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PART III, OPERATING UNITS
OPERATING UNIT 12 DOUBLE-SHELL TANK SYSTEM

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PART III, OPERATING UNITS

OPERATING UNIT 12 DOUBLE-SHELL TANK SYSTEM

UNIT DESCRIPTION

The Double-Shell Tank (DST) System, Operating Unit Group 12, consists of 28 double-shell tanks located in 6 tank farms and the 204-AR Waste Unloading Station. The SY Tank Farm is located in the 200 West Area of the Hanford Site and consists of 3 tanks that have a design capacity of approximately 1.2 million gallons (mg) each. The AN, AP, AW, AY and AZ tank farms are located in the 200 East Area. The AN Tank Farm consists of 7 tanks. Each tank has an approximate capacity of 1.2 mg each. The AP tank farm has the highest number of tank at 8 and the highest per tank capacity of approximately 1.27 mg. The AW Tanks farm consists of 6 tanks that have a capacity of 1.2 mg each. Both of the AY and AZ tank farms consist of 2 tanks each with an approximate capacity of 1 mg. The first DST, 241-AY-101, began operation in 1971 and the last tanks began operation in 1986 (AP Tank Farm).

The DST System also has various types of ancillary equipment including, but not limited to pipelines between tanks within a tank farm and between tank farms, the Cross Site Transfer System which includes the 6241 Vent Station located between the SY Tank Farm in the 200 West Area and the AP Tank Farm in the 200 East Area, as well as various pits, seal pots, pumps, valves, jumpers, and nozzles.

The DST System also includes the 204-AR Waste Unloading Station which includes a tank system that is operational, except for the pipeline, LIQW-702, connecting the 204-AR Waste Unloading Station to the DST System which is in deferred status. Transfers from the 204-AR Waste Unloading Station to the other parts of the DST System will not occur until Ecology determines that the 204-AR Waste Unloading System Tank System is in compliance with [WAC 173-303](#). The 204-AR Waste Unloading Station is a 2-story structure that consists of an unloading canyon that receives tanker trucks and rail cars and a 1500-gallon waste catch tank. Waste is drained to the catch tank for chemical adjustment as needed to meet the DST System waste acceptance criteria. Some waste is stored in the 204-AR Waste Unloading Station tank system that consists of water to maintain the drain seals and ventilation condensate.

LIST OF ADDENDA

The following listed documents are hereby incorporated by reference in their entirety into this Permit. Some of the documents are excerpts from the Permittees Dangerous Waste Permit Application. Ecology has, as deemed necessary, modified specific language in the addendums. As incorporated by specific conditions, and as modified by those conditions, incorporated addendums constitute enforceable requirements of this Permit.

Addendum A	Part A form, dated October 14, 2009
Addendum B	Waste Analysis Plan
Addendum C	Process Information
Addendum D	Reserved, Groundwater
Addendum E	Security
Addendum F	Preparedness and Prevention
Addendum G	Personnel Training
Addendum H	Closure Plan
Addendum I	Inspection Requirements
Addendum J	Emergency Pumping Guide
Addendum K	Contingency Plan
Addendum L	Reserved
Addendum M	Waste Transfer Operating Conditions

1 **DEFINITIONS**

2 The following definitions apply to the Double-Shell Tank System.

3 The term “**ancillary equipment**” means any device including, but not limited to, such devices as piping,
4 fittings, flanges, valves, and pumps, that is used to distribute, meter, or control the flow of dangerous
5 waste from its point of generation to a storage or treatment tank(s), between dangerous waste storage and
6 treatment tanks to a point of disposal on-site, or to a point of shipment for disposal off-site. [[WAC 173-
7 303-040](#)]

8 The term “**annulus**” means the space between the primary and secondary shells in a double-shell tank.

9 The term “**Best Basis Inventory**” means a database that was developed by the U.S. Department of
10 Energy (DOE) Hanford Site to comply with the Data Access and Delivery Requirements in Section 9.6 of
11 the HFFACO. The Best Basis Inventory is accessed through the Tank Waste Information Network
12 System (TWINS).

