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Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

98-EAP-124

FEB 27 1998



Ms. L. J. Cusack
Nuclear Waste Program
State of Washington
Department of Ecology
1315 West Fourth Avenue
Kennewick, Washington 99336-6018

Dear Ms. Cusack:

REVIEW OF THE DANGEROUS WASTE PORTION OF THE HANFORD FACILITY RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) PERMIT (RCRA PERMIT), REVISION 4, MODIFIED ON JANUARY 28, 1998

On January 28, 1998, the State of Washington Department of Ecology (Ecology) modified the Dangerous Waste Portion of the Hanford Facility RCRA Permit. Revision 4 added two Fluor Daniel Hanford, Inc. (FDH) managed operating units to the RCRA Permit (Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility; and 242-A Evaporator) and modified the closure plan for the 303-K Storage Facility, one Pacific Northwest National Laboratory (PNNL) operating unit, 325 Hazardous Waste Treatment Units, and one Bechtel Hanford, Inc. (BHI) post closure unit, 183-H Solar Evaporation Basin. In accordance with Washington Administrative Code 173-303-840(8)(a), the Permittees [U.S. Department of Energy, Richland Operations Office (RL), FDH, Pacific Northwest National Laboratory, and Bechtel Hanford, Inc.] have 30 days to file an appeal of Revision 4 of the RCRA Permit.

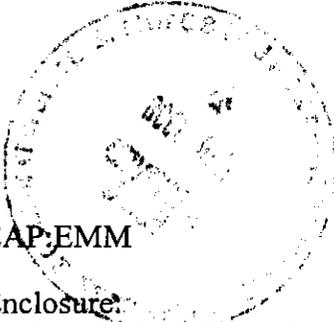
RL has decided not to appeal Revision 4 of the RCRA Permit. Based on our recent discussions with you, it is our understanding that Ecology will correct configuration control problems identified in Revision 4, and reissue the RCRA Permit as Revision 4A. The discussed configuration control changes are provided in the attached redline/strikeout version.

Ms. L. J. Cusack
98-EAP-124

-2-

FEB 27 1998

Should you have any questions regarding this information, please contact Ellen M. Mattlin, RL, on (509) 376-2385; Susan M. Price, FDH, on (509) 376-1653; Harold T. Tilden, PNNL, (509) 376-0499; or Roger J. Landon, BHI, (509) 372-9209.



EAP:EMM

Sincerely,

A handwritten signature in cursive script that reads "James E. Rasmussen".

James E. Rasmussen, Director
Environmental Assurance, Permits,
and Policy Division

Enclosure:
Review of the DW Portion of the
Hanford Facility RCRA Permit,
Revision 4, Modified on January 28, 1998

cc w/encl:
EDMC, H6-08
R. Jim, YIN
L. Johnson, BHI
R. Landon, BHI
D. Powaukee, NPT
S. Price, FDH
H. Tilden, PNNL
J. Wilkinson, CTUIR

cc w/o encl:
W. Adair, FDH
K. Brog, PNNL
M. Hughes, BHI
D. Sherwood, EPA
E. Skinnarland, Ecology

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

Department of Ecology
Nuclear Waste Program
P.O. Box 47600
Olympia, Washington 98504-7600
Telephone: (360) 407-7132

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) 376-4645

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

This Permit, as modified on January 28, 1998, is effective as of February 28, 1998, 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).

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

Michael Wilson, Manager
Nuclear Waste Program
Department of Ecology

Date: _____

1	CHAPTER 3	49
2	PUREX Storage Tunnels	49
3	CHAPTER 4	50
4	<u>Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility</u>	50
5	CHAPTER 5	54
6	242-A Evaporator	54
7	CHAPTER 6	57
8	325 Hazardous Waste <u>Treatment Units</u>	57
9	PART IV - CORRECTION ACTIONS FOR PAST PRACTICES	61
10	PART V - UNIT-SPECIFIC CONDITIONS FOR UNITS UNDERGOING CLOSURE	62
11	CHAPTER 1	62
12	183-H Solar Evaporation Basins (<u>See Attachment 37</u>)	62
13	CHAPTER 2	65
14	300 Area Solvent Evaporator (Clean Closed)	65
15	CHAPTER 3	66
16	2727-S Nonradioactive Dangerous Waste Storage Facility (Clean Closed)	66
17	CHAPTER 4	67
18	Simulated High Level Waste Slurry Treatment and Storage Unit (Clean Closed)	67
19	CHAPTER 5	68
20	218-E-8 Borrow Pit Demolition Site (Clean Closed)	68
21	CHAPTER 6	69
22	200 West Area Ash Pit Demolition Site (Clean Closed)	69
23	CHAPTER 7	70
24	2101-M Pond (Clean Closed)	70
25	CHAPTER 8	71
26	216-B-3 Expansion Ponds (Clean Closed)	71
27	CHAPTER 9	72
28	Hanford Patrol Academy Demolition Sites (Clean Closed)	72
29	CHAPTER 10	73
30	105-DR Large Sodium Fire Facility (<u>Partial Closure Plan Completed</u>)	73
31	CHAPTER 11	75
32	304 Concretion Facility (Clean Closed)	75
33	CHAPTER 12	76
34	4843 Alkali Metal Storage Facility (Clean Closed)	76
35	CHAPTER 13	77
36	3718-F Alkali Metal Treatment and Storage Facility Closure Plan	77
37	CHAPTER 14	79
38	303-K Storage Facility	79
39	PART VI - UNIT-SPECIFIC CONDITIONS FOR UNITS IN POST-CLOSURE	82
40	CHAPTER 1	82
41	300 Area Process Trenches	82
42	CHAPTER 2	85
43	183-H Solar Evaporation Basins	85

1	Attachment 21	200 West Ash Pit Demolition Site Closure Plan, Revision 1, October 1994 (Clean Closed, November 28, 1995)
2		
3	Attachment 22	2101-M Pond Closure Plan, Revision 2A, July 1993 (Clean Closed, November 28, 1995)
4		
5	Attachment 23	216-B-3 Expansion Ponds Closure Plans, Revision 2, October 1994 (Clean Closed, July 31, 1995)
6		
7	Attachment 24	Hanford Patrol Academy Demolition Sites Closure Plan, Revision 1, December 1994 (Clean Closed, November 28, 1995)
8		
9	Attachment 25	105-DR Large Sodium Fire Facility Closure Plan, Revision 2, March 1995 (Partial Closure Plan Completed, July 31, 1995)
10		
11	Attachment 26	304 Concretion Facility Closure Plan, Revision 2A, November 1993 (Clean Closed, January 21, 1996)
12		
13	Attachment 27	Permit Modification Schedule
14	Attachment 28	PUREX Storage Tunnels Part A, <u>Form 3, Revision 5, October 1996 & Part B,</u> Revision 4, <u>April 1997, including Class I modifications.</u>
15		
16	Attachment 29	4843 <u>Alkali Metal Storage Facility</u> Closure Plan, Revision 1, September 1995 (Clean Closed, April 14, 1997)
17		
18	Attachment 30	3718-F <u>Alkali Metal Treatment and Storage Facility</u> Closure Plan, Revision 2, November 1995
19		
20	Attachment 31	300 Area Process Trenches <u>Modified Closure Plan and Part A, Form 3,</u> Revision 4, <u>May 1995</u>
21		
22	Attachment 32	303-K Storage Facility Closure Plan, Revision 2A, June 1995
23	Attachment 33	<u>Hanford Facility Dangerous Waste Permit Application, General Information</u> <u>Portion, Revision 3, April 1997, including Class I modifications. Attachment 4</u> <u>supersedes Appendix 7A of this Attachment 33.</u>
24		
25		
26	Attachment 34	<u>Liquid Effluent Treatment Facility, Part A, Form 3, Revision 5, October 1996</u> <u>and 200 Area Effluent Treatment Facility Part A, Form 3, Revision 2,</u> <u>October 1996, and Part B Permit Application, Revision 0, July 1997</u>
27		
28		
29	Attachment 35	242-A Evaporator <u>Part A, Form 3, Revision 7, October 1996, and Part B Permit</u> Application, Revision 1, July 1997
30		
31	Attachment 36	325 Hazardous Waste Treatment Units <u>Part A, Form 3, Revision 4, June 1997,</u> and <u>Part B Permit Application, Revision 1, July 1997</u>
32		
33	Attachment 37	183-H Solar Evaporation <u>Basins</u> Postclosure Plan, Revision 0, June 1997
34	<u>Attachment 38</u>	<u>303-K Storage Facility Sampling and Analysis Plan, Revision 0, July 14, 1997</u>
35	<u>Attachment 39</u>	<u>Errata Sheet for the 303-K Storage Facility Sampling and Analysis Plan,</u> <u>August 1, 1997</u>
36		

