shall be notified in writing whenever the locations of WRAP records change.

III.7.B.1.4. Page 12-1, add the following "All unit-specific reporting requirements identified in Table 12-1 of the General Information Portion (DOE/RL-91-28) are applicable to the WRAP unit, except for the following: II.F.2.a., II.F.2.c., II.I.1.p., and II.U." The Permittees shall identify requirements from Table 12-1 of the General Information Portion (DOE/RL-91-28) that are not applicable to WRAP and justify why they are not applicable. This information shall be submitted to Ecology within thirty (30) days of the effective date of this Permit and, upon approval by Ecology, be incorporated as a Class 1Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

CHAPTER 8

Central Waste Complex

This chapter sets forth the operating conditions for the Central Waste Complex (CWC).

III.8.A. COMPLIANCE WITH APPROVED PERMIT APPLICATION

The Permittees shall comply with all requirements set forth in the Central Waste Complex (CWC) Permit Application, Rev. 1 and 1A, as found in Attachment 44, including the amendments specified in Condition III.8.B. Enforceable portions are listed below; all subsections, figures, and tables included in these portions are also enforceable unless stated otherwise:

Part A, Form 3, Permit Application, Revision 6, June 28, 1999

Section 2.2	Topographic Maps
Section 2.4	Release from Solid Waste Management Units (SWMU)
Chapter 3.0	Waste Analysis
Chapter 4.0	Process Information
Chapter 6.0	Procedure to Prevent Hazards
Chapter 7.0	Contingency Plan
Chapter 8.0	Personnel Training
Chapter 11.0	Closure and Post Closure Requirements
Chapter 12.0	Reporting and Recordkeeping
Appendix 2A	Topographic Maps
Appendix 3A	Waste Analysis Plan
Appendix 4A	Design Drawings
Appendix 4B	Secondary Containment Calculations
Appendix 4C	Sealant Properties
Appendix 7A	Building Emergency Plan (As applicable in Chapter 7)
Appendix 8A	Training Plan
Attachment 45	Selecting a Laboratory and Quality Assurance/Quality Control

III.8.B. AMENDMENTS TO THE APPROVED PERMIT APPLICATION

III.8.B.a Chapter 1

III.8.B.a.1. Page 1-1, Line 29, delete the word "seven" and replace with the word "eight."

III.8.B.b. Chapter 2

III.8.B.b.1. Section 2.4, Revise to include the following specific regulatory requirements for releases from solid waste management units: WAC 173-303-806 (4)(a)(xxiii), and -(xxiv); WAC 173-303-645 and -646; and 40 CFR 270.14d.

III.8.B.c. Chapter 3

III.8.B.c.1. Page 3-1, Lines 5 and 31, delete the phrase "stored and treated" and replace with the word "managed."

III.8.B.c.2. Page 3-1, Line 6, delete the phrase "storage and treatment" and replace with the word "management."

III.8.B.c.3. Page 3-1, Line 12, delete the word "normally."

III.8.B.c.4. The Permittees shall prepare an attachment to the WAP which describes the waste tracking procedures specified in lines 26 and 27 on page 3-2. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology, the description will be added to the text of Section 1.1.1 of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 permit modification.

III.8.B.c.5. Waste transfers between the Central Waste Complex,, Waste Receiving and Processing Facility, and T Plant do not require the development of a new waste profile because the waste has already been accepted at one of the TSD units under the original waste profile and is being transferred for waste management purposes.

III.8.B.D. Appendix 3A

III.8.B.d.1. Page 1-1, Line 23, after the word "sections," insert the phrase "and the flowchart on Page F2-1 describe the process for waste acceptance and" to read as follows: "The following sections and the flowchart on Page F2-1 describe the process for waste acceptance and the different types of information..."

III.8.B.d.2. Page 1-2, Lines 16 through 20, delete the text and replace with the following: "Verification. Verification activities include container receipt inspection, physical screening, and chemical screening. All waste shipments and containers are subject to receipt inspection during the waste shipment acceptance process. In addition, a percentage of waste containers in each shipment is selected for physical screening. Containers are opened and inspected visually or verified by NDE, NDA, or dose rate profile. A percentage of those containers subjected to physical screening is required to be sampled for field or laboratory analysis. All information and data are evaluated to confirm that the waste matches the waste profile and container data/information supplied by the generator. Any discrepancies between..."

III.8.B.d.3. Page 1-3, Line 7, delete "A PES" and insert "The Performance Evaluation System (PES)".

III.8.B.d.4. The Permittees shall prepare an adequate description of the procedure for using conformance reports to evaluate the generator and to adjust the physical screening rate. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology, the description will replace the text on Page 1-3, Lines 42 through 46, beginning with "The CWC..." of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification. If said adequate description is not provided as specified herein, the following text shall be an enforceable condition: "Page 1-3, Lines 42 through 46, delete the text beginning "The CWC operating organization..." and replace with the following: "Conformance reports are used to complete an evaluation of the generator and to adjust the physical screening rate as indicated. At a minimum, a quarterly evaluation according to the following criteria shall be performed and the indicated scores shall be assigned based upon severity and justification:

1. Designation conformance issues
   - Regulatory violation, 7 – 10
   - Mismanagement of waste (conditions which would or did lead to placement of waste in the wrong storage location, the wrong treatment path, etc.), 4 – 6
   - No mismanagement of waste, 1 – 3
2. Characterization conformance issues
   - Safety issue, 7 – 10
   - Mismanagement of waste (see above), 4 – 6
   - No mismanagement of waste, 1 –3
3. Paperwork inconsistencies
   - LDR form, 1 – 3
   - Shipping papers or waste tracking forms, 1 – 3
   - Waste profile discrepancies, 1 – 3
   - Incomplete shipment and/or transfer information, 1 – 3
4. Screening conformance issues
   - Regulatory violation and/or safety issue, 7 – 10
   - Mismanagement of waste (see above), 4 – 6
   - No mismanagement of waste, 1 – 3
5. Receipt conformance issues
   - Regulatory violation and/or safety issue, 7 – 10
   - Mismanagement of waste (see above), 4 – 6
   - No mismanagement of waste, 1 – 3

A generator receiving a score of 10 or greater has demonstrated less than satisfactory performance and must be evaluated for corrective action by the CWC operating organization. The physical screening rate is increased for that generator based upon the following criteria:

- A score of 10 to 15 – the physical screening frequency is increased to a minimum of 15%.
- A score of 16 to 20 – the physical screening frequency is increased to a minimum of 50%.
- A score greater than 20 – the physical screening frequency is increased to 100%."

III.8.B.d.5. Paperwork inconsistencies or improperly completed and/or incorrect information must be corrected and resolved prior to acceptance of waste for management at this TSD unit.

III.8.B.d.6. Approved waste profiles and all supporting documentation from the initial submission through all re-evaluations must be retained in the TSD unit operating record as required by Condition II.I.1. for waste managed, i.e., stored and/or treated, at this TSD unit.

III.8.B.d.7. Within thirty (30) days of the issuance of this Permit, the Permittees are required to submit, to Ecology for review and approval, text describing all constraints which apply to the acceptance of waste at this TSD unit for any purpose, including physical examination and temporary storage in any portion of the building or within the boundaries of the TSD unit. Subsequent to any revisions required by Ecology, the description will be added to the text of Section.1.1.3 of the WAP as a Class 1 permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 permit modification.

III.8.B.d.8. The Permittees shall prepare an adequate description of the procedure for reducing the physical screening frequency for acceptance of waste at this TSD unit. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of

this Permit. Subsequent to any revisions required by Ecology, the description will replace the text on Page 1-4, Lines 32 through 46 and Page 1-5, Lines 1 through 5, of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification. If said adequate description is not provided as specified herein, the following text shall be an enforceable condition: "Lines 32 through 46 and Page 1-5, Lines 1 through 5, insert the following text: "1.1.1.3.4 Process for Reducing the Physical Screening Frequency. After the initial screening frequency has been established for a generator or that frequency has been adjusted due to poor performance, the physical screening frequency can be reduced in accordance with the following:

- The physical screening frequency will be stepped down in three steps based upon the ability of the generator to implement the corrective action plan and/or demonstrate an ability to appropriately manage waste. At no time shall the physical screening frequency be reduced below 5% for onsite generators or below 10% for offsite generators.

  Step 1) Reduce frequency by 66% the first month.
  Step 2) Reduce frequency established in Step 1 by 50% or to the minimum allowable, whichever results in a greater frequency.
  Step 3) Reduce frequency to the minimum allowable.

- The reduction will be determined during the periodic evaluation process; however, the following minimum criteria must be met prior to reduction of the frequency:

  (1) Five (5) containers from the waste stream in question (defined by a single waste profile) must pass verification, and
  (2) The TSD unit must document an acceptable evaluation of the corrective action plan or that the generator's new waste management program has been implemented and is effective.

If the screening frequency was increased based upon conformance issues at the time of waste receipt, the corrective action plan must be fully implemented before the generator may return to the minimum physical screening frequency. However, waste streams from the same generator, which did not have conformance issues upon receipt at this TSD unit, may return to the minimum verification frequency if the TSD unit operating organization determines that the specific conformance issue is unlikely to affect the generator's other waste streams.""

III.8.B.d.9. Page 1-5, Lines 28 throught 32, add the following waste types to the list of wastes prohibited from management at this TSD unit:

- "Bulk solids in trucks or roll-off boxes."

III.8.B.d.10. Page 1-5, Line 28, replace the phrase "Bulk liquid waste" with the following: "Bulk liquid waste in tankers."

III.8.B.d.11. Page 1-6, Lines 12 through 45, delete the text regarding Alternative Waste Management Plan.

III.8.B.d.12. Page 2-1, Lines 3 through 13, delete the text beginning with "The requirement..."

III.8.B.d.13. Page 2-2, Lines 39 through 40, delete "or its representative."

III.8.B.d.14. Page 2-2, Line 46, delete the phrase "the information is accurate" and replace with: "the waste to be shipped to CWC is as described by the waste profile."

III.8.B.d.15. Page 2-3, Lines 8 through 33, delete the text and replace with text that is adequate to describe how containers are chosen for physical and chemical screening. Within thirty (30) days of the effective date of this Permit, a description of this procedure must be submitted to Ecology for review and approval; subsequent to any revisions required by Ecology, the description will be added to the text of Section 2.1.2 of this WAP as a Class 1 permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 permit modification.

III.8.B.d.16. Page 2-4, Lines 4 through 7, delete the text and replace with the following: "When the available information does not qualify as acceptable knowledge or is not sufficient to characterize a waste for management, the sampling and testing methods outlined in WAC 173-303-110 must be used by the generator to determine whether a waste designates as ignitable, corrosive, reactive, and/or toxic and whether the waste contains free liquids. If the analysis is performed to complete characterization after acceptance of the waste by the TSD unit, then this Permit governs the sampling and testing requirements."

III.8.B.d.17. Page 2-4, Line 26, and Page 2-5, Line 3, correct the WAC citations to read as follows: "173-303-380(1) (j), -(k), -(n), and -(o)."

III.8.B.d.18. Page 2-4, Lines 31 through 44, delete the text beginning with the following: "In some situations..." Replace it with: "The following waste knowledge exceptions apply to waste accepted for management at the CWC TSD unit:

- Hazardous debris as defined in WAC 173-303-040 that is managed in accordance with 40 CFR 268.45 (the "Debris Rule") is not required to be sampled. Management of debris in this manner is not dependent on the quantification of constituents to be federal and State-only LDR regulations.
- Wastes generated on-site may be shipped to the CWC TSD unit provided the waste has been characterized for storage and a representative sample has been taken to characterize the waste for treatment and/or disposal.
- Waste that was previously disposed and then retrieved may be transferred to the CWC TSD unit with only the necessary information to properly manage the waste at the storage unit.
- Waste received prior to the implementation of this guidance and has been characterized for storage only may be transferred between CWC and permitted storage units without re-characterization; however, the pre-shipment review and verification requirements must be met.
- On-site generators may ship waste (that cannot be sampled by the generator) to the CWC TSD unit for completion of characterization provided that the waste is characterized for storage."

III.8.B.d.19. Page 2-5, Lines 41 through 46 and Page 2-6, Lines 1 through 2 (Section 2.2.1), delete the text and replace with the following: "...100 percent of each shipment (including onsite transfers) are inspected at the TSD unit for possible damage or leaks, complete labeling, intact tamper seals (if waste has been subjected to physical or chemical screening at another location), and piece count. This is to ensure that the shipment: (1) is received at the TSD unit in good condition, (2) is the waste indicated on the manifest or shipping papers, (3) has not been opened after physical and/or chemical screening was performed, and (4) is complete. Any issue resolution, including correction of document discrepancies, re-labeling, overpacking of leaking or deteriorated drums, must occur before verification activities may continue. Documentation of issue resolutions must be maintained in the TSD unit operating record.

Any paperwork discrepancies for shipments from both offsite and onsite generators must be resolved as required by WAC 173-303-370(4)."

III.8.B.d.20. For waste in storage at CWC, Ecology recognizes that the generator may hire the WRAP operating organization to treat waste, including sorting and repackaging, and thereby correct discrepancies and problems identified during the CWC waste acceptance process. If correction of these discrepancies and problems are not accomplished within two (2) months of receipt of the waste shipment at CWC, the Permittees shall contact Ecology (specifically the Ecology Project Manager). Ecology will establish a compliance schedule for treatment of the waste shipment.

III.8.B.d.21. The Permittees shall prepare an adequate description of the procedure for performing physical screening by visual inspection or NDE before waste is sent to the TSD unit. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology, the description will replace the text on Page 2-6, Lines 8 through 10 (Section 2.2.2) of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification. If said adequate description is not provided as specified herein, the following text shall be an enforceable condition:

"Page 2-6, Lines 8 through 10 (Section 2.2.2), delete the text and replace with the following: "as a verification activity. Physical screening by visual inspection or NDE could be performed by the CWC operating organization before the waste is shipped to CWC. In this case, the visual inspection is performed by observation of the generator filling empty containers with waste or examining the contained contents at the location. NDE is performed using mobile equipment which meets the performance requirements identified in this permit. When visual inspection or NDE is performed at a location other than CWC, at least one tamper-resistant seal is applied to each container examined and verified as acceptable, so that the container may not be reopened unless the seal is broken. These seals are the same as custody seals and are subject to the same evidentiary requirements as custody seals. The seals must be placed by the observer/verifier before the container leaves his/her sight on the day the observation occurs. The seal must be uniquely identified and controlled, e.g., signed and dated or uniquely numbered and tracked in a logbook. In addition, the seal must be easily differentiated from tamper-resistant seals used for other purposes. The verification must be documented in the paperwork that accompanies the waste shipment to CWC and that paperwork must be placed in the TSD unit operating record. Also, the transfer documentation must identify whether the container required verification and the result of that verification. As long as the tamper-resistant seal remains intact, those containers of waste may be moved within the Hanford Solid Waste Complex without further physical screening, although container receipt inspections are required for all waste shipments, including transfers. The waste may still be subject to chemical screening."

III.8.B.d.22. Add the following text to Section 2.2.2: "Selection and interpretation of the appropriate physical screening method(s) are conducted by personnel who are qualified as described in the Training Plan (Appendix 8A) as amended by any Permit conditions. Each physical screening method is performed by qualified personnel."

III.8.B.d.23. Page 2-6, Line 14, add a reference to the text to reads as follows: "(See Section 3.1 for the criteria for choosing a physical screening method.)."

III.8.B.d.24. Page 2-6, Line 26, insert the phrase "The minimum" at the beginning of the sentence, so that the sentence reads as follows: "The minimum physical screening frequency is 5 percent for onsite generating units,..."

III.8.B.d.25. Page 2-6, Line 36, add a reference to Section 1.1.1.3. to the sentence, so the sentence reads as follows: "All failed containers and shipments are dispositioned via the PES, as described in Section 1.1.1.3. of this WAP."

III.8.B.d.26. Page 2-7, Line 9, delete "authorized independent agent are" and replace with "is."

III.8.B.d.27. Page 2-6, Lines 12 and 13, delete "or Pacific Northwest National Laboratory (PNNL) packaged waste that is transferred to PNNL operated TSD units]".

III.8.B.d.28. Page 2-7, Lines 19 through 21, delete the text and replace with the following: "frequency, and exceptions for chemical screening. Chemical screening may be performed by the CWC operating organization before the waste is shipped to CWC. After chemical screening is done, tamper-resistant seals are applied over the container opening on each outer container screened. The requirements described for tamper-resistant seals used for visual examination apply for chemical screening, as well. Any requirement elsewhere in this Waste Analysis Plan or Permit related to chemical screening also applies for chemical screening performed before the waste is received at CWC."

III.8.B.d.29. Page 2-7, Line 23, delete the first sentence and replace with the following text: "Selection and interpretation of the appropriate chemical screening method(s) are conducted by personnel who are qualified as described in the Training Plan (Appendix 8A) as amended by any Permit conditions. Each chemical screening method is performed by qualified personnel."

III.8.B.d.30. Page 2-7, Lines 24 through 25, delete the text which reads "The objective...documentation." and replace with the following: "The objective of chemical screening is to obtain reasonable assurance that the waste received by the TSD unit is consistent with the description of the waste on the waste profile and to provide information that will be used to safely manage the waste at the TSD unit."

III.8.B.d.31. Deleted.

III.8.B.d.32. Page 2-7, Line 40, delete "Headspace testing" and replace with "Ignitability/headspace screening for volatile compounds."

III.8.B.d.33. Page 2-7, Line 43, delete "Paint filter" and replace with "Paint Filter Liquids Test."

III.8.B.d.34. Page 2-7, Line 45, correct the reference to read as follows: "Section 2.2.5.2."

III.8.B.d.35. Page 2-8, Line 24, delete ", etc."

III.8.B.d.36. Page 2-8, Line 37, delete "special-case" and replace with: "special cases."

III.8.B.d.37. Page 2-8, Lines 41 through 44, delete all text to the word "contamination" and replace with: "Sampling is performed in accordance with WAC 173-303-110(2). A representative sample is obtained for chemical screening."

III.8.B.d.38. Page 2-9, Line 8, delete the phrase "shipping documentation" and replace with "waste profile."

III.8.B.d.39. All confirmation activities shall be governed by TSD unit-specific controlling documentation and performed in a consistent manner. Confirmation records shall be kept in a traceable,

defensible manner. Records shall be maintained in a protective manner (e.g., protected from fire, water, access and/or tampering by unauthorized personnel). In addition, electronic records must be protected from electromagnetic damage. A modification to the Waste Analysis Plan must be submitted within thirty (30) days following the effective date of this Permit, to identify the location of Waste Analysis Plan components of the TSD unit-specific Operating Record. Upon approval by Ecology, this information shall be incorporated as a Class 1 Permit modification or, if necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

III.8.B.d.40. If a false negative occurs as described in line 21, page 2-9, the corrective actions mentioned in line 23 must include the re-evaluation of all affected video tapes/records since the previous acceptable QC check. If any results are questionable, those affected drums must be reevaluated and handled appropriately."

III.8.B.d.41. Page 2-9, in Section 2.2.5.1, note that quality control has not been presented for non-destructive assay (NDA) or for dose rate profile. Until such time that text describing those physical screening options is provided to Ecology for review and approval, the required revisions are made, the public comment conducted, and the text becomes an enforceable condition of this WAP, all physical screening must be by visual observation and NDE only, subject to other enforceable conditions of this Permit.

III.8.B.d.42. The equipment requirements of Table 4-1, as amended by any Permit conditions, apply to sampling for chemical screening. In addition, the following sampling equipment may be used in sampling for chemical screening: (1) For liquids and slurries – dip, tank, bomb, and bailer samplers, as well as tube-type samplers (e.g., thin-walled Shelby tubes, split spoons, probes); and (2) For sludges and solids – Tube-type samplers (as above) and augers; for small containers, a spoon may be used in place of a scoop.

III.8.B.d.43. The required quality control for chemical screening includes, but is not limited to, the following:

- Containers and equipment of the appropriate size and that are chemically compatible with the waste and all testing reagents shall be used.
- A documented source of reagent water shall be used.
- All chemicals and test kits shall be identified in the logbook/records by manufacturer; lot number(s) or, if no lot number is present, by date of manufacture; date of receipt; and expiration date (if none provided or not applicable, so indicate). All chemicals and test kits must be labeled so that they are traceable to the logbook/records.
- All chemical preparations, i.e., chemical mixtures or solutions, shall be documented in logbook/records by the method of preparation, e.g., weight or volume of chemical(s), identity of solute, volume or weight of solute, final concentration, as well as the name of the preparer, preparation date, expiration date. They must be labeled completely and traceable to the preparation records.
- One in 20 analyses at a minimum shall be performed in duplicate.

The results of quality control checks for each test kit lot or periodic testing and for daily quality control checks including equipment calibration shall be recorded in a defensible manner.

III.8.B.d.44. The Permittees shall provide an adequate description of quality control for chemical screening. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology,

the description will replace the text on Page 2-10, Lines 4 through 7, under a new bulleted heading "Equipment and Quality Control Checks" of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification. If said adequate description is not provided as specified herein, the following text shall be an enforceable condition: "Page 2-10, Lines 4 through 7, delete the text and insert the following under a new bulleted heading "Equipment and Quality Control Checks": "The CWC operating organization will perform the following quality control checks on each new test kit or reagent lot to be followed by rechecks on at least a six-month interval, unless a more frequent period is specified in the test kit instructions or the quality control check method.

(a) Ignitability/Headspace Screening for Volatile Organic Compounds: Headspace screening equipment shall be calibrated using known standards in accordance with the manufacturer's instructions. In addition, the equipment will be quality control checked on each day of use by sampling the headspace of a reagent containing hexane. If it does not perform as expected, the equipment will be recalibrated.

(b) Peroxide Screening: The quality control check for the peroxide test paper is as follows: (1) Moisten the test paper with water. Add two drops of 3% hydrogen peroxide solution to the test paper. The test paper should turn blue. If it does not, replace the test paper or reject the lot. (2) Add a drop of potassium dichromate solution to approximately ½-inch of water in a test tube. Place the peroxide test paper in the solution. The test paper should not turn blue. If it changes color, replace the test paper or reject the lot. (3) Add one drop of nitric acid to the test paper. The paper should turn yellow. If it does not, replace the test paper or reject the lot.

(c) Paint Filter Liquids Test: The quality control check consists of visually inspecting each filter, prior to performing each test, to ensure that it is in good condition and is not torn or ripped. If it is damaged, the filter shall be replaced.

(d) pH Screen: The quality control check for the pH test paper is as follows: (1) Place a drop of concentrated hydrochloric acid onto the test paper; the pH should be 0 ± 1. (2) Place a drop of acetic acid onto the test paper; the pH should be 2 to 3 ± 1. (3) Place a drop of reagent water onto the test paper; the pH should be 7 ± 1. (4) Place a drop of ammonium hydroxide onto the test paper; the pH should be 11 to 12 ± 1. (5) Place a drop of sodium hydroxide onto the test paper; the pH should be 14 ± 1. If the pH on most of these tests is not as specified, replace or reject the pH paper. If only one or two tests produce results that are different than stated, check or replace the reagents. The most important check is the reagent water, although it frequently will have a slightly acidic pH. All of the stated pH checks also may be performed using pH buffer solutions.

(e) Oxidizer Screen: The quality control check for the oxidizer test paper is as follows: Moisten the test paper with 3M hydrochloric acid. Add two drops of potassium dichromate solution to the paper. The paper should turn black. If the test is negative, replace the paper or reject the lot.

(f) Water Reactivity Screen: The quality control check consists of testing the pH of the reagent water. If the pH is not 7 ± 1, the reagent water shall be replaced. Note that this check may be performed as part of the pH quality control check.

(g) Cyanide Screen: The ferrous ammonium citrate reagent is the most unstable reagent used in this test. The ferrous ion will oxidize to ferric upon standing for even a short

period of time. If the reagent has a thick opaque color or if there are particulates floating in the solution, the reagent should be replaced. To check the ferrous ammonium citrate, perform both of the following tests: (1) Add a pinch of ferrous ammonium sulfate to ¼-inch of the ferrous ammonium citrate reagent in a test tube. Add a drop of 1,10-phenanthroline to the test tube. The solution should turn blood red. (2) Add a pinch of ferrous ammonium sulfate to ¼-inch of the ferrous ammonium citrate reagent in a test tube (this is solution 1). Add a small amount of potassium ferrocyanide to a test tube of water (this is solution 2). Add a small amount of solution 1 to solution 2 to form solution 3. Add a ¼-inch of 3 Normal (i.e., 3N or 3M) hydrochloric acid to solution 3. The solution should turn dark blue. If either test is negative, replace the reagent or reject the lot.

(h) Sulfide Screen: The quality control check for the sulfide test paper is as follows: (1) Add 1 to 2 drops of reagent water to the sulfide test paper. (2) Add two drops of 3 Normal (3N or 3M) hydrochloric acid to two sodium sulfide flakes in a disposable watch glass or weighing boat. (3) Touch the sulfide test paper to the flakes. The test paper should turn brown, black, or silvery. If the test is negative, then replace the test paper or reject the lot.

(i) HOC Screen: The quality control check is to perform the test according to the test kit instruction on a reagent containing approximately 50 ppm of a chlorinated organic compound. If the test does not indicate a positive result, replace or reject the lot. If two or more test kit lots do not indicate a positive result, replace and/or test the reagent and retest the test kit lots.""

III.8.B.d.45. The phrase "shipping documentation" is used throughout Section 3.0. The Permit requires that the shipping documentation be evaluated against the "waste profile" so that only approved waste is received by the TSD unit. Therefore, ultimately each physical and chemical screening result must be in agreement with the waste profile to determine the acceptability of the result and, thereby, whether or not the container fails.

III.8.B.d.46. The result of failure (i.e., "a container fails...") as described in Section 3.1, Physical Screening Parameters, under the heading "Failure Criteria" may be a return to the generator, a re-profiling of the waste stream, or treatment (processing or reprocessing) at a permitted TSD unit. The result of failure for chemical screening (e.g., failing the test, constitutes failure), as described in Section 3.2, Chemical Screening Parameters, under the heading "Tolerance" may the same outcomes as for physical screening. In addition, a failure of the chemical screening may be the expected outcome of the test, dependent upon the waste profile.

III.8.B.d.47. Page 3-1, Lines 2 and 3, delete the text and replace with the following: "Physical and chemical screening parameters for verification must be chosen from those in Sections 3.1 and 3.2. Parameters for waste designation and to meet LDR requirements are addressed in Section 3.3."

III.8.B.d.48. Page 3-1, Line 7, replace the phrase "could be used to perform" with the phrase "are approved for use in performing" so that the sentence reads as follows: "The following methods are approved for use in performing physical screening."

III.8.B.d.49. Page 3-1, Line 17, replace the phrase "could be" with the word "are" so that the sentence reads as follows: "Homogenous loose solids are probed to determine the presence of material not documented . . . "

III.8.B.d.50. Page 3-1, Lines 35 through 38, delete the text and replace with the following text: "The container is scanned top-to-bottom and side-to-side with a non-destructive examination (NDE) system according to documented and approved procedures. At a minimum, the lifts, conveyors rotators, and manipulators for the real-time imaging systems shall be capable of handling drums up to 85-gallons in size and up to 1000 pounds in weight and boxes up to 7000 pounds in weight. The minimum image quality, X-ray system performance, and system operator requirements shall be in accordance with the documented specifications for operating the NDE system. The X-ray components shall include the following: (1) a nine-inch (diagonal) entrance field image intensifier, or equivalent, (2) a twelve-inch, high resolution video display monitor, (3) a video printer, and (4) a high-performance, broadcast quality, S-VHS/VHS recorder/player. Quality assurance measures that indicate X-ray imaging quality shall be utilized and documented during equipment startup. For verification activities by NDE, data are observed on a video monitor and captured on video tape to provide a record. Personnel experienced in the interpretation of NDE imagery will record their observations. These observations are then compared to the inventory of container contents on the shipping documentation and also must be in agreement with the waste profile."