13 The term “**Cathodic Protection System**” means a system providing electrochemical corrosion
14 mechanisms used to protect carbon steel located underground from corrosion.

15 The term “**complexed waste**” means dilute waste material containing relatively high concentrations of
16 chelating agents from B Plant waste fractionization operations.

17 The term “**component**” means either the tank or ancillary equipment of a tank system. [[WAC 173-303-
18 040](#)]

19 The term “**deferred use**” means the dangerous waste unit and/or component is not currently authorized as
20 fit for use, but will be upgraded to be made fit for use or to be closed in accordance with the approved
21 closure plan.

22 The term “**diversion box**” means a below-grade concrete enclosure containing the remotely maintained
23 jumpers and spare nozzles to divert waste solutions to tank farms.

24 The term “**field deployed**” means that the temporary waste transfer line has been removed from storage
25 placed in the field to be set up to transfer waste. This ends its storage time and begins its service life.

26 The term “**Hose-in-Hose Transfer Line**” means a liquid waste pipeline transfer system consisting of a
27 primary hose encased in a secondary hose. The primary is fitted with hose end connections suitable for
28 attaching to valve manifolds with remote connectors. For transfer lines too long to be made out of one
29 continuous length of hose, two or more HIHTL assemblies are joined at mid-point connections to
30 establish the required route.

31 The term “**interlock**” means circuitry and instrumentation that prevent activation or operation until
32 required conditions have been met.

33 The term “**jumper**” means a pipe connection between pipeline nozzles that is removed remotely.

34 The term “**nozzle**” means the termination point for a transfer line in a diversion box designed to be a
35 jumper connection point.

36 The term “**quarter**” means the three month period for each of the following timeframes: January 1
37 through March 31, April 1 through June 30, July 1 through September 30 or October 1 through December
38 31.

39 The term “**service life**” means the period of time starting when the hose is put into operation up to the
40 date it is removed from the application.

41 The term “**slurry**” means a fluid stream that is comprised of liquid (usually aqueous streams) containing
42 dissolved salts and suspended solids.

43 The term “**storage time**” means the period of time from cure date to the limit date that a rubber hose or
44 hose assembly may be stored under proper conditions and be suitable for service.

- 1 The term “**supernatant**” means the fluid portion of waste in a storage tank.
- 2 The term “**tank system**” means a dangerous waste storage or treatment tank and its associated ancillary
3 equipment and containment system. [[WAC 173-303-040](#)]
- 4 The term “**temporary waste transfer line**” means a line that is meant for temporary use that can be
5 removed and possibly used in another location and is in compliance with the requirements for ancillary
6 equipment in [WAC 173-303-640](#).
- 7 The term “**ultrasonic testing**” means a corrosion measurement method used to gauge underground tank
8 wall thickness.
- 9 The term “**unfit-for-use component**” means a tank system component that has been determined through
10 an integrity assessment or other inspection to be no longer capable of storing or treating dangerous waste
11 without posing a threat of release of dangerous waste to the environment.

12 **ACRONYMS**

13 The following acronyms apply to the Double-Shell Tank System permit.

14	ALARA	As low as reasonably achievable
15	DST	double-shell tank
16	HIHTL	hose-in-hose transfer line
17	TWTL	Temporary Waste Transfer Line