- 1 Part I, **Standard Conditions**, contains Conditions which are similar to those appearing in all dangerous
2 waste permits.
- 3 Part II, **General Facility Conditions**, combines typical dangerous waste Permit Conditions with those
4 Conditions intended to address issues specific to the Hanford Facility. Where appropriate, the General
5 Facility Conditions apply to all final status dangerous waste management activities at the Facility. Where
6 appropriate, the General Facility Conditions also address dangerous waste management activities which
7 may not be directly associated with distinct treatment, storage, and disposal (TSD) units or which may be
8 associated with many TSD units (i.e., spill reporting, training, contingency planning, etc.).
- 9 Part III, **Unit-Specific Conditions for Operating Units**, contains those Permit requirements which apply
10 to each individual TSD unit operating under final status. Conditions for each TSD unit are found in a
11 Chapter dedicated to that TSD unit. These unit-specific Chapters contain references to Standard and
12 General Conditions (Parts I and II), as well as additional requirements which are intended to ensure that
13 each TSD unit is operated in an efficient and environmentally protective manner.
- 14 Part IV, **Corrective Actions for Past Practice**, references the Agency's HSWA Permit. The HSWA
15 Permit contains those requirements that apply to the identification of Solid Waste Management Units
16 (SWMUs) at the Facility and conduct of investigations and remediations at such SWMUs. The HSWA
17 Permit addresses both SWMUs that are located on the USDOE managed portions of the Facility as well as
18 SWMUs which are not located on USDOE managed property (i.e., leased lands). Any SWMUs located on
19 USDOE managed property are, or will be, included in the FFACO and assigned to operable units. The
20 processes and procedures to be followed, and the schedules of compliance for investigation and subsequent
21 remediation, will be contained in the FFACO. SWMUs not located on USDOE managed property will
22 undergo investigations and remediations, as necessary, in accordance with the requirements and schedules
23 identified in the HSWA Permit.
- 24 It is intended that, once the Department receives authorization from the Agency to implement the
25 Corrective Action provisions, these requirements will be incorporated into this Part through a Permit
26 modification. Until the Department receives authorization for the Corrective Action provisions of RCRA,
27 the Agency shall maintain regulatory lead for these requirements.
- 28 Part V, **Unit-Specific Conditions for Units Undergoing Closure**, contains those requirements which
29 apply to those specific TSD units included in this Part that are undergoing closure. In accordance with
30 Section 5.3. of the Action Plan of the FFACO, all TSD units that undergo closure, irrespective of permit
31 status, shall be closed pursuant to the authorized State Dangerous Waste Program in accordance with
32 WAC 173-303-610. Requirements for each TSD unit undergoing closure are found in a Chapter dedicated
33 to that TSD unit. These unit-specific Chapters contain references to Standard Conditions (Part I) and
34 General Conditions (Part II), as well as additional requirements which are intended to ensure that each
35 TSD unit is closed in an efficient and environmentally protective manner.
- 36 Part VI, **Unit-Specific Conditions for Units in Post-Closure**, contains requirements which apply to those
37 specific units in this Part that have completed modified or landfill closure requirements and now only need
38 to meet post-closure standards. As set out in Section 5.3 of the Action Plan of the FFACO, certain TSD
39 units shall be permitted for post-closure care pursuant to the authorized State Dangerous Waste Program
40 (173-303 WAC) and the Hazardous and Solid Waste Amendments. Requirements for each unit
41 undergoing post-closure care are found in a Chapter, within this Part, dedicated to that unit. These unit
42 specific Chapters may contain references to Standard Conditions (Part I) and General Conditions (Part II),
43 as well as, the unit specific conditions, all of which are intended to ensure the unit is managed in an
44 efficient, environmentally protective manner.

- 1 treating, or disposing of dangerous waste. The legal and physical description of the Facility is
2 set forth in Attachment 2 of this Permit.
- 3 h. The term "**FFACO**" means the Hanford Federal Facility Agreement and Consent Order, as
4 amended. (Commonly referred to as Tri-Party Agreement [TPA]).
- 5 i. The term "**RCRA Permit**" means the Dangerous Waste Portion of the RCRA Permit for the
6 Treatment, Storage, and Disposal of Dangerous Waste (Dangerous Waste Permit) issued by
7 the Washington State Department of Ecology, pursuant to Chapter 70.105 RCW and Chapter
8 173-303 WAC coupled with the HSWA Portion of the RCRA Permit for the Treatment,
9 Storage, and Disposal of Hazardous Waste (HSWA Permit) issued by the EPA, Region 10,
10 pursuant to 42 U.S.C. 6901 *et seq.* and 40 CFR Parts 124 and 270.
- 11 j. The term "**Permittees**" means the United States Department of Energy (owner/operator),
12 Fluor Daniel Hanford, Inc. (co-operator), Bechtel Hanford, Inc. (co-operator), and Pacific
13 Northwest National Laboratory (co-operator).
- 14 k. The term "**Raw Data**" means the initial value of analog or digital instrument outputs and/or
15 manually recorded values obtained from measurement tools or personal observation. These
16 values are converted into reportable data (e.g., concentration, percent moisture) via automated
17 procedures and/or manual calculations.
- 18 l. The term "**Reasonable Times**" means normal business hours, hours during which production,
19 treatment, storage, construction, disposal, or discharge occurs or times when the Department
20 suspects a violation requiring immediate inspection.
- 21 m. The term "**Significant Discrepancy**" in regard to a manifest or shipping paper means a
22 discrepancy between the quantity or type of dangerous waste designated on the manifest or
23 shipping paper and the quantity or type of dangerous waste a TSD unit actually receives. A
24 significant discrepancy in quantity is a variation greater than ten (10) percent in weight for
25 bulk quantities (e.g., tanker trucks, railroad tank cars, etc.) or any variation in piece count for
26 nonbulk quantities (i.e., any missing container or package would be a significant
27 discrepancy). A significant discrepancy in type is an obvious physical or chemical difference
28 which can be discovered by inspection or waste analysis (e.g., waste solvent substituted for
29 waste acid).
- 30 n. The term "**Unit**" (or "**TSD unit**"), as used in Parts I through VI of this Permit, means the
31 contiguous area of land on or in which dangerous waste is placed, or the largest area in which
32 there is a significant likelihood of mixing dangerous waste constituents in the same area. A
33 TSD unit, for purposes of this Permit, is a subgroup of the Facility which has been identified
34 in a Hanford Facility Dangerous Waste Part A Permit Application Form 3.

1	SWMU	Solid Waste Management Unit
2	TCLP	Toxicity Characteristic Leaching Procedure
3	TSD	Treatment, Storage, and/or Disposal
4	USDOE	U.S. Department of Energy
5	WAC	Washington Administrative Code
6	WAP	Waste Analysis Plan
7	<u>183-H</u>	<u>183-H Solar Evaporation Basins</u>
8	<u>242-A</u>	<u>242-A Evaporator</u>
9	<u>300 ASE</u>	<u>300 Area Solar Evaporation</u>
10	<u>325 HWTUs</u>	<u>325 Hazardous Waste Treatment Units</u>
11	<u>303-K</u>	<u>303-K Storage Facility</u>
12	<u>305-B</u>	<u>305-B Storage Facility</u>
13	<u>616 NRDWSE</u>	<u>616 Nonradioactive Dangerous Waste Storage Facility</u>

1 **I.C.2. Filing of a Request**

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

6 **I.C.3. Modifications**

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

15 **I.D. SEVERABILITY**

16 **I.D.1. Effect of Invalidation**

17 The provisions of this Permit are severable, and if any provision of this Permit, or the
18 application of any provision of this Permit to any circumstance is contested and/or held
19 invalid, the application of such provision to other circumstances and the remainder of this
20 Permit shall not be affected thereby. Invalidation of any state statutory or regulatory
21 provision which forms the basis for any Condition of this Permit does not affect the validity
22 of any other state statutory or regulatory basis for said Condition.