III.8.B.d.51. Page 3-2, Line 43, replace the phrase "could be used to perform" with the phrase "are approved for use in performing" so that the sentence reads as follows: "The following methods are approved for use in performing chemical screening."

III.8.B.d.52. Page 3-3, Lines 28 and 29, in addition to the text provided, the following condition applies: The required method for the Paint Filter Liquids Test is Method 9095 in the U.S. Environmental Protection Agency (EPA), SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (the most recently promulgated version).

III.8.B.d.53. Page 3-3, Lines 41 through 44, delete the text and replace with the following: "Method: Full range pH paper with a stated precision of 1.0 pH unit and a corresponding color chart is used for testing. For aqueous samples, a representative test portion of the sample is introduced onto the strip of pH paper. For solids, sludges, and non-aqueous liquids, a representative test portion is mixed with an approximately equal amount of water. The aqueous portion (extractant) of this mixture is then introduced onto the strip of pH paper. The paper is compared visually to the color chart to determine the best color match. The pH is recorded to the nearest whole pH unit."

III.8.B.d.54. Page 3-4, Lines 7 and 8, delete the text and replace with the following: "Method: Potassium iodide (KI) starch test paper is used for testing. KI oxidizes to iodine (I_2) in the presence of starch to yield a dark blue-black coloration on the test paper. A representative test portion of the sample is placed on a disposable watch dish or weighing boat. The KI test paper strip is acidified with 3M hydrochloric acid (HCl) and placed in contact with the test portion. A darkening of the test paper is a positive indication of the oxidizing properties of the sample."

III.8.B.d.55. Page 3-4, Lines 19 through 21, delete the text and replace with the following: "Method: Water reactivity of waste is determined by adding a representative test portion to an approximately equal volume of water in a disposable watch glass or weighing boat. The mixture is observed for positive indications of water reactivity such as temperature change (increase or decrease), gas evolution, gelling or polymerization."

III.8.B.d.56. Page 3-4, Lines 32 through 35, delete the text and replace with the following: "Method: A ferrous ammonium citrate solution is used as a colorimetric indicator of free cyanides and some complex cyanides. The reagent turns a dark Prussian blue color due to the formation of

blue iron ferrocyanide in the presence of cyanide under acidic conditions. A representative test portion is placed on a disposable watch glass or weighing boat. An approximately equal amount of water is added to solid matrices. The ferrous ammonium citrate solution is added and mixed into the test portion. The mixture is then acidified with 3M hydrochloric acid (HCl). A dark blue color, if present, indicates the presence of cyanides."

III.8.B.d.57. Page 3-4, Lines 46 through 49, delete the text and replace with the following: "Method: Lead acetate test paper strips are used for testing. Under acidic conditions, sulfide compounds release hydrogen sulfide (H_2S) and, in the presence of this H_2S, the lead acetate paper changes to a silvery brown or black color due to the formation of lead sulfide (PbS). A representative test portion is place on a disposable watch glass or weighing boat. The test portion is acidified with 3M hydrochloric acid (HCl). A lead acetate test paper strip is dampened with water and placed near the acidified test portion. A darkening of the test paper is a positive indication of the presence of sulfides in the test portion."

III.8.B.d.58. Page 3-5, Lines 11 through 14, delete the text and replace with the following: "Method: A precise amount of oil (i.e., the test portion) is placed into the first of two disposable test tubes provided with the test kit. An ampule containing a colorless catalyst is broken and the contents are mixed thoroughly with the test portion. A second ampule containing metallic sodium is broken and the sodium, activated by the catalyst, strips chlorine from any chlorinated organic compounds present to form sodium chloride. An aqueous buffer solution is added to the test portion. This neutralizes the excess sodium and extracts the sodium chloride into the water. The water layer is then separated from the oil and decanted into the second test tube. An ampule containing a precise amount of reagent is broken and the contents mixed with the water. An ampule containing an indicator is then broken and the contents mixed with the water. The color of the mixture is dependent on the amount of chlorinated organic compounds in the original test portion of oil.

III.8.B.d.59. The Permittees shall prepare an adequate description of "Tolerance" for the HOC chemical screening. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology, the description will replace the text on Page 3-5, Lines 16 through 17 of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

III.8.B.d.60. Page 3-5, Line 20, delete the phrase "Sample and."

III.8.B.d.61. Page 3-5, Lines 21 and 22, delete the text and replace with the following: "Parameters needed to meet designation, characterization, and LDR requirements for waste stored at and/or treated for CWC are identified in Appendix A of this WAP."

III.8.B.d.62. Delete the title of Section 4.0 and replace it with the following: "Selecting Sampling Procedures." The content of this section, as amended, applies to all sampling that is done by or at the direction of the TSD unit for (1) characterization of waste after processing, (2) LDR of treated waste, or (3) additional characterization, if needed, for treatment or disposal.

III.8.B.d.63. Page 4-2, Lines 9 through 10, delete the text beginning with "or other approved sample preservation method in accordance with 62 FR 62079" and replace it with the following: "except as amended by the Permit."

III.8.B.d.64. The following condition applies for the preservation and holding times for samples and for laboratory extracts of the samples. Waste samples are treated and preserved as necessary to protect the sample. Tables 2-36 and 4-1 in SW-846 contains recommended

treatment/preservative and holding times. Not all samples require preservation and placing a holding time on a sample may not always be appropriate. Samples with a high concentration of the analyte or non-LDR samples may not require preservation, whereas aqueous samples and samples with low concentrations of the analyte or LDR samples require preservation. If the required preservation interferes with some of the analytes requested, then multiple aliquots of sample may need to be obtained for analysis. Samples taken for analysis of a persistent constituent or non-biologically degradable constituent may not require a holding time. For example, a sample for PCB analysis does not require a holding time (although the laboratory extractant is subject to a holding time). The recommended holding time and preservation for hexavalent chromium (Cr+6) listed in the Tables are required for all sample matrices unless the hexavalent chromium concentration is assumed to be represented by the total chromium in the sample. The recommended preservation and holding time for mercury (Hg) is required in all sample matrices. For the laboratory-prepared organic extracts (e.g., semi-volatile organic analysis and PCBs) the holding times listed in the Tables are required to be met for each extract.

III.8.B.d.65. Page 4-2, Line 13, delete the title of Section 4.5 and replace with the following: "Establishing Quality Assurance and Quality Control Procedures for Sampling."

III.8.B.d.66. Page 4-2, Line 21, the phrase "appropriate personnel" is defined as the sampler or a person who is directed by the sampler.

III.8.B.d.67. Page 4-2, Line 22, insert the following after the sentence: "If sampling is conducted in a posted radiological zone, then the logbook entries may be made by a person who is outside the zone or by the sampler immediately after the sampling is completed."

III.8.B.d.68. Page 4-2, Line 22 through 23, delete the phrase "or copies of logs are maintained by the appropriate personnel after completion of sampling activities" and replace with: "are permanent records of the TSD unit and must be retained in the TSD unit operating record."

III.8.B.d.69. The Permittees shall prepare an adequate procedural description of recordkeeping for sampling. This text shall be submitted to Ecology for review and approval within thirty (30) days of the effective date of this Permit. Subsequent to any revisions required by Ecology, the description will be inserted on Page 4-2 after Line 23 as a new paragraph of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification. If adequate description is not provided as specified herein, the following text shall be an enforceable condition: "Page 4-2, insert the following text after line 23 as a new paragraph: "The log of sampling activities is kept in an inventoried, uniquely numbered, bound logbook with sequentially numbered pages. Any affixed information (e.g., pictures, copies of chain-of-custody documentation) shall be permanently attached to a logbook page and initialed and dated across the edge of the attached material onto the logbook page so that removal or tampering with the attachment(s) can be identified. No affixed material may be placed over any other affixed items or written entries. The requirements for defensible data recording apply, including correction of entries by single line cross-out, initial and date, and give reason for the change. A signature is required rather than initials if the correction is made by someone other than the original recorder. No entries shall be obliterated (e.g., "white out" must not be used). The identity of the person who is initialing the record must be easily determined."

III.8.B.d.70. The Permittees shall prepare an adequate description of the procedure for chain of custody for this TSD unit. This text shall be submitted to Ecology for review and approval within thirty

(30) days of the effective date of this Permit. Subsequent to any revision required by Ecology, the description will replace the text on Page 4-2, Lines 25 through 28 of the Waste Analysis Plan (WAP), also identified as Appendix 3A, as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification. If adequate description is not provided as specified herein, the following text shall be an enforceable condition: "Page 4-2, Lines 25 through 28, delete the text and replace with the following: "Chain of custody and chain-of-custody documentation are maintained at all times for samples collected by or for CWC. The chain-of-custody documentation includes, but may not be limited to, the following information: the container from which the sample originated, the unique sample number assigned, date and time of collection, sample type, sample location, method(s) of transfer to the laboratory, identity of the sample collector, identity of all subsequent custodians. The chain of custody form is originated by the sample collector and includes all transfers of custody. The chain-of-custody form travels with each sample to the laboratory."

III.8.B.d.71. Section 5.0 is deleted in entirety and replaced by the text of Attachment 45.

III.8.B.d.72. Deleted.

III.8.B.d.73. Deleted.

III.8.B.d.74. Page 6-1, Lines 2 through 10, delete the text and replace with the following: "The frequency to re-evaluate the waste profile and supporting data and documentation is each twelve (12) months, at a minimum, or more often if the generator has informed the TSD unit of a change in the waste generation process or if the TSD unit has identified that the waste received at the TSD unit or the description on the manifest or shipping papers does not match the waste profile. If the generator has informed the TSD unit of a change in the waste generation process, the waste re-enters the waste stream approval process described in Section 2.1.1 as amended by any Permit conditions. The TSD unit will evaluate verification data against the waste profile to identify any waste streams for which a change in waste generation process is suspect. If a waste stream is suspect, that waste stream also will re-enter the approval process described in Section 2.1.1 as amended by any Permit condition."

III.8.B.d.75. Page 7-1, Lines 7 and 8, delete the sentence beginning with "Differences include..." and replace with the following: "Differences include, but are not limited to, the following: (1) physical and chemical screening frequencies for verification (minimum percentages of 5% for waste from on-site generator units and 10% for waste from off-site generators (note that chemical screening frequency is dependent upon the physical screening frequency); (2) shipping documentation (Uniform Hazardous Waste Manifests are used for waste from off-site generators and waste tracking forms are used for waste from on-site generator units); and (3) LDR documentation requirements (notification for waste from off-site generators and the information contained in the notice for waste from on-site generator units)."

III.8.B.d.76. Page 7-1, Line 41, delete the phrase "and not per Section 1.1.1.1."

III.8.B.d.77. Page 7-2, Line 1, correct the WAC citation to read as follows: "WAC 173-303-380(1)(j), -(k), -(l), -(m), -(n), or -(o)."

III.8.B.d.78. Page 7-3, Line 19, delete the word "an" and replace with the phrase "that a federal."

III.8.B.d.79. Page 7-3, Line 20, delete the phrase "or equivalent."

III.8.B.d.80. Page 7-3, Line 21, delete the phrase "or any other reliable method allowed by regulations."

III.8.B.d.81. Page 7-3, Line 25, delete the phrase "or any other method allowed by regulations" and replace with the phrase "WAC 173-303-110, or this Permit."

III.8.B.d.82. Page 7-3, Line 30, delete the word "sample" and replace with the word "analytical."

III.8.B.d.83. Page 7-3, Line 33, add the following text: "A copy of the certification is placed in the CWC operating record."

III.8.B.d.84. Page 7-3, Line 35, delete the word "Where" and replace with the word "When."

III.8.B.d.85. Page 7-3, Line 38, correct the WAC citation to read as follows: "WAC 173-303-380(l)(k), -(n), -(o)."

III.8.B.e. Chapter 4

III.8.B.e.1. With the exception of spill materials (those spill materials which are specifically generated within the CWC TSD unit boundary) waste treatment by CWC must be approved by Ecology prior to execution. In the event that waste treatment at CWC is a consideration, the following actions must take place: (1) The Permittees must revise pertinent Part B Permit application chapters and appendices (including, but not limited to, waste analysis, process information, WAP, and BEP) and submit them to Ecology for review and approval **sixty (60) days** before treatment is scheduled to begin, and (2) upon approval, the revised information will be incorporated into the Permit through a Class 3 permit modification.

III.8.B.e.2. The Permittees shall identify critical systems for safe management of dangerous waste and mixed waste at CWC as required in General Condition II.L.2.b of this Permit. The Permittees shall describe the location and function of each critical system identified. This information shall be submitted to Ecology within thirty (30) days of issuance of this Permit and, upon approval by Ecology, incorporated as a Class 1 modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 permit modification.

III.8.B.f. Chapter 7

III.8.B.f.1. The following condition supercedes any limitation stated or implied in Chapter 7 and Table 7-1: The requirements of WAC 173-303-350(3)(b) are hereby required for all damaged or unacceptable dangerous/mixed waste shipments which arrive at this TSD unit,, whether from off-site (i.e., manifested) or from on-site (i.e., under shipping papers) from both generators and/or other TSD units or facilities.

III.8.B.f.2. Table 7-1. The first paragraph of Attachment 4 to the Hanford Facility RCRA Permit (Dangerous Waste Portion) and the following sections of Attachment 4 to the Hanford Facility RCRA Permit (Dangerous Waste Portion) are added as applicable sections of Appendix 7A of this TSD unit-specific Chapter 7: Sections 3.1, 7.3, 9.2, 8.4, 11.0, 12.0 and 13.0.

In addition, delete Section 1.3.2 and replace with Section 1.3.4.

III.8.B.f.3. Those portions of DOE/RL-94-02 which are not made enforceable by inclusion in the application matrix of that document are not made enforceable by reference in this document.

III.8.B.g. Appendix 7A

III.8.B.g.1. The Permittees must review and immediately amend the emergency response documentation, if necessary, whenever: (a) Applicable regulations are revised, (b) The plan fails in an emergency, (c) The unit changes (in its design, construction, operation, maintenance, or other circumstances) in a way that materially increases the potential for fires, explosions, or

releases of dangerous waste constituents, or in a way that changes the response necessary in an emergency, and (d) The list of emergency equipment changes.

III.8.B.g.2. The Permittees must note, in the CWC operating record, the time, date, and details of any incident that requires implementing the Contingency Plan. Within fifteen (15) days after the incident, the Permittees must submit a written report to Ecology. The report must, at a minimum, include:

(1) Name, address, and telephone number of the Permittees;
(2)Name and telephone number of the TSD unit;
(3) Date, time, and type of incident;
(4) Name and quantity of material(s) involved;
(5) Extent of injuries;
(6) An assessment of actual or potential hazards to human health or the environment, where this is applicable;
(7) Estimated quantity and disposition of recovered material that resulted from the incident;
(8) Cause of the incident; and
(9) Description of corrective actions taken to prevent reoccurrence of the incident.

III.8.B.h. Chapter 8 (Reserved)

III.8.B.i. Appendix 8A

III.8.B.i.1. Page 1, Section 4.0, insert the following text: "A Facility Manager for the CWC operating organization must ensure that personnel performing the various TSD unit and TSD unit-related activities have received appropriate on-the-job training (OJT). The OJT must be provided by an individual proficient in the specific activity or activities. That individual must sign-off that personnel who successfully complete the OJT are proficient before personnel may be assigned to perform the activity independently (i.e., without close supervision)."

III.8.B.j. Chapter 11

III.8.B.j.1. Section 11.1.2. shall be revised to include the following language: "Any sampling and analysis activities to support partial or full closure of the TSD unit will require approval from Ecology. Closure activities at a minimum must meet requirements stipulated in WAC-173-303-610." The list of closure activities in Revision 1 of the certified Permit application can be used as an example of such activities, but not as a comprehensive list."

III.8.B.j.2. Section 11.1.4.5. shall be revise to include the following language: "Decontamination of the waste storage pad may require determination of the presence of chemical contamination. Appropriate closure activities will be performed to address chemical contamination if deemed necessary."

III.8.B.k. Chapter 12

III.8.B.k.1. Page 12-1, Line 37, add the following text: "The Permittees will produce and place as-built drawings in the CWC operating record within six (6) months of issuance of this Permit. This requirement pertains to the following design elements: Secondary Containment, Structural Integrity of the Base, and Management of Certain Reactive Wastes in Containers. In addition, the referenced as-built drawings will be revised at least every twelve (12) months to incorporate all outstanding engineering change notices (ECNs) and Non-Conformance Reports (NCRs)." These requirements are pursuant to WAC 173-303-806(4)(b)(i) and (iv) and –630(7), and Condition II.L.2.d.

III.8.B.k.2. Page 12-1, add the following text "All unit specific reporting requirements identified in Table 12-1 of the General Information Portion "DOE/RL-91-28" are applicable to the CWC unit."

III.8.B.k.3. The Permittees shall identify requirements from Table 12-1 of the General Information Portion "DOE/RL-91-28" that are not applicable to CWC and provide justification as to why they are not applicable. This information shall be submitted to Ecology within thirty (30) days of the effective date of this Permit and, upon approval by Ecology, incorporated as a Class 1 Permit modification. If necessary, Ecology will amend the requirements through a Class 2 or 3 Permit modification.

PART IV – UNIT SPECIFIC CONDITIONS FOR CORRECTIVE ACTION

CHAPTER 1

100-NR-1 Operable Unit

The 100-NR-1 Operable Unit (OU) includes solid waste management units and one-time spill sites which are undergoing corrective action. As prescribed by Conditions II.Y. of this Permit, this Chapter sets forth the corrective action requirements for the 100-NR-1 OU.

IV.1.A. COMPLIANCE WITH APPROVED CORRECTIVE MEASURES STUDY

The Permittees shall comply with all requirements set forth in Attachment 47, the Corrective Measures Study (CMS) for the 100-NR-1 Operable Units, DOE/RL-95-111, Revision 0. Enforceable portions of the CMS are listed below; all subsections, figures, and tables included in these potions are also enforceable, unless stated otherwise:

Section 7.0	Comparative Analysis of Remedial Alternatives
Section 9.0	Recommended Corrective Measures
Section 9.1	RCRA Correction Action Performance Standards
Section 9.2	Corrective Measures for the 100-NR-1 Operable Unit Source Sites
Section 9.2.1	Recommended Actions and Justifications
Section 9.2.2	Cleanup Standards for the 100-NR-1 Operable Unit
Section 9.2.3	Cost
Section 9.2.4	Schedule
Section 9.2.5	Training
Appendix A	Applicable or Relevant and Appropriate Requirements
Appendix G	Cost Estimates

IV.1.B. COMPLIANCE WITH APPROVED ENGINEERING EVALUATION/COST ANALYSIS

The Permittees shall comply with all requirements set forth in Attachment 48, the Engineering Evaluation/Cost Analysis for the 100-N Area Ancillary Facilities and Integration Plan (EE/CA), DOE/RL-97-22, Rev. 1. Enforceable portions of the EE/CA are listed below; all subsections, figures, and tables included in these potions are also enforceable, unless stated otherwise:

Section 2.2.1.5	Remedial Unit Five – Description of the SWMU's
Section 5.2	Compliance with ARARS
Section 5.10	Other Considerations
Section 6.0	Recommended Alternative
Table 2-1	Suspected Contaminants in 100-N Area Ancillary Facilities
Table 5-1	Summary of Estimated Costs for Alternatives Two, Three, and Four
Appendix A	Integration Plan for Decontamination and Demolition and Remedial Action in the 100-N Area

CHAPTER 2

100-NR-2 Operable Unit

The 100-NR-2 Operable Unit (OU) is the ground water below 100-NR-1 OU, which has been contaminated as a result of past intentional disposal operations and unintentional spills of hazardous substances. As prescribed by Conditions II.Y. of this Permit, this Chapter sets forth the corrective action requirements for the 100-NR-2 OU.

IV.2.A COMPLIANCE WITH APPROVED CORRECTIVE MEASURES STUDY

The Permittees shall comply with all requirements set forth in Attachment 47, the Corrective Measures Study (CMS) for the 100-NR-2 Operable Units, DOE/RL-95-111, Revision 0. Enforceable portions of the CMS are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Section 7.0	Comparative Analysis of Remedial Alternatives
Section 9.0	Recommended Corrective Measures
Section 9.1	RCRA Correction Action Performance Standards
Section 9.3	Corrective Measure for the 100-NR-2 Operable Unit
Section 9.3.1	Recommended Action and Justification
Section 9.3.2	Cleanup Standards for the 100-NR-2 Operable Unit
Section 9.3.3	Cost
Section 9.3.4	Schedule
Section 9.3.5	Training
Appendix A	Applicable or Relevant and Appropriate Requirements
Appendix G	Cost Estimates

IV.2.B. COMPLIANCE WITH APPROVED ENGINEERING EVALUATION/COST ANALYSIS

The Permittees shall comply with all requirements set forth in Attachment 48, the Engineering Evaluation/Cost Analysis for the 100-N Area Ancillary Facilities and Integration Plan (EE/CA), DOE/RL-97-22, Rev. 1. Enforceable portions of the EE/CA are listed below; all subsections, figures, and tables included in these potions are also enforceable, unless stated otherwise:

Section 2.2.1.5	Remedial Unit Five – Description of the SWMU's
Section 5.2	Compliance with ARARS
Section 5.10	Other Considerations
Section 6.0	Recommended Alternative
Table 2-1	Suspected Contaminants in 100-N Area Ancillary Facilities
Table 5-1	Summary of Estimated Costs for Alternatives Two, Three, and Four
Appendix A	Integration Plan for Decontamination and Demolition and Remedial Action in the 100-N Area

PART V - UNIT-SPECIFIC CONDITIONS FOR UNITS UNDERGOING CLOSURE

CHAPTER 1

183-H Solar Evaporation Basins
(Superseded by Part VI, Chapter 2)

The 183-H Solar Evaporation Basins (Basins) TSD unit was operated as an evaporation treatment unit for dangerous wastes. This Chapter sets forth the closure requirements for this TSD unit. The 183-H Solar Evaporation Basins Closure Plan has been completed and clean closure could not be achieved. The Modified Closure Plan presented in Part VI, Chapter 2 now supersedes this Chapter.

CHAPTER 2

300 Area Solvent Evaporator
(Clean Closed, July 31, 1995)

The 300 Area Solvent Evaporator (300 ASE) unit was operated as an evaporation treatment unit for dangerous wastes. This Chapter sets forth the closure requirements for this TSD unit.

This unit has been Clean Closed on July 31, 1995, in accordance with the approved Closure Plan contained in Attachment 16 of this Permit.

CHAPTER 3

2727-S Nonradioactive Dangerous Waste Storage Facility (Clean Closed, July 31, 1995)

The 2727-S NRDWSF unit was operated as a storage unit for dangerous wastes. This Chapter sets forth the closure requirements for this TSD unit.

This unit has been Clean Closed on July 31, 1995, in accordance with the approved Closure Plan contained in Attachment 17 of this Permit.

CHAPTER 4

Simulated High Level Waste Slurry Treatment and Storage Unit (Clean Closed, October 23, 1995)

The Simulated High Level Waste Slurry (SHLWS) unit was operated as a TSD unit for simulated slurry as a test operation in connection with the grout project. This Chapter sets forth the closure requirements for this TSD unit.

This unit has been Clean Closed on October 23, 1995, in accordance with the approved Closure Plan contained in Attachment 19 of this Permit.

CHAPTER 5

218-E-8 Borrow Pit Demolition Site (Clean Closed, November 28, 1995)

The 218-E-8 Borrow Pit Demolition Site (218 BPDS) unit was operated as an open burning/open detonation unit for dangerous wastes. This Chapter sets forth the closure requirements for this TSD unit.

This unit has been Clean Closed on November 28, 1995, in accordance with the approved Closure Plan contained in Attachment 20 of this Permit.

CHAPTER 6

200 West Area Ash Pit Demolition Site (Clean Closed, November 28, 1995)

The 200 West Area Ash Pit Demolition Site (200 APDS) unit was operated as an open burning/open detonation unit for dangerous wastes. This Chapter sets forth the closure requirements for this TSD unit.

This unit has been Clean Closed on November 28, 1995, in accordance with the approved Closure Plan contained in Attachment 21 of this Permit.

CHAPTER 7

2101-M Pond
(Clean Closed, November 28, 1995)

The 2101-M Pond unit was operated as a disposal unit for potentially dangerous waste. This chapter sets forth closure requirements for this TSD unit.

This unit has been Clean Closed on November 28, 1995, in accordance with the approved Closure Plan contained in Attachment 22 of this Permit.

CHAPTER 8

216-B-3 Expansion Ponds
(Clean Closed, July 31, 1995)

The 216-B-3 Expansion Ponds unit was operated as a treatment and disposal unit for dangerous waste. This chapter sets forth the closure requirements for this TSD unit.

This unit has been Clean Closed on July 31, 1995, in accordance with the approved Closure Plan contained in Attachment 23 of this Permit.

CHAPTER 9

Hanford Patrol Academy Demolition Site (Clean Closed, November 28, 1995)

The Hanford Patrol Academy Demolition Site (HPADS) unit was operated as an open burning/open detonation unit for dangerous waste. This Chapter sets forth the closure requirements for this TSD unit.

This unit has been Clean Closed on November 28, 1995, in accordance with the approved Closure Plan contained in Attachment 24 of this Permit.

CHAPTER 10

105-DR Large Sodium Fire Facility
(Partial Closure Plan Completed, October 1, 1996)

The Large Sodium Fire Facility (LSFF) was a research laboratory used to conduct experiments for studying the behavior of alkali metals. This facility was also used for the treatment of alkali metal dangerous wastes.

This unit completed the closure plan on October 1, 1996, in accordance with the approved Closure Plan contained in Attachment 25 of this Permit

CHAPTER 11

304 Concretion Facility
(Clean Closed, January 21, 1996)

The 304 Concretion Facility (304 Facility) was used for the treatment of dangerous wastes produced during the fuel fabrication process. These wastes consist of beryllium/Zircalloy-2 chips and Zircalloy-2 chips and fines.

This Unit has been Clean Closed on January 21, 1996, in accordance with the approved Closure Plan contained in Attachment 26 of this Permit.

CHAPTER 12

4843 Alkali Metal Storage Facility Closure Plan (Clean Closed, April 14, 1997)

The 4843 Alkali Metal Storage Facility (4843 AMSF) is an inactive storage facility which is currently undergoing permanent closure activities. This TSD unit was operated as a storage unit for dangerous waste and alkali metals.

This unit has been clean closed on April 14, 1997, in accordance with the approved closure plan contained in attachment 29 of this Permit.

CHAPTER 13

3718-F Alkali Metal Treatment and Storage Facility Closure Plan (Clean Closed, August 4, 1998)

The 3718-F Alkali Metal Treatment and Storage Facility was operated to treat and store alkali metal waste from the Fast Flux Test Facility, and from various laboratories that used alkali metals for experiments. Contaminated equipment was treated using water, methanol, isopropyl alcohol, or 2-butoxy ethanol. Bulk waste was treated by burning to eliminate the ignitability and reactive characteristics. After the burn treatment, the waste was neutralized with acid to a pH between 2 and 12.5.