- 1 **III.12.A COMPLIANCE WITH PERMIT CONDITIONS**
- 2 **III.12.A.1** The Permittees will comply with all requirements in this Chapter and its Addenda, as set
3 forth in the following conditions, for managing dangerous waste in the Double-Shell
4 Tank (DST) System, and will comply with the requirements in Part I and, to the extent
5 applicable, Part II.
- 6 **III.12.B GENERAL WASTE MANAGEMENT**
- 7 **III.12.B.1** The Permittees are authorized to accept, according to the requirements of the Waste
8 Analysis Plan in Addendum B, dangerous/mixed waste for management in Operating
9 Unit Group 12 dangerous waste management units.
- 10 **III.12.B.2** The DST System can only accept dangerous waste in accordance with the criteria
11 specified in the Waste Analysis Plan in Addendum B.
- 12 **III.12.B.3** The Permittees will treat or store dangerous waste in the DST System as specified in the
13 Waste Analysis Plan (Addendum B).
- 14 **III.12.B.4** The Permittees can store, treat or transfer dangerous waste only in DST System
15 components shown on the latest revision of H-14-107346, sheets 1 through 7, DST
16 Waste Transfer Piping Diagram, that are in compliance with the requirements of [WAC](#)
17 [173-303-640](#).
- 18 **III.12.B.5** The Permittees will maintain the most current revision of H-14-107346, sheets 1 through
19 7, DST Waste Transfer Piping Diagram, in Building 272-AW in accordance with RPP-
20 23814.
- 21 **III.12.B.6** The Permittees will manage wastes at the facility in accordance with the requirements of
22 this Permit, including the performance standard requirements in [WAC 173-303-283](#),
23 incorporated by reference.
- 24 **III.12.B.7** The Permittees will submit a permit modification request to Ecology within 90 days of
25 the effective date of the Permit to incorporate a revised Addendum C, Process
26 Information.
- 27 **III.12.C WASTE ANALYSIS**
- 28 **III.12.C.1** The Permittees will conduct waste analysis to support waste characterizations,
29 acceptance, and management, as specified in the Addendum B, Waste Analysis Plan and
30 in compliance with the requirements of Section II.D and [WAC 173-303-300](#),
31 incorporated by reference.
- 32 **III.12.C.2** The Waste Analysis Plan will comply with the requirements of [WAC 173-303-300\(5\)](#).
- 33 **III.12.C.3** The Permittees will submit a permit modification to Ecology within 30 days of the
34 effective date of the permit to incorporate a revised Waste Analysis Plan into the DST
35 System permit chapter. The revised Waste Analysis Plan will describe the procedures
36 used to comply with waste analysis requirements. [[WAC 173-303-300\(5\)](#)]
- 37 **III.12.C.4** Changes to the Waste Analysis Plan will be made in accordance with [WAC 173-303-](#)
38 [830\(4\)](#).
- 39 **III.12.C.5** The Permittees will maintain accurate and complete waste profile documentation as
40 specified in Section B.2.2.1 of Addendum B, for every waste stream accepted into the
41 DST System. Inaccurate or incomplete waste analysis information is not a defense for
42 noncompliance by the Permittees with the waste management requirements and
43 conditions in this Permit, or the land disposal restrictions specified in the requirements of
44 [WAC 173-303-140](#), incorporated by reference.