23 **I.D.2. Final Resolution**

24 In the event that a Condition of this Permit is stayed for any reason, the Permittees shall
25 continue to comply with the related applicable and relevant interim status standards in WAC
26 173-303-400 until final resolution of the stayed Condition, unless the Department determines
27 compliance with the related applicable and relevant interim status standards would be
28 technologically incompatible with compliance with other Conditions of this Permit which
29 have not been stayed, or unless the FFACO authorizes an alternative action, in which case the
30 Permittees shall comply with the FFACO.

31 **I.E. DUTIES AND REQUIREMENTS**

32 **I.E.1. Duty to Comply**

33 The Permittees shall comply with all Conditions of this Permit, except to the extent and for
34 the duration such noncompliance is authorized by an emergency permit issued under WAC
35 173-303-804. Any Permit noncompliance other than noncompliance authorized by an
36 emergency permit constitutes a violation of Chapter 70.105 RCW, as amended, and is
37 grounds for enforcement action, Permit termination, modification or revocation and
38 reissuance of the Permit, and/or denial of a Permit renewal application.

39 **I.E.2. Compliance Not Constituting Defense**

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

- 1 I.E.9.a. During operating hours, and at all other reasonable times, enter and inspect the Facility or any
2 unit or area within the Facility where regulated activities are located or conducted, or where
3 records must be kept under the Conditions of this Permit;
- 4 I.E.9.b. Have access to, and copy, at reasonable times, any records that must be kept under the
5 Conditions of this Permit;
- 6 I.E.9.c. Inspect at reasonable times any portion of the Facility, equipment (including monitoring and
7 control equipment), practices, or operations regulated or required under this Permit; and,
- 8 I.E.9.d. Sample or monitor, at reasonable times, for the purposes of assuring Permit compliance or as
9 otherwise authorized by state law, as amended, for substances or parameters at any location.
- 10 **I.E.10. Monitoring and Records**
- 11 I.E.10.a. Samples and measurements taken by the Permittees for the purpose of monitoring required by
12 this Permit shall be representative of the monitored activity. Sampling methods shall be in
13 accordance with WAC 173-303-110 or 40 CFR 261, unless otherwise specified in this Permit
14 or agreed to in writing by the Department. Analytical methods shall be as specified in the
15 most recently published test procedure of the documents cited in WAC 173-303-110(3)(a)
16 through (d), unless otherwise specified in this Permit or agreed to in writing by the
17 Department.
- 18 I.E.10.b. The Permittees shall retain at the TSD unit(s), or other location approved by the Department,
19 as specified in Parts III, V, and/or VI of this Permit, records of monitoring information
20 required for compliance with this Permit, including calibration and maintenance records and
21 all original strip chart recordings for continuous monitoring instrumentation, copies of reports
22 and records required by this Permit, and records of data used to complete the application for
23 this Permit for a period of at least ten (10) years from the date of the sample, measurement,
24 report, or application, unless otherwise required for certain information by other Conditions
25 of this Permit. This information may be retained on electronic media.
- 26 I.E.10.c. The Permittees shall retain at the Facility, or other approved location, records of all
27 monitoring and maintenance records, copies of all reports and records required by this Permit,
28 and records of all data used to complete the application for this Permit which are not
29 associated with a particular TSD unit for a period of at least ten (10) years from the date of
30 certification of completion of post-closure care or corrective action for the Facility, whichever
31 is later. This information may be retained on electronic media.
- 32 I.E.10.d. The record retention period may be extended by request of the Department at any time by
33 notification, in writing, to the Permittees and is automatically extended during the course of
34 any unresolved enforcement action regarding this Facility to ten (10) years beyond the
35 conclusion of the enforcement action.
- 36 I.E.10.e. Records of monitoring information shall include:
- 37 i. The date, exact place and time of sampling or measurements;
- 38 ii. The individual who performed the sampling or measurements and their affiliation;
- 39 iii. The dates the analyses were performed;
- 40 iv. The individual(s) who performed the analyses and their affiliation;
- 41 v. The analytical techniques or methods used; and,
- 42 vi. The results of such analyses.

- 1 v. The extent of injuries, if any;
- 2 vi. An assessment of actual or potential hazard to the environment and human health,
3 where this is applicable;
- 4 vii. Estimated quantity of released material that resulted from the incident; and,
- 5 viii. Actions which have been undertaken to mitigate the occurrence.
- 6 I.E.15.c. The Permittees shall report, in accordance with Conditions I.E.15.a. and I.E.15.b., any
7 information concerning the release or unpermitted discharge of any dangerous waste or
8 hazardous substances that may cause an endangerment to drinking water supplies or ground or
9 surface waters, or of a release or discharge of dangerous waste or hazardous substances or of
10 a fire or explosion at the Facility, which may threaten human health or the environment. The
11 description of the occurrence and its cause shall include all information necessary to fully
12 evaluate the situation and to develop an appropriate course of action.
- 13 I.E.15.d. For any release or noncompliance not required to be reported to the Department immediately,
14 a brief account must be entered within two (2) working days, into the TSD operating record,
15 for a TSD unit, or into the Facility operating record, inspection log or separate spill log, for
16 non-TSD units. This account must include: the time and date of the release, the location and
17 cause of the release, the type and quantity of material released, and a brief description of any
18 response actions taken or planned.
- 19 I.E.15.e. All releases, regardless of location of release or quantity of release, shall be controlled and
20 mitigated, if necessary, as required by WAC 173-303-145(3).
- 21 I.E.16. **Written Reporting**
- 22 Within 15 days after the time the Permittees become aware of the circumstances of any
23 noncompliance with this Permit which may endanger human health or the environment, the
24 Permittees shall provide to the Department a written report. The written report shall contain a
25 description of the noncompliance and its cause (including the information provided in the
26 verbal notification); the period of noncompliance including exact dates and times; the
27 anticipated time noncompliance is expected to continue if the noncompliance has not been
28 corrected; corrective measures being undertaken to mitigate the situation, and steps taken or
29 planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- 30 I.E.17. **Manifest Discrepancy Report**
- 31 I.E.17.a. For dangerous waste received from outside the Facility, whenever a significant discrepancy in
32 a manifest is discovered, the Permittees shall attempt to reconcile the discrepancy. If not
33 reconciled within 15 days of discovery, the Permittees shall submit a letter report in
34 accordance with WAC 173-303-370(4), including a copy of the applicable manifest or
35 shipping paper, to the Department.
- 36 I.E.17.b. For dangerous waste which is being transported within the Facility (i.e., shipment of on-site
37 generated dangerous waste), whenever a significant discrepancy in the shipping papers (see
38 Condition II.Q.1.) is discovered, the Permittees shall attempt to reconcile the discrepancy. If
39 not reconciled within 15 days of discovery, the Permittees shall note the discrepancy in the
40 receiving unit's operating record.

1 I.F. SIGNATORY REQUIREMENT

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

6 I.G. CONFIDENTIAL INFORMATION

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

9 I.H. DOCUMENTS TO BE MAINTAINED AT FACILITY SITE

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

- 13 1. This Permit and all attachments;
- 14 2. All dangerous waste Part B permit applications, post-closure permit applications,
15 and closure plans; and,
- 16 3. The Facility Operating Record.