This unit has been Clean Closed on August 4, 1998, in accordance with the approved Closure Plan contained in Attachment 30 of this Permit.

CHAPTER 14

303-K Storage Facility

The 303-K Storage Facility (303-K) was used primarily for storage, and some treatment of dangerous wastes produced during the fuel fabrication process. These wastes consist of beryllium/zircalloy-2 chips which were concreted at the 304 Concretion Facility, and other process wastes.

V.14.A COMPLIANCE WITH THE APPROVED CLOSURE PLAN

The Permittees shall comply with all the requirements set forth in Attachment 32, including the Amendments specified in Condition V.14.B. Enforceable portions of the Plan are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Part A, Form 3, Permit Application, Revision 5, October 1996

Section 2.1	Description of the 303-K Storage Facility
Section 2.2	Security
Chapter 4.0	Waste Characteristics
Chapter 6.0	Closure Strategy and Performance Standards
Chapter 7.0	Closure Activities
Chapter 8.0	Post-Closure
Appendix B	Random Sampling Locations
Appendix E	Personnel Training
Appendix F	Quality Assurance Project Plan for Sampling and Analysis for the 304 Concretion Facility Closure Activities

V.14.B AMENDMENTS TO THE APPROVED CLOSURE PLAN

V.14.B.a. If closure activities have not begun and/or will not be conducted in accordance with the Plan, including these unit-specific Conditions to the Plan, a written notification shall be submitted to Ecology within thirty (30) days after the Plan is approved.

V.14.B.b. The results of all sampling required by the Plan shall be provided to Ecology. This submittal shall include raw analytical data, a summary of analytical results, a data validation package, and a narrative summary of conclusions.

V.14.B.c. Ecology shall be provided, for review and approval, a SAP and date of sampling for any sampling event not addressed in the Plan, which provides data used to support the 303-K cleanup activities, at least thirty (30) days prior to initiating actual sampling activities. The results of this sampling shall be submitted to Ecology. These submittals shall include the raw analytical data, a summary of analytical results, a data validation package, and a narrative summary of conclusions.

V.14.B.d. The Permittees shall notify Ecology, in writing, if action levels cited in Section 6.1 of the Plan are exceeded. The notification shall include a request for Ecology's approval of alternative action levels, or identify interim measures to be taken in the 303-K until closure activities are performed in conjunction with the 300-FF-3 Operable Unit. The interim measures must be approved by Ecology.

V.14.B.e. The Permittees and the independent, registered, professional engineer's certifications of closure shall be prepared and submitted to Ecology by registered mail within sixty (60) days of closure as described in Section 7.8 of the Plan. The Permittees shall continue to address the 303-K as a dangerous waste management unit until receipt of Ecology's written notification that the 303-K is accepted as clean closed.

V.14.B.f. Due to lack of federal funding in 1998, the allowed time for closure of 303-K is hereby extended in accordance with WAC 173-303-610(4)(b)(i) and 173-303-815(3). The Permittees shall submit a certification of closure for 303-K no later than September 30, 2001. In addition, the Permittees shall submit to Ecology at least two (2) reports of progress toward completion of closure (i.e., budgeting for building demolition, obtaining sufficient funding, scheduling the physical work). The first report shall be submitted no later than September 30, 1999, and the second shall be submitted no later than September 30, 2000.

V.14.B.g. Compliance with the approved Sampling and Analysis Plan.

The Permittees shall comply with all the requirements set forth in the "303-K Storage Facility Sampling and Analysis Plan" (as found in Attachment 38) and the "Errata Sheet for the 303-K Storage Facility Sampling and Analysis Plan" (as found in Attachment 39) including the Amendments specified below. All subsections, figures, and tables included in the Sampling and Analysis Plan also are enforceable, unless otherwise stated.

V. 14.B.g.1. Section 5.1 Cleanup Performance Standards for Soils.

Insert the following after line 25 on page 5: "Using the Ecology publication, Model Toxics Control Act (MTCA) Cleanup Levels and Risk Calculations (CLARC II) Update, February 1996 (Publication #94-145, as updated January 1996), cleanup levels shall be identified for all constituents of concern. In addition, when a MTCA Method B value does not exist for a constituent, the cleanup level shall be obtained from the appropriate Method A table in WAC 173-340."

Delete Table 1 on page 6.

V.14.B.g.2. Section 7.4 Support for Ecology during Sampling.

Delete lines 29 through 32 on page 16 ("Split samples of concrete and soil may be collected, if requested, for Ecology. If split samples for Ecology are collected as part of this sampling effort, then the...") and replace with the following: "Split samples of concrete and soil will be collected for Ecology from each sampling location. The..."

V.14.B.g.3. Field analytical quality control will include analytical duplicate(s) and verification of the method detection limit. Each field screening analytical duplicate sample will be collected from the same volume of sample material as the original field screening analytical sample. The frequency for these duplicates will be one (1) per twenty (20) samples, or one (1) per day of analysis, whichever is more stringent. The procedure used for the verification of the method detection limit is subject to approval by Ecology.

V.14.B.g.4. The laboratory quality control will be performed as described in the respective method, but will include the following: The frequency for analytical quality control will be one (1) in twenty (20) samples, or one (1) per analytical batch, whichever is more stringent, for duplicate and spike (or matrix spike) samples. Samples from this project must be chosen for the duplicate and spike (or matrix spike) samples. At least one (1) method blank, and one (1) quality control check sample, will be performed for each analytical batch.

V.14.B.g.5. Samples shall be placed upon ice immediately, or refrigerated to 4± 2 degrees Celsius after sampling, and held at that temperature prior to and during shipping to the analytical laboratory.

V.14.B.g.6. Loss of any sample due to any cause may require resampling and/or reanalysis, at the discretion of Ecology.

V.14.B.g.7 The results of all analyses required by the SAP as revised by these Conditions shall be provided to Ecology as stated in V.14.B.c. In addition to the items listed, these submittals shall include calibration and quality control data. A data evaluation report shall be submitted to Ecology comparing the analytical results to the cleanup levels for the 303-K, derived as described in Condition V.14.B.g.1. For data to be useable for this comparison, the method quantification limit for the constituent must be equal to, or less than, the cleanup level, or the method detection limit must be at least ten (10) times below the cleanup level, and the data package must be complete.

V.14.B.h. If any analytical result, except for arsenic and beryllium, for any sample location specified in the SAP exceeds the MTCA Method B cleanup level, then characterization of the lateral and vertical extent of the contamination shall be required and Ecology shall pursue corrective action for this TSD unit. If arsenic or beryllium exceed the established Hanford Sitewide Background values, then characterization of the lateral and vertical extent of the contamination shall be required and Ecology shall pursue corrective action for this TSD unit.

CHAPTER 15

100 D Ponds
(Clean Closed, August 9, 1999)

The 100 D Ponds was operated as a liquid effluent disposal site for dangerous wastes. This unit has been Clean Closed on August 9, 1999, in accordance with the approved Clean Closure Plan contained in Attachment 40 of this Permit.

CHAPTER 16

1325-N Liquid Waste Disposal Facility

The 1325-N Liquid Waste Disposal Facility is an inactive TSD unit that is currently undergoing modified closure activities. This TSD unit was operated as a liquid waste disposal facility for dangerous wastes. This Chapter sets forth the modified closure requirements for this TSD unit.

V.16.A. COMPLIANCE WITH APPROVED MODIFIED CLOSURE PLAN

The Permittees shall comply with all requirements set forth in the 1325-N Closure Plan found in Attachment 41 (DOE/RL-96-39, Rev. 0, Appendix A), including the Amendments specified in Condition V.16.B. Enforceable portions of the Plan are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Part A, Form 3, Permit Application, Revision 7, February 25, 1997

Section A1.0 Introduction

Section A2.1 General Description of Unit

Section A3.0 Ground Water Monitoring

Section A4.0 Closure

Section A5.0 Post-closure Plan

V.16.B. AMENDMENTS TO THE APPROVED MODIFIED CLOSURE PLAN

V.16.B.a. (Reserved)

CHAPTER 17

1301-N Liquid Waste Disposal Facility

The 1301-N Liquid Waste Disposal Facility is an inactive TSD unit that is currently undergoing modified closure activities. This TSD unit was operated as a liquid waste disposal facility for dangerous wastes. This Chapter sets forth the modified closure requirements for this TSD unit.

V.17.A. COMPLIANCE WITH APPROVED MODIFIED CLOSURE PLAN

The Permittees shall comply with all requirements set forth in the 1301-N Closure Plan found in Attachment 41 (DOE/RL-96-39, Rev. 0, Appendix A), including the Amendments specified in Condition V.17.A. Enforceable portions of the Plan are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Part A, Form 3, Permit Application, Revision 7, February 29, 1997

Section A1.0 Introduction

Section A2.1 General Description of Unit

Section A3.0 Ground Water Monitoring

Section A4.0 Closure

Section A5.0 Post-Closure Plan

V.17.B. AMENDMENTS TO THE APPROVED MODIFIED CLOSURE PLAN

V.17.B.a. (Reserved)

CHAPTER 18

1324-N Surface Impoundment

The 1324-N Surface Impoundment is an inactive TSD unit that is currently undergoing modified closure activities. This TSD unit was operated as a percolation unit for dangerous wastes. This Chapter sets forth the modified closure requirements for this TSD unit.

V.18.A. COMPLIANCE WITH APPROVED MODIFIED CLOSURE PLAN

The Permittees shall comply with all requirements set forth in the 1324-N Closure Plan found in Attachment 42 (DOE/RL-96-39, Rev. 0, Appendix B), including the Amendments specified in Condition V.18.B. Enforceable portions of the Plan are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Part A, Form 3, Permit Application, Revision 3, June 30, 1994

Section B1.0	Introduction
Section B2.1	General Description of Unit
Section B3.0	Ground Water Monitoring
Section B4.0	Closure
Section B5.0	Post-Closure Plan

V.18.B. AMENDMENTS TO THE APPROVED MODIFIED CLOSURE PLAN

V.18.B.a. (Reserved)

CHAPTER 19

1324-NA Percolation Pond

The 1324-NA Percolation Pond is an inactive TSD unit that is currently undergoing modified closure activities. This TSD unit was operated as a surface impoundment unit for dangerous wastes. This Chapter sets forth the modified closure requirements for this TSD unit.

V.19.A. COMPLIANCE WITH APPROVED MODIFIED CLOSURE PLAN

The Permittees shall comply with all requirements set forth in the 1324-NA Closure Plan found in Attachment 42 (DOE/RL-96-39, Rev. 0, Appendix B), including the Amendments specified in Condition V.19.B. Enforceable portions of the Plan are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Part A, Form 3, Permit Application, Revision 3, June 30, 1994

Section B1.0	Introduction
Section B2.1	General Description of Unit
Section B3.0	Ground Water Monitoring
Section B4.0	Closure
Section B5.0	Post-Closure Plan

V.19.B. AMENDMENTS TO THE APPROVED MODIFIED CLOSURE PLAN

V.19.B.a. (Reserved)

CHAPTER 20

300 Area Waste Acid Treatment System

The 300 Area Waste Acid Treatment System (300 WATS) is a tank system that was used to treat and store nonrecoverable uranium-bearing waste acid from reactor fuel fabrication operations. Waste acid neutralization occurred in portions of what now is the 300 Area WATS before operation of the system as a *Resource Conservation and Recovery Act* (RCRA) *of 1976* unit. This Closure Plan details closure of RCRA components and areas, and of contamination resulting from RCRA operations. This unit consists of portions of four (4) buildings and two (2) tank farms: 334-A Building, 313 Building, 303-F Building, 333 Building, 334 (tank 4), and 311 Tank Farms (tanks 40 and 50).

Clean closure has been given for structures above the ground using the visually verifiable clean debris rule and table in the *Ecology Guidance for Clean Closure of Dangerous Waste Facilities Publication #94-111* (August, 1994). Transition of WATS from EM-60 to EM-40 will be done to complete disposition of "unclosed" soils beneath the units to be cleaned in conjunction with the 300-FF-2 CERCLA OU remedial action and to complete WATS RCRA closure.

This unit is undergoing modified closure to the performance standards of the Dangerous Waste Regulations, Washington Administrative Code (WAC) 173-303-610, 173-303-640, and Permit Condition II.K with respect to all dangerous waste, materials, and media (i.e., soil) contaminated from RCRA operations of the WATS unit.

V.20.A. COMPLIANCE WITH APPROVED MODIFIED CLOSURE PLAN

The Permittees shall comply with all requirements set forth in Attachment 46, including Appendix 6A, Phased Closure Documentation (Phase 1 and 2) and Addendum (Phase 3). Enforceable portions of the plan are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless otherwise stated. The Permittees shall also comply with all the requirements in the 300-FF-2 Record of Decision.

Part A, Form 3, Permit Application, Revision 5, October 1, 1996

Chapter 2.0	Facility Description
Chapter 6.0	Closure Strategy and Performance Standards
Chapter 7.0	Closure Activities
Chapter 8.0	Post-closure
Appendix 6A	Phased Closure Documentation
Addendum to 6A	Phase 3 Closure Documentation (HNF-2814)

V.20.B AMENDMENTS TO THE APPROVED CLOSURE PLAN

V.20.B.a. Phases one (1), two (2), and three (3), Decontamination and Inspection Plans shall be added in their entirety to the approved Closure Plan (DOE/RL-90-11, Revision 2, dated May 1999)

V.20.B.b. The Permittee will review the modified closure option in five (5) years (January 2006). The purpose of the review will be to determine if this TSD can be clean closed.

V.20.B.c. 300-FF-2 CERCLA OU Record of Decision. The Permittees shall comply with the above referenced document, which details the final status for complete disposition of "unclosed" soils beneath the units to be cleaned in conjunction with the 300-FF-2 OU remedial action and to complete WATS RCRA closure.

CHAPTER 21

2401-W Waste Storage Building
(Clean Closed, February 9, 1999)

2401-W Waste Storage Building was operated as a container storage area for polychlorinated biphenyl (PCB) contaminated waste. This building was originally part of the Central Waste Complex located in the 200 West Area. This chapter sets forth the closure requirements for this TSD unit.

This unit has been Clean Closed on February 9, 1999, in accordance with the approved Closure Plan contained in Attachment 49 of this Permit.

PART VI - UNIT-SPECIFIC CONDITIONS FOR UNITS IN POST-CLOSURE

CHAPTER 1

300 Area Process Trenches

The 300 Area Process Trenches were operated to receive effluent discharges of dangerous mixed waste from fuel fabrication laboratories in the 300 Area. This chapter sets forth the modified closure requirements.

VI.1.A. COMPLIANCE WITH APPROVED MODIFIED CLOSURE PLAN

The Permittees shall comply with all requirements set forth in Attachment 31, including all Class 1 Modifications specified below, and Amendments specified in Condition VI.1.B. Enforceable portions of the plan are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless otherwise stated. The Permittees shall also comply with all the requirements in the 300-FF-1 and 300-FF-5 Record of Decision and Addendum and the Ground Water Monitoring Plan (WHC-SD-EN-AP-185, Rev. 0A). The 300 Area Process Trenches achieved closure in May 1998 in accordance with the Closure Plan contained in Attachment 31, and Permit Conditions contained in this Chapter. Therefore, enforceable portions of the plan currently consist of those associated with post-closure care. These portions are Sections 8.2, 8.4, and 8.5.

Part A, Form 3, Permit Application, Revision 4, May 1995

Section ADD-1 Addendum, Introduction

Section 8.2. Inspection Plan, from Class 1 Modification for quarter ending September 30, 1998

Section 8.4. Maintenance Plan, from Class 1 Modification for quarter ending September 30, 1998

Section 8.5. Personnel Training, from Class 1 Modification for quarter ending September 30, 1998

VI.1.B. AMENDMENTS TO THE APPROVED MODIFIED CLOSURE PLAN

VI.1.B.b. Pursuant to Condition II.K.7. of the Hanford Facility Wide Permit, the 300 Area Process Trenches (APT) closure shall be a Modified Closure in coordination with the Record of Decision (ROD) for 300-FF-1 and 300-FF-5. Sections of CERCLA documents (examples may include, but are not limited to, Remedial Design/Remedial Action CERCLA work plan, the Operation and Monitoring Work Plan, etc.), which satisfy requirements and Conditions of this Modified Closure Plan, will be reviewed and approved by Ecology.

VI.1.B.i. As stipulated through the RCRA Final Status Compliance Monitoring Plan (i.e., WHC-SD-EN-AP-185) Appendix IX, sampling shall not be required unless post-closure monitoring results indicate a need to do so.

VI.1.B.q. Page 8-3, line 20. Well condition will be assessed pursuant to Condition II.F. of the Permit.

VI.1.B.r Page 8-5, Section 8.5. This section will reference Section II.C. of the Permit for additional training requirements.

CHAPTER 2

183-H Solar Evaporation Basins

The 183-H Solar Evaporation Basins (Basins) comprise an inactive TSD unit that is currently undergoing closure activities. This TSD unit was operated as an evaporation treatment unit for dangerous wastes. This Chapter sets forth the closure requirements for this TSD unit. The following enforceable portions of the *183-H Solar Evaporation Basins Post-Closure Plan*, Rev. 0 (Plan), found in Attachment 37 supersede the *183-H Solar Evaporation Basins Closure Plan/Post-Closure Plan*, found in Attachment 11 which was previously listed in Part V, Chapter 1.

VI. 2. A. COMPLIANCE WITH APPROVED MODIFIED CLOSURE PLAN

The requirements are set forth in Attachment 37. Enforceable portions of the Plan are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise:

Part A, Form 3, Permit Application, Revision 4, June 1994

Attachment 37, 183-H Solar Evaporation Basins Post-Closure Plan, Rev. 0

Section 2.1	Modified Post-Closure Institutional Controls
Section 2.2	Modified Post-Closure Periodic Assessments
Section 3.0	Ground Water Monitoring During Post-Closure
Section 3.1	WAC 173-303-645(11)(d) Monitoring Requirements
Section 3.1.1	WAC 173-303-645(3) Ground Water Protection Standard
Section 3.1.2	WAC 173-303-645(8) General Ground Water Monitoring Requirements
Section 3.2	RCRA Corrective Action Ground Water Monitoring Schedule
Section 3.3	Ground Water Monitoring under CERCLA
Section 3.3.1	100-HR-3 Remedial Investigation Monitoring
Section 3.3.2	100-HR-3 Interim Remedial Measure Monitoring
Section 3.4	Inspection, Maintenance, and Replacement of Wells
Section 4.0	Corrective Action Plan
Section 4.1	Soil Column Corrective Action
Section 4.2	Groundwater Corrective Action
Section 4.3	Remediation Expectations During the Interim Remedial Measure (IRM)
Section 5.0	Personnel Training During Post-Closure
Section 6.0	Security
Section 7.0	Closure Contact
Section 8.0	Certification of Post-Closure

VI.2.B. AMENDMENTS TO THE APPROVED POST-CLOSURE PLAN

VI.2.B.a. The Permittee will review the modified closure option in five (5) years (February 28, 2003). The

purpose of the review will be to determine if this TSD can be clean closed.

VI.2B.b. Ground Water Monitoring Plan for the 183-H Solar Evaporation Basins, PNNL-11573. The Permittees shall comply with the above referenced document, which details the final status Ground Water Monitoring Program for the 183-H Solar Evaporation Basins.

Enclosure 3
Permit Applicability Matrix
(Attachment 3)

(Attachment 3)

HANFORD FACILITY WIDE PERMIT APPLICABILITY MATRIX (REV. 7)

Updated: 2/28/01

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B[1]	C[2]	D[3]	E	F	G	
I.A.1.		*	*	*	*	*	*	*	
I.A.2.		*	*	*	*	*	*	*	
I.A.3.		*	*		*	*	*	*	
I.A.4.	Coordination with the FFACO		*		*	*	*	*	
I.C.1.	Modification, Revocation, Reissuance, or Termination		*		*	*	*	*	
I.C.2.	Filing of a Request		*		*	*	*	*	
I.C.3.	Modifications		*		*	*	*	*	
I.D.1.	Effect of Invalidation		*		*	*	*	*	
I.D.2.	Final Resolution		*		*	*	*	*	
I.E.1.	Duty to Comply		*		*	*	*	*	
I.E.2.	Compliance Not Constituting Defense		*		*	*	*	*	
I.E.3.	Duty to Reapply		*		*	*	*	*	
I.E.4.	Permit Expiration & Continuation		*		*	*	*	*	
I.E.5.	Need to Halt or Reduce Activity Not a Defense		*		*	*	*	*	
I.E.6.	Duty to Mitigate		*		*	*	*	*	
I.E.7.	Proper Operation & Maintenance		*			*	*	*	
I.E.8.	Duty to Provide Information		*		*	*	*	*	
I.E.9.	Inspection & Entry		*		*	*	*	*	
I.E.9.a.			*		*	*	*	*	
I.E.9.b.			*		*	*	*	*	
I.E.9.c.			*		*	*	*	*	
I.E.9.d.			*		*	*	*	*	
I.E.10.	Monitoring & Records								
I.E.10.a.			*		*	*	*	*	

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

1 – For Category B, Part I Conditions only apply if future TSD activities are begun on the North Slope or ALE.
2 – For Category C, all Part I Conditions apply to activities subject to Conditions II.U. and II.V.
3 – For Category D, Part I Conditions only apply to activities subject to Conditions II.A., II.C., II.D.4., II.G., II.I., II.L.3., II.O., II.Q., II.S., II.T., II.X., and II.Y.

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B[1]	C[2]	D[3]	E	F	G	
I.E.10.b.			*		*	*	*	*	
I.E.10.c.			*		*	*	*	*	
I.E.10.d.			*		*	*	*	*	
I.E.10.e.			*		*	*	*	*	
I.E.11.	Reporting Planned Changes		*			*	*	*	
I.E.12.	Certification of Construction or Modification		*				*		
I.E.13.	Anticipated Noncompliance		*		*	*	*	*	
I.E.14.	Transfer of Permits		*			*	*	*	
I.E.15.	Immediate Reporting								
I.E.15.a.			*		*	*	*	*	
I.E.15.b.			*		*	*	*	*	
I.E.15.c.			*		*	*	*	*	
I.E.15.d.			*		*	*	*	*	
I.E.15.e.			*		*	*	*	*	
I.E.16.	Written Reporting		*		*	*	*	*	
I.E.17.	Manifest Discrepancy Report								
I.E.17.a.			*			*	*	*	
I.E.17.b.			*		*	*	*	*	
I.E.18.	Unmanifested Waste Report		*			*	*	*	
I.E.19.	Other Noncompliance		*		*	*	*	*	
I.E.20.	Other Information		*		*	*	*	*	
I.E.21.	Reports, Notifications, & Submissions		*		*	*	*	*	
I.E.22.	Annual Report		*		*	*	*	*	

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

1 – For Category B, Part I Conditions only apply if future TSD activities are begun on the North Slope or ALE.
2 – For Category C, all Part I Conditions apply to activities subject to Conditions II.U. and II.V.
3 – For Category D, Part I Conditions only apply to activities subject to Conditions II.A., II.C., II.D.4., II.G., II.I., II.L.3., II.O., II.Q., II.S., II.T., II.X., and II.Y.

(Attachment 3)

HANFORD FACILITY WIDE PERMIT APPLICABILITY MATRIX (REV. 7)

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
II.A.1.					*	*	*	*	For Category D, II.A. Conditions only apply to releases of hazardous substances that threaten human health or the environment.
II.A.2.					*	*	*	*	
II.A.3.					*	*	*	*	
II.A.4.					*	*		*	
II.B.1.						*	*		
II.B.2.						*	*		
II.B.3.						*	*		
II.B.4.						*	*		
II.C.1.						*	*	*	
II.C.2.					*	*	*	*	
II.C.2.a.					*	*	*	*	
II.C.2.b.					*	*	*	*	
II.C.2.c.					*	*	*	*	
II.C.2.d.					*	*	*	*	
II.C.2.e.					*	*	*	*	
II.C.3.						*	*	*	

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

(Attachment 3)

HANFORD FACILITY WIDE PERMIT APPLICABILITY MATRIX (REV. 7)

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
II.C.4.					*	*	*	*	For Category D, Condition II.C.4. will not apply to unrestricted (publicly accessible) areas.
II.D.1.						*	*	*	
II.D.2.						*	*	*	
II.D.3.						*	*	*	
II.D.4.					*				
II.E.1.						*	*	*	
II.E.2.						*	*	*	
II.E.2.a.						*	*	*	
II.E.2.b.						*	*	*	
II.E.2.c.						*	*	*	
II.E.2.d.						*	*	*	
II.E.3.						*	*	*	
II.E.3.a.						*	*	*	
II.E.3.b.						*	*	*	
II.E.3.c.						*	*	*	
II.E.4.						*	*	*	
II.E.5.						*	*	*	
II.F.1.	Purgewater Management					*	*	*	

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

(Attachment 3)

HANFORD FACILITY WIDE PERMIT APPLICABILITY MATRIX (REV. 7)

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
II.F.2.	Well Remediation and Abandonment					*	*	*	
II.F.2.a.						*	*	*	
II.F.2.b.						*	*	*	
II.F.2.c.						*	*	*	
II.F.2.d.						*	*	*	
II.F.3.	Well Construction					*	*	*	
II.H.1.	Cost Estimate for Facility Closure					*	*	*	
II.H.2.	Cost Estimate for Post-Closure Monitoring and Maintenance					*	*	*	
II.H.3.						*	*	*	
II.I.1.		*	*		*	*	*	*	
II.I.1.a.		*	*		*	*	*	*	
II.I.1.b.							*	*	

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
II.I.1.c.					*	*	*	*	
II.I.1.d.						*	*	*	
II.I.1.e.			*		*				
II.I.1.f.					*	*	*	*	
II.I.1.g.						*	*	*	
II.I.1.h.	Condition Reserved								
II.I.1.i.						*	*	*	
II.I.1.j.						*	*	*	
II.I.1.k.					*	*	*	*	
II.I.1.l.	Condition Reserved								
II.I.1.m.						*	*	*	
II.I.1.n.					*	*	*	*	
II.I.1.o.	Condition Reserved								
II.I.1.p.			*		*	*	*	*	
II.I.1.q.			*		*	*	*	*	
II.I.1.r.					*	*	*	*	
II.I.1.s.					*	*	*	*	
II.I.1.t.					*	*	*	*	
II.I.2.		*	*		*	*	*	*	
II.J.1.						*	*	*	
II.J.2.						*	*	*	
II.J.3.						*	*	*	
II.J.4.						*	*	*	
II.J.4.a.						*	*	*	

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
II.J.4.b.						*	*	*	
II.J.4.c.						*	*	*	
II.J.4.d.						*	*	*	
II.K.1.						*	*	*	
II.K.2.						*	*	*	
II.K.3.						*	*	*	
II.K.3.a.						*	*	*	
II.K.3.b.						*	*	*	
II.K.3.c.						*	*	*	
II.K.4.						*	*	*	
II.K.5.						*	*	*	
II.K.6.						*	*	*	
II.K.7.						*	*	*	
II.L.1.	Proper Design and Construction					*	*	*	
II.L.2.	Design Changes, Nonconformance and as-built Drawings					*	*	*	Condition II.L.2. applies to Categories E & G only if it is a landfill closure.
II.L.2.a.						*	*	*	
II.L.2.b.						*	*	*	
II.L.2.c.						*	*	*	

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

(Attachment 3)

HANFORD FACILITY WIDE PERMIT APPLICABILITY MATRIX (REV. 7)