- 1 **III.12.C.5.a** A copy of the waste profile documentation will be kept in the Hanford Facility Operating
2 Record, DST System file. [[WAC 173-303-380\(1\)\(a\)](#)]
- 3 **III.12.C.6** The Permittees will use testing methods according to Permit Condition I.F.1.b. If the
4 most current version of a specific method cannot be used due to ALARA or matrix
5 concerns, the Permittees will obtain Ecology approval for using an alternative or other
6 method.
- 7 **III.12.C.6.a** The Permittees will place the documentation of the justification for using another method
8 and Ecology approval in the Hanford Facility Operating Record, DST System file.
- 9 **III.12.D** **RECORDKEEPING AND REPORTING**
- 10 **III.12.D.1** The Permittees will keep records as required by [WAC 173-303-380](#), and maintain records
11 in the Hanford Facility Operating Record, DST System file, as required by [WAC 173-](#)
12 [303-380](#) and as specified in this chapter and its addenda.
- 13 **III.12.D.2** The Permittees will update and maintain H-14-107346, sheets 1 through 7, DST Waste
14 Transfer Piping Diagram, in accordance with RPP-23814, showing the DST waste
15 transfer system components that are compliant with [WAC 173-303](#), not compliant with
16 [WAC 173-303](#), deferred use components and those components that have a variance from
17 Ecology including those components that are part of the 204-AR Waste Unloading
18 Station.
- 19 **III.12.D.3** The Permittees shall submit a report annually to Ecology identifying changes in the
20 compliance status of DST System noncompliant components as identified in H-14-
21 107346, sheets 1 through 7, DST Waste Transfer Piping Diagram.
- 22 **III.12.D.4** The Permittees shall place updates to engineering drawings listed in Addendum C into
23 the Hanford Facility Operating Record, DST System file.
- 24 **III.12.D.5** The Permittees will keep summary reports and details of all incidents that require
25 implementation of the Contingency Plan in the Hanford Facility Operating Record, DST
26 System file, according to the requirements of Permit Condition II.A.1. [[WAC 173-303-](#)
27 [380\(1\)\(d\)](#)]
- 28 **III.12.E** **SECURITY**
- 29 **III.12.E.1** The Permittees will comply with and maintain the security measures, equipment, and
30 warning signs specified in Addendum E and by the requirements in [WAC 173-303-310](#)
31 and [WAC-173-303-640\(5\)\(d\)](#), incorporated by reference.
- 32 **III.12.F** **PREPAREDNESS AND PREVENTION**
- 33 **III.12.F.1** The Permittees will use and maintain the internal and external communications and
34 emergency equipment specified in Addendum F, in accordance with the requirements of
35 [WAC 173-303-340\(2\)](#), incorporated by reference.
- 36 **III.12.F.2** The Permittees will implement the emergency procedures specified in Addendum K, in
37 the event of a fire, explosion, or release that could threaten human health or the
38 environment, in accordance with the requirements of [WAC 173-303-340](#) and [WAC-173-](#)
39 [303-360](#), incorporated by reference.
- 40 **III.12.F.3** The Permittees will operate and maintain the runoff controls, interlock systems and other
41 systems described in Section F.2 in Addendum F, in accordance with the requirements of
42 [WAC 173-303-640\(5\)](#), incorporated by reference.
- 43

- 1 **III.12.G INSPECTIONS**
- 2 **III.12.G.1** The Permittees will inspect the DST System in accordance with Sections I.1 through I.4,
3 I.6.1 to I.6.5 and Tables I-1 and I-2 in the Inspection Plan in Addendum I. [[WAC 173-](#)
4 [303-640\(6\)](#)]
- 5 **III.12.G.2** The Permittees will place and maintain the inspection records in the Hanford Facility
6 Operating Record, DST System file.
- 7 **III.12.G.3** The Permittees will remedy any problem revealed by inspections on a schedule which
8 prevents hazards to the public health and environment per the requirements of [WAC 173-](#)
9 [303-320\(3\)](#), incorporated by reference.
- 10 **III.12.G.4** Where an inspection reveals a problem that creates a hazard that is imminent or has
11 already occurred, the Permittees will take remedial action immediately.
- 12 **III.12.H CONTINGENCY PLAN**
- 13 **III.12.H.1** The Permittees will comply with Addendum K in addition to the requirements of Permit
14 Condition II.A when applicable. [[WAC 173-303-350](#)]
- 15 **III.12.I TRAINING PLAN**
- 16 **III.12.I.1** The Permittees will comply with the requirements for training in Addendum G, Permit
17 Attachment 5, and in accordance with the requirements of [WAC 173-303-330](#),
18 incorporated by reference.
- 19 **III.12.J CLOSURE**
- 20 **III.12.J.1** The Permittees will close dangerous waste management units in the DST System in
21 accordance with Addendum H, Closure Plan. [[WAC 173-303-610\(4\)](#)]
- 22 **III.12.J.2** The Permittees will complete closure of the DST System in accordance with HFFACO
23 milestone M-42-00A.
- 24 **III.12.K TANK SYSTEMS**
- 25 **III.12.K.1 Waste and Storage Limits**
- 26 **III.12.K.1.a** The Permittees will not transfer waste into DSTs in excess of the capacity of the tanks as
27 listed in Table 1 of Addendum A.
- 28 **III.12.K.1.b** The Permittees will submit a permit modification request to the Part A (Addendum A) for
29 the DST System in accordance with Permit Condition I.C if the capacity decreases or
30 increases for the DST System.
- 31 **III.12.K.2 Waste Transfers**
- 32 **III.12.K.2.a** The Permittees shall use the latest approved revision, in accordance with RPP-23814, of
33 H-14-107346, sheets 1 through 7, DST Waste Transfer Piping Diagram to establish,
34 waste transfer routes using compliant components or components subject to permit
35 condition III.12.K.3.i.
- 36 **III.12.K.2.b** The Permittees will comply with the Waste Transfer Conditions specified in Addendum
37 M and with the requirements of [WAC 173-303-640\(5\)](#), incorporated by reference.
- 38 **III.12.K.2.c** The Permittees may transfer waste into the DST System through tank risers from tanker
39 trucks in accordance with Addendum B and the requirements of [WAC 173-303-395\(4\)](#),
40 incorporated by reference.
- 41 **III.12.K.2.d** A copy of the procedures to demonstrate compliance with the requirements of [WAC 173-](#)
42 [303-395\(4\)](#) will be kept in the Hanford Facility Operating Record, DST System file.