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

- 1 II.C.2.e. Familiarization with the Hanford Facility Contingency Plan.
- 2 II.C.3. Description of training plans for personnel assigned to TSD units subject to this Permit are
3 delineated in the unit-specific chapters in Parts III, V, and/or VI of this Permit.
- 4 II.C.4. The Permittees shall provide the necessary training to non-Facility personnel (i.e., visitors,
5 sub-contractors) as appropriate for the locations such personnel will be at and the activities
6 that will be undertaken. At a minimum, this training shall describe dangerous waste
7 management hazards at the Facility.
- 8 II.D. WASTE ANALYSIS
- 9 II.D.1. All waste analyses required by this Permit shall be conducted in accordance with a written
10 waste analysis plan (WAP) or sampling and analysis plan (SAP). Operating TSD units shall
11 have a WAP, which shall be approved through incorporation of the TSD unit into Part III of
12 this Permit. Closing TSD units and units in post-closure should have a SAP and, if necessary,
13 a WAP which shall be approved through incorporation of the TSD unit into Part V and/or VI
14 of this Permit.
- 15 II.D.2. Until a WAP is implemented in accordance with Condition II.D.1., any unit(s) identified in
16 Parts III, V, and/or VI of this Permit without a unit-specific waste analysis plan approved by
17 the Department shall not treat, store, or dispose of dangerous waste, unless specified
18 otherwise by the Department in writing.
- 19 II.D.3. Each TSD unit WAP shall include:
- 20 i. The parameters for which each dangerous waste will be analyzed, and the rationale for
21 selecting these parameters;
- 22 ii. The methods of obtaining or testing for these parameters;
- 23 iii. The methods for obtaining representative samples of wastes for analysis (representative
24 sampling methods are discussed in WAC 173-303-110(2);
- 25 iv. The frequency with which analysis of a waste will be reviewed or repeated to ensure
26 that the analysis is accurate and current;
- 27 v. The waste analyses which generators have agreed to supply;
- 28 vi. Where applicable, the methods for meeting the additional waste analysis requirements
29 for specific waste management methods as specified in WAC 173-303-630 through
30 173-303-670; and,
- 31 vii. For off-site facilities, the procedures for confirming that each dangerous waste received
32 matches the identity of the waste specified on the accompanying manifest or shipping
33 paper. This includes at least:
- 34 (1) The procedure for identifying each waste movement at the Facility; and,
- 35 (2) The method for obtaining a representative sample of the waste to be identified, if
36 the identification method includes sampling.
- 37 II.D.4. Should waste analysis be required by this Permit at a location on the Facility other than at a
38 TSD unit, a SAP shall be maintained by the Permittees and made available upon request
39 from the Department. Any SAP required by this Permit not associated with a particular TSD
40 unit shall include the elements of Conditions II.D.3.(i) through II.D.3.(iv).

- (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 measurements 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

- 1 iii. Sampling or field measurement raw data;
- 2 iv. Laboratory analysis ID number;
- 3 v. Result of analysis (e.g., concentration);
- 4 vi. Elevations of reference points for all ground water level measurements, including water
- 5 level elevation, top of casing elevation, and ground surface elevation; and,
- 6 vii. Magnetic computer records of all ground water, soil, surface water, and sediment
- 7 analytical data.
- 8 II.E.3.b. Tabular displays, as appropriate, illustrating:
 - 9 i. Unsorted validated and invalidated data;
 - 10 ii. Results for each medium and each constituent monitored;
 - 11 iii. Data reduction for statistical analysis;
 - 12 iv. Sorting of data by potential stratification factors (e.g., location, soil layer, topography);
 - 13 and,
 - 14 v. Summary data.
- 15 II.E.3.c. Graphical displays (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-
- 16 sectional plots or transects, three dimensional graphs, etc.), as appropriate, presenting the
- 17 following:
 - 18 i. Displays of sampling location and sampling grid;
 - 19 ii. Identification of boundaries of sampling area and areas where more data are required;
 - 20 iii. Displays of concentrations of contamination at each sampling location;
 - 21 iv. Displays of geographical extent of contamination;
 - 22 v. Aerial and vertical displays of contamination concentrations, concentration averages,
 - 23 and concentration maxima, including isoconcentration maps for contaminants found in
 - 24 environmental media at the Facility;
 - 25 vi. Illustrations of changes in concentration in relation to distance from the source, time,
 - 26 depth, or other parameters;
 - 27 vii. Identification of features affecting intramedia transport and identification of potential
 - 28 receptors;
 - 29 viii. For each round of ground water level measurements, maps showing the distribution of
 - 30 head measurements in each aquifer; and,
 - 31 ix. For each well, provide a hydrograph that shows the distribution of water level
 - 32 measurements taken during the time interval of the investigation.
- 33 II.E.4. Unless otherwise agreed upon in writing by the Department, the Permittees shall provide
- 34 notification of availability to the Department of all data obtained pursuant to this Permit
- 35 within 30 days of receipt by the Permittees, or after completion of QA/QC activities, if
- 36 applicable. If the Department agrees that data will be obtained on a routine basis for a
- 37 particular unit, the Permittees shall only be required to provide notification of data
- 38 availability within 30 days of first availability along with a statement as to expected
- 39 frequency of future data. If routine data is not acquired at the stated expected frequency, the
- 40 Permittees shall notify the department within 30 days with an explanation and revision, if
- 41 applicable. This notification requirement shall also apply to any other information obtained

1 **II.F.3. Well Construction**

2 All wells constructed pursuant to this Permit shall be constructed in compliance with Chapter
3 173-160 WAC.

4 **II.G. SITING CRITERIA**

5 The Permittees shall comply with the applicable notice of intent and siting criteria of WAC
6 173-303-281 and WAC 173-303-282, respectively.

7 **II.H. RECORDKEEPING AND REPORTING**

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

10 **II.H.1. Cost Estimate for Facility Closure**

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

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

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

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

21 **II.I. FACILITY OPERATING RECORD**

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

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

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

41 **II.I.1.c.** An identification of the system(s) currently utilized to generate Occurrence Reports. The
42 identification of the system(s) is required to include a description, an identification of an on-

- 1 II.I.1.t. All other reports as required by this Permit, including ECNs and NCRs.
- 2 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.,
3 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
4 September 28, 1995.
- 5 II.J. FACILITY CLOSURE
- 6 II.J.1. Final closure of the Hanford Facility will be achieved when closure activities for all TSD
7 units have been completed, as specified in Parts III, IV, V, or VI of this Permit. Completion
8 of these activities shall be documented using either certifications of closure, in accordance
9 with WAC 173-303-610(6), or certifications of completion of post-closure care, in accordance
10 with WAC 173-303-610(11).
- 11 II.J.2. The Permittees shall close all TSD units as specified in Parts III, V, and/or VI of this Permit.
- 12 II.J.3. The Permittees shall submit a written notification of or request for a permit modification in
13 accordance with the provisions of WAC 173-303-610(3)(b) whenever there is a change in
14 operating plans, facility design, or the approved closure plan. The written notification or
15 request must include a copy of the amended closure plan for review or approval by the
16 Department.
- 17 II.J.4. The Permittees shall close the Facility in a manner that:
- 18 II.J.4.a. Minimizes the need for further maintenance;
- 19 II.J.4.b. Controls, minimizes or eliminates to the extent necessary to protect human health and the
20 environment, post-closure escape of dangerous waste, dangerous constituents, leachate,
21 contaminated run-off, or dangerous waste decomposition products to the ground, surface
22 water, ground water, or the atmosphere; and,
- 23 II.J.4.c. Returns the land to the appearance and use of surrounding land areas to the degree possible
24 given the nature of the previous dangerous waste activity.
- 25 II.J.4.d. Meets the requirements of WAC 173-303-610(2)(b).
- 26 II.K. SOIL/GROUNDWATER CLOSURE PERFORMANCE STANDARDS
- 27 II.K.1. For purposes of Condition II.K., the term "clean closure" shall mean the status of a TSD unit
28 at the Facility which has been closed to the cleanup levels prescribed by WAC 173-303-
29 610(2)(b) provided certification of such closure has been accepted by the Department.
- 30 II.K.2. The Permittees may close a TSD unit to background levels as defined in Department
31 approved Hanford Site Background Documents if background concentrations exceed the
32 levels prescribed by Condition II.K.1. Closure to these levels, provided the Permittees
33 comply with all other closure requirements for a TSD unit as identified in Parts III, V, and/or
34 VI of this Permit, shall be deemed as "clean closure."
- 35 II.K.3. Except for those TSD units identified in Conditions II.K.1., II.K.2., or II.K.4., the Permittees
36 may close a TSD unit to a cleanup level specified under Method C of Chapter 173-340 WAC.
37 Closure of a TSD unit to these levels, provided the Permittees comply with all other closure
38 requirements for the TSD unit as specified in Parts III, V, and/or VI of the Permit, and
39 provided the Permittees comply with Conditions II.K.3.a. through II.K.3.c., shall be deemed
40 as a "modified closure."
- 41 II.K.3.a. For "modified closures," the Permittees shall provide institutional controls in accordance with
42 WAC 173-340-440 which restricts access to the TSD unit for a minimum of five (5) years

1 **II.L. DESIGN AND OPERATION OF THE FACILITY**

2 **II.L.1. Proper Design and Construction**

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

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

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

13 **II.L.2.b.** During construction of a project subject to this Permit, changes to the approved designs, plans
14 and specifications shall be formally documented with an Engineering Change Notice (ECN).
15 All ECNs shall be maintained in the TSD unit-specific operating record and shall be made
16 available to the Department upon request or during the course of an inspection. The
17 Permittees shall provide copies of ECNs affecting any critical system to the Department
18 within five (5) working days of initiating the ECN. Identification of critical systems shall be
19 included by the Permittees in each TSD unit-specific dangerous waste permit application,
20 closure plan or Permit modification, as appropriate. The Department will review an ECN
21 modifying a critical system and inform the Permittees within two (2) working days in writing
22 whether the proposed ECN, when issued, will require a Class 1, 2, or 3 permit modification.
23 If after two (2) working days the Department has not responded, it will be deemed as
24 acceptance of the ECN by the Department.

