

**LIQUID EFFLUENT RETENTION FACILITY & 200 AREA EFFLUENT TREATMENT FACILITY
PART III, OPERATING UNIT GROUP 3
UNIT-SPECIFIC PERMIT CONDITIONS**

CHANGE CONTROL LOG

Change Control Logs ensure that changes to this unit are performed in a methodical, controlled, coordinated, and transparent manner. Each unit addendum will have its own change control log with a modification history table. The “**Modification Number**” represents Ecology’s method for tracking the different versions of the permit. This log will serve as an up to date record of modifications and version history of the unit.

Modification History Table

Modification Date	Modification Number
06/13/2022	8C.2021.13F
09/23/2021	8C.2021.2F
09/09/2021	PCN-LERF/ETF-2021-03 (8C.2021.Q3)
06/28/2021	8C.2021.7F
03/10/2021	8C.2020.8F
11/09/2020	PCN-LERF/ETF-2020-04 (8C.2020.Q4)
10/20/2020	PCN-LERF/ETF-2020-03 (8C.2020.Q4)
06/25/2020	PCN-LERF/ETF-2020-01 (8C.2020.Q2)
06/24/2020	8C.2020.5F
05/19/2020	8C.2020.6F
04/30/2019	PCN-LERF/ETF-2019-01 (8C.2019.Q2)
12/7/2018	PCN-LERF/ETF-2018-01 (8C.2018.Q4)
01/23/2018	PCN-LERF/ETF-2017-02 (8C.2018.Q1)
01/23/2018	PCN-LERF/ETF-2017-01 (8C.2018.Q1)
10/25/2017	8C.2017.3F
08/25/2016	8C.2016.Q2

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2 **LIQUID EFFLUENT RETENTION FACILITY & 200 AREA EFFLUENT TREATMENT FACILITY**
3 **PART III, OPERATING UNIT GROUP 3**
4 **UNIT-SPECIFIC PERMIT CONDITIONS**
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2 **PART III, OPERATING UNIT GROUP 3, UNIT-SPECIFIC PERMIT CONDITIONS**
3 **LIQUID EFFLUENT RETENTION FACILITY & 200 AREA EFFLUENT TREATMENT FACILITY**

4
5 **UNIT DESCRIPTION**

6 The Liquid Effluent Retention Facility (LERF) and 200 Area Effluent Treatment Facility (200 Area ETF)
7 consists of an aqueous waste treatment system that provides treatment, storage integral to the treatment
8 process, and storage of secondary wastes from the treatment process for a variety of aqueous mixed
9 waste. The 200 Area ETF is located in the 200 East Area. Aqueous wastes managed by the 200 Area ETF
10 include process condensate from the LERF and 200 Area ETF and other aqueous waste generated from
11 on-site remediation and waste management activities.

12 The LERF consists of four lined surface impoundments, or basins. Aqueous waste from LERF is pumped
13 to the 200 Area ETF for treatment in a series of process units, or systems, that remove or destroy
14 essentially all of the dangerous waste constituents. The treated effluent is discharged to a State-Approved
15 Land Disposal Site (SALDS) north of the 200 West Area, under the authority of a Washington State Waste
16 Discharge Permit Number ST0004500 (Ecology 2014) and 200 Area ETF Delisting (40 Code of Federal
17 Regulations [CFR] 261, Appendix IX, Table 2). Construction of the LERF began in 1990. Waste
18 management operations began at LERF in April 1994. Construction of the 200 Area ETF began in 1992.
19 Waste management operations began at 200 Area ETF in November of 1995.

20 This chapter provides Unit-Specific Permit Conditions applicable to the dangerous waste management
21 units for LERF and 200 Area ETF.

22 **LIST OF ADDENDA SPECIFIC TO OPERATING UNIT GROUP 3**

- 23 Addendum A Part A Form
24 Addendum B Waste Analysis Plan
25 Addendum C Process Information
26 Addendum D Groundwater Monitoring
27 Addendum E Security Requirements
28 Addendum F Preparedness and Prevention
29 Addendum G Personnel Training
30 Addendum H Closure Plan
31 Addendum I Inspection Requirements
32 Addendum J Contingency Plan

33 **DEFINITIONS**

34 **Flow Equalization:** Flow equalization is the process by which concentrations of constituents are
35 homogenized through blending of the wastewater in the LERF Basins, resulting in a more uniform
36 loading of constituents prior to entering the appropriate treatment train.