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
II.L.2.d.						*	*	*	
II.L.3.	Facility Compliance				*	*	*	*	
II.N.1.	Receipt of Off-Site Waste						*		
II.N.2.	Waste From Sources Outside the U.S.						*		
II.N.3.	Notice to Generator						*		
II.O.1.					*				
II.O.1.a.					*				
II.O.1.b.					*				
II.O.1.c.					*				
II.O.1.d.					*				
II.O.2.					*				
II.O.3.					*				
II.P.1.						*	*	*	
II.P.2.						*	*	*	
II.Q.1.					*	*	*	*	
II.Q.1.a.					*	*	*	*	

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
II.Q.1.b.					*	*	*	*	
II.Q.1.c.					*	*	*	*	
II.Q.1.d.					*	*	*	*	
II.Q.1.e.					*	*	*	*	
II.Q.1.f.					*	*	*	*	
II.Q.1.g.					*	*	*	*	
II.Q.1.h.					*	*	*	*	
II.Q.2.					*	*	*	*	
II.R.1.						*	*	*	
II.R.2.						*	*	*	
II.R.3.						*	*	*	
II.U.1.				*		*	*	*	
II.U.2.				*		*	*	*	
II.U.3.				*		*	*	*	
II.U.4.				*		*	*	*	

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
II.W.1.						*	*	*	
II.W.2.						*	*	*	
II.W.3.						*	*	*	
II.X.1.				*	*	*	*	*	Condition II.X. only applies to Category C if activities are subject to Conditions II.U. and II.V.
II.X.2.				*	*	*	*	*	Condition II.X. only applies to Category D if activities are subject to this Permit as defined by this matrix.
II.Y.1.	Compliance with Chapter 173-340 WAC	*	*	*	*	*	*	*	
II.Y.1.a.		*	*	*	*	*	*	*	
II.Y.1.b.		*	*	*	*	*	*	*	
II.Y.1.c.		*	*	*	*	*	*	*	
II.Y.1.d.		*	*	*	*	*	*	*	
II.Y.1.e.		*	*	*	*	*	*	*	
II.Y.1.f.		*	*	*	*	*	*	*	
II.Y.1.g.		*	*	*	*	*	*	*	

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

CONDITION		CATEGORY							QUALIFIERS
PART	**TITLE**	**A**	**B**	**C**	**D**	**E**	**F**	**G**	
II.Y.2.	Acceptance of Work Under Other Authorities or Programs and Integration with the FFACO	*	*	*	*	*	*	*	
II.Y.2.a.		*	*	*	*	*	*	*	
II.Y.2.b.		*	*	*	*	*	*	*	
II.Y.2.c.		*	*	*	*	*	*	*	
II.Y.2.d.		*	*	*	*	*	*	*	
II.Y.3.	Releases of Dangerous Waste or Dangerous Constituents Not Covered by the FFACO	*	*	*	*	*	*	*	
II.Y.3.a.	U.S. Ecology	*	*	*	*	*	*	*	
II.Y.3.b.	Newly Identified Solid Waste Management Units and Newly Identified Releases of Dangerous Waste or Dangerous Waste Constituents	*	*	*	*	*	*	*	

CONDITION		CATEGORY							QUALIFIERS
PART	**TITLE**	**A**	**B**	**C**	**D**	**E**	**F**	**G**	
III.1.A.	**616 NRDWSF** Compliance with Approved Permit Application						*		
III.1.B.	Amendments to the Approved Permit Application						*		
III.2.A.	**305-B** Compliance with Approved Permit Application						*		

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
III.2.B.	Amendments to the Approved Permit Application						*		
III.3.A.	**PUREX TUNNELS** Compliance with Approved Permit Application						*		
III.3.B.	Amendments to the Approved Permit Application						*		
III.4.A.	**Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility** Compliance with Approved Permit Application						*		
III.4.B.	Amendments to the Approved Permit Application						*		
III.5.A.	**242-A Evaporator** Compliance with Approved Permit Application						*		
III.5.B.	Amendments to the Approved Permit Application						*		
III.6.A.	**325 Hazardous Waste Treatment Units** Compliance with Approved Permit Application						*		
III.6.B.	Amendments to the Approved Permit Application						*		
III.7.A.	**Waste Receiving and Processing (WRAP) Facility** Compliance with Approved Permit Application						*		
III.7.B.	Amendments to the Approved Permit Application						*		
III.8.A.	**Central Waste Complex** Compliance with Approved Permit Application						*		
III.8.B.	Amendments to the Approved Permit Application						*		

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
IV.1.A.	**100-NR-1 Operable Unit** Compliance with Approved Corrective Measures Study				*	*			
IV.2.A.	**100-NR-2 Operable Unit** Compliance with Approved Corrective Measures Study				*	*			

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
V.14.A.	**303-K Storage Facility** Compliance with Approved Closure Plan					*			
V.14.B.	Amendments to the Approved Closure Plan					*			
V.15.A.	**100 D Ponds** Compliance with Approved Closure Plan					*			
V.15.B	Amendments to the Approved Closure Plan					*			
V.16.A.	**1325-N Liquid Waste Disposal** Compliance with Approved Modified Closure Plan					*			
V.16.B.	Amendments to the Approved Closure Plan					*			
V.17.A.	**1301-N Liquid Waste Disposal** Compliance with Approved Modified Closure Plan					*			
V.17.B.	Amendments to the Approved Closure Plan					*			

CATEGORIES ARE DEFINED AS FOLLOWS:

A. Leased Land
B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
V.18.A.	**1324-N Surface Impoundment** Compliance with Approved Modified Closure Plan					*			
V.18.B.	Amendments to the Approved Closure Plan					*			
V.19.A.	**1324-NA Percolation Pond** Compliance with Approved Modified Closure Plan					*			
V.19.B.	Amendments to the Approved Closure Plan					*			
V.20.A.	**300 Area Waste Acid Treatment System** Compliance with Approved Modified Closure Plan					*			
V.20.B.	Amendments to the Approved Closure Plan					*			
V.21	**2401-W Waste Storage Building** Compliance with Approved Closure Plan								

CONDITION		CATEGORY							QUALIFIERS
PART	TITLE	A	B	C	D	E	F	G	
VI.1.A.	**300 Area Process Trenches** Compliance with Approved Modified Closure Plan							*	
VI.1.B.	Amendments to the Approved Modified Closure Plan							*	
VI.2A.	**183-H Solar Evaporation Basins** Compliance with Approved Modified Closure Plan							*	
VI.2.B.	Amendments to the Approved Post-Closure Plan							*	

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B. North Slope and ALE
C. Interim Status TSD Units
D. Areas Between TSDs (excluding A and B)
E. TSD Unit Closures (in Part V)
F. TSD Operating Units (in Part III)
G. TSD Units in Post-Closure/Modified Closure (in Part VI)

* Condition applies to this category, as modified by applicable footnotes and qualifiers.

Enclosure 4
616 Nonradioactive Dangerous Waste Storage Facility
Closure Plan and permit modification forms
(Attachment 8)

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
616 Nonradioactive Dangerous Waste Storage Facility	Part III, Chapter 1

Description of Modification:

Replace Chapter 11.0 of Section III.A.1 with Revision 2A: These modifications are being submitted to facilitate closure of the 616 NRDWSF in FY 2000. The modifications reflect agreements with Ecology that were made during 616 NRDWSF closure approval workshops and are in keeping with the current approach for closure of Hanford Facility permitted container storage units.

Note:

1) Appendix 11B of Section III.1.A is no longer needed upon approval of Chapter 11.0, Revision 2A and should be deleted.
2) Attachment 10 of the List of Attachments (page 4 of 76, line 22) is no longer needed upon approval of Chapter 11.0, Revision 2A and should be deleted.

Modification Class: [1] [2] [3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:				X

Relevant WAC 173-303-830, Appendix I Modification: Other modifications

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

The proposed modification does not match any modification listed in WAC 173-303-830, Appendix I, and therefore, in accordance with WAC 173-303-830 (4)(d)(i), is being submitted as a Class 3 modification request.

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:	
J. D. Williams	Date 2/24/99	H. E. Bilson	Date 6/1/99	M. N. Jaraysi	Date 6/25/99
					2/28/01

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
616 Nonradioactive Dangerous Waste Storage Facility	Part III, Chapter 1

Description of Modification:

1. Add supplementary owner/operator/co-operator certification page to Chapter 14.0 of the 616 NRDWSF Part B Permit Application for certification of Chapter 11, Revision 2B.

Modification Class: [1,2,3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:				X

Relevant WAC 173-303-830, Appendix I Modification: Other modifications

The proposed modification does not match any modification listed in WAC 173-303-830, Appendix I, and therefore, in accordance with WAC 173-303-830(4)(d)(I), is being submitted as a Class 3 modification request.

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:	
J. D. Williams	Date	H. E. Bilson	Date	M. N. Jaraysi	Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

CONTENTS

FIGURES

TABLE

11.0 CLOSURE PLAN/FINANCIAL ASSURANCE FOR CLOSURE [I]

This totally revised chapter indicates the 616 NRDWSF will be clean closed and available for non-RCRA use after closure. Consistent with clean closure, no postclosure activities should be necessary.

Because no waste currently is stored at the 616 NRDWSF and no further waste storage is planned, the unit will be closed. 616 NRDWSF operated as a clean, well maintained, nonradioactive dangerous waste container storage unit. Detailed storage records were maintained. Only containers of the proper type and in good condition were accepted. Storage and loading area containment was designed to preclude spills from reaching soil, and containment surfaces were maintained to ensure integrity. Waste was managed to minimize the potential for spills. The latest operating methods and administrative controls required waste spills to be cleaned up promptly and completely and the waste removal area to be analytically verified (Chapter 2.0, Section 2.1.3.6 and Chapter 4.0, Section 4.1.1.8). However, because operating records do not demonstrate that early operations met these spill cleanup requirements, the unit will be considered potentially contaminated and will undergo decontamination. Although no spills to soil are documented, soil will be sampled to demonstrate clean closure.

11.1 CLOSURE PLAN [I-1]

Closure will comply with WAC 173-303-610 regulations. This chapter describes the closure performance standards that will be met and the closure activities that will be conducted to achieve and to verify clean closure conditions for 616 NRDWSF.

11.1.1 Closure Performance Standard [I-1a]

The following sections identify performance standards and waste removal and decontamination standards for clean closure of the 616 NRDWSF.

11.1.1.1 Performance Standard [I-1a(1)]

Closure of the 616 NRDWSF will be conducted in a manner that meets the clean closure performance standards of WAC 173-303-610(2)(a). The performance standards will be met by removing all dangerous waste and by removing or decontaminating all structures and soil to clean closure removal or decontamination standards.

11.1.1.2 Soil and Structure Removal or Decontamination Standards [I-1a (2)]

The clean closure removal and decontamination standards for soil and structures have been established in accordance with WAC 173-303-610(2)(b).

The clean closure standard for soil is in accordance with WAC 173-303-610(2)(b)(i). The standard identifies a maximum allowable concentration for each constituent of concern shown in Section 11.1.2.4. The maximum allowable concentration for each constituent of concern is the greater of its numeric, health-based cleanup level calculated using WAC 173-340 (MTCA) Method B formulas (or Method A tables, if appropriate) or natural background (DOE/RL-92-24). Constituent concentrations will be verified through analytical sampling and analysis as described in Section 11.1.2.4. Only the soil of the

french drain (Figure 11-1) had a potential to have been contaminated by storage operations and will be sampled to demonstrate clean closure.

The clean closure standard for structures is a visually verifiable standard established in accordance with WAC 173-303-610(2)(b)(ii). The standard is the absence of obvious stains or residues that would indicate potential dangerous waste contamination. Surfaces must be free of indications of potential dangerous waste, except for residual waste stains consisting of light shadows, slight streaks, or minor discoloration. The standard will be achieved through decontamination of all indoor and outdoor storage and loading area floor and pad surfaces (Figure 11-2). The standard will be verified by visual inspections performed and documented as described in Section 11.1.2.3.2. Only storage and loading area floor surfaces and some miscellaneous components that will remain after closure had a potential to have been contaminated by storage operations and these areas will be required to meet this standard.

11.1.2 Closure Activities [I-1b]

Closure activities required to achieve and verify clean closure of structures and soil (i.e., storage and loading area pads, floors, trenches, and sumps) are as follows.

- Remove all dangerous waste inventory
- Remove potentially contaminated storage building equipment and components for reuse
- Decontaminate storage building components and storage building and loading area floors, trenches, and sumps
- Visually inspect the decontaminated surfaces for achievement of the clean closure standard
- Sample french drain soil and compare results to clean closure standards for soil
- Certify that closure activities were completed in accordance with the approved closure plan.

11.1.2.1 Maximum Extent of Operations and Maximum Waste Inventory [I-1b(1) and 1c]

All waste handling and storage activities were limited to the loading and storage areas identified in Figure 11-2. Of the six cells, the caustic and the oxidizer cells each could hold approximately 19,873 liters, the combustible cell could hold 22,447.5 liters, and the acid cell could hold 23,091 liters of waste. The remaining two cells, the Class 1A and Class 1B flammable cells, could hold 9,596 liters and 12,870.4 liters, respectively. In total, approximately 108,395 liters of waste could have been stored in the 616 NRDWSF. Figure 11-3 shows the configuration and layout of a typical cell.

11.1.2.2 Removing Dangerous Waste [I-1b(2)]

No dangerous waste inventory remains at the unit. The final volume of waste was transferred to other TSD unit(s) November 30, 1995.

11.1.2.3 Decontamination and Inspection of Building Components and Structures [I-1b(3) and I1-b(4)]

The following sections describe decontamination and inspection activities for structures and miscellaneous building components that will remain after closure.

11.1.2.3.1 Waste Handling Equipment

No equipment will remain after closure that would require decontamination to meet clean closure levels. All portable waste handling equipment used for handling containers (e.g., barrel tongs, forklift truck) has been removed and redeployed to other Solid Waste Project (SWP) TSD units. At closure, the scissor-lift bolted to the east loading pad will be unbolted and disposed of or used by another SWP TSD or other approved location as reusable equipment.

11.1.2.3.2 Decontamination of Structures

Storage cell floors, sumps, trenches, and outdoor loading pads (Figure 11-2) will be cleaned by hand using mops, rags, brushes, water, and appropriate nonregulated detergent or by mechanical means using a power scrubber or high-pressure/low-volume steam or water spray. Cleaning will be conducted so as to minimize the quantity of rinsates generated. Rinsates (if any) will be collected in trenches or sumps, pumped from the sumps into appropriate containers, and the pump triple rinsed. Rinsate collection locations will be cleaned and inspected last. Decontamination will be documented on a decontamination and inspection checklist similar to Figure 11-4. All decontamination waste will be designated in accordance with WAC 173-303 and managed accordingly.

The cleaned surfaces will be visually inspected for achievement of the clean closure standard described in Section 11.1.1.2 of no obvious stains or residues indicating potential dangerous waste contamination. The visual inspection will be documented on the checklist used to document the decontamination. When the visual standard is met, the structure will be considered clean. Copies of the completed visual inspection checklist(s) will be placed in the Hanford Facility Operating Record.

11.1.2.3.3 Decontamination and Inspection of Miscellaneous Building Components

Two stainless steel basins exist in the packaging and sampling room will remain after closure. Neither basin has a drain. The basins will be cleaned by hand, using rags or brushes and an appropriate nonregulated cleaner. Rinsate (if any) and decontamination waste (e.g., rags) will be collected, designated, and managed accordingly. Decontamination will be documented on a Decontamination and inspection checklist similar to Figure 11-4. The basins will be visually inspected for achievement of the clean closure standard. The inspection will be documented on the checklist used to document the decontamination.

Grating over trenches of the indoor areas and the outdoor loading pads will be cleaned by high-pressure/low-volume steam or water spray, or will be cleaned by hand using rags, brushes, water, and an appropriate cleaner, if necessary. Rinsate and decontamination materials will be collected, designated, and managed accordingly. Decontamination will be documented on a Decontamination and inspection checklist similar to Figure 11-4. The grating will be inspected for achievement of the visual acceptance standard and the inspection documented on the checklist used to document the decontamination.

11.1.2.4 Soil Sampling

The floor of each of the two outdoor loading area pads has a single drainage trench. Each trench has one drain that discharges to the same french drain (Figure 11-1). The french drain is a vertically oriented, perforated concrete pipe that is approximately 3 feet in diameter and six feet long and is entirely in the ground. The drain has a concrete cover and is open to soil at the bottom to allow drainage. The bottom foot (0.3048 meter) of the pipe is filled with gravel. To facilitate access to soil for sampling, gravel in the french drain will be removed down to the gravel/soil interface. When gravel is removed, care will be

taken so as not to disturb subsoil. Gravel will be placed into lined containers to await designation based on the results of french drain soil sampling. The gravel will be disposed in accordance with the results of waste designation.

One grab sample of surface soil will be taken from the center of the french drain. The sample will be analyzed for the following: pH, volatile organic compounds, semi-volatile organic compounds, RCRA metals, PCBs, herbicides, pesticides, phosphorous pesticides, cyanide, total organic halides (TOX), anions, phenols, and chrome VI. EPA-approved analytical methods will be used for sample analysis. For methods that can determine multiple analytes, the laboratory will report the routine target analyte list. Quality assurance/quality control (QA/QC) samples will include one trip blank, one field blank, and one equipment blank. Table 11-1 provides target analytes and the detection limits.

The laboratory will provide a data package that provides information regarding analytical holding times, method blank results, matrix spikes, laboratory control samples, laboratory duplicates, chemical and tracer recoveries, initial and continuing instrument calibration, and all QC checks required by the analytical method. The laboratory information pertaining to the soil sample and one complete QC series will be independently validated.

Constituent concentrations will be evaluated against clean closure action levels. Initial action levels will be natural background levels (DOE/RL-92-24) or limit of quantitation. For concentrations above these levels, closure to health-based levels calculated as described in Section 11.1.1.2 will be assessed. If sampling verifies constituent concentration below these levels, soil will be clean closed. The laboratory report and data evaluation will be placed in the Hanford Facility Operating Record.

Although not expected, if the soil sampling results indicate contamination above clean closure levels, the closure plan will be modified to include further characterization, remediation, and verification activities as necessary to meet WAC 173-303-610(2)(b) clean closure requirements.

11.1.2.5 Other Activities [I-1b(5)]

No other activities are expected to be necessary for clean closure.

11.2 SCHEDULE FOR CLOSURE [I-1f]

A schedule for closure activities is presented in Figure 11-5. Closure activities are anticipated to be completed before formal closure plan approval by inclusion of this modification into the Hanford Facility RCRA Permit during Modification E (1999). Although not anticipated, if the planned closure activities will not achieve clean closure, this closure plan and schedule will be revised.

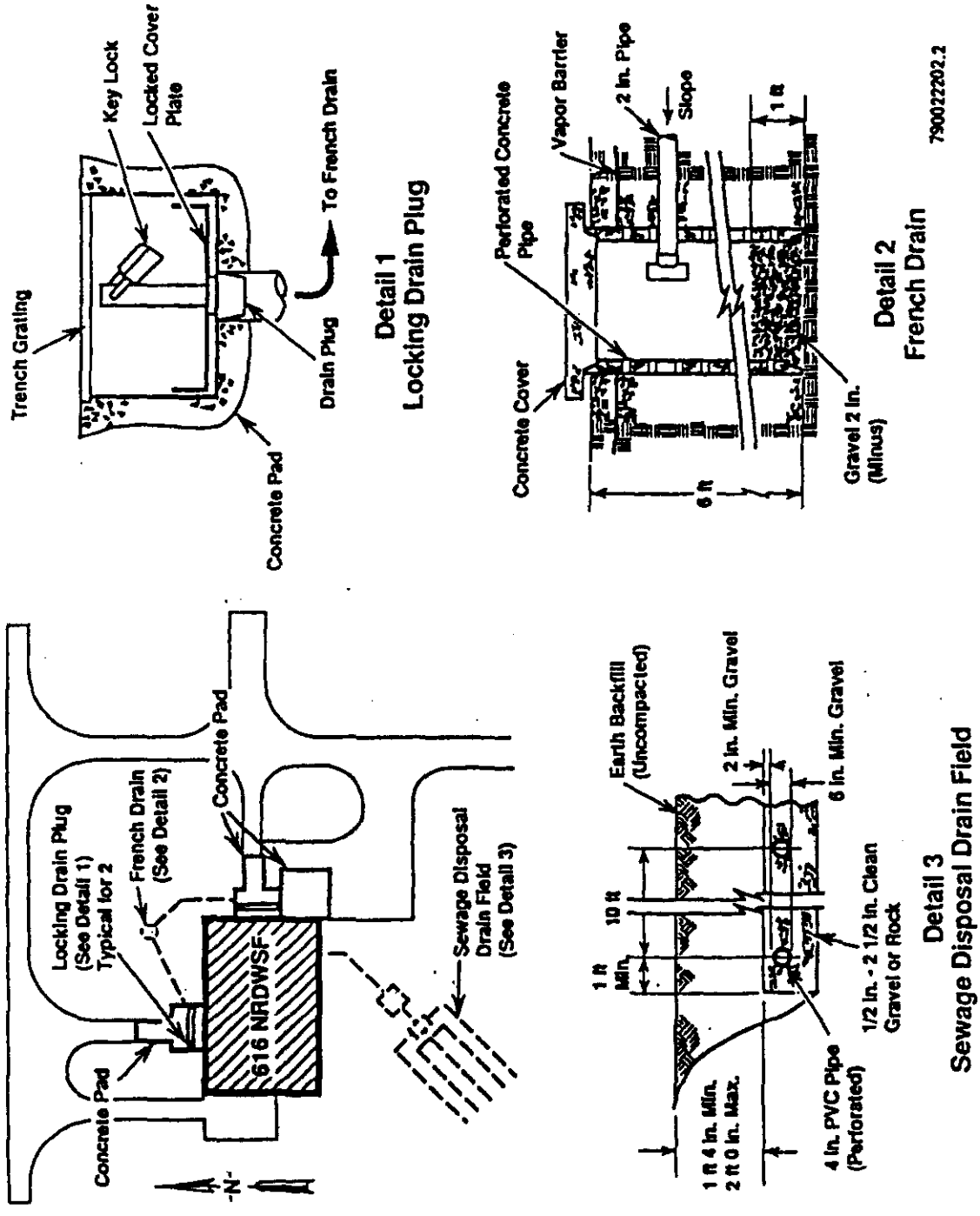


Figure 11-1. French Drain and Tile Field.

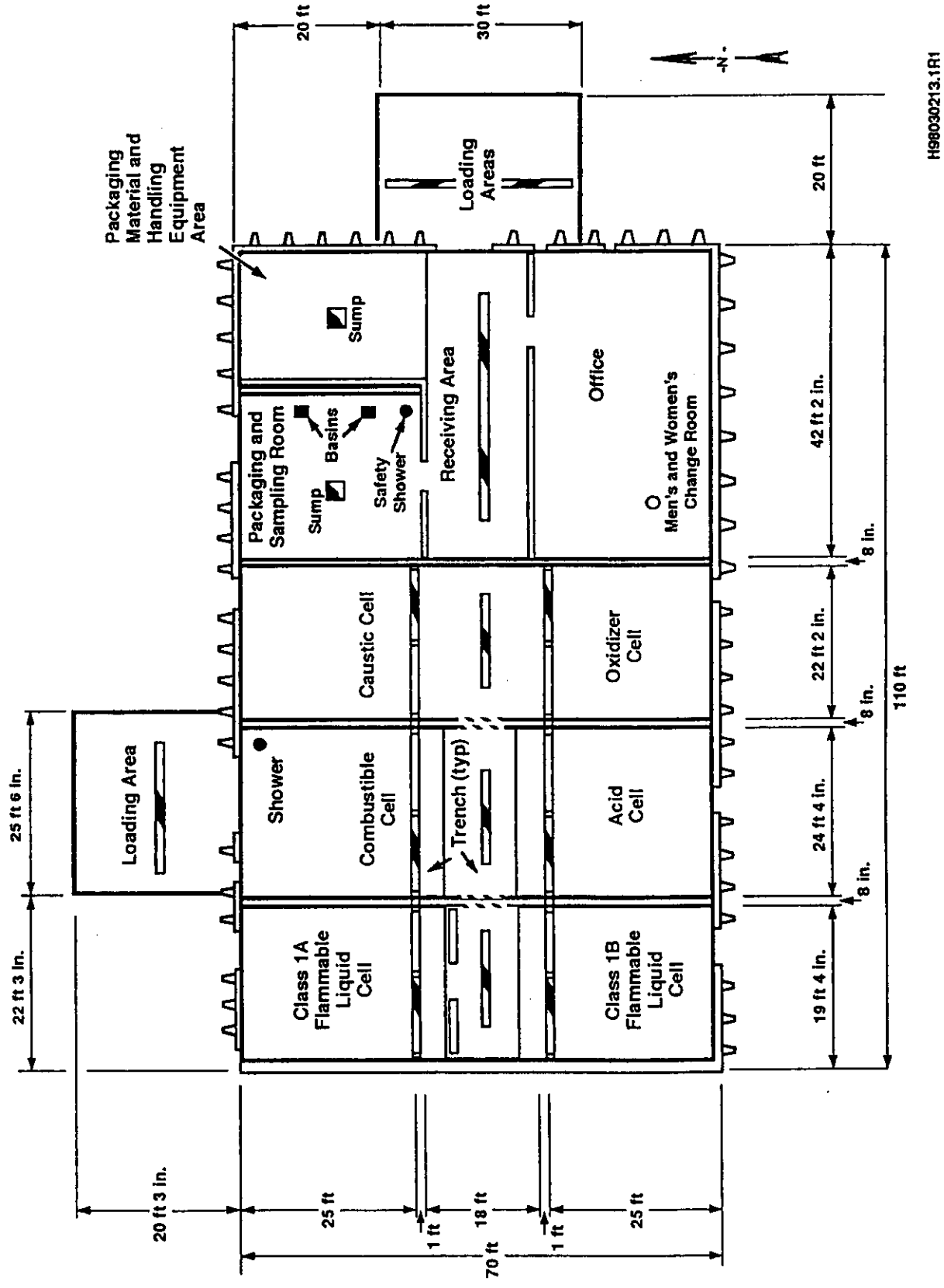


Figure 11-2. Loading and Storage Areas.