25 **II.L.2.c.** During construction of a project subject to this Permit, any work completed which does not
26 meet or exceed the standards of the approved design, plans and specifications shall be
27 formally documented with a nonconformance report (NCR). All NCRs shall be maintained in
28 the TSD unit-specific operating record and shall be made available to the Department upon
29 request or during the course of an inspection. The Permittees shall provide copies of NCRs
30 affecting any critical system to the Department within five (5) working days after
31 identification of the nonconformance. The Department will review an NCR affecting a
32 critical system and inform the Permittees within two (2) working days in writing whether a
33 permit modification is required of any nonconformance and whether prior approval is
34 required from the Department before work proceeds which affects the nonconforming item.
35 If the Department does not respond within two (2) working days, it will be deemed as
36 acceptance and no permit modification is required.

37 **II.L.2.d.** Upon completion of a construction project subject to this Permit, the Permittees shall produce
38 as-built drawings of the project which incorporate the design and construction modifications
39 resulting from all project ECNs and NCRs as well as modifications made pursuant to WAC
40 173-303-830. The Permittees shall place the drawings into the operating record within 12
41 months of completing construction, or within an alternate period of time specified in a unit-
42 specific Condition in Part III or V of this Permit.

- 1 v. Unpermitted waste discharges.
- 2 II.O.1.d. The Permittees shall notify the Department at least seven (7) days prior to conducting these
3 inspections in order to allow representatives of the Department to be present during the
4 inspections.
- 5 II.O.2. If the inspection by the Permittees conducted pursuant to Condition II.O.1. reveals any
6 problems, the Permittees shall take remedial action on a schedule agreed to by the
7 Department.
- 8 II.O.3. The inspection of high radiation areas will be addressed on a case-by-case basis in either Part
9 III of this Permit or prior to the inspections required in Condition II.O.1.
- 10 II.P. MANIFEST SYSTEM
- 11 II.P.1. The Permittees shall comply with the manifest requirements of WAC 173-303-370 for waste
12 received from off-site and WAC 173-303-180 for waste shipped off-site.
- 13 II.P.2. Transportation of dangerous wastes along State Highways 240, 24, and 243, and Route 4
14 South (Stevens Drive) south of the Wye Barricade, if such routes are not closed to general
15 public access at the time of shipment, shall be manifested pursuant to Condition II.P.1.
- 16 II.Q. ON-SITE TRANSPORTATION
- 17 II.Q.1. Documentation must accompany any on-site dangerous waste which is transported to or from
18 any TSD unit subject to this Permit through or within the 600 Area, unless the roadway is
19 closed to general public access at the time of shipment. Waste transported by rail or by
20 pipeline is exempt from this Condition. This documentation shall include the following
21 information, unless other unit-specified provisions are designated in Part III or V:
- 22 II.Q.1.a. Generator's name, location, and telephone number;
- 23 II.Q.1.b. Receiving TSD unit's name, location, and telephone number;
- 24 II.Q.1.c. Description of waste;
- 25 II.Q.1.d. Number and type of containers;
- 26 II.Q.1.e. Total quantity of waste;
- 27 II.Q.1.f. Unit volume/weight;
- 28 II.Q.1.g. Dangerous waste number(s); and,
- 29 II.Q.1.h. Any special handling instructions.
- 30 II.Q.2. All non-containerized solid, dangerous waste transported to or from TSD units subject to this
31 Permit shall be covered to minimize the potential for material to escape during transport.
- 32 II.R. EQUIVALENT MATERIALS
- 33 II.R.1. The Permittees may substitute an equivalent or superior product for any equipment or
34 materials specified in this Permit. Use of equivalent or superior products shall not be
35 considered a modification of this Permit. A substitution will not be considered equivalent
36 unless it is at least as effective as the original equipment or materials in protecting human
37 health and the environment.
- 38 II.R.2. The Permittees shall place in the operating record (within seven (7) days after the change is
39 put into effect) the substitution documentation, accompanied by a narrative explanation, and
40 the date the substitution became effective. The Department may judge the soundness of the
41 substitution.

1 shall be accompanied by a description of the quality assurance and quality control measures
2 used to compile the maps.

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

7 II.U.4. By September 28, 1998, the Permittees shall make an initial submittal to the Department of
8 maps showing the location of dangerous waste underground pipelines (including active,
9 inactive, and abandoned pipelines which contain or contained dangerous waste subject to the
10 provisions of Chapter 173-303 WAC) within the 200 East, 200 West, 300, 400, 100N, and
11 100K Areas. These maps will incorporate information available six months prior to the
12 scheduled submittal date. Thereafter, the maps will be updated on an annual basis to
13 incorporate additional information, as such information becomes available in accordance with
14 the FFACO milestone schedule. A schedule for the provision of map input shall be included
15 in the report specified in Condition II.U.1.

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

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

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

29 II.V. MARKING OF UNDERGROUND PIPING

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

36 II.W. OTHER PERMITS AND/OR APPROVALS

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

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

1 **CHAPTER 2**

2 **305-B Storage Facility**

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

6 **III.2.A. COMPLIANCE WITH APPROVED PERMIT APPLICATION**

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

11 Part A, Form 3, Permit Application, Revision 1

12 Section 2.1.2 The 305-B Storage Unit

13 Section 2.2.1 General Requirement

14 Section 2.5 Performance Standard

15 Section 2.6 Buffer Monitoring Zones, from Class 1 modification for quarter ending
16 March 31, 1997.

17 Section 2.8 Manifest System

18 Chapter 3.0 Waste Characteristics

19 Chapter 4.0 Process Information, from Class 1 modification for quarter ending
20 March 31, 1997.

21 Chapter 6.0 Procedures to Prevent Hazards, from Class 1 modification for quarter
22 ending March 31, 1997.

23 Chapter 7.0 Contingency Plan, from Class 1 modification for quarter ending
24 March 31, 1997.

25 Chapter 8.0 Personnel Training, from Class 1 modification for quarter ending
26 June 30, 1997.

27 Chapter 11.0 Closure and Post-Closure Requirements, from Class 1 modification for
28 quarter ending June 30, 1997.

29 Chapter 12.0 Reporting and Recordkeeping, from Class 1 modification for quarter
30 ending June 30, 1997.

31 Section 13.8 Toxic Substances Control Act, from Class 1 modification for quarter
32 ending June 30, 1997.

33 Section 13.9 Other Requirements, from Class 1 modifcaiton for quarter ending
34 June 30, 1997.

35 Appendix 2A Hanford Site and 300-Area Topographic Maps, Plates 2-2 Through 2-9

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

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

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

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

12 III.2.B.e. Page 3-10, line 32. The following is added to the end of this section: "Wastes must be
13 analyzed using the TCLP in accordance with Appendix II of 40 CFR 261, as amended, in
14 order to provide sufficient information for proper management and for decisions regarding
15 Land Disposal Restrictions pursuant to 40 CFR 268."

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

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

34 III.2.B.g. Part A Application, Page 3Q of 5, lines 10 and 11. Waste Code WC01 shall be deleted and
35 the estimated annual volume of Waste Code WC02 shall be changed to 2,000 kilograms.