37 **State and Federal Delisting Actions:** The state delisting action pursuant to Washington Administrative
38 Code (WAC) 173-303-910(3), August 8, 2005, and the federal delisting action appearing in 40 CFR 261,
39 Appendix IX, Table 2 applicable to the United States Department of Energy (DOE), Richland,
40 Washington.

41 **ACRONYMS**

42 LERF and 200 Area ETF 200 Area Liquids Processing Facility

- 1 **III.3.A COMPLIANCE WITH UNIT-SPECIFIC PERMIT CONDITIONS**
- 2 **III.3.A.1** The Permittees will comply with all Permit Conditions in this chapter and its addendums
3 with respect to dangerous waste management and dangerous waste management units in
4 LERF and 200 Area ETF, in addition to requirements in Permit Part I and Part II.
- 5 **III.3.B GENERAL WASTE MANAGEMENT**
- 6 **III.3.B.1** The Permittees are authorized to accept dangerous and/or mixed waste for treatment in
7 dangerous waste management units that satisfies the waste acceptance criteria in Permit
8 Addendum B according to the waste acceptance procedures in Permit Addendum B.
9 (WAC 173-303-300)
- 10 **III.3.B.2** The Permittees are authorized to manage dangerous and/or mixed wastes physically
11 present in the dangerous waste management units in LERF and 200 Area ETF as of the
12 effective date of this Permit according to the requirements of Permit Condition III.3.B.1.
- 13 **III.3.B.3** The Permittees are authorized to treat and/or store dangerous/mixed waste in the
14 dangerous waste management units in LERF and 200 Area ETF according to the
15 following requirements:
- 16 **III.3.B.3.a** The Permittees are authorized to treat, and store as necessary in support of treatment,
17 dangerous waste in the 200 Area ETF tank systems identified in Permit Addendum C,
18 Section C.2, and Section C.4 according to the Permit Conditions of this chapter.
- 19 **III.3.B.3.b** The Permittees are authorized to store and treat those dangerous and/or mixed waste
20 identified in Permit Addendum C, Section C.3, in containers according to the
21 requirements of this chapter. All container management activities pursuant to this Permit
22 Condition will take place within the container storage areas or within the 200 Area ETF
23 process area identified in Permit Addendum C, Figures C-2 and C-3.
- 24 **III.3.B.3.c** Treatment in containers authorized by Permit Condition III.3.B.3.b is limited to decanting
25 of free liquids, and addition of sorbents to free liquids. The Permittees will ensure that
26 sorbents are compatible with wastes and the containers. Sorbents will be compliant with
27 the requirements of WAC 173-303-140(4)(b)(iv), incorporated by reference.
- 28 **III.3.B.3.d** The Permittees are authorized to treat aqueous waste in LERF Basins (Basins 41, 42, 43
29 and 44) subject to the following requirements:
- 30 **III.3.B.3.d.1** Following treatment in a LERF Basin, aqueous wastes must be treated in 200 Area ETF
31 according to Permit Conditions III.3.B.3.a through c; [40 CFR 268.4(2)(iii), incorporated
32 by reference by WAC 173-303-140].
- 33 **III.3.B.3.d.2** The Permittees must ensure that for each basin, either supernatant is removed on a
34 flow-through basis, to meet the requirement of 40 CFR 268.4(a)(2)(ii) incorporated by
35 reference by WAC 173-303-140, or incoming waste is shown to not contain solids by
36 either: (1) sampling results showing the waste does not contain detectable solids, or (2)
37 filtering through a 10 micron filter; [WAC 173-303-815(2)(b)(ii)].
- 38 **III.3.B.4** The Permittees will maintain the physical structure of the LERF and 200 Area ETF as
39 documented in the applicable sections of Permit Addendum C, Section C.1 and
40 Section C.2. [WAC 173-303-630(7), WAC 173-303-640(3), WAC 173-303-640(4),
41 WAC 173-303-650]