- 1 **III.12.K.2.e** Permittees may not accept waste through the 204-AR Waste Unloading Station until
2 pipeline LIQW-702 connecting Tank TK-1 to the DST System either is replaced by a
3 compliant pipeline or is modified to be in compliance with the requirements of [WAC](#)
4 [173-303-640\(4\)\(f\)](#), incorporated by reference, with the following exception:
- 5 **III.12.K.2.e.i** Ventilation condensate and water to maintain the drain seals in the 204-AR Waste
6 Unloading Station can be stored in Tank TK-1.
- 7 **III.12.K.2.f** The 204-AR Waste Unloading Station transfer line does not currently comply with
8 applicable regulations. Within 24 months of the effective date of the permit, the
9 Permittees must provide a compliance schedule to make this line fit for use or submit a
10 closure plan to close 204-AR Waste Unloading Station as specified in [WAC 173-303-](#)
11 [610](#), incorporated by reference.
- 12 **III.12.K.3 Tank System Integrity**
- 13 **III.12.K.3.a** The Permittees will assess the integrity of all DST System dangerous waste tank systems
14 in accordance with limitations and conditions specified in the requirements of [WAC 173-](#)
15 [303-640\(2\)](#), incorporated by reference.
- 16 **III.12.K.3.b** The Permittees will conduct an integrity assessment for each tank within 10 years of the
17 initial or previous integrity assessment for that tank, unless the IQRPE recommends a
18 more frequent integrity assessment be conducted, in which case the Permittees will
19 conduct the integrity assessment on the IQRPE recommended frequency. The Permittees
20 may request a less frequent integrity assessment schedule through a permit modification
21 request based upon IQRPE findings and recommendations. [[WAC 173-303-640\(2\)\(a\)](#)
22 and [-640\(2\)\(e\)](#)]
- 23 **III.12.K.3.c** Each integrity assessment will be reviewed by an IQRPE and certified in accordance with
24 the requirements of [WAC 173-303-810\(13\)\(a\)](#), incorporated by reference.
- 25 **III.12.K.3.d** The Permittees will conduct the IQRPE assessment and address any findings and
26 implement any recommendations necessary to obtain and maintain IQRPE certification as
27 described in the current revision of RPP-28538, IQRPE Double-Shell Tank Integrity
28 Assessment Report.
- 29 **III.12.K.3.e** The Permittees will issue a report to Ecology addressing the Permittees disposition of all
30 findings and recommendations in the current IQRPE assessment report. The report will
31 be placed into the Hanford Facility Operating Record, DST System file.
- 32 **III.12.K.3.f** The Permittees will maintain the integrity assessment program and schedule for the
33 entire DST System in accordance with the requirements of [WAC 173-303-640\(2\)](#),
34 incorporated by reference. A description of updates to the integrity assessment program
35 and schedule will be submitted to Ecology for review within 60 days of issuance of the
36 update. [[WAC 173-303-815\(2\)\(b\)\(ii\)](#)]
- 37 **III.12.K.3.g** The Permittees will place the integrity assessment program and schedule documentation
38 and updates or changes to the program and schedule into the Hanford Facility Operating
39 Record, DST System file within 60 days of the update or change.
- 40 **III.12.K.3.h** All reports, data and other information used to evaluate the condition of the DST System,
41 including the IQRPE Report, will be kept in the Hanford Facility Operating Record, DST
42 System file, until clean closure is complete and certified.
- 43 **III.12.K.3.i** Permittees may use the following pipelines: SN-277, SN-278, SN-279, SN-280, SL-177,
44 SL-178, SL-179, SN-285, and SN-286, provided that the following requirements are met
45 for that pipeline:

- 1 **III.12.K.3.i.i** Hydraulically leak test the line annually, or prior to use if the line is used less often than
2 once a year. The hydraulic leak testing will be conducted at 150% of the maximum
3 operating pressure during liquid transfers or system flushing, for a minimum of 1 hour.
4 Line can be used if the leak test demonstrates a less than 5% drop after testing for a
5 minimum of 1 hour at 150% of the operating pressure.
- 6 **III.12.K.3.i.ii** Assess material balance for all transfers through the lines.
- 7 **III.12.K.3.i.iii** Alternative leak detection monitoring may be used at the most likely locations for a leak
8 or pooling to occur. When alternative leak detection monitoring is used, documentation
9 of the method of alternative monitoring will be placed in the Hanford Facility Operating
10 Record, DST System file.
- 11 **III.12.K.3.i.iv** Obtain an integrity assessment of the lines that is reviewed and certified by an
12 Independent Qualified Registered Professional Engineer in accordance with the
13 requirements of [WAC 173-303-640\(3\)\(c\)](#), incorporated by reference.
- 14 **III.12.K.3.i.v** Remediate any leaks from the line in accordance with the requirements of [WAC 173-](#)
15 [303-640\(7\)](#), incorporated by reference.
- 16 **III.12.K.3.i.vi** Maintain all reports and data generated from conditions III.12.K.3.i.i through
17 III.12.K.3.i.v in the Hanford Facility Operating Record, DST System file.
- 18 **III.12.K.4 Tank System Design and Construction**
- 19 **III.12.K.4.a** The Permittees will comply with the requirements in [WAC 173-303-640\(3\)](#), incorporated
20 by reference, for the design and construction of any new dangerous waste tank systems or
21 components.
- 22 **III.12.K.4.b** The Permittees will place the design and all supporting documentation related to the
23 permitted system in the Hanford Facility Operating Record, DST System file, until
24 closure of the unit.
- 25 **III.12.K.5 Tank System Installation and Certification**
- 26 **III.12.K.5.a** The Permittees will comply with the requirements in [WAC 173-303-640\(3\)](#), incorporated
27 by reference, for the installation and certification of new equipment.
- 28 **III.12.K.5.b** The Permittees will place the certification and all supporting documentation in the
29 Hanford Facility Operating Record, DST System file, until closure of the unit.
- 30 **III.12.K.6 Tank System Certification of Major Repair**
- 31 **III.12.K.6.a** The Permittees will comply with the requirements in [WAC 173-303-640\(7\)\(f\)](#).
- 32 **III.12.K.6.b** The Permittees will place the certification and all supporting documentation related to the
33 permitted system in the Hanford Facility Operating Record, DST System file, until
34 closure of the unit.
- 35 **III.12.K.7 Tank Management Practices**
- 36 **III.12.K.7.a** The Permittees will properly operate and maintain all DST System facilities and systems
37 of treatment and control which are installed or used by the Permittees to achieve
38 compliance, in accordance with the requirements of [WAC 173-303-810\(6\)](#), incorporated
39 by reference, including the components shown on the most current revision of H-14-
40 107346, Sheets 1 through 7, DST Waste Transfer Piping Diagram.
- 41 **III.12.K.7.b** The Permittees will maintain all labels and signs identifying the waste contained in the
42 DST System in accordance with the requirements of [WAC 173-303-640\(5\)\(d\)](#),
43 incorporated by reference.