- 1 then compared to the Toxicity Characteristic (TC) constituent limits [WAC 173-303-
2 090(8)]. If the TC limit is met or exceeded, the waste is designated accordingly. All
3 measured parameters are compared against the corresponding treatment standards.
- 4 III.4.B.b.10. Section 7.2 Analytical Program
- 5 The beginning of Section 7.2 Analytical Programs is repeated on page 7-1. Delete the
6 portion on page 7-1. Replace the sentence "The quality control/quality assurance program
7 of the onsite analytical laboratory is based on Hanford Site analytical services quality
8 assurance/quality control requirements." with "The quality assurance/quality control
9 program for sampling and must comply with the applicable Hanford Site standard
10 requirements and the regulatory requirements. All analytical data will be defensible and
11 will be traceable to specific, related quality control samples and calibrations."
- 12 III.4.B.b.11. Appendix B Table B-1 Sample and Analysis Criteria for Influent Aqueous Waste and
13 Treated Effluent and Table B-2 Sample Containers, Preservative Methods, and Holding
14 Times for ETF Powder, Concentrate Tank, Maintenance and Operations, and Unknown
15 Waste
- 16 Footnote "c" on page APP B-2 is deleted.
- 17 III.4.B.c. Liquid Effluent Retention Facility Final Ground Water Monitoring Plan, PNNL-11620, is
18 an integral Part of this permit and is to be added as Appendix 5A to the 200 Area Liquid
19 Waste Complex Permit Application.
- 20 III.4.B.d. Appendix 7A, Building Emergency Plan for 200 Area Effluent Treatment Facility and
21 Liquid Effluent Retention Facility.
- 22 III.4.B.d.1. Section 3.2, add to end of first paragraph; "Only qualified personnel will perform response
23 actions."
- 24 III.4.B.d.2. Section 5.2.1, add to end of first sentence of first paragraph; "other than the
25 radioactive/dangerous/mixed waste discussed in Section 5.2.3."

- 1 Table 3, Page 5-5, Add footnote "f" to title of the table and add footnote "f. This table is
2 used to ensure process condensate generated from candidate feed tank treatment is within
3 Liquid Effluent Retention Facility liner compatibility limits."
- 4 III.5.B.a.4. Section 6.1.2. Candidate Feed Tank Sampling Quality Assurance and Quality Control
5 Delete lines 5 through 6 on page 6-2 ("Trip blanks are analyzed for those constituents
6 detected in the field blanks.") and replace with the following: "Trip blanks are analyzed as
7 independent samples for volatile organics analysis. "
- 8 III.5.B.a.5. Section 6.1.2. Candidate Feed Tank Sampling Quality Assurance and Quality Control
9 Delete the word "discrete" from line 18 on page 6-2 and insert the word "unique."
- 10 III.5.B.a.6. Section 6.1.3. Process Condensate Sample Collection
11 Append to lines 32 through 33 on page 6-2 ["Samples of process condensate are collected
12 in a manner consistent with SW-846 procedures (EPA 1986)."] the following text: "...as
13 documented in sampling procedures which are maintained and implemented by unit
14 personnel."
- 15 III.5.B.a.7. Table 5. Analytes for Candidate Feed Tanks.
16 On page 6-4, delete the word "method" and insert the word "technique" in the heading of
17 column 2.
- 18 III.5.B.a.8. Section 7.3 Laboratory Quality Assurance and Quality Control
19 In line 40, delete "matrix spike –" and in line 43, replace "accuracy" with "precision" and
20 add a new sentence at the end of the paragraph, "Accuracy for DSC is evaluated by using
21 the laboratory control standard."
- 22 III.5.B.a.9. Section 7.3 Laboratory Quality Assurance and Quality Control
23 Add a new paragraph, "The quality assurance/quality control program for sampling and
24 analysis related to this unit must, at a minimum, comply with the applicable Hanford Site
25 standard requirements and the regulatory requirements. All analytical data shall be
26 defensible and shall be traceable to specific, related quality control samples and
27 calibrations."
- 28 III.5.B.a.10. Table 7, Quality Assurance Objectives for Candidate Feed Tank Stream Analytes.
29 Delete the word "Objectives" from the title of the table and insert the word
30 "Requirements."
- 31 III.5.B.a.11. Table 7. Quality Assurance Objectives for Candidate Feed Tank Stream Analytes.
32 In column 4, delete the words "matrix spike", so the heading reads as follows: "Precision
33 (RPD between duplicates), %."
- 34 III.5.B.a.12. Table 7. Quality Assurance Objectives for Candidate Feed Tank Stream Analytes.
35 Delete Footnote 1 and replace with "Reserved".
- 36 III.5.B.a.13. Table 7. Quality Assurance Objectives for Candidate Feed Tank Stream Analytes.
37 In line 6, under "Accuracy" column, add "4" to table entry "N/A" and add to the end of
38 footnote 4, "Accuracy for DSC is evaluated by using the laboratory control standard."

- 1 **III.6.B. AMENDMENTS TO THE APPROVED PERMIT APPLICATION**
- 2 **III.6.B.a.** Only treatment specifically identified in the enforceable portions of the application and
3 these permit conditions may be performed at this TSD unit.
- 4 **III.6.B.b.** Twenty months after inclusion in the Permit, this chapter shall be modified to reflect
5 changes to waste streams shipped into and out from this unit, TSD unit operations, and the
6 addition of a new storage tank.
- 7 **III.6.B.c.** Within 30 days of the effective date issuance of this Permit, the Permittee shall submit a
8 topographic map delineating the maximum probable flood plain, i.e., 500-year flood plain.
- 9 **III.6.B.d.** For all shipments of dangerous waste to or from the 325 Hazardous Waste Treatment
10 Units, the Permittees shall comply with the applicable information in Conditions II.Q.1.h.
11 and II.Q.2. of the Permit. For clarification, all dangerous waste must be transported in
12 accordance with the unit specific provisions as outlined in the PNNL Operating Procedure
13 for the 325 Building, in effect at the date of the transfer. With exception to and in addition
14 to the packaging and transporting operations, shall be as follows:
- 15 The acceptance of all dangerous waste received at the 325 TSD Units will be dependent upon
16 their packaging. The practice of hand carrying single walled waste containers will no longer be
17 acceptable. Each waste container shall have secondary containment with absorbent materials packed
18 around the contents.
- 19 **III.6.B.e.** The final design drawings and operable status of the proposed 325 Collection/Loadout
20 Station Tank shall be submitted for Department approval at least 30 days before entering
21 into a contract for installation or 120 days before the tank system begins operation.
- 22 **III.6.B.f.** The Permittee must conduct integrity assessments over the life of the two tank systems in
23 this TSD unit, to ensure that the tanks retain structural integrity per WAC 173-303-640.
24 Records must be maintained in the Operating Record for this TSD unit. Within 30 days of
25 completion of each assessment, data relating to each tank system shall be made available,
26 upon request, to the Department for review
- 27 **III.6.B.g.** Within 3 months of final installation of the new tank, the Permittee shall submit to
28 Ecology a written integrity assessment, which has been reviewed and certified by an
29 independent, qualified registered professional engineer in accordance with WAC 173-303-
30 810 (13)(a).
- 31 **III.6.B.h.** The TSD unit shall comply with all applicable Subpart AA and BB requirements of the
32 Air Emission Standards. The Permittee shall submit to the Department, a copy of the
33 assessment performed to meet requirements of Subpart AA and BB within 30 days of
34 issuance of this Permit.
- 35 **III.6.B.i.** In response to the request in Chapter 11.0, Section 11.7, of Attachment 37, the Permittees
36 are granted two years to close the TSD unit. This time period is necessitated by the high
37 levels of radioactivity in the materials that are present, particularly in the six
38 interconnected hot cells. Removal of waste inventory from the TSD unit is an activity of
39 closure.
- 40 **III.6.B.j.** Telephone number(s) for a point-of-contact at each of the three units of the HWTUs shall
41 be provided in the Waste Analysis Plan (i.e., Unit Description) and provided to the
42 Department within 30 days of the effective date issuance of this Permit.
- 43 **III.6.B.k.** All process knowledge and analytical data that are used for waste characterization, LDR
44 determination, and/or treatment activities at this TSD unit shall be documented and placed
45 in the Operating Record.