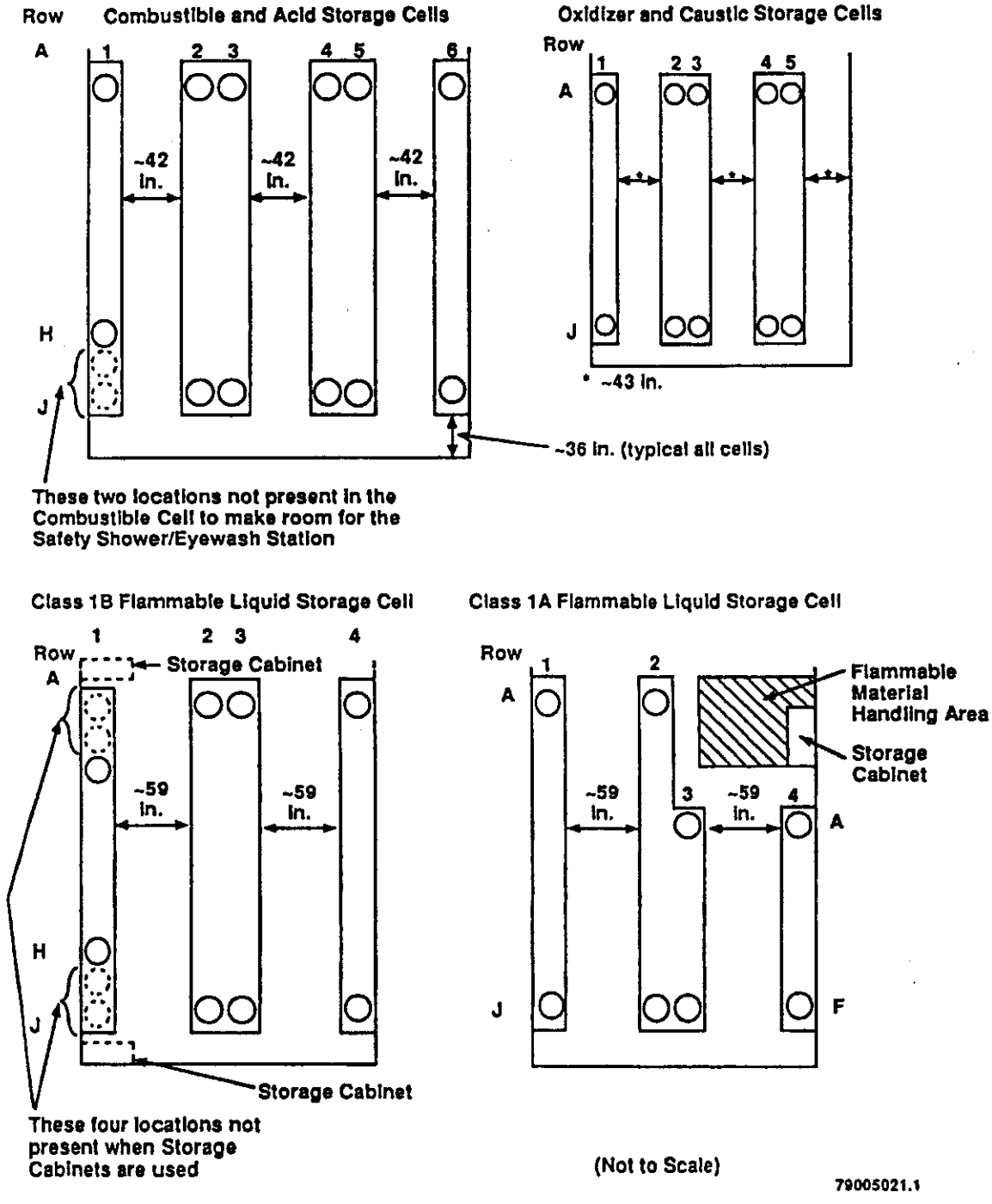


Figure 11-3. Configuration and Layout of a Typical Cell.

EXAMPLE

DECONTAMINATION AND INSPECTION CHECKLIST FOR 616 NONRADIOACTIVE DANGEROUS WASTE STORAGE FACILITY CLOSURE ACTIVITIES

1. Portion of unit (e.g., north loading pad): _____

2. Structure/component description/material (e.g., coated concrete floor): _____
   Note: Attach photographs taken during visual inspection.

DECONTAMINATION

3. Decontamination method used: _____
   _____
   _____
   (Initial/Date) _____/_____

4. Comments on decontamination (or N/A): _____
   _____
   _____
   (Initial/Date) _____/_____

5. Decontamination is complete: Date: _____ Time: _____
   (Initial/Date) _____/_____

VISUAL VERIFICATION

6. Assigned visual inspector(s):
   Name: _____ Signature: _____ Initials: _____
   _____ _____ _____
   _____ _____ _____

   Assigning Manager: _____ _____
   Signature Date

7. Visual inspection of all (Step 1) locations is complete: Date: _____ Time: _____
   (Initial/Date) _____/_____

8. Visual performance standard met for all (Step 1) locations (no obvious visual signs of potential contamination).
   (Initial/Date) _____/_____

9. Visual inspection comments (if any): _____
   _____
   _____
   (Initial/Date) _____/_____

10. Additional comments (if any): _____
    _____
    _____
    (Initial/Date) _____/_____

11. The checklist is complete. Forward the completed checklist to the Hanford Facility Operating Record.
    (Initial/Date) _____/_____

Figure 11-4. Example Inspection Checklist.

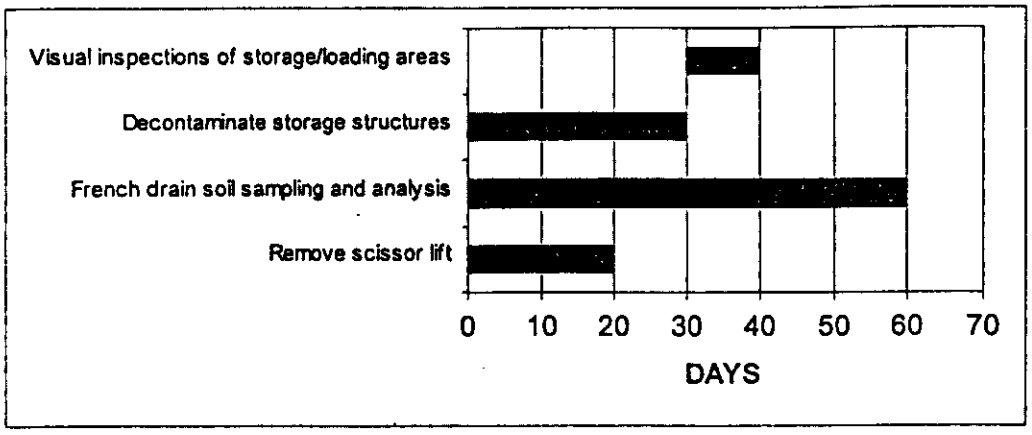


Figure 11-5. Closure Schedule.

Table 11-1. Target Analytes and Detection Levels.

Method name	Constituent long name	ID	Matrix	Reporting limits µg/kg
EPA8270A	4-Nitroaniline	100-01-6	Soil	1600
EPA8270A	4-Nitrophenol	100-02-7	Soil	1600
EPA8260A	Ethylbenzene	100-41-4	Soil	5
EPA8260A	Styrene	100-42-5	Soil	5
EPA8270A	Benzyl alcohol	100-51-6	Soil	330
EPA8260A	cis-1,3-Dichloropropene	10061-01-5	Soil	5
EPA8270A	N-Nitrosopiperidine	100-75-4	Soil	330
EPA8270A	4-Bromophenylphenyl ether	101-55-3	Soil	330
EPA8081	Heptachlor epoxide	1024-57-3	Soil	1.7
EPA8081	Endosulfan sulfate	1031-07-8	Soil	1.7
EPA8270A	2,4-Dimethylphenol	105-67-9	Soil	330
EPA8270A	N-Nitrosomethylethylamine	10595-95-6	Soil	330
EPA8270A	4-Methylphenol (cresol, p-)	106-44-5	Soil	330
EPA8270A	1,4-Dichlorobenzene	106-46-7	Soil	330
EPA8260A	1,4-Dichlorobenzene	106-46-7	Soil	5
EPA8270A	4-Chloroaniline	106-47-8	Soil	670
EPA8270A	p-Phenylenediamine	106-50-3	Soil	3300
EPA8260A	Acrolein	107-02-8	Soil	100
EPA8260A	1,2-Dichloroethane	107-06-2	Soil	5
EPA8260A	Ethyl cyanide	107-12-0	Soil	20
EPA8260A	Acrylonitrile	107-13-1	Soil	100
EPA8015M	Ethylene glycol	107-21-1	Soil	25000
EPA8260A	4-Methyl-2-Pentaone	108-10-1	Soil	20
EPA8270A	2,2'-Oxybis(1-chloropropane)	108-60-1	Soil	330
EPA8260A	Toluene	108-88-3	Soil	5
EPA8270A	Phenol	108-95-2	Soil	330
EPA8270A	2-Picoline	109-06-8	Soil	660
EPA8270A	Tetrahydrofuran	109-99-9	Soil	50
EPA8260A	2-Chloroethyl vinyl ether	110-75-8	Soil	50
EPA8270A	Pyridine	110-86-1	Soil	660
EPA8081	Aroclor-1260	11096-82-5	Soil	33
EPA8081	Aroclor-1254	11097-69-1	Soil	33
EPA8081	Aroclor-1221	11104-28-2	Soil	33
EPA8081	Aroclor-1232	11141-16-5	Soil	33
EPA8270A	Bis(2-chloroethyl) ether	111-44-4	Soil	330
EPA8015M	2-Butoxyethanol	111-76-2	Soil	25000
EPA8270A	Bis(2-Chloroethoxy)methane	111-91-1	Soil	330
EPA8270A	Bis(2-ethylhexyl) phthalate	117-81-7	Soil	330
EPA8270A	Di-n-octylphthalate	117-84-0	Soil	330
EPA8270A	Hexachlorobenzene	118-74-1	Soil	330
EPA8270A	3,3'-Dimethylbenzidine	119-93-7	Soil	330
EPA8270A	Anthracene	120-12-7	Soil	330
EPA8150A	Dichloroprop	120-36-5	Soil	80
EPA8270A	Isosafrole	120-58-1	Soil	660

Table 11-1. Target Analytes and Detection Levels.

Method name	Constituent long name	ID	Matrix	Reporting limits µg/kg
EPA8270A	1,2,4-Trichlorobenzene	120-82-1	Soil	330
EPA8260A	1,2,4-Trichlorobenzene	120-82-1	Soil	5
EPA8270A	2,4-Dichlorophenol	120-83-2	Soil	330
EPA8270A	2,4-Dinitrotoluene	121-14-2	Soil	330
EPA8270A	alpha,alpha-Dimethylphenethylamine	122-09-8	Soil	1600
EPA8260A	Dibromochloromethane	124-48-1	Soil	5
EPA8270A	O,O,O-Triethyl phosphorothioate	126-68-1	Soil	1600
EPA8081	Aroclor-1248	12672-29-6	Soil	33
EPA8015M	Tributyl phosphate	126-73-8	Soil	25000
EPA8270A	Tributyl phosphate	126-73-8	Soil	3300
EPA8081	Aroclor-1016	12674-11-2	Soil	33
EPA8260A	Chloroprene	126-99-8	Soil	5
EPA8260A	Tetrachloroethene	127-18-4	Soil	5
EPA8270A	Pyrene	129-00-0	Soil	330
EPA8270A	1,4-Naphthoquinone	130-15-4	Soil	1600
EPA8270A	Dimethyl phthalate	131-11-3	Soil	330
EPA8270A	Dibenzofuran	132-64-9	Soil	330
EPA8260A	Xylenes (total)	1330-20-7	Soil	5
EPA8270A	1-Naphthylamine	134-32-7	Soil	330
EPA8270A	Aramite	140-57-8	Soil	660
EPA300.0	Phosphate	14265-44-2	Soil	5000
EPA8270A	Kepone	143-50-0	Soil	3300
EPA300.0	Sulfate	14808-79-8	Soil	5000
EPA8260A	cis-1,2-Dichloroethylene	156-59-2	Soil	2.5
EPA8260A	trans-1,2-Dichloroethylene	156-60-5	Soil	2.5
EPA300.0	Chloride	16887-00-6	Soil	2000
EPA300.0	Fluoride	16984-48-8	Soil	1000
EPA9030	Sulfide	18496-25-8	Soil	10000
EPA8270A	Hexachloropropene	1888-71-7	Soil	3300
EPA8270A	Benzo(ghi)perylene	191-24-2	Soil	330
EPA8150A	Dicamba	1918-00-9	Soil	40
EPA8270A	Indeno(1,2,3-cd)pyrene	193-39-5	Soil	330
EPA8270A	Benzo(b)fluoranthene	205-99-2	Soil	330
EPA8270A	Fluoranthene	206-44-0	Soil	330
EPA8270A	Benzo(k)fluoranthene	207-08-9	Soil	330
EPA8270A	Acenaphthylene	208-96-8	Soil	330
EPA8270A	Chrysene	218-01-9	Soil	330
EPA8270A	Diallate	2303-16-4	Soil	660
EPA8270A	Pronamide	23950-58-5	Soil	660
EPA8270A	O,O-Diethyl 0-2-pyrazinyl phosphorothioa	297-97-2	Soil	1600
EPA8270A	Methyl parathion	298-00-0	Soil	1600
EPA8270A	Phorate	298-02-2	Soil	1600

Table 11-1. Target Analytes and Detection Levels.

Method name	Constituent long name	ID	Matrix	Reporting limits µg/kg
EPA8270A	Disulfoton	298-04-4	Soil	1600
EPA8015M	Bis(2-ethylhexyl)phosphoric acid (D2EHPA)	298-07-7	Soil	25000
EPA8081	Aldrin	309-00-2	Soil	1.7
EPA8081	Alpha-BHC	319-84-6	Soil	1.7
EPA8081	Beta-BHC	319-85-7	Soil	1.7
EPA8081	Delta-BHC	319-86-8	Soil	1.7
EPA8081	Endosulfan II	33213-65-9	Soil	1.7
EPA8270A	Tetraethyl dithiopyrophosphate	3689-24-5	Soil	1600
EPA8270A	Isodrin	465-73-6	Soil	330
EPA8081	4,4'-DDT	50-29-3	Soil	1.7
EPA8270A	Benzo(a)pyrene	50-32-8	Soil	330
EPA8270A	Chlorobenzilate	510-15-6	Soil	330
EPA8270A	2,4-Dinitrophenol	51-28-5	Soil	1600
EPA8270A	Famphur	52-85-7	Soil	3300
EPA8270A	4,6-Dinitro-2methyl phenol	534-52-1	Soil	1600
EPA8081	Aroclor-1242	53469-21-9	Soil	33
EPA8270A	Dibenz[a,h]anthracene	53-70-3	Soil	330
EPA8270A	2-Acetylaminofluorene	53-96-3	Soil	3300
EPA8260A	1,2-Dichloroethene(Total)	540-59-0	Soil	5
EPA8270A	1,3-Dichlorobenzene	541-73-1	Soil	330
EPA8270A	N-Nitrosodiethylamine	55-18-5	Soil	330
EPA8260A	Carbon tetrachloride	56-23-5	Soil	5
EPA8270A	Parathion	56-38-2	Soil	1600
EPA8270A	3-Methylcholanthrene	56-49-5	Soil	660
EPA8270A	Benzo(a)anthracene	56-55-3	Soil	330
EPA8270A	4-Nitroquinoline-1-oxide	56-57-5	Soil	3300
EPA335.2	Cyanide	57-12-5	Soil	0.5
EPA9010	Cyanide	57-12-5	Soil	0.5
EPA8081	Chlordane	57-74-9	Soil	1.7
EPA8270A	7,12-Dimethylbenz[a]anthracene	57-97-6	Soil	660
EPA8081	Gamma-BHC (Lindane)	58-89-9	Soil	1.7
EPA8270A	2,3,4,6-Tetrachlorophenol	58-90-2	Soil	330
EPA8260A	2-Hexanone	591-78-6	Soil	20
EPA8270A	4-Chloro-3-methylphenol	59-50-7	Soil	670
EPA8270A	N-Nitrosomorpholine	59-89-2	Soil	330
EPA8270A	p-Dimethylaminoazobenzene	60-11-7	Soil	660
EPA8015M	Diethyl ether	60-29-7	Soil	25000
EPA8270A	Dimethoate	60-51-5	Soil	660
EPA8081	Dieldrin	60-57-1	Soil	1.7
EPA8270A	2,6-Dinitrotoluene	606-20-2	Soil	330
EPA8270A	Pentachlorobenzene	608-93-5	Soil	330
EPA8270A	N-Nitroso-di-n-dipropylamine	621-64-7	Soil	330
EPA8270A	Phenacetin	62-44-2	Soil	660

Table 11-1. Target Analytes and Detection Levels.

Method name	Constituent long name	ID	Matrix	Reporting limits µg/kg
EPA8270A	Ethyl methanesulfonate	62-50-0	Soil	330
EPA8270A	Aniline	62-53-3	Soil	330
EPA8270A	N-Nitrosodimethylamine	62-75-9	Soil	330
EPA8260A	1,1,1,2-Tetrachloroethane	630-20-6	Soil	5
EPA8015M	Ethanol	64-17-5	Soil	25000
EPA8015M	Normal paraffin hydrocarbons (petroleum)	64771-72-8	Soil	25000
EPA8270A	Benzoic acid	65-85-0	Soil	1600
EPA8270A	Methyl methanesulfonate	66-27-3	Soil	330
EPA8015M	Methanol	67-56-1	Soil	25000
EPA8260A	Acetone	67-64-1	Soil	20
EPA8260A	Chloroform	67-66-3	Soil	5
EPA8270A	Hexachloroethane	67-72-1	Soil	330
WTPH-DIESEL	Diesel oil	68334-30-5	Soil	25000
EPA8270A	4-Chlorophenylphenyl ether	7005-72-3	Soil	330
EPA8260A	1-Butanol	71-36-3	Soil	100
EPA8260A	Benzene	71-43-2	Soil	5
EPA8260A	1,1,1-Trichloroethane	71-55-6	Soil	5
EPA8081	Endrin	72-20-8	Soil	1.7
EPA8081	Methoxychlor	72-43-5	Soil	1.7
EPA8081	4,4'-DDD	72-54-8	Soil	1.7
EPA8081	4,4'-DDE	72-55-9	Soil	1.7
EPA8081	Endrin aldehyde	7421-93-4	Soil	1.7
EPA6010A	Aluminum	7429-90-5	Soil	20000
EPA6010A	Iron	7439-89-6	Soil	10000
EPA6010A	Lead	7439-92-1	Soil	10000
EPA7421	Lead	7439-92-1	Soil	300
EPA6010A	Lithium	7439-93-2	Soil	5000
EPA6010A	Magnesium	7439-95-4	Soil	500000
EPA6010A	Manganese	7439-96-5	Soil	1500
EPA7470	Mercury	7439-97-6	Soil	33
EPA7471	Mercury	7439-97-6	Soil	100
EPA6010A	Molybdenum	7439-98-7	Soil	4000
EPA6010A	Nickel	7440-02-0	Soil	4000
EPA6010A	Potassium	7440-09-7	Soil	500000
EPA6010A	Silicon	7440-21-3	Soil	50000
EPA6010A	Silver	7440-22-4	Soil	1000
EPA6010A	Sodium	7440-23-5	Soil	500000
EPA6010A	Strontium (elemental)	7440-24-6	Soil	5000
EPA6010A	Thallium	7440-28-0	Soil	200000
EPA7840	Thallium	7440-28-0	Soil	1000
EPA7841	Thallium	7440-28-0	Soil	1000
EPA6010A	Tin	7440-31-5	Soil	10000
EPA6010A	Titanium	7440-32-6	Soil	5000

Table 11-1. Target Analytes and Detection Levels.

Method name	Constituent long name	ID	Matrix	Reporting limits µg/kg
EPA6010A	Antimony	7440-36-0	Soil	6000
EPA7060	Arsenic	7440-38-2	Soil	1000
EPA6010A	Arsenic	7440-38-2	Soil	30000
EPA6010A	Barium	7440-39-3	Soil	20000
EPA6010A	Beryllium	7440-41-7	Soil	500
EPA6010A	Boron	7440-42-8	Soil	20000
EPA7130	Cadmium	7440-43-9	Soil	100
EPA7131	Cadmium	7440-43-9	Soil	100
EPA6010A	Cadmium	7440-43-9	Soil	500
EPA7191	Chromium	7440-47-3	Soil	100
EPA6010A	Chromium	7440-47-3	Soil	1000
EPA6010A	Cobalt	7440-48-4	Soil	5000
EPA6010A	Copper	7440-50-8	Soil	2500
EPA6010A	Vanadium	7440-62-2	Soil	5000
EPA6010A	Zinc	7440-66-6	Soil	2000
EPA6010A	Zirconium	7440-67-7	Soil	10000
EPA6010A	Calcium	7440-70-2	Soil	500000
EPA8260A	Bromomethane	74-83-9	Soil	10
EPA8260A	Chloromethane	74-87-3	Soil	10
EPA8260A	Iodomethane	74-88-4	Soil	5
EPA8260A	Dibromomethane	74-95-3	Soil	5
EPA8260A	Chloroethane	75-00-3	Soil	10
EPA8260A	Vinyl chloride	75-01-4	Soil	10
EPA8260A	Methylenechloride	75-09-2	Soil	5
EPA8260A	Carbon disulfide	75-15-0	Soil	5
EPA8260A	Bromoform	75-25-2	Soil	5
EPA8260A	Bromodichloromethane	75-27-4	Soil	5
EPA8260A	1,1-Dichloroethane	75-34-3	Soil	5
EPA8260A	1,1-Dichloroethene	75-35-4	Soil	5
EPA8260A	Dichlorodifluoromethane	75-71-8	Soil	10
EPA8150A	Dalapon	75-99-0	Soil	40
EPA8270A	Pentachloroethane	76-01-7	Soil	1600
EPA8260A	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	Soil	10
EPA8081	Heptachlor	76-44-8	Soil	1.7
EPA365.4	Phosphorus	7723-14-0	Soil	10000
EPA8270A	Hexachlorocyclopentadiene	77-47-4	Soil	1600
EPA6010A	Selenium	7782-49-2	Soil	25000
EPA7740	Selenium	7782-49-2	Soil	500
EPA8270A	Isophorone	78-59-1	Soil	330
EPA8260A	1,2-Dichloropropane	78-87-5	Soil	5
EPA8260A	2-Butanone	78-93-3	Soil	20
EPA8260A	1,1,2-Trichloroethane	79-00-5	Soil	5
EPA8260A	Trichloroethene	79-01-6	Soil	5

Table 11-1. Target Analytes and Detection Levels.

Method name	Constituent long name	ID	Matrix	Reporting limits µg/kg
EPA8260A	1,1,2,2-Tetrachloroethane	79-34-5	Soil	5
EPA8081	Toxaphene	8001-35-2	Soil	67
WTPH-GAS	Gasoline	8006-61-9	Soil	500
EPA8015M	Kerosene	8008-20-6	Soil	25000
EPA8260A	Methyl methacrylate	80-62-6	Soil	5
EPA8270A	Pentachloronitrobenzene (PCNB)	82-68-8	Soil	1600
EPA8270A	Acenaphthene	83-32-9	Soil	330
EPA8270A	Diethylphthalate	84-66-2	Soil	330
EPA8270A	Di-n-butylphthalate	84-74-2	Soil	330
EPA8270A	Phenanthrene	85-01-8	Soil	330
EPA8270A	Butylbenzylphthalate	85-68-7	Soil	330
EPA8270A	N-Nitrosodiphenylamine	86-30-6	Soil	330
EPA8270A	Fluorene	86-73-7	Soil	330
EPA8270A	Carbazole	86-74-8	Soil	330
EPA8270A	2,6-Dichlorophenol	87-65-0	Soil	330
EPA8270A	Hexachlorobutadiene	87-68-3	Soil	330
EPA8270A	Pentachlorophenol	87-86-5	Soil	1600
EPA8270A	2,4,6-Trichlorophenol	88-06-2	Soil	330
EPA8270A	2-Nitroaniline	88-74-4	Soil	1600
EPA8270A	2-Nitrophenol	88-75-5	Soil	330
EPA8150A	2-secButyl-4,6-dinitrophenol(DNBP)	88-85-7	Soil	12
EPA8270A	2-secButyl-4,6-dinitrophenol(DNBP)	88-85-7	Soil	660
EPA8270A	Naphthalene	91-20-3	Soil	330
EPA8270A	2-Methylnaphthalene	91-57-6	Soil	330
EPA8270A	2-Chloronaphthalene	91-58-7	Soil	330
EPA8270A	2-Naphthylamine	91-59-8	Soil	330
EPA8270A	Methapyrilene	91-80-5	Soil	1600
EPA8270A	3,3'-Dichlorobenzidine	91-94-1	Soil	1600
EPA8270A	N-Nitrosodi-n-butylamine	924-16-3	Soil	330
EPA8270A	4-Aminobiphenyl	92-67-1	Soil	1600
EPA8270A	Nitrosopyrrolidine	930-55-2	Soil	330
EPA8150A	MCPP	93-65-2	Soil	8000
EPA8150A	2,4,5-TP	93-72-1	Soil	20
EPA8150A	2,4,5-T	93-76-5	Soil	20
EPA8270A	Safrol	94-59-7	Soil	660
EPA8150A	MCPA	94-74-6	Soil	8000
EPA8150A	2,4-Dichlorophenoxyacetic acid	94-75-7	Soil	80
EPA8150A	2,4-DB	94-82-6	Soil	80
EPA8270A	2-Methylphenol (cresol, o-)	95-48-7	Soil	330
EPA8270A	1,2-Dichlorobenzene	95-50-1	Soil	330
EPA8270A	o-Toluidine	95-53-4	Soil	660
EPA8270A	2-Chlorophenol	95-57-8	Soil	330

Table 11-1. Target Analytes and Detection Levels.

Method name	Constituent long name	ID	Matrix	Reporting limits µg/kg
EPA8270A	1,2,4,5-Tetrachlorobenzene	95-94-3	Soil	330
EPA8270A	2,4,5-Trichlorophenol	95-95-4	Soil	330
EPA8081	Endosulfan I	959-98-8	Soil	1.7
EPA8260A	1,2,3-Trichloropropane	96-18-4	Soil	5
EPA8270A	Acetophenone	98-86-2	Soil	330
EPA8270A	Nitrobenzene	98-95-3	Soil	330
EPA8270A	3-Nitroaniline	99-09-2	Soil	1600
EPA8270A	sym-Trinitrobenzene	99-35-4	Soil	1600
EPA8270A	5-Nitro-o-toluidine	99-55-8	Soil	660
EPA8270A	m-Dinitrobenzene	99-65-0	Soil	330
EPA353.1	Nitrogen in Nitrite and Nitrate	NO2+NO3-N	Soil	500
EPA300.0	Nitrogen in Nitrite	NO2-N	Soil	200
EPA300.0	Nitrogen in Nitrate	NO3-N	Soil	200
EPA413.1	Oil and grease	OIL/GREASE	Soil	500000
EPA415.1	Total organic carbon	TOC	Soil	25000
EPA9060	Total organic carbon	TOC	Soil	25000
EPA418.1	Total petroleum hydrocarbons	TPH	Soil	5000

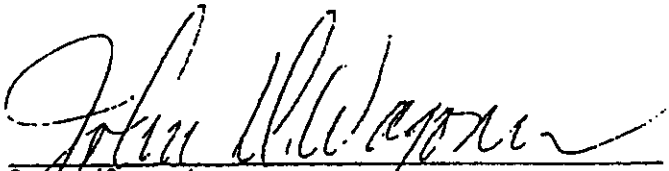
CAS # = Chemical Abstracts Service number.
µg/kg = micrograms per kilograms (parts per billion).

CONTENTS

14.0 CERTIFICATION [K]

The following certification, required by WAC 173-303-810(13), for all applications and reports submitted to Ecology is hereby included:

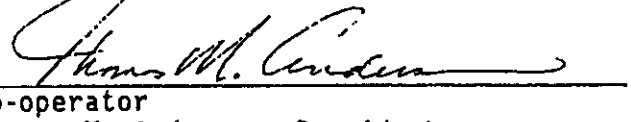
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



10/30/91

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Field Office, Richland

Date



10/4/91

Co-operator
Thomas M. Anderson, President
Westinghouse Hanford Company

Date

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14.0 CERTIFICATION [K]*

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John D. Wagoner — 7/26/96

Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

Date

[signature] — 7/17/96

Co-operator
A. LaMar Trego, President
Westinghouse Hanford Company

Date

* This certification statement is only for Chapter 6.0, Revision 2A (Procedures to Prevent Hazards) for the 616 Nonradioactive Dangerous Waste Storage Facility.