- 1 **III.3.B.5** The Permittees are authorized to use treated effluent for recycle/makeup water purposes
2 at the 200 Area ETF as outlined in Permit Addendum C, Section C.2.5.5, and the letters
3 dated August 19, 2005, Environmental Protection Agency (EPA) Region 10 to Keith A.
4 Klein; and August 8, 2005, Department of Ecology (Ecology) to Keith A. Klein.
5 [WAC 173-303-815(2)(b)(ii)]
- 6 **III.3.B.6** The Permittees will maintain and operate systems for the 200 Area ETF documented in
7 Permit Addendum C, Section C.2.5 as necessary for proper operation of the 200 Area
8 ETF, compliance with the conditions of this Permit, and protection of human health and
9 the environment. For purposes of this Permit Condition, the Monitor and Control System
10 (MCS) documented in Permit Addendum C, Section C.2.5.1, is considered to include all
11 indicators, sensors, transducers, actuators and other control devices connected to but
12 remote from the centralized MCS computer.
- 13 **III.3.B.7** The Permittees must complete the following requirements prior to acceptance for
14 treatment in 200 Area ETF aqueous waste streams with listed waste numbers subject to
15 the requirements of the State and Federal Delisting; [WAC 173-303-815(2)(b)(ii)].
- 16 **III.3.B.7.a** The Permittees will prepare a written waste processing strategy according to the
17 requirements of the State and Federal Delisting Actions Conditions (1)(a)(ii) and (1)(b),
18 incorporated by reference, and Permit Addendum B, Section B.2.2.2.
- 19 **III.3.B.7.b** The waste processing strategy required by Permit Condition III.3.B.7.a, must document
20 the proposed processing configuration for the 200 Area ETF, operating conditions for
21 each processing unit, and the expected treated effluent characteristics based on the
22 process model and treatability envelope data required by State and Federal Delisting
23 Conditions (1)(a)(ii) and (1)(b).
- 24 **III.3.B.7.c** The written waste processing strategy required by Permit Condition III.3.B.7.a must
25 demonstrate that the projected treated effluent characteristics satisfy the delisting
26 exclusion limits in State and Federal Delisting Condition (5) of the State and Federal
27 Delisting Actions, and the discharge limits of the Discharge Permit Number ST0004500
28 (Ecology 2014).
- 29 **III.3.B.7.d** The Permittees will place a copy of the written waste processing strategy required by
30 Permit Condition III.3.B.7.a in the Hanford Facility Operating Record, LERF and
31 200 Area ETF file as part of the documentation of waste streams accepted for
32 management at the 200 Area ETF.
- 33 **III.3.B.8** Treatment of aqueous waste streams in the 200 Area ETF with listed waste numbers that
34 are subject to the requirements of the State and Federal Delisting Actions must comply
35 with the requirements of State and Federal Delisting Condition (1)(c), incorporated by
36 reference. [WAC 173-303-815(2)(b)(ii)]
- 37 **III.3.B.9** The Permittees will manage treated effluent in the final verification tanks according to the
38 requirements of the State and Federal Delisting Conditions (3) and (5), incorporated by
39 reference. [WAC 173-303-815(2)(b)(ii)]
- 40 **III.3.B.10** The Permittees will manage treated effluent from the 200 Area ETF according to the
41 requirements of the Discharge Permit Number ST0004500 (Ecology 2014) and State and
42 Federal Delisting Condition (7). [WAC 173-303-815(2)(b)(ii)]

- 1 **III.3.B.11** The Permittees will ensure compliance with treatment standards (40 CFR 268,
2 incorporated by reference by WAC 173-303-140) applicable to treated effluent prior to
3 discharge to the SALDS, the delisting criteria at 40 CFR 261, Appendix IX, Table 2, and
4 the corresponding state-approved delisting (dated August 8, 2005, all incorporated by
5 reference). Sampling and analysis necessary for these demonstrations must meet the
6 corresponding requirements in Permit Addendum B. [WAC 173-303-140,
7 WAC 173-303-815(2)(b)(ii)]
- 8 **III.3.C WASTE ANALYSIS**
- 9 **III.3.C.1** The Permittees will comply with requirements in Permit Addendum B for sampling and
10 analysis of all dangerous and/or mixed waste required by conditions in this chapter.
11 (WAC 173-303-300)
- 12 **III.3.C.2** The Permittees will have an accurate and complete waste profile as described in Permit
13 Addendum B, Section B.2.1.2, for every waste stream accepted for management in LERF
14 and 200 Area ETF dangerous waste management units. [WAC 173-303-380(1)(a), (b)]
- 15 **III.3.C.3** The Permittees will place a copy of each waste profile required by Permit Condition
16 III.3.C.2 in the Hanford Facility Operating Record, LERF and 200 Area ETF file required
17 by Permit Condition II.I.1.j. [WAC 173-303-380(1)(a), (b)]
- 18 **III.3.C.4** The Permittees will make a copy of the waste profile required by Permit Condition
19 III.3.C.2 available upon request. [WAC 173-303-380(1)(a), (b)]
- 20 **III.3.C.5** Records and results of waste analysis described in this Permit will be maintained in the
21 Hanford Facility Operating Record, LERF and 200 Area ETF file required by Permit
22 Condition II.I.1.b. [WAC 173-303-380(1)(a), (b)]
- 23 **III.3.D RECORDKEEPING AND REPORTING**
- 24 **III.3.D.1** The Permittees will place the following into the Hanford Facility Operating Record,
25 LERF and 200 Area ETF file required by Permit Condition II.I.1:
- 26 **III.3.D.1.a** Records required by WAC 173-303-380(1)(k), and (o) incorporated by reference.
- 27 **III.3.D.1.b** Records and results of waste analysis, waste determinations (as required by Subpart CC)
28 and trial tests required by WAC 173-303-300, *General waste analysis*, and by
29 40 CFR §264.1034, §264.1063, §264.1083, §265.1034, §265.1063, §265.1084, §268.4(a),
30 and §268.7; [WAC 173-303-310(2)].
- 31 **III.3.D.1.c** An inspection log, summarizing inspections conducted pursuant to Permit Condition
32 III.3.H.1; [WAC 173-303-380(1)(e)].
- 33 **III.3.D.1.d** Records required by the State and Federal Delisting Condition (6), incorporated by
34 reference; [WAC 173-303-815(2)(b)(ii)].
- 35 **III.3.D.1.e** Engineering calculations for 200 Area ETF Process Vents volatile organic constituents
36 emissions required by Permit Condition III.3.P.2.g.
- 37 **III.3.E SECURITY**
- 38 **III.3.E.1** The Permittees comply with the Security requirements specific to the LERF and 200 Area
39 ETF in Addendum E and Permit Attachment 3 as required by Permit Condition II.M.
40 [WAC 173-303-310(2)]
- 41 **III.3.F PREPAREDNESS AND PREVENTION**
- 42 **III.3.F.1** The Permittees will comply with the Preparedness and Prevention requirements specific
43 to LERF and 200 Area ETF in Addendum F. (WAC 173-303-340)

- 1 **III.3.G CONTINGENCY PLAN**
- 2 **III.3.G.1** The Permittees will comply with Addendum J, “Contingency Plan,” in addition to the
3 requirements of Permit Condition II.A when applicable. (WAC 173-303-350)
- 4 **III.3.H INSPECTIONS**
- 5 **III.3.H.1** The Permittees will comply with Addendum I in addition to the requirements of Permit
6 Condition II.X. (WAC 173-303-320)
- 7 **III.3.I TRAINING PLAN**
- 8 **III.3.I.1** The Permittees will include the training requirements described in Addendum G of this
9 chapter specific to the dangerous waste management units and waste management
10 activities at LERF and 200 Area ETF into the written training plan required by Permit
11 Condition II.C.
- 12 **III.3.J GENERAL REQUIREMENTS**
- 13 **III.3.J.1** The Permittees will comply with the requirements of WAC 173-303-395(1), incorporated
14 by reference, for prevention of reaction of ignitable, reactive, or incompatible wastes.
- 15 **III.3.J.2** RESERVED
- 16 **III.3.J.2.a** RESERVED
- 17 **III.3.J.2.b** RESERVED
- 18 **III.3.J.2.c** RESERVED
- 19 **III.3.J.2.d** The upgraded leak detection system must be operational prior to waste transfers from
20 WTP to the LERF.
- 21 **III.3.J.2.e** Tightness test for WTP-EMF transfer line to LERF Catch Basins 242AL-41 and
22 242AL-42 (4”-WTP-001-M17) will be performed at a frequency of every 10 years upon
23 completion of Permit Condition III.3.J.2.e.
- 24 **III.3.J.3** Modifications to the leak detection system for the WTP-EMF transfer line to LERF Catch
25 Basins 242AL-41 and 242AL-42 (4”-WTP-001-M17) will be made in accordance with
26 Permit Condition I.C.3.
- 27 **III.3.J.3.a** The Permittee shall submit to Ecology a report listing what are determined to be false
28 leak detector alarms for LDA-015, LDA-010, and LDA-006, and the instrument number
29 of the leak detector that alarmed (LDE-015, LDE-010, and LDE-006). The report shall be
30 submitted no later than 15 months after Ecology accepts the installation of the new leak
31 detectors. The report shall include the Permittee conclusion if false alarms occurred due
32 to condensate. The report shall be submitted annually until DOE can demonstrate that
33 false alarms due to condensate are not impacting the use and reliability of the system.
- 34 **III.3.J.4** The low point electronic leak detection system for the WTP-EMF transfer line to LERF
35 Catch Basins 242AL-41 and 242AL-42 (4”-WTP-001-M17) shall be maintained and
36 operated continuously when in use with the following exceptions:
- 37 **III.3.J.4.a** If the electronic leak detection system, LDE-42-2 and LED-41-4, is not available, visual
38 inspection can be employed at LERF Catch Basins 242AL-41 and 242AL-42 sight
39 glasses (FG-60M-003 and/or FG-80W-001 respectively).

- 1 **III.3.J.4.b** The department must be notified if the electronic leak detection system is out of service
2 for more than 90 days. This notification must include a schedule for repairing and
3 returning the system to service within 90 days from notification, or longer if approved by
4 the department.
- 5 **III.3.J.4.c** The Permittee shall submit to Ecology a report listing the time and date of all leak
6 detector alarms, and the instrument number of the leak detector that alarmed. The report
7 shall be submitted quarterly for one year after installation of the new leak detectors, and
8 then annually thereafter until issues with false alarms are determined to not be a problem
9 and Ecology agrees to a permit modification to delete the requirement.
- 10 **III.3.J.5** Prior to receipt of any dangerous waste in the brine loadout system, the Permittees will
11 submit a revised Addendum A, "Part A Form," to include photograph of the
12 2025E Container Storage and Treatment Area.
- 13 **III.3.J.6** Prior to receipt of any dangerous waste in the brine loadout system, the Permittees will
14 submit functional testing for the automatic shutoff valves (60J-334 and 60J-335) to the
15 department.
- 16 **III.3.J.7** Prior to operations of the brine loadout system, the Permittees must provide to Ecology
17 for review and approval information demonstrating that the liquid brine waste stream will
18 be shipped to authorized treatment, storage, or disposal facilities for treatment and
19 disposal.
- 20 **III.3.J.8** The brine loadout system must meet land disposal restriction requirements as specified in
21 Permit Condition II.S and the Hanford Federal Facility Agreement and Consent Order.
- 22 **III.3.J.9** Prior to processing waste through the steam stripper system, the Permittees must provide
23 to Ecology the treatment and disposal pathway for the concentrated acetonitrile distillate
24 secondary waste stream.
- 25 **III.3.K CLOSURE**
- 26 **III.3.K.1** The Permittees will close dangerous waste management units in the LERF and 200 Area
27 ETF in accordance with Addendum H, "Closure Plan," and Permit Condition II.J.
28 [WAC 173-303-610(3)(a)]
- 29 **III.3.L POST-CLOSURE – RESERVED**
- 30 **III.3.M CRITICAL SYSTEMS – RESERVED**
- 31 **III.3.N RESERVED**
- 32 **III.3.O CONTAINERS**
- 33 **III.3.O.1** Container Storage and Treatment Unit Standards
- 34 **III.3.O.1.a** As part of or in addition to the requirements of Permit Condition III.3.B.2, the Permittees
35 will ensure the integrity of container storage secondary containment and the chemically
36 resistant coating described in Addendum C, Section C.3.10.1 as necessary to ensure any
37 spills or releases to secondary containment do not migrate to the underlying concrete or
38 soils.
- 39 **III.3.O.1.a.1** Include documentation of any damage and subsequent repairs in the Hanford Facility
40 Operating Record, LERF and 200 Area ETF file required by Permit Condition II.I.I.
- 41 **III.3.O.2** Container Management Standards
- 42 **III.3.O.2.a** The Permittees will maintain and manage wastes in accordance with the requirements of
43 Addendum C, Section C.3.8. [WAC 173-303-630(2)]

- 1 **III.3.O.2.b** The Permittees will label containers in accordance with the requirements of
2 Addendum C, Section C.3.9. [WAC 173-303-630(3)]
- 3 **III.3.O.2.c** The Permittees will comply with the requirements for managing wastes in containers in
4 WAC 173-303-630(5), incorporated by reference.
- 5 **III.3.O.2.d** The Permittees will ensure wastes are compatible with containers and with other wastes
6 stored or treated in containers within the 200 Area ETF according to the requirements of
7 Addendum C, Section C.3.7. [WAC 173-303-630(4), WAC 173-303-630(9)]
- 8 **III.3.O.2.e** The Permittees may treat wastes in containers via decanting of free liquids and addition
9 of sorbents. The Permittees may not use addition of sorbents for purposes of changing the
10 treatability group of a waste with respect to the land disposal restriction standards of
11 40 CFR 268, incorporated by reference by WAC 