PART IV - CORRECTIVE ACTIONS FOR PAST PRACTICES

1
2 The HSWA Permit is issued by the Agency in conjunction with this Permit. Upon delegation of the
3 Corrective Action requirements of the HSWA by the Agency to the Department, the Permit shall be
4 modified to incorporate the specific requirements of the HSWA Permit into this Permit. This modification
5 shall be considered a Class 3 modification in accordance with Condition I.C.3. Until this modification is
6 complete, compliance with the terms of the referenced provisions, shall be deemed as compliance with
7 WAC 173-303-646.

- 1 V.1.B. AMENDMENTS TO THE APPROVED CLOSURE PLAN
- 2 V.1.B.a. Page I-1, lines 9-12. The sentence found here is deleted and replaced with the following:
3 "Additionally, the 183-H Basins will be closed in accordance with the most current version of
4 all applicable environmental regulations and laws as well as the FFAFO. New or modified
5 regulations and laws may require closure activities and/or the closure plan to be modified."
- 6 V.1.B.b. Page I-108, line 46. The reference to WAC 173-303-700 is deleted.
- 7 V.1.B.c. Page I-150, line 53. The date of "October 1991" is deleted and replaced with "the first
8 October after the effective date of this Permit."
- 9 V.1.B.d. Page III-77, line 5. The phone number (509) 376-5411 is changed to (509) 375-4647.
- 10 V.1.B.e. A copy of any Unusual Occurrence Report or Off Normal Occurrence Report issued after
11 approval of the Plan which is directly related to Basin closure shall be provided to the
12 Department's Basin unit manager within seven (7) days after issuance. This does not relieve
13 the Permittees from any other reporting requirements specified in Part I or II of this Permit.
- 14 V.1.B.f. Annual closure cost estimates shall be provided to the Department as described in Section
15 I.C.4. of this closure plan and Condition II.H.1. of this Permit.
- 16 V.1.B.g. A written notification that closure has begun and will be conducted in accordance with the
17 Plan, including these conditions to the Plan, shall be submitted to the Department within 30
18 days after the Plan is approved through issuance of this Permit.
- 19 V.1.B.h. Concrete sampling and analysis activities (basin and background sampling) shall be
20 conducted as described within the Plan and as augmented by the Decommissioning Work Plan
21 (DWP) entitled "Concrete Sampling - 183-H Solar Evaporation Basins" (DWP-H-080-00001)
22 as found in Attachment 12 of this Permit.
- 23 V.1.B.i. Soil sampling and analyses activities (including Phases I and II, berm and background
24 sampling) shall be conducted as described within the Plan and as augmented by DWP-H-080-
25 00005 entitled "Core Drill Sampling - 183-H Solar Evaporation Basins (Phase I);" WHC-SD-
26 EN-AP-056 entitled "183-H Solar Evaporation Basins Vadose Zone Sampling Plan;" and
27 DWP-H-026-00008 entitled "Berm Removal For 183-H Solar Evaporation Basins" as found
28 in Attachments 13, 14, and 15, respectively, of this Permit.
- 29 V.1.B.j. The results of Basin concrete sampling (including background sampling) shall be received by
30 the Department within 180 days of the effective date of this Permit. This submittal shall
31 include the raw analytical data, a summary of analytical results, a data validation package,
32 and a narrative summary with conclusions.
- 33 V.1.B.k. The results of Basin soil sampling (including Phases I and II, berm and background sampling)
34 shall be received by the Department within 180 days of the effective date of this Permit. This
35 submittal shall include the raw analytical data, a summary of analytical results, a data
36 validation package, and a narrative summary with conclusions.
- 37 V.1.B.l. The Department shall be provided, for review and approval, a sampling plan and the date of
38 sampling for any sampling event not addressed above which provides data used to support
39 Basin closure activities at least 30 days prior to initiating actual sampling activities. This
40 condition applies to, but is not limited to, equipment and non-concrete structural sampling and
41 verification sampling. The results of this sampling shall be submitted to the Department.
42 These submittals shall include the raw analytical data, a summary of analytical results, a data
43 validation package, and a narrative summary with conclusions.

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 set 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.

1 CHAPTER 13

2 **3718-F Alkali Metal Treatment and Storage Facility Closure Plan**

3 The 3718-F Alkali Metal Treatment and Storage Facility was operated to treat and store alkali metal waste
4 from the Fast Flux Test Facility and from various laboratories that used alkali metals for experiments.
5 Contaminated equipment was treated using water, methanol, isopropyl alcohol, or 2-butoxy ethanol. Bulk
6 waste was treated by burning to eliminate the ignitability and reactive characteristics. After the burn
7 treatment, the waste was neutralized with acid to a pH between 2 and 12.5.

8 V.13.A COMPLIANCE WITH THE APPROVED CLOSURE PLAN

9 The Permittees shall comply with all requirements set forth in Attachment 30, including the
10 amendments specified in Condition V.13.B. Enforceable portions of the Plan are listed
11 below; all subsections, figures, and tables included in these portions are also enforceable
12 unless stated otherwise:

13 The operation of this facility resulted in the release of material, which may classify as
14 dangerous waste and/or dangerous constituents, to the soil surrounding the building and
15 concrete pad. A closure plan must address the full extent of operation and releases to the
16 environment. Therefore, the Department requires the owner/operator to conduct soil
17 sampling to determine the extent of the releases. The 3718-F Alkali Metal Treatment and
18 Storage Facility can not be released from interim status until it can be demonstrated that the
19 unit has been closed in accordance with closure requirements of WAC 173-303, or corrective
20 action has been completed.

21 If pre-existing contamination remains at the unit in concentrations above appropriate MTCA
22 cleanup levels, the unit is subject to additional remediation under RCRA corrective action,
23 MTCA, or CERCLA, as appropriate.

24 Part A, Form 3, Permit Application, Revision 4, October 1996

25 Section 1.2 Closure Strategy
26 Chapter 2.0 Facility Description and Location Information
27 Chapter 5.0 Groundwater Monitoring
28 Chapter 6.0 Closure Performance Standards
29 Chapter 7.0 Closure Activities
30 Chapter 8.0 Post-Closure Plan

31 V.13.B. AMENDMENTS TO THE APPROVED CLOSURE PLAN

32 V.13.B.a. If closure activities have not begun and/or will not be conducted in accordance with the Plan,
33 including these unit-specific Conditions to the Plan, a written notification shall be submitted
34 to the Department within 30 days after the Plan is approved.

35 V.13.B.b. The Department shall be provided, for review and approval, a soil sampling and analysis plan
36 at least 30 days prior to initiating actual sampling. Such a plan shall include a schedule for
37 conducting sampling events. The analytical results of the sampling event will be used to
38 determine if corrective action will be required to close the 3718-F Alkali Metal Treatment
39 and Storage Facility.

40 V.13.B.c. The Department shall be provided a diagram of the 3718-F Alkali Metal Treatment and
41 Storage Facility unit boundary to be closed, addressing the maximum extent of operation.
42 The diagram should incorporate the fenced area surrounding the building indicating which

1 CHAPTER 14

2 **303-K Storage Facility**

3 The 303-K Storage Facility (303-K) was used primarily for storage, and some treatment, of dangerous
4 wastes produced during the fuel fabrication process. These wastes consist of beryllium/zircalloy-2 chips
5 which were concreted at the 304 Concretion Facility, and other process wastes.

6 V.14.A COMPLIANCE WITH THE APPROVED CLOSURE PLAN

7 The Permittees shall comply with all the requirements set forth in Attachment 32, including
8 the amendments specified in Condition V.14.B. Enforceable portions of the Plan are listed
9 below; all subsections, figures, and tables included in these portions are also enforceable
10 unless stated otherwise:

11 Part A, Form 3, Permit Application, Revision 5, October 1996

12 Section 2.1 Description of the 303-K Storage Facility

13 Section 2.2 Security

14 Chapter 4.0 Waste Characteristics

15 Chapter 6.0 Closure Strategy and Performance Standards

16 Chapter 7.0 Closure Activities

17 Chapter 8.0 Post-Closure

18 Appendix B Random Sampling Locations

19 Appendix E Personnel Training

20 Appendix F Quality Assurance Project Plan for Sampling and Analysis for the 304
21 Concretion Facility Closure Activities

22 V.14.B AMENDMENTS TO THE APPROVED CLOSURE PLAN

23 V.14.B.a. If closure activities have not begun and/or will not be conducted in accordance with the Plan,
24 including these unit-specific Conditions to the Plan, a written notification shall be submitted
25 to the Department within 30 days after the Plan is approved.