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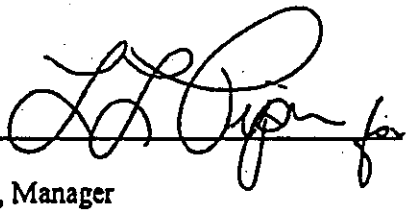
14.0 PART B CERTIFICATION [K]
Modification D

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Owner/Operator
John D. Wagoner, Manager
U.S. Department of Energy
Richland Operations Office

5/22/98
Date

Co-operator
H. J. Hatch,
President and Chief Executive Officer
Fluor Daniel Hanford Company

May 14, 1998
Date

Note: This certifies the following: Chapter 7.0 (Contingency Plan), Revision 2A; Appendix 7A (Building Emergency Plan for the 616 Nonradioactive Dangerous Waste Storage Facility, HNF-IP-0263-616), Revision 4; Appendix 8A (Training Plan for the 616 Nonradioactive Dangerous Waste Storage Facility, HNF-1276), Revision 1.

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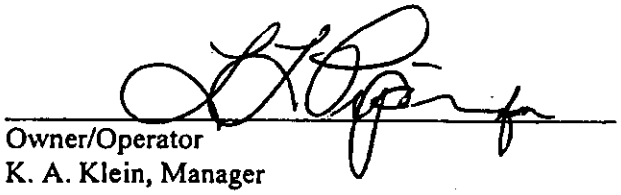
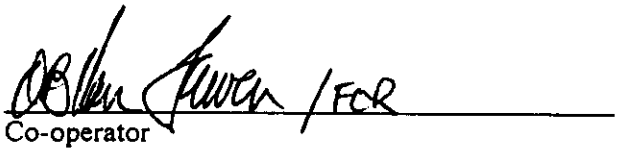
14.0 PART B CERTIFICATION [K]

I certify under penalty of law that Chapter 11.0 was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Owner/Operator
K. A. Klein, Manager
U.S. Department of Energy
Richland Operations Office

6/1/99
Date



Co-operator
R. D. Hanson,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

5/26/99
Date

Enclosure 5
Permit Modification Schedule
(Attachment 27)

PERMIT MODIFICATION SCHEDULE (ATTACHMENT 27)

Updated: February 28, 2001

Year & Mod.	TSD Unit	Part*	Status and Remarks
1994 Mod. 0	616 NRDWSF	III	In Rev. 0, Completed, approved
	305-B Storage Facility	III	In Rev. 0, Completed, approved
	183-H Solar Evaporation Basins	V	In Rev. 0, Completed, approved
	300 Area Solvent Evaporator	V	In Rev. 0, Completed, approved
	2727-S Storage Facility	V	In Rev. 0, Completed, approved
1995 Mod. A	Simulated High Level Waste Slurry Treatment & Storage	V	In Rev. 1, Completed, approved
	218-E-8 Borrow Pit Demolition Site	V	In Rev. 1, Completed, approved
	200 Area Ash Pit Demolition Site	V	In Rev. 1, Completed, approved
	2101-M Pond	V	In Rev. 1, Completed, approved
	216-B-3 Expansion Ponds	V	In Rev. 1, Completed, approved
1995 Mod. A'	Hanford Patrol Academy Demolition Sites	V	In Rev. 2, Completed, approved
	105-DR Large Sodium Fire Facility	V	In Rev. 2, Completed, approved
	304 Concretion Facility	V	In Rev. 2, Completed, approved
1996 Mod. B	PUREX Tunnels 1 & 2	III	In Rev. 3, Completed, approved
	4843 Alkali Metal Storage	V	In Rev. 3, Completed, approved
	3718-F Alkali Metal Treatment	V	In Rev. 3, Completed, approved
	300 Area Process Trenches	VI	In Rev. 3, Completed, approved
1997 Mod. C	Liquid Effluent Retention Facility & 200 Effluent Treatment Facility	III	In Rev. 4, Completed, approved
	242-A Evaporator	III	In Rev. 4, Completed, approved
	325 Hazardous Waste Treatment Units	III	In Rev. 4, Completed, approved
	303-K Storage Facility	V	In Rev. 4, Completed, approved
	183-H Solar Evaporation Basins	VI	In Rev. 4, Completed, approved
1998 Mod. D	100 D Ponds	V	In Rev. 5, Completed, approved
	1325-N Liquid Waste Disposal	V	In Rev. 5, Completed, approved
	1301-N Liquid Waste Disposal	V	In Rev. 5, Completed, approved
	1324-N Surface Impoundment	V	In Rev. 5, Completed, approved
	1324-NA Percolation Pond	V	In Rev. 5, Completed, approved
1999 Mod. E	Waste Receiving and Processing Facility	III	
	Central Waste Complex	III	
	300 Waste Acid Treatment & Storage	V	
	2401-W Waste Storage Building	V	
	Transuranic Storage and Assay Facility	V	
2000 Mod. F	222-S Laboratory Complex	III	
2000 Mod. F'	Vitrification-Privatization (British Nuclear Fuels Limited, Inc.)	III	
2001 Mod. G	Double-Shell Tank System & 204-AR Waste Unloading Station	III	
2002 Mod. H	Low Level Burial Grounds	III	
	T Plant Complex	III	
	Hexone Storage and Treatment Facility	V	
2003 Mod. I	Canister Storage Building – Immobilized High-Level Waste	III	
	Immobilized Low-Activity Waste Storage Facility	III	
	216-A-29 Ditch	V	
	216-B-3 Main Pond	V	
	216-B-63 Trench	V	
	216-S-10 Pond and Ditch	V	
2004 Mod. J	Reissue Hanford Facility RCRA Permit		

Legend: * Part in Permit

Part III Unit-Specific Conditions for Operating Units
Part IV Unit-Specific Conditions for Corrective Action
Part V Unit-Specific Conditions for Units Undergoing Closure
Part VI Unit-Specific Conditions for Units in Post-Closure

Note:

All TSD Units not shown in this table will be scheduled through a Class 1 Permit Modification (requiring prior approval) to Attachment 27.
All Permit Modifications listed in this table will be conducted in accordance with the applicable requirements in WAC 173-303-830.

3. New TSD Part B Applications, if submitted, will be added to this table through a Class 1 Permit Modification (requiring prior approval).

Enclosure 6
WRAP Facility Part A and B
(Attachment 43)

HANFORD FACILITY DANGEROUS WASTE PERMIT APPLICATION, WASTE RECEIVING AND PROCESSING FACILITY

FOREWORD

The *Hanford Facility Dangerous Waste Permit Application* is considered to be a single application organized into a General Information Portion (document number DOE/RL-91-28) and a Unit-Specific Portion. The scope of the Unit-Specific Portion is limited to Part B permit application documentation submitted for individual, 'operating' treatment, storage, and/or disposal units, such as Waste Receiving and Processing Facility (this document, DOE/RL-91-16).

Both the General Information and Unit-Specific portions of the *Hanford Facility Dangerous Waste Permit Application* address the content of the Part B permit application guidance prepared by the Washington State Department of Ecology (1996) and the U.S. Environmental Protection Agency (40 Code of Federal Regulations 270), with additional information needs defined by the *Hazardous and Solid Waste Amendments* and revisions of Washington Administrative Code 173-303. For ease of reference, the Washington State Department of Ecology alpha-numeric section identifiers from the permit application guidance documentation (1996) follow, in brackets, the chapter headings and subheadings. A checklist indicating where information is contained in Waste Receiving and Processing Facility permit application documentation, in relation to the Washington State Department of Ecology guidance, is located in the Contents Section.

Documentation contained in the General Information Portion is broader in nature and could be used by multiple treatment, storage, and/or disposal units (e.g., the glossary provided in the General Information Portion). Wherever appropriate, Waste Receiving and Processing Facility permit application documentation makes cross-reference to the General Information Portion, rather than duplicating text.

Information provided in this Waste Receiving and Processing Facility permit application documentation is current as of May 1998.

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DOCUMENT CONTENTS

APPENDICES

METRIC CONVERSION CHART

The following conversion chart is provided to the reader as a tool to aid in conversion.

Into metric units			Out of metric units		
If you know	Multiply by	To get	If you know	Multiply by	To get
Length			**Length**		
inches	25.40	millimeters	millimeters	0.0393	inches
inches	2.54	centimeters	centimeters	0.393	inches
feet	0.3048	meters	meters	3.2808	feet
yards	0.914	meters	meters	1.09	yards
miles	1.609	kilometers	kilometers	0.62	miles
Area			**Area**		
square inches	6.4516	square centimeters	square centimeters	0.155	square inches
square feet	0.092	square meters	square meters	10.7639	square feet
square yards	0.836	square meters	square meters	1.20	square yards
square miles	2.59	square kilometers	square kilometers	0.39	square miles
acres	0.404	hectares	hectares	2.471	acres
Mass (weight)			**Mass (weight)**		
ounces	28.35	grams	grams	0.0352	ounces
pounds	0.453	kilograms	kilograms	2.2046	pounds
short ton	0.907	metric ton	metric ton	1.10	short ton
Volume			**Volume**		
fluid *ounces*	29.57	milliliters	milliliters	0.03	fluid *ounces*
quarts	0.95	liters	liters	1.057	quarts
gallons	3.79	liters	liters	0.26	gallons
cubic feet	0.03	cubic meters	cubic meters	35.3147	cubic feet
cubic yards	0.76	cubic meters	cubic meters	1.308	cubic yards
Temperature			**Temperature**		
Fahrenheit	subtract 32 then multiply by 5/9ths	Celsius	Celsius	multiply by 9/5ths, then add 32	Fahrenheit

Source: *Engineering Unit Conversions*, M. R. Lindeburg, PE., Second Ed., 1990, Professional Publications, Inc., Belmont, California.

Facility name Waste Receiving and Processing Facility

Date Application Received _____

State of Washington Part B Permit Application Review Checklist for Treatment and Storage in Tanks and Containers			
		Technically Adequate?	Location in Application
A.	Part A Form		Chapter 1.0
B.	Facility Description and General Provisions		2.0
B-1	General Description		2.1
B-1(a)	Facility Description		2.1
B-1(b)	Construction Schedule		2.1.9
B-2	Topographic Map		2.2
B-2a	General Requirements		2.2
B-2b	Additional Requirements for Land Disposal Facilities	Not Applicable	Not Applicable
B-3	Seismic Consideration		N/A
B-4	Traffic Information		2.3
C.	Waste Analysis		3.0
C-1	Chemical, Biological and Physical Analyses		3.1
C-1a C-1b C-1c	Waste In Piles Landfilled Wastes Wastes Incinerated and Wastes Used in Performance Tests	Not Applicable	Not Applicable
C-2	Waste Analysis Plan		3.2 and Appendix 3A

		Technically Adequate?	Location in Application
C-2a	Detailed Chemical, Physical, and/or Biological Analysis		Appendix 3A
C-2a(1)	Parameters and Rationale		Appendix 3A
C-2a(2)	Analytical Methods		Appendix 3A
C-2a(3)	Generator-Supplied Analyses		Appendix 3A
C-2b	Additional Requirements for Wastes Generated Off-site		Appendix 3A
C-2b(1)	Parameters and Rationale to Confirm Identity of Off-site Waste		Appendix 3A
C-2b(2)	Analytical Methods to Confirm Identity of Off-site Waste		Appendix 3A
C-2b(3)	Representative Sampling of Incoming Off-site Wastes		Appendix 3A
C-2c	Methods for Collecting Samples for Detailed and Confirming Analyses		Appendix 3A
C-2d	Frequency of Analyses		Appendix 3A
C-3	Manifest System		Appendix 3A
C-3a	Procedures for Receiving Shipments		Appendix 3A
C-3b	Response to Significant Discrepancies		Appendix 3A
C-3c	Provisions for Non-acceptance of Shipment		Appendix 3A
C-3c(1)	Non-acceptance of Undamaged Shipment		Appendix 3A
C-3c(2)	Activation of Contingency Plan for Damaged Shipment		Appendix 3A
C-4	Tracking System		Appendix 3A
D.	Process Information		4.0
D-1	Containers		4.1

		Technically Adequate?	Location in Application
D-1a	Description of Containers		4.1.1
D-1b	Container Management Practices		4.1.2
D-1c	Container Labelling		4.1.3
D-1d	Containment Requirements for Storing Containers		4.1.4
D-1d(1)	Secondary Containment System Design		4.1.4.1
D-1d(1)(a)	System Design		4.1.4.2
D-1d(1)(b)	Structural Integrity of Base		4.1.4.3
D-1d(1)(c)	Containment System Capacity		4.1.4.4
D-1d(1)(d)	Control of Run-on		4.1.4.5
D-1d(2)	Removal of Liquids from Containment System		4.1.5
D-1e	Demonstration that Containment Is Not Required Because Containers Do Not Contain Free Liquids, Wastes That Exhibit Ignitability or Reactivity, or Wastes Designated F020 - 023, F026, or F027		N/A
D-1f	Prevention of Reaction of Ignitable, Reactive, and Incompatible Wastes in Containers		4.2
D-1f(1)	Management of Certain Reactive Wastes in Containers		4.2.1
D-1f(2)	Management of Ignitable and Certain Other Reactive Wastes in Containers		4.2.2
D-1f(3)	Design of Areas to Manage Incompatible Wastes		4.2.3
D-2	Tank Systems		N/A

		Technically Adequate?	Location in Application
D-2a	Design, Installation and Assessment of Tanks Systems		N/A
D-2a(1)	Design Requirements		N/A
D-2a(2)	Integrity Assessments		N/A
D-2a(3)	Additional Requirements for Existing Tanks		N/A
D-2a(4)	Additional Requirements for New Tanks		N/A
D-2a(5)	Additional Requirements for New On-ground or Underground Tanks		N/A
D-2b	Secondary Containment and Release Detection for Tank Systems		N/A
D-2b(1)	Requirements for All Tank Systems		N/A
D-2b(2)	Additional Requirements for Specific Types of Systems		N/A
D-2b(2)(a)	Vault Systems		N/A
D-2b(2)(b)	Double-walled Tanks		N/A
D-2b(2)(c)	Ancillary Equipment		N/A
D-2c	Variances from Secondary Containment Requirements		N/A
D-2d	Tank Management Practices		N/A
D-2e	Labels or Signs		N/A
D-2f	Air Emissions		N/A
D-2g	Management of Ignitable or Reactive Wastes in Tank Systems		N/A
D-2h	Management of Incompatible Wastes in Tank Systems		N/A

		Technically Adequate?	Location in Application
D-3 D-4 D-5 D-6 D-7	Waste Piles Surface Impoundments Incinerators Landfills Land Treatment	Not Applicable	Not Applicable
D-8	Air Emissions Control		4.3
D-8a	Process Vents		N/A
D-8a(1)	Applicability of Subpart AA Standards		N/A
D-8a(1)(a)	Process Vents Subject to Subpart AA Standards		N/A
D-8a(1)(b)	Process Vents Not Subject to Subpart AA Standards		N/A
D-8a(1)(c)	Re-evaluating Applicability of Subpart AA Standards		N/A
D-8a(2)	Process Vents - Demonstrating Compliance		N/A
D-8a(2)(a)	The Basis for Meeting Limits/Reductions		N/A
D-8a(2)(b)	Demonstrating Compliance via Selected Method		N/A
D-8a(2)(c)	Design Information and Operating Parameters for Closed Vent Systems and Control Devices		N/A
D-8a(2)(d)	Re-evaluating Compliance with Subpart AA Standards		N/A
D-8b	Equipment Leaks		N/A
D-8b(1)	Applicability of Subpart BB Standards		N/A
D-8b(1)(a)	Equipment Subject to Subpart BB		4.3.1
D-8b(1)(b)	Re-evaluating Applicability of Subpart BB Standards		4.3.1

		Technically Adequate?	Location in Application
D-8b(2)	Equipment Leaks - Demonstrating Compliance		4.3.1
D-8b(2)(a)	Procedures for Identifying Equipment Location and Method of Compliance, Marking Equipment, and Ensuring Records are Up-to-date		4.3.1
D-8b(2)(b)	Demonstrating Compliance with D-8b(1)(a) and (2)(a) Procedures		4.3.1
D-8b(2)(c)	Closed Vent Systems or Control Devices: Showing Compliance with Emission Reduction Standards		4.3.1
D-8c	Tanks and Containers		4.3.1
D-8c(1)	Applicability of Subpart CC Standards		4.3.2
D-8c(2)	Tank Systems and Container Areas - Demonstrating Compliance		4.3.2
D-9	Waste Minimization		10.0
D-10	Groundwater Monitoring for Land-based Units	Not Applicable	Not Applicable
E.	Releases from Solid Waste Management Units		2.4
E-1	Solid Waste Management Units and Known and Suspected Releases of Dangerous Wastes or Constituents		2.4
E-1a	Solid Waste Management Units		2.4
E-1b	Releases		2.4
E-2	Corrective Actions Implemented		2.4
F.	Procedures to Prevent Hazards		6.0
F-1	Security		6.1
F-1a	Security Procedures and Equipment		6.1.1

	Technically Adequate?	Location in Application
F-1b Waiver		6.1.2
F-2 Inspection Plan		6.2
F-2a General Inspection Requirements		6.2.1
F-2b Inspection Log		6.2.1
F-2c Schedule for Remedial Action for Problems Revealed		6.2.2
F-2d Specific Process or Waste Type Inspection Requirements		6.2.3
F-2d(1) Container Inspections		6.2.3
F-2d(2) Tank System Inspections and Corrective Actions		N/A
F-2d(2)(a) Tank System Inspections		N/A
F-2d(2)(b) Tank Systems - Corrective Actions		N/A
F-2d(3) Storage of Ignitable or Reactive Wastes		6.5.2
F-2d(4) Air Emissions Control and Detection - Inspections, Monitoring, and Corrective Actions		N/A
F-2d(4)(a) Process Vents		N/A
F-2d(4)(b) Equipment Leaks		N/A
F-2d(4)(c) Tanks and Containers		N/A
F-2d(5) Waste Pile Inspection F-2d(6) Surface Impoundment Inspection F-2d(7) Incinerator Inspection F-2d(8) Landfill Inspection F-2d(9) Land Treatment Facility Inspection	Not Applicable	Not Applicable
F-3 Preparedness and Prevention Requirements		6.3

		Technically Adequate?	Location in Application
F-3a	Equipment Requirements		6.3.1
F-3b	Aisle Space Requirement		6.3.2
F-4	Preventive Procedures, Structures, and Equipment		6.4
F-5	Prevention of Reaction of Ignitable, Reactive, and/or Incompatible Wastes		6.5
F-5a	Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Waste		6.5.1
F-5b	Precautions for Handling Ignitable or Reactive Waste and Mixing Incompatible Wastes		6.5.2
F-5b(1)	Ignitable or Reactive Wastes In Tanks		N/A
F-5b(2)	Incompatible Wastes In Containers or Tanks		N/A
G.	Contingency Plan		7.0 and Appendix 7A
G-1	General Information		Appendix 7A
G-2	Emergency Coordinators		Appendix 7A
G-3	Circumstances Prompting Implementation		Appendix 7A
G-4	Emergency Response Procedures		Appendix 7A
G-4a	Notification		Appendix 7A
G-4b	Identification of Dangerous Materials		Appendix 7A
G-4c	Hazard Assessment and Report		Appendix 7A
G-4d	Prevention of Recurrence or Spread of Fires, Explosions, or Releases		Appendix 7A
G-4f	Post-Emergency Actions		Appendix 7A
G-5	Emergency Equipment		Appendix 7A

		Technically Adequate?	Location in Application
G-6	Coordination Agreements		Appendix 7A
G-7	Evacuation Plan		Appendix 7A
G-8	Required Reports, Recordkeeping, and Certifications		Appendix 7A
G-8a	General Requirements		Appendix 7A
G-8a	Requirements for Tank Systems		N/A
H.	Personnel Training		8.0 and Appendix 8A
H-1	Job Title/Job Description		Appendix 8A
H-2	Outline of Training Program		Appendix 8A
H-3	Implementation of Training Program		Appendix 8A
I.	Closure and Financial Assurance		11.0
I-1	Closure Plan/Financial Assurance for Closure		N/A
I-1a	Closure Performance Standard		11.2
I-1b	Closure Activities		11.3
I-1b(1)	Maximum Extent of Operation		11.4
I-1b(2)	Removing Dangerous Wastes		11.3
I-1b(3)	Decontaminating Structures, Equipment, and Soil		11.3
I-1b(4)	Sampling and Analysis to Identify Extent of Decontamination/ Removal and to Verify Achievement of Closure Standard		11.3
I-1b(4)(a)	Sampling to Confirm Decontamination of Structures and Soils		1.3

		Technically Adequate?	Location in Application
I-1b(5)	Other Activities		11.3
I-1c	Maximum Waste Inventory		11.4
I-1d I-1e	Closure of Waste Piles, Surface Impoundments, Incinerators, Land Treatment, and Miscellaneous Units Closure of Landfill Units	Not Applicable	Not Applicable
I-1f	Schedule for Closure		11.5
I-1g	Extension for Closure Time		N/A
I-1h	Closure Cost Estimate		N/A
I-1i	Financial Assurance Mechanism for Closure		N/A
I-2	Notice in Deed of Already Closed Disposal Units		N/A
I-3	Post-Closure Plan		N/A
I-4	Liability Requirements		N/A
I-4a	Coverage for Sudden Accidental Occurrences		N/A
I-4b	Coverage for Nonsudden Accidental Occurrences		N/A
I-4c	Request for Variance		N/A
J.	Other Federal and State Laws		13.0
K.	Part B Certification		14.0

CONTENTS

1.0 PART A [A]

The Part A, Form 3, covers Waste Receiving and Processing Facility (WRAP). The original Part A, Form 3, (Revision 0) was submitted May 19, 1988 and included the Radioactive Mixed Waste Storage Facility [now known as Central Waste Complex (CWC)] and WRAP. The revised Part A, Form 3, (Revision 1) was submitted October 22, 1990. Revision 1 was prepared to ensure agreement between annual waste quantities as identified in the Part A, Form 3 (Revision 0), and the Hanford Site Annual Dangerous Waste Report submitted in March 1990 to the Washington State Department of Ecology. Two waste codes (D012 and D016) and 26 new dangerous waste codes, based on the U.S. Environmental Protection Agency *Final Rule Change*, "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristics Revisions" (55 FR 61), were added. Revision 2 submitted October 7, 1994 added waste codes (F039, P057, U248, U249, U328, U353, and U359) and removed waste codes (U230, WC01, P052, and U013). Revision 0, submitted January 25, 1995, provided a separate Part A, Form 3, for WRAP. The CWC Part A, Form 3, Revision 3 is included in the Hanford Facility Dangerous Waste Permit Application, Central Waste Complex, Revision 1 (DOE/RL-91-17). Revision 1, submitted September 30, 1996, identified a new co-operator. In addition the Part A, Form 3, was revised to (1) remove the detailed descriptions of WRAP Module 2A and Module 2B and replace them with a general statement that future additions of WRAP could be designed; (2) review the maximum weight limit of containers received at WRAP; (3) delete dangerous waste number WC02 (carcinogenic) because this dangerous waste number has been removed from WAC 173-303; (4) add dangerous number WSC2 (state-only, corrosive dangerous waste); (5) list the dangerous waste numbers in a streamline format; and (6) identify treatment, storage, and/or disposal (TSD) unit boundary.

Revision 2, submitted June 1, 1998, was revised with the following changes:

- Clarified the TSD unit boundary. The original TSD boundary was established to include WRAP 2 and 2A modules projects, however these projects have since been canceled. The TSD boundary has been moved to encompass just the WRAP 2336W Building

- Removed three dangerous waste numbers, added 61 dangerous waste numbers that have been added to the federal and state regulations to increase the estimated annual quantities of waste

- Updated site drawings

- Removed discussion in Section III.C. for process codes S01, "storage-container", and all discussion in Section IV.E. because discussion of this process code is not required in accordance with the Part A, Form 3, instructions.

Revision 3, submitted for inclusion into Modification E of the Hanford Facility Resource Conservation and Recovery Act Permit was revised to add 14 dangerous waste numbers, revise 200 Area Site Map, and revise the elevation drawing.

FORM **3**

DANGEROUS WASTE PERMIT APPLICATION

1. EPA/STATE I.D. NUMBER: W A 7 8 9 0 0 0 8 9 6 7

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED *(mo., day, & yr.)*	COMMENTS
X	06 28 99	Approved 4/28/01 To be used in conjunction with Statewide Permit, Rev. 7

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA/STATE I.D. Number, or if this is a revised application, enter your facility's EPA/STATE I.D. Number in Section I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

☐ 1. EXISTING FACILITY (*See instructions for definition of "existing" facility. Complete item below.*)

MO.	DAY	YR.
03	22	43

* FOR EXISTING FACILITIES, PROVIDE THE DATE *(mo., day, & yr.)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*
* The date construction of the Hanford Facility commenced.

☐ 2. NEW FACILITY (*Complete item below.*)

MO.	DAY	YR.

FOR NEW FACILITIES, PROVIDE THE DATE, *(mo., day, & yr.)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

B. REVISED APPLICATION *(place an "X" below and complete Section I above)*

☒ 1. FACILITY HAS AN INTERIM STATUS PERMIT

☒ 2. FACILITY HAS A FINAL PERMIT

III. PROCESSES – CODES AND CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the codes(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the *(Section III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.

2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D80	GALLONS OR LITERS
LANDFILL	D81	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D82	*ACRES OR HECTARES*
OCEAN DISPOSAL	D83	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D84	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided: Section III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECATRES	Q

EXAMPLE FOR COMPLETING SECTION III *(shown in line numberS X-1 and X-2 below): A facility has two storage tanks; one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.*

LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE *(from list above)*	B. PROCESS DESIGN CAPACITY 1. AMOUNT *(specify)*	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE *(enter code)*	FOR OFFICIAL USE ONLY
X-1	S02	600	G		5				
X-2	T03	20	E		6				
1	T04	12,900	V		7				
2	S01	73,500	L		8				
3					9				
4					10				

Continued from the front.

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T04

The Waste Receiving and Processing Facility (WRAP) commenced construction in 1994 and began waste management operations in March of 1997.

WRAP has the capability to treat waste through deactivation, solidification or absorption of liquids, neutralization of corrosives, amalgamation, microencapsulation, macroencapsulation, volume reduction of waste (e.g., supercompaction), reaction of reactive waste, and repackaging of waste.

The total process design capacity for treatment is 12,900 liters (3,408 gallons) per day.

IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER – Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describes the characteristics and/or the toxic contaminants of those dangerous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate densit specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2			T 0 3 D 8 0	*included with above*

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I. D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*	
1	D001	20,000	K	T04	S01			Treatment - Other/Storage - Container	
2	D002	15,000							
3	D003	500							
4	D004	50							
5	D005	400							
6	D006	117							
7	D007	400							
8	D008	400							
9	D009	800							
10	D010	10							
11	D011	20							
12	D012	300							
13	through	↓							
14	D043	↓							
15	WT01	16,000							
16	WT02	22,000							
17	WP01	12,000							
18	WP02	3,000							
19	WP03	2,000							
20	WSC2	15,000							
21	W001	5,000							
22	F001	4,000							
23	F002	4,500							
24	F003	6,500	↓	↓	↓			↓	

(enter "A," "B," "C," etc., behind the "3" to identify photo copied pages)

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I. D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	F004	570	K	T04 S01	Treatment - Other/Storage - Container (continued)
2	F005	6,000			
3	through				
4	F012				
5	F019				
6	F020	300			
7	through				
8	F023				
9	F026				
10	F027	500			
11	F028	300			
12	F039	500			
13	U001	5,000			
14	through				
15	U012				
16	U014				
17	through				
18	U039				
19	U041				
20	through				
21	U053				
22	U055				
23	through				
24	U064				
25	U066				
26	U067				

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I. D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U068	5,000	K	T04 S01	Treatment - Other/Storage - Container (continued)
2	through				
3	U099				
4	U101				
5	U102				
6	U103				
7	U105				
8	through				
9	U138				
10	U140				
11	through				
	U174				
13	U176				
14	through				
15	U194				
16	U196				
17	U197				
18	U200				
19	through				
20	U223				
21	U225				
22	through				
23	U228				
24	U230				
	through				
26	U240				

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I. D. NUMBER *(entered from page 1)*: WA7890008967

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U242	5,000	K	T04 S01	Treatment - Other/Storage - Container (continued)
2	through				
3	U244				
4	U246				
5	through				
6	U249				
7	U271				
8	U277				
9	through				
10	U280				
11	U328				
12	U353				
13	U359				
14	U364				
15	through				
16	U367				
17	U372				
18	U373				
19	U375				
20	through				
21	U379				
22	U381				
23	through				
24	U387				
25					
26					

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I. D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	U389	5,000	K	T04	S01			Treatment - Other/Storage - Container (continued)
2	through							
3	U396							
4	U400							
5	through							
6	U404							
7	U407							
8	U409							
9	through							
10	U411							
11	P001							
	through							
13	P018							
14	P020							
15	through							
16	P024							
17	P026							
18	through							
19	P031							
20	P033							
21	P034							
22	P036							
23	through							
24	P051							
	P054							
26								

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I. D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	P056	5,000	K	T04 S01	Treatment - Other/Storage - Container (continued)
2	through				
3	P060				
4	P062				
5	through				
6	P078				
7	P081				
8	P082				
9	P084				
10	P085				
11	P087				
12	through				
13	P089				
14	P092				
15	through				
16	P099				
17	P101				
18	through				
19	P116				
20	P118				
21	through				
22	P123				
23	P127				
24	P128				
25	P185				
26					

CONTINUE ON REVERSE

(enter "A," "B," "C," etc., behind the "3" to identify photo copied pages)

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I. D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*				D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	P188	5,000	K	T04	S01			Treatment - Other/Storage - Container (continued)
2	through							
3	P192							
4	P194							
5	P196							
6	through							
7	P199							
8	P201							
9	through							
10	P205							Included With Above
11								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

Continued from the front.

IV. DESCRIPTION OF DANGEROUS WASTE (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail)*.

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs *(aerial or ground-level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail)*.

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawings and photos.

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information," place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED
Keith A. Klein, Manager U.S. Department of Energy Richland Operations Office		6/28/99

X. OPERATOR CERTIFICATION

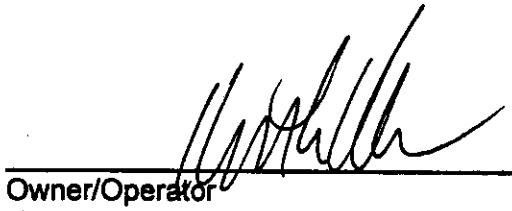
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individu immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting fal information, including the possibility of fine and imprisonment.

NAME *(print or type)*	SIGNATURE	DATE SIGNED

 CONTINUE ON PAGE 5

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



6/28/99

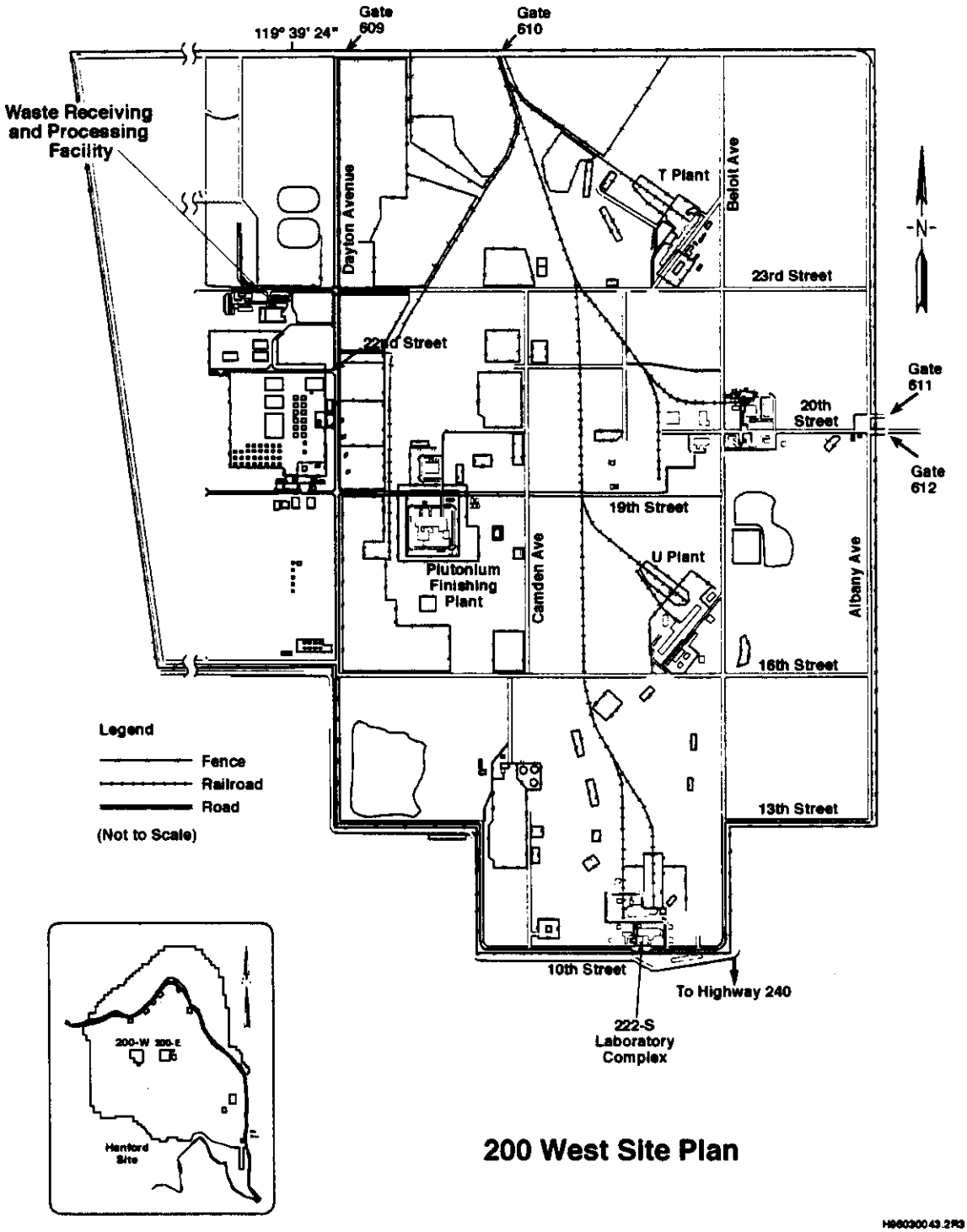
Owner/Operator
Keith A. Klein, Manager
U.S. Department of Energy
Richland Operations Office

Date

June 28, 1999

Co-operator
R. D. Hanson,
President and Chief Executive Officer
Fluor Daniel Hanford, Inc.

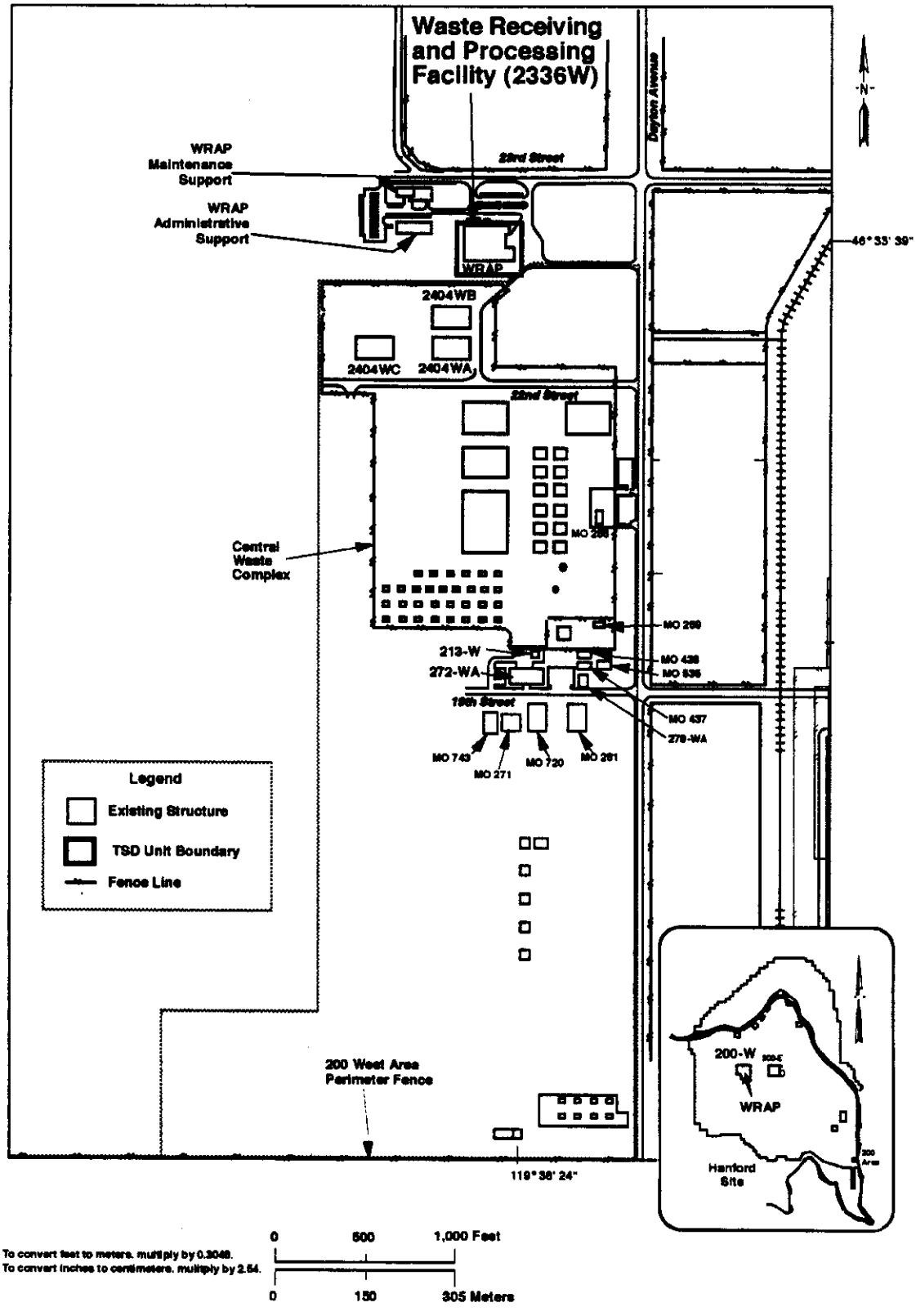
Date



200 West Site Plan

H9600043.2R3

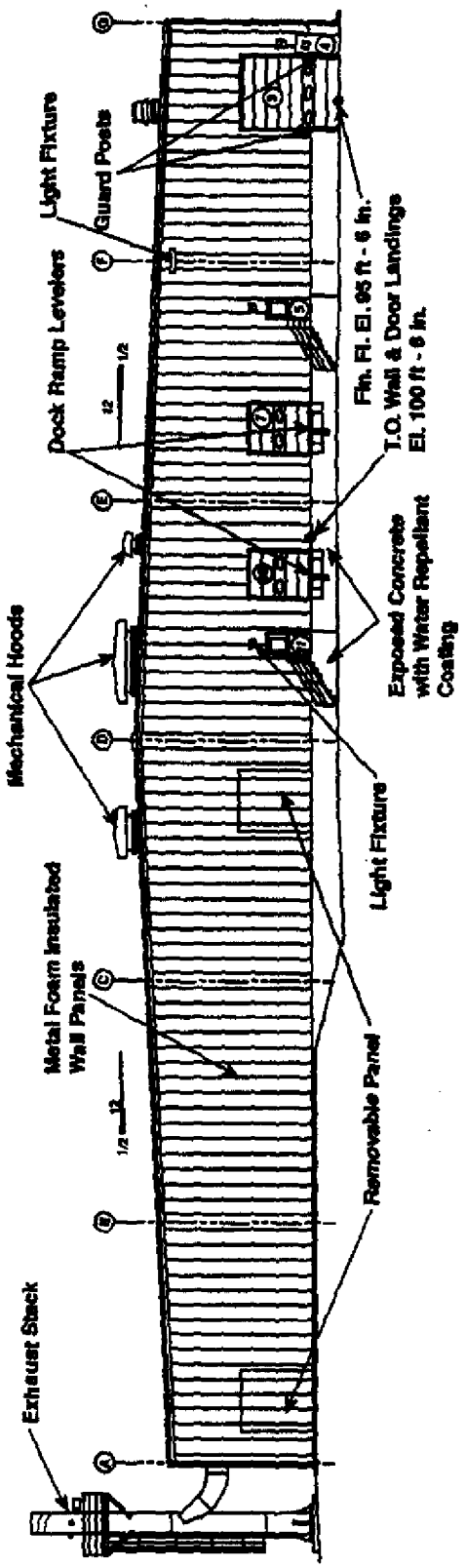
Waste Receiving and Processing Facility (WRAP)



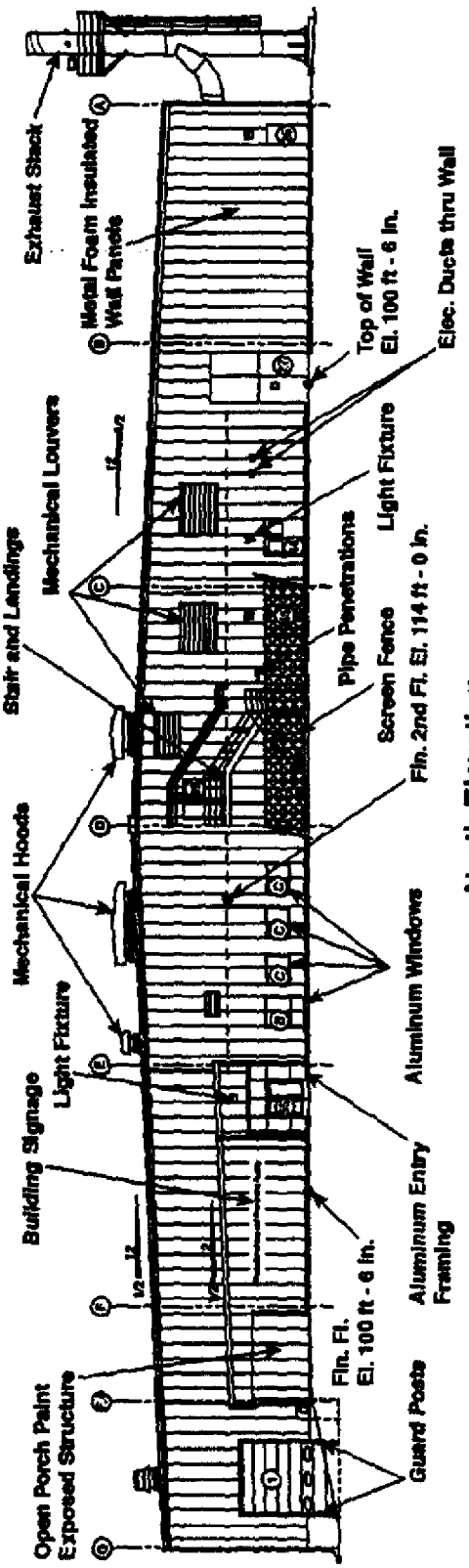
Note: To convert feet to meters, multiply by 0.3048.
To convert inches to centimeters, multiply by 2.54.

H96030043.3R2

Waste Receiving and Processing Facility
2336-W Building

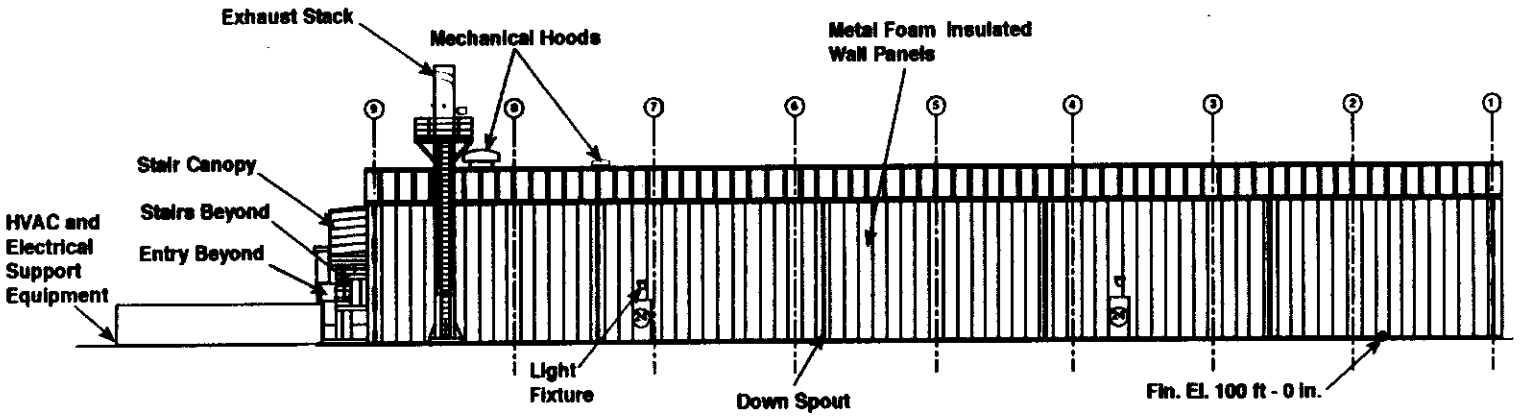


South Elevation

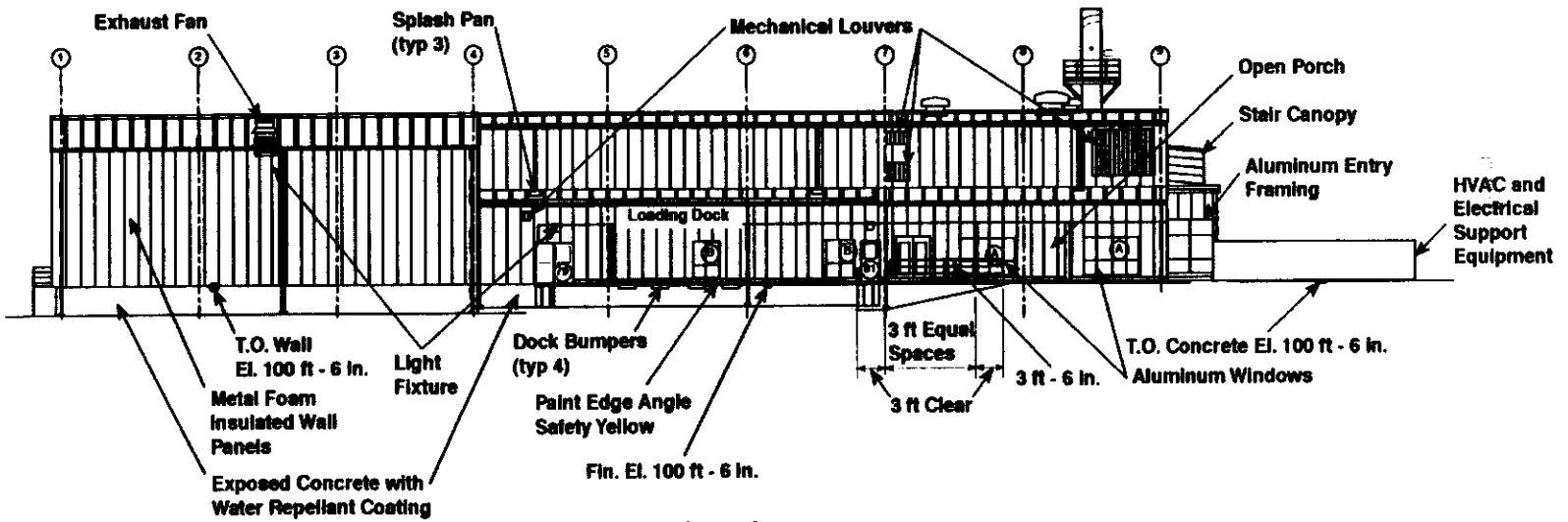


North Elevation

Waste Receiving and Processing Facility
2336-W Building



West Elevation

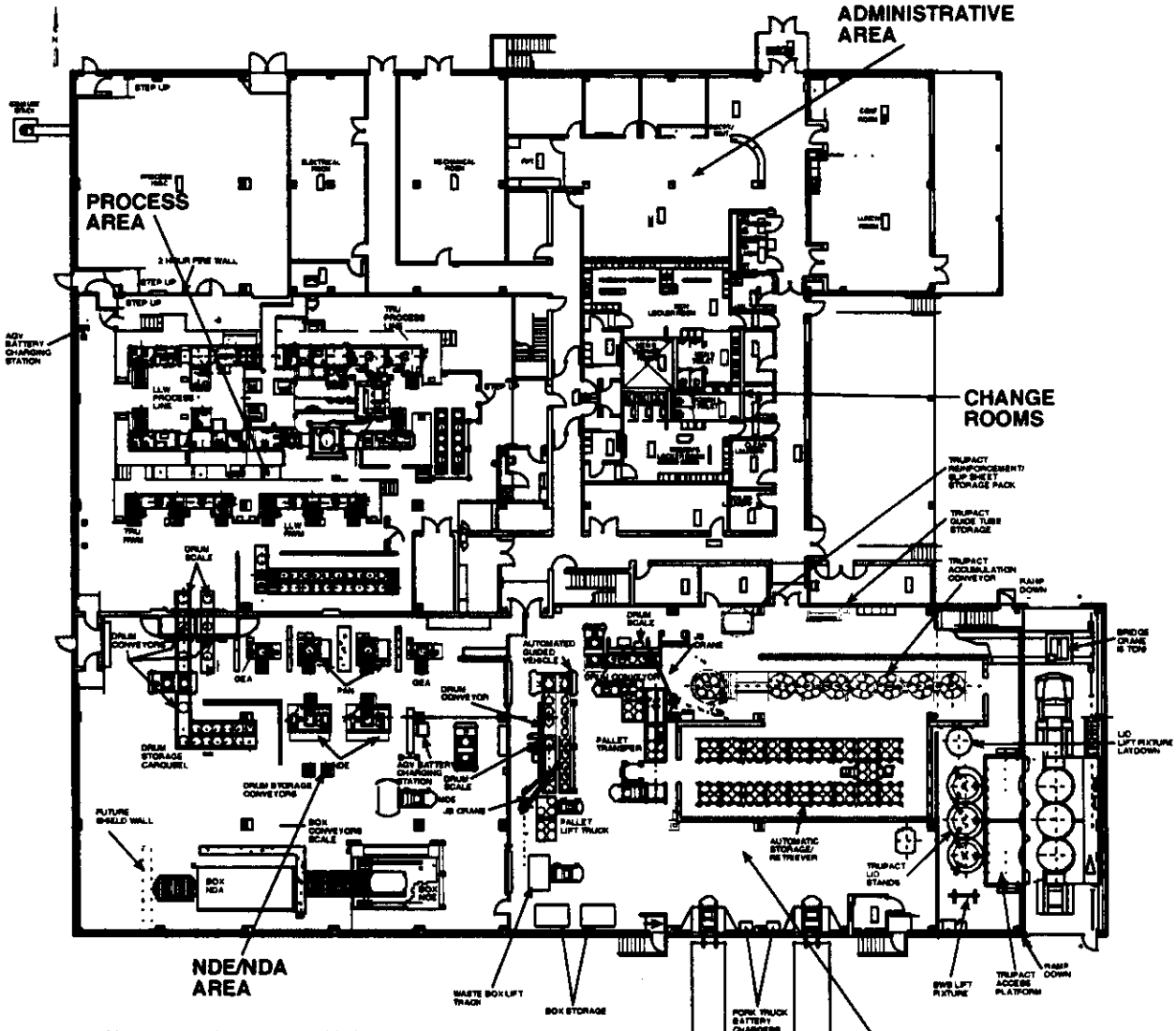


East Elevation

H98030043.5R2

HVAC = Heating, ventilation, and air conditioning.

Waste Receiving and Processing Facility
Building Layout



AGV = Automated guided vehicle
GEA = Gamma energy analysis
HVAC = Heating, ventilation, and air conditioning
LLW = Low-level waste
NDA = Nondestructive assay
NDE = Nondestructive examination
PAN = Passive/active neutron
RWM = Restricted waste management gloveboxes
SWB = Standard waste box
TRU = Transuranic
TRUPACT = Transuranic waste transporter

H98030043.1

WASTE RECEIVING AND PROCESSING FACILITY

46°33'29"
119°38'24"

96050191-68CN
(PHOTO TAKEN 1996)

CONTENTS

APPENDIX

FIGURES

2.0 FACILITY DESCRIPTION AND GENERAL PROVISIONS [B AND E]

WRAP, located in the 200 West Area (Chapter 1.0), provides waste receipt, confirmation, repackaging, certification, and/or storage of dangerous, mixed, and radioactive waste from onsite generating units or from offsite generators, TSD units, or as a result of operations. Mixed and/or radioactive waste is treated in WRAP.

A more detailed discussion of the waste types and known characteristics of the waste that WRAP processes, and the associated process information, are provided in Chapters 3.0 and 4.0, respectively. Because dangerous waste does not include the source, special nuclear, and by-product material components of mixed waste, radionuclides are not within the scope of WAC 173-303 or of this permit application documentation. The information on radionuclides is provided only for general knowledge where appropriate.

2.1 DESCRIPTION OF WASTE RECEIVING AND PROCESSING FACILITY [B-1]

WRAP typically accepts contact-handled waste packaged in 208- or 322-liter steel drums and steel or wooden boxes no larger than 2.7 meters long by 1.5 meters high by 1.5 meters wide. Contact-handled waste is waste where the external surface dose rate does not exceed 200 millirems per hour. Remote-handled waste could be received on a case-by-case basis with special precautions. Remote-handled waste is waste where the external surface dose rate exceeds 200 millirems per hour. The maximum weight of containers received at WRAP is 455 kilograms for drums and 3,175 kilograms for boxes. However, heavier boxes could be received on a case-by-case basis.

WRAP has a waste shipping and receiving area, a nondestructuve examination (x-ray) and nondestructive assay area, and a processing area. The processing area contains process enclosures (referred to as gloveboxes) for opening, sorting, sampling, and treating the contents of the waste containers. WRAP also includes a process support area, a sample management area, and an administrative area (Figure 2-1).

Waste containers are received in the shipping and receiving area. After processing, the low-level portion of the waste is transferred to an onsite treatment, storage, and/or disposal unit or to an offsite TSD facility (hereinafter, use of 'TSD unit' does not preclude the possibility that an offsite TSD facility could be used). The transuranic waste will be shipped to a TSD unit approved by appropriate agencies to accept transuranic waste.