- 1 **III.12.K.7.c** The Permittees will maintain the design features of the DST System that prevent the
2 escape into the air of vapors, fumes or other emissions that are acutely or chronically
3 toxic. [WAC 173-303-640(5)(e)]
- 4 **III.12.K.7.d** The Permittees will operate the DST System as designed to prevent the endangerment of
5 the health of employees or the public near the facility. [WAC 173-303-283(3)(i)]
- 6 **III.12.K.7.e** The Permittees will place the most current revision of the Tank Farm Waste Transfer
7 Compatibility Program into the Hanford Facility Operating Record, DST System file,
8 within 7 days after a revision is issued.
- 9 **III.12.K.7.f** The Permittees will place in the Hanford Facility Operating Record, DST System file,
10 waste compatibility assessments for waste transferred into or out of the DST System and
11 for waste transferred between tanks in the DST System within 7 days after the assessment
12 is issued.
- 13 **III.12.K.7.g** A continuous Leak Detection System for each of the 28 DSTs on the Hanford Site shall
14 be composed of the following leak detection devices:
- 15 **III.12.K.7.g.i** Three annulus leak detector probes, conductivity type or equal or better device, placed as
16 equidistantly as possible within the annulus of each DST; and
- 17 **III.12.K.7.g.ii** At least one in-tank surface level monitor installed within the primary tank of each DST
18 on the Hanford site.
- 19 **III.12.K.7.h** The Permittees shall set each adjustable annulus leak detector probe within 0.25 inches
20 from the annulus floor with allowance for normal engineering tolerances.
- 21 **III.12.K.7.i** The Permittees will evaluate an alarm of an annulus leak detection system probe at its set
22 point to determine if it is attributable to operational activities. If the Permittees determine
23 the alarm is not attributable to operational activities, the alarm must be reported to
24 Ecology within 24 hours of the determination.
- 25 **III.12.K.7.j** The Permittees shall operate and maintain all leak detection system devices comprising
26 the leak detection system continuously with the following exceptions:
- 27 **III.12.K.7.j.i** Downtime for preventive maintenance and periodic functional testing shall not exceed 24
28 hours, unless Ecology provides approval for an extended period of time and pre-approved
29 alternative Leak Detection Methods are employed.
- 30 **III.12.K.7.j.ii** Downtime for repair of a leak detection system device discovered to be inoperable or
31 requiring repair shall not normally exceed 90 days.
- 32 **III.12.K.7.j.iii** The Permittees shall notify Ecology of any leak detection device out of service for more
33 than 90 days. This notification shall include a schedule for repair and return to service of
34 the device as soon as possible.
- 35 **III.12.K.7.k** The Permittees shall document all maintenance, repair, and functional testing activities of
36 the leak detection system in the Hanford Facility Operating Record, DST System file.
- 37 **III.12.K.7.l** The Permittees may supplement the leak detection system by operation of annulus
38 ventilation system continuous air monitors (CAMS). All DSTs equipped with operating
39 annulus CAMS will be monitored daily for airborne releases into the annulus that could
40 give an indication of a leak from the primary tank structure into the annulus.
- 41 **III.12.K.7.l.i** The Permittees will set the CAMs to alarm at set points no greater than 3,000 counts per
42 minute.
- 43 **III.12.K.7.l.ii** Annulus CAM readings exceeding their alarm set point, and which the Permittees have
44 determined are not attributable to atmospheric radon or operational activities (e.g.,
45 annulus contamination due to vacuum imbalance between annulus and primary tank