26 V.14.B.b. The results of all sampling required by the Plan shall be provided to the Department. This
27 submittal shall include raw analytical data, a summary of analytical results, a data validation
28 package, and a narrative summary of conclusions.

29 V.14.B.c. The Department shall be provided, for review and approval, a sampling and analysis plan and
30 date of sampling for any sampling event not addressed in the Plan, which provides data used
31 to support the 303-K cleanup activities at least 30 days prior to initiating actual sampling
32 activities. The results of this sampling shall be submitted to the Department. These
33 submittals shall include the raw analytical data, a summary of analytical results, a data
34 validation package, and a narrative summary of conclusions.

35 V.14.B.d. The Permittees shall notify the Department, in writing, if action levels cited in Section 6.1 of
36 the Plan are exceeded. The notification shall include a request for Ecology's approval of
37 alternative action levels or identify interim measures to be taken in the 303-K until closure
38 activities are performed in conjunction with the 300-FF-3 Operable Unit. The interim
39 measures must be approved by the Department.

40 V.14.B.e. The Permittees' and the independent, registered, professional engineer's certifications of
41 closure shall be prepared and submitted to the Department by registered mail within 60 days

1 listed, these submittals shall include calibration and quality control data. A data evaluation
2 report shall be submitted to the Department comparing the analytical results to the cleanup
3 levels for the 303-K, derived as described in Condition V.14.B.g.1. For data to be useable for
4 this comparison, the method quantification limit for the constituent must be equal to or less
5 than the cleanup level, or the method detection limit must be at least ten times below the
6 cleanup level, and the data package must be complete.

7 V.14.B.h. If any analytical result, except for arsenic and beryllium, for any sample location specified in
8 the Sampling and Analysis Plan exceeds the MTCA Method B cleanup level, then
9 characterization of the lateral and vertical extent of the contamination shall be required and
10 the Department shall pursue corrective action for this TSD unit. If arsenic or beryllium
11 exceed the established Hanford Sitewide Background values, then characterization of the
12 lateral and vertical extent of the contamination shall be required and the Department shall
13 pursue corrective action for this TSD unit.

- 1
- 2 VI.1.B. AMENDMENTS TO THE APPROVED MODIFIED CLOSURE PLAN
- 3 VI.1.B.a. Page 1-1, line 34 will reference section II.K.3. of the Hanford Facility Wide Permit, which
4 covers modified closures.
- 5 VI.1.B.b. Pursuant to condition II.K.7. of the Hanford Facility Wide Permit, the 300 Area Process
6 Trenches (APT) closure shall be a Modified Closure in coordination with the Record of
7 Decision (ROD) for 300-FF-1 and 300-FF-5. Sections of CERCLA documents (examples
8 include, but are not limited to, Remedial Design/Remedial Action CERCLA work plan, the
9 Operation and Monitoring Work Plan, etc.) which satisfy requirements and conditions of this
10 Modified Closure Plan will be reviewed and approved by the Department.
- 11 VI.1.B.c. The Sampling and Analysis Plan, Appendix 7A (Verification Sampling), will be submitted to
12 the Department for approval. This will occur prior to all remedial actions within the 300
13 APT.
- 14 VI.1.B.d. Page 1-7, lines 9-13. This portion of the paragraph will be replaced by the following:
15 "Disposal of TSD unit soil into the Environmental Restoration Disposal Facility (ERDF) (or a
16 comparable RCRA Subtitle C Landfill) within the boundaries of the Hanford Facility is
17 allowed through an approved, contained in demonstration, based on MTCA B cleanup levels
18 (WAC-173-340) for the contamination carrying the F and U codes, and with TCLP data for
19 the characteristic waste."
- 20 VI.1.B.e. Page 6-1, lines 8-10. This portion of the paragraph will be replaced by the following: "Based
21 on data in addition to ERA data (DOE/RL-92-32), remediation will occur to meet all
22 Applicable Relevant and Appropriate Requirements (ARARs) within the trenches. This will
23 include removal of the spoils pile for chemical contamination above MTCA C Industrial
24 cleanup values. It has been concluded that when uranium is removed to the CERCLA
25 cleanup standard of 350 pCi/g, the Chemical Contaminants of Concern (COCs) will likely be
26 removed to below the cleanup standard, as well. Verification samples will be collected for
27 both chemicals and radioisotopes, as directed in the remedial action sampling and analysis
28 plan, to determine whether performance standards for the modified closure have been met."
- 29 VI.1.B.f. Page 6-1, line 11. The sentence here is deleted and replaced with the following: "When SD
30 soils are remediated, the cleanup levels achieved for RCRA constituents could qualify the
31 unit for clean closure of the soil."
- 32 VI.1.B.g. Page 6-1, lines 22-27. This portion of the paragraph will be removed.
- 33 VI.1.B.h. Page 6-2, line 23-27. These sentences will be deleted and replaced with the following:
34 "Final closure specifications are known and will be coordinated with the CERCLA cleanup
35 activities."
- 36 VI.1.B.i. As stipulated through the RCRA Final Status Compliance Monitoring Plan (i.e., WHC-SD-
37 EN-AP-185) Appendix IX, sampling shall not be required unless Post-Closure monitoring
38 results indicate a need to do so.
- 39 VI.1.B.j. Page 6-3, line 12-24. Presenting the option for Modified Closure is redundant. This
40 paragraph will be deleted.
- 41 VI.1.B.k. Page 6-4, lines 26-33. Presenting the Landfill Closure Option is not supported by sufficient
42 technical data. This paragraph will be deleted.

1 CHAPTER 2

2 **183-H Solar Evaporation Basin**

3 The 183-H Solar Evaporation Basins (Basins) comprise an inactive Treatment Storage and Disposal (TSD)
4 unit that is currently undergoing closure activities. This TSD unit was operated as an evaporation
5 treatment unit for dangerous wastes. This Chapter set forth the closure requirements for this TSD unit.
6 The following enforceable portions of the *183-H Solar Evaporation Basins Postclosure Plan*, Rev. 0
7 (Plan), found in Attachment 37 supersede the *183-H Solar Evaporation Basins Closure Plan/Post-Closure*
8 *Plan*, found in Attachment 11 which was previously listed in Part V, Chapter 1.

9 VI. 2. A. COMPLIANCE WITH APPROVED CLOSURE PLAN

10 The requirements are set forth in Attachment 37, which supersedes Attachment 11.
11 Enforceable portions of the Plan are listed below; all subsections, figures, and tables included
12 in these portions are also enforceable unless stated otherwise:

13 Part A, Form 3, Permit Application, Revision 4, June 1994

14 Attachment 37, 183-H Solar Evaporation Basins Postclosure Plan, Rev. 0

- 15 Section 2.1 Modified Postclosure Institutional Controls
- 16 Section 2.2 Modified Postclosure Periodic Assessments
- 17 Section 3.0 Groundwater Monitoring During Postclosure
- 18 Section 3.1 WAC 173-303-645(11)(d) Monitoring Requirements
- 19 Section 3.1.1 WAC 173-303-645(3) Groundwater Protection Standard
- 20 Section 3.1.2 WAC 173-303-645(8) General Groundwater Monitoring Requirements
- 21 Section 3.2 RCRA Corrective Action Groundwater Monitoring Schedule
- 22 Section 3.3 Groundwater Monitoring under CERCLA
- 23 Section 3.3.1 100-HR-3 Remedial Investigation Monitoring
- 24 Section 3.3.2 100-HR-3 Interim Remedial Measure Monitoring
- 25 Section 3.4 Inspection, Maintenance, and Replacement of Wells
- 26 Section 4.0 Corrective Action Plan
- 27 Section 4.1 Soil Column Corrective Action
- 28 Section 4.2 Groundwater Corrective Action
- 29 Section 4.3 Remediation Expectations During the IRM
- 30 Section 5.0 Personnel Training During Postclosure
- 31 Section 6.0 Security
- 32 Section 7.0 Closure Contact
- 33 Section 8.0 Certification of Postclosure

34 VI. 2. B. Amendments to the Approved Postclosure Plan

35 VI. 2. B. a. The permittee will review the modified closure option in five years (February 28, 2003). The
36 purpose of the review will be to determine if this TSD can be clean closed.