WRAP provides nondestructive examination and nondestructive assay of the contact-handled waste. Nondestructive examination is used to identify the physical contents of waste containers to support waste characterization and processing, confirmation, or certification. The assay results are used to determine radioactive content and distribution.

WRAP process area gloveboxes are designed for opening, sorting, and sampling to characterize or confirm the contents of containers of transuranic, low-level, and mixed waste. Treatment of waste includes deactivation, solidification or absorption of liquids, neutralization of corrosives, amalgamation, microencapsulation, macroencapsulation, volume reduction of waste (e.g., supercompaction), reaction of reactive waste, and repackaging of waste.

Process support areas are provided with space for heating, ventilation, and air conditioning equipment, mechanical equipment, and electrical equipment used to support operations.

A sample management area is provided to manage the various samples that are taken from within the process area gloveboxes.

The administrative area contains a computer control room. A computer is used to monitor the process control system, nondestructive examination equipment, nondestructive assay equipment, and other process equipment.

Exterior storage space is provided for the receipt of empty containers and other materials.

The following sections describe the functional areas of WRAP and include the following:

- Shipping and receiving area
- Nondestructive examination and nondestructive assay area
- Process area
- Sample management area
- Process support area
- Administrative area
- Exterior storage area.

Although a separate equipment decontamination area is not provided within WRAP, manual decontamination of equipment and waste containers is performed throughout the various areas when necessary.

2.1.1 Shipping and Receiving Area

The shipping and receiving area (Figure 2-2) provides approximately 350 square meters of interim storage for incoming and outgoing waste.

Storage within the shipping and receiving area is handled by an automated storage and retrieval system. Waste is segregated by container type and compatibility as follows.

- Mixed waste is segregated from waste that is only radioactively contaminated.

- Processed waste is segregated from unprocessed waste or waste awaiting analytical results.

- Transuranic waste is segregated from low-level waste.

- Ignitable and reactive waste is segregated and stored in compliance with WAC 173-303-630 and the Uniform Fire Code (NFPA 1997).

- Incompatible waste is packaged and segregated on containment pallets in accordance with the requirements of WAC 173-303-630.

Placement of containers is administratively controlled within the automated storage and retrieval system. In addition to segregation of incompatible waste, containment pallets are used to segregate other waste types and to contain any leaks.

Space is provided to accommodate the storage of at least 216 containers within the automated storage and retrieval system. A concrete wall provides shielding around the automated storage and retrieval system for radiological protection of personnel. Space also is provided in the shipping and receiving area for storage of up to eight waste boxes. In addition, waste containers can be stored throughout WRAP to accommodate waste management operations. Container storage locations are recorded on a computerized tracking system that selects individual containers for processing, which match current process requirements.

After processing at WRAP, most mixed waste and transuranic waste ready for treatment, storage, or disposal is transported to a permitted TSD unit.

Transuranic and transuranic mixed waste containers have their own loading and storage area in WRAP. In this area, containers are stretch-wrapped in plastic in a seven-drum configuration for loading into TRUPACT[1]-II shipping casks. Two seven-packs of containers or two standard waste boxes (SWB)[2] are loaded into each cask. However, loading configuration is subject to modification to accommodate receiving TSD unit requirements. Three casks can be on each trailer. Once the casks are loaded, the waste is shipped to an approved waste disposal site.

2.1.2 Nondestructive Examination and Nondestructive Assay Area

The nondestructive examination and nondestructive assay area (Figure 2-3) provides approximately 700 square meters for radiography and nondestructive assay equipment. The nondestructive examination equipment uses x-ray to examine the content of each waste container. The nondestructive assay equipment is used to determine the radionuclide content of each waste container.

Nondestructive examination systems are used to identify dense waste items that could influence nondestructive assay, to indicate the physical appearance of the waste, and to identify if liquids or other noncompliant[3] waste forms are present. Such identifications are noted on a computerized system to ensure that these noncompliant items are removed in the open/sort location in a glovebox in the process area.

All radiography equipment is designed to meet the Bureau of Radiological Health Standard for cabinet x-ray systems (21 CFR 1020.40). This equipment is located inside shielded enclosures.

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[1] Transuranic package transporter.

[2] SWB is the name of a specific box designed expressly for transport in a TRUPACT-II shipping cask. Each SWB is approximately 139 centimeters wide by 162 centimeters long by 83 centimeters high with round ends with either a welded or gasketed bolted lid. Each SWB is constructed of 12-gauge painted carbon steel with carbon steel reinforcement and is equipped with one or more carbon composite filtered vents. Each SWB has an empty weight of 368 kilograms with a nominal capacity of 1.8 cubic meters and 2,727 kilograms gross.

[3] Noncompliant waste refers to materials that cannot be accepted for transportation or disposal without further processing and does not refer to noncompliance with WAC 173-303.

Nondestructive assay indicates the radionuclide content and distribution in the waste. Separate nondestructive examination and nondestructive assay lines are provided for containers and boxes. Space is provided within the nondestructive examination and nondestructive assay area for the storage of 12 waste containers. Concrete shield walls are located around the storage area to provide radiological protection for personnel.

After examination and assay, containers are routed to the shipping and receiving area. Containers that are found to include noncompliant items are processed through WRAP to remove or treat the noncompliant items. Containers with noncompliant items also could be stored at WRAP or at another TSD unit until treatment can be performed.

2.1.3 Process Area

The 650-square-meter process area (Figure 2-4) contains waste management gloveboxes. The area is designed to provide secondary containment when waste containers are opened in the gloveboxes. Automatic dry chemical fire extinguishment systems are provided inside the gloveboxes.

Waste containers are opened in the process gloveboxes. The waste is sorted, field screened, and sampled. Compliant waste and empty containers could be compacted and compliant waste is loaded out into new containers. Noncompliant waste items are transferred to one of two restricted waste management gloveboxes. These gloveboxes are used for screening, sampling, and treating waste. Aerosol cans are punctured, vented, and drained in the restricted waste management gloveboxes. The sampling and screening occur for both verification and waste characterization.

Because much of the waste is contained in small inner packages inside the containers, a nondestructive examination system is located within the gloveboxes to assist in the identification of noncompliant items. Also a small nondestructive assay system is located within the transuranic waste process glovebox.

The low-level and transuranic waste gloveboxes contain movable stainless steel sorting tables. The sorting tables are a primary location for all sorting, screening, and sampling activities within the WRAP process lines. The tables, on rails, travel under the respective drum tipper to accept waste from drums. The low-level waste sorting table can be tipped, when in the 'home' position, to replace waste into the drum after sorting. The transuranic sorting table moves into a position between two receiving drums so that waste can be sorted into the appropriate containers. Each table has a capacity of 0.91 metric ton. Closed circuit television cameras view the sorting tables to aid the operator in clearing the waste into the appropriate containers.

Limited treatment of noncompliant waste is performed in the restricted waste management glovebox. Noncompliant materials include the following:

- Aerosol cans
- Reactive metals
- Chelating compounds
- Chemically incompatible materials
- Corrosives
- Explosives
- Gas cylinders not permanently vented
- High-efficiency particulate air (HEPA) filters
- Lead

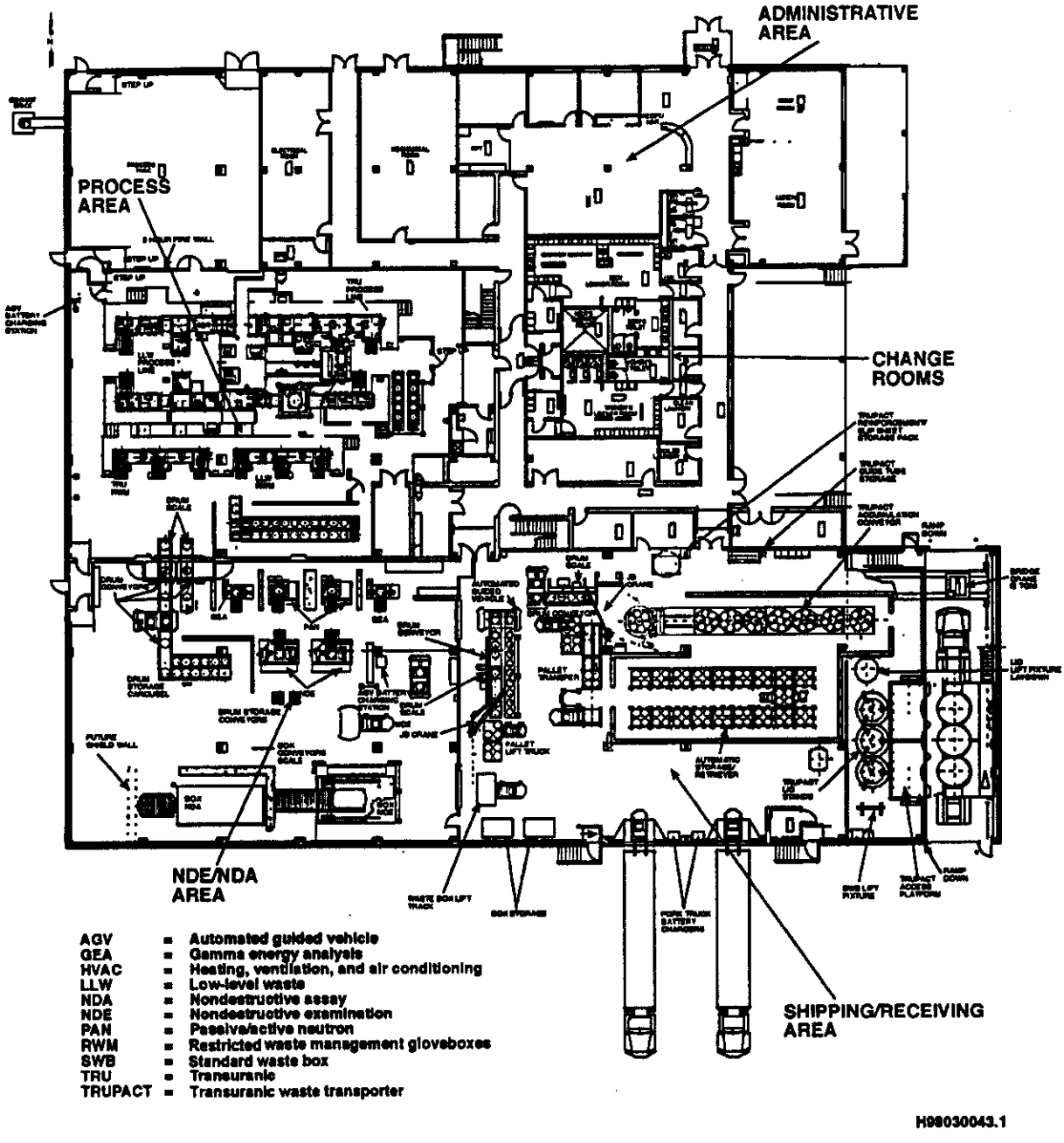
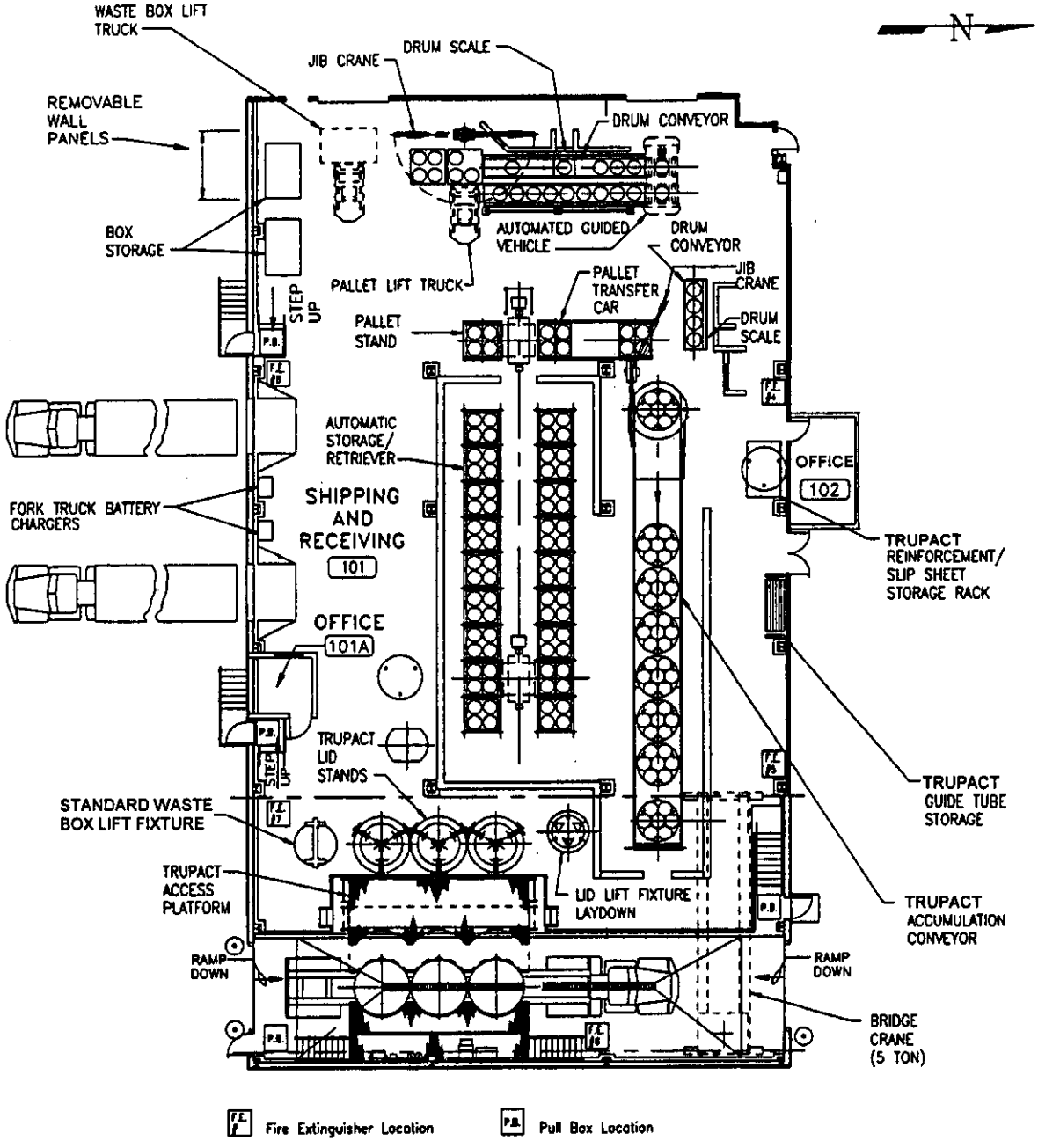
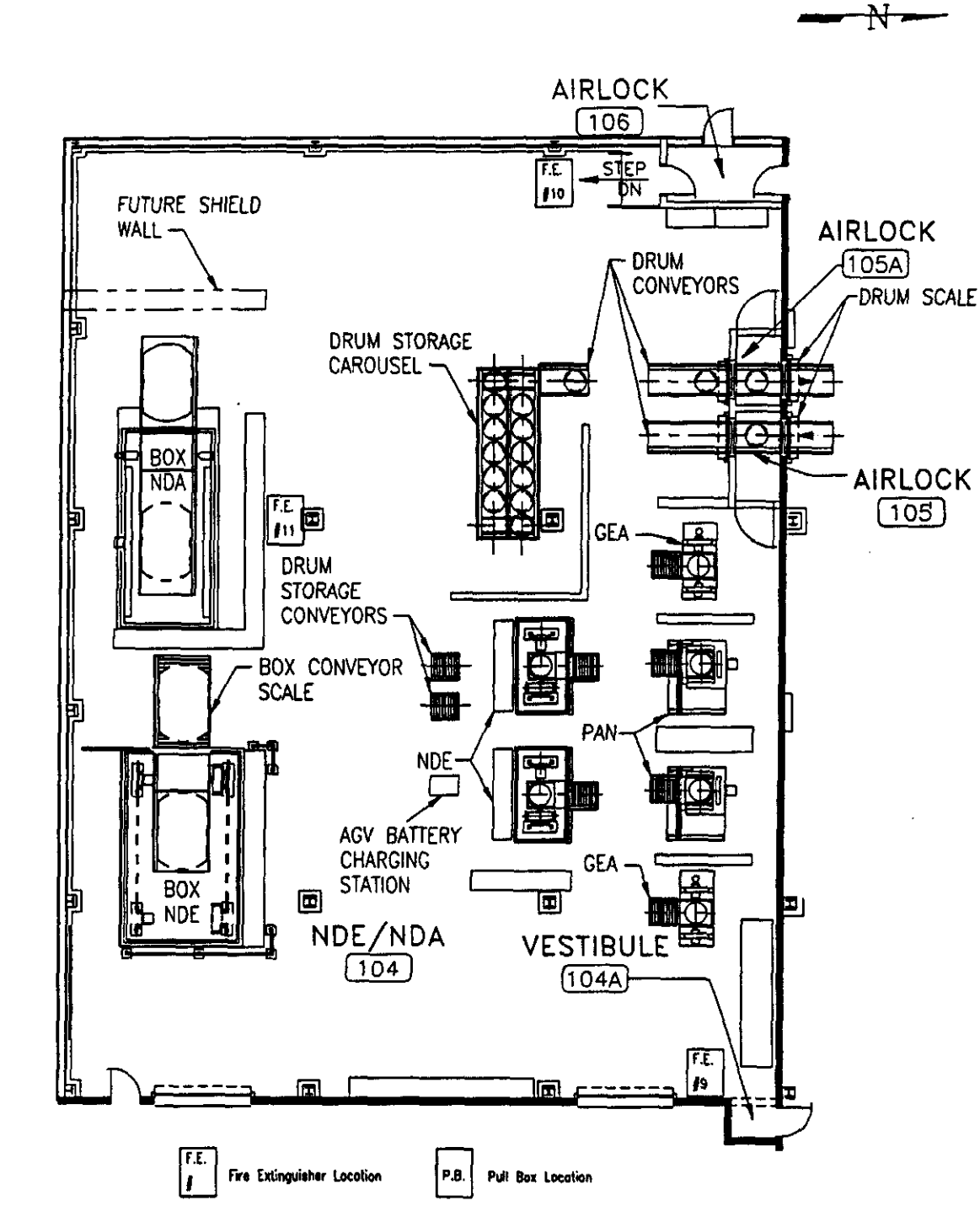


Figure 2-1. Layout for Waste Receiving and Processing Facility.



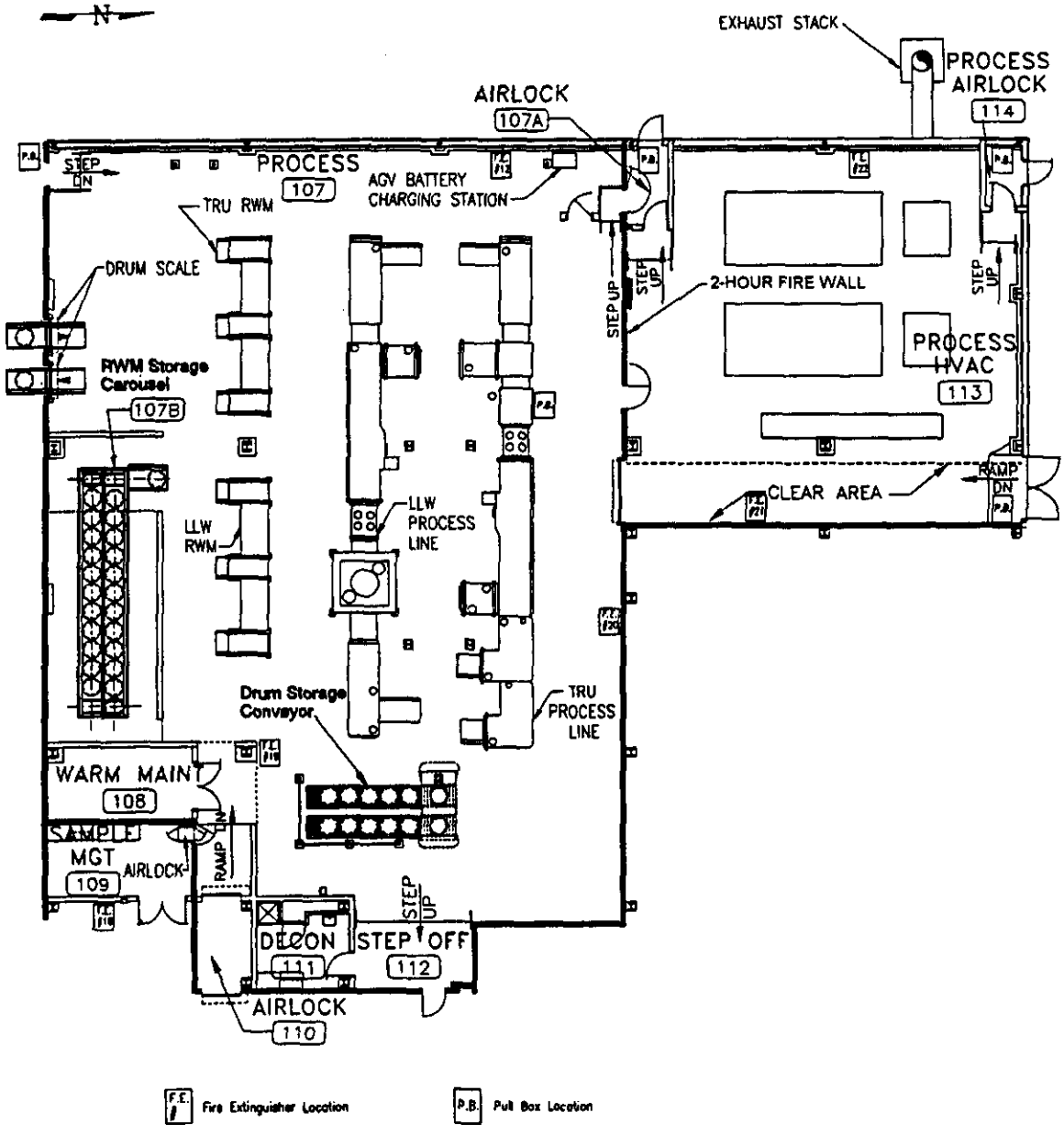
TRUPACT = transuranic waste transporter

Figure 2-2. Shipping and Receiving Area.



AGV = automated guided vehicle
GEA = gamma energy analysis
NDA = nondestructive assay
NDE = nondestructive examination
PAN = passive/active neutron

Figure 2-3. Nondestructive Examination and Nondestructive Assay Area.



AGV = automated guided vehicle
HVAC = heating, ventilation, and air conditioning
LLW = low-level waste
RWM = restricted waste management
TRU = transuranic

Figure 2-4. Process Area.

- Free liquids
- Mercury
- Particulate materials
- Pyrophoric materials.

Waste requiring treatment other than what WRAP can provide is repackaged, labeled, and transferred to a TSD unit for treatment or for storage pending identification or development of an appropriate treatment.

Waste sampling occurs in the restricted waste management gloveboxes, and to a lesser degree in the process gloveboxes, to determine the presence and characteristics of any dangerous waste constituents. Field screening techniques are used as much as practical to assist in the characterization of the waste. The specific waste analysis plan is provided in Chapter 3.0.

Samples of waste are transferred to the sample management area for packaging and transferred to an onsite laboratory or shipped offsite to a laboratory for analysis. Samples are collected and analyzed in accordance with Chapter 3.0, Appendix 3A.

Storage is provided for waste containers while awaiting laboratory analysis and empty containers. The storage area is surrounded by concrete shield walls and roof to protect operating personnel. The total space provided is for 24 containers. If there is insufficient space in this storage area, excess containers either are stored in the automated storage and retrieval system located in the shipping and receiving area or transferred to a TSD unit.

2.1.4 Sample Management Area

The sample management area receives samples from the process area and restricted waste management gloveboxes. The sample management area is used to package samples for transport to appropriate onsite or offsite analytical laboratories. All samples have a bar code label and are accompanied by chain-of-custody documentation as appropriate.

The sample management area contains storage space for samples, which includes refrigerated storage and laboratory supplies.

2.1.5 Process Support Area

The process support area provides approximately 900 square meters on the main level and the mezzanine for electrical equipment; mechanical equipment; heating, ventilation, and air conditioning systems; and a maintenance area.

The electrical equipment room is located adjacent to the process area. Incoming electrical power is brought to the room via overhead bus duct from transformers located outside WRAP.

The mechanical room contains the pumps associated with the heating, ventilation, and air conditioning equipment. Two chillers/tower units are located outside the building. This space also contains plant air compressors, a fire water entry, and a hot water heater.

The heating, ventilation, and air conditioning systems, exhaust fans, and HEPA filtration equipment are located adjacent to the process area. All air is exhausted through a stack located outside the building.

A maintenance room is provided for limited disassembly, part replacement, and maintenance activities associated with the process equipment. Other activities could occur in this room, as required.

2.1.6 Administrative Area

The administrative area provides approximately 800 square meters on the main level and the mezzanine for offices, lunch rooms, records retention, conference rooms, restrooms, change rooms for operations personnel including an anticontamination clothing change area, and a computer control room.

The computer control room is located on the upper level of the building and is centrally located to allow for direct observation of the shipping and receiving area, nondestructive examination and nondestructive assay area, and the process area. The control room contains five control stations to support operation of the nondestructive examination and nondestructive assay equipment, and to monitor the internal transport of waste containers and building and process systems. All computer equipment that supports process control or data management is located in the control room.

2.1.7 Exterior Loading Dock and Storage Area

The exterior loading dock and storage area provides approximately 200 square meters of space for storage of new containers and other supplies. A dry-pipe fire suppression system is provided within this area. This area is located on the east side of the building.

2.1.8 Other Environmental Permits

Environmental permits that are required to support operation of the WRAP are identified in the *Annual Hanford Site Environmental Permitting Status Report* (e.g., DOE/RL-96-63).

2.1.9 Construction Schedule [B-1b]

Any proposed new construction for WRAP will be managed as described in the *Hanford Facility Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste* (HF RCRA Permit) (Ecology 1994).

2.2 TOPOGRAPHIC MAP [B-2]

Topographic map (Drawing H-13-000003) is located in Appendix 2A.

2.3 ROADWAY TRAFFIC TO WASTE RECEIVING AND PROCESSING FACILITY [B-4]

General traffic information for the Hanford Facility is presented in the General Information Portion (DOE/RL-91-28).

Various access routes to WRAP are provided on the topographic map located in Appendix 2A.

Waste is shipped to and from WRAP in vehicles that range in size from fork lifts to 18.3-meter tractor-trailer rigs, depending on the size of the load. Sufficient turnaround space is provided for a TRUPACT-II tractor-trailer rig outside of the shipping and receiving areas. The weight of fully loaded TRUPACT-II casks is 8,372 kilograms and three casks are transported on one specially designed flatbed tractor-trailer. This is the heaviest of the vehicles to operate over the paved roadways to WRAP. The heaviest axle loading of a fully loaded TRUPACT-II shipment is 9,072 kilograms for the rear axles, corresponding to a load of approximately 6,895 newtons per square meter.

In addition, parking space is provided for up to two tractor-trailers and two enclosed 1,301-kilogram waste transport vans. Separation of service vehicles and personnel vehicle access and parking is provided. Paved roads are constructed to provide adequate all weather access to WRAP.

Typical shipments to WRAP are 40 containers each day and two boxes each week (two to three trucks each day).

2.4 RELEASE FROM SOLID WASTE MANAGEMENT UNITS [E]

Information concerning releases from solid waste management units is discussed in the General Information Portion (DOE/RL-91-28).

CONTENTS

APPENDIX

TABLE