- 1 ventilation system, or other operational activities), must be reported to Ecology within 24
2 hours of the time that this detection is made.
- 3 **III.12.K.7.m** The Permittees must design, install, maintain and operate the leak detection systems as
4 described in Addendum C to meet the requirements of [WAC 173-303-640\(4\)\(b\)](#) and (c),
5 incorporated by reference.
- 6 **III.12.K.7.n** The Permittees may use an in-pit video camera during maintenance and testing of in-pit
7 equipment or waste transfers as an equivalent leak detection method as long as using the
8 camera meets the requirements of [WAC 173-303-640\(4\)\(b\)\(iii\)](#), incorporated by
9 reference.
- 10 **III.12.K.7.o** The Permittees will comply with the Emergency Pumping Guide in Addendum J and the
11 requirements of [WAC 173-303-640\(7\)](#), incorporated by reference.
- 12 **III.12.K.7.p** The Permittees will comply with the loading and unloading requirements listed in
13 Addendum C and the requirements of [WAC 173-303-395\(4\)](#), incorporated by reference.
- 14 **III.12.K.7.q** The Permittees will notify Ecology within 24 hours should waste be discovered in a
15 deferred use line or should waste be inadvertently transferred into a noncompliant
16 component. Within 7 days of discovery of the waste, the Permittees shall provide
17 Ecology with the process and schedule for removal of the waste. The Permittees shall
18 place all associated documentation into the Hanford Facility Operating Record, DST
19 System file.
- 20 **III.12.L** **TEMPORARY WASTE TRANSFER LINE MANAGEMENT**
- 21 **III.12.L.1** The Permittees will comply with the following requirements for management of
22 temporary waste transfer lines:
- 23 **III.12.L.1.a** The Permittees will place a description of the installation, maintenance and operation of
24 each DST System temporary waste transfer line in the Hanford Facility Operating
25 Record, DST System file.
- 26 **III.12.L.1.b** The Permittees will have leak detection sufficient to meet the requirements of [WAC 173-](#)
27 [303-640\(4\)\(c\)](#), incorporated by reference, for each DST temporary waste transfer line.
28 Documentation of the leak detection method will be kept in the Hanford Facility
29 Operating Record, DST System file.
- 30 **III.12.L.1.c** Prior to use of a temporary waste transfer line, the Permittees will have IQRPE
31 certification, that having considered the entire configuration of the system impacted by
32 the use of the temporary waste transfer line, attests the temporary waste transfer line is fit
33 for use per the requirements of [WAC 173-303-640\(4\)\(b\)](#) and (c).
- 34 **III.12.L.2** The Permittees will comply with the following requirements for hose-in-hose transfer
35 line (HIHTL) temporary waste transfer lines:
- 36 **III.12.L.2.a** The primary document, Temporary Waste Transfer Line Management Program Plan,
37 RPP-12711, latest approved version, is incorporated by reference into this permit and is
38 fully enforceable.
- 39 **III.12.L.2.b** The Permittees shall implement the latest approved RPP-12711, Temporary Waste
40 Transfer Line Management Program Plan within 90 days of the effective date of this
41 permit.
- 42 **III.12.L.2.b.i** Any changes made to RPP-12711, except changes to Tables A1 and A2 must be
43 approved by Ecology.
- 44 **III.12.L.2.b.ii** The Permittees will place the latest approved version of RPP-12711 in the Hanford
45 Facility Operating Record, DST System file within 7 days after its approval.

- 1 **III.12.L.2.c** The Permittees will update the HIHTL tracking system information pursuant to RPP-
2 12711, for the DST System temporary waste transfer lines within 20 days of the end of
3 each quarter. The tracking system information will be maintained in the Hanford Facility
4 Operating Record, DST System file. A copy of the quarterly updates will be submitted to
5 Ecology within 30 days after the end of the quarter.
- 6 **III.12.L.2.d** The Permittees will submit formal notification of the determination to extend the service
7 life of an HIHTL to Ecology.
- 8 **III.12.L.2.d.i** The Permittees will place the completed extension waiver package into the Hanford
9 Facility Operating Record, DST System file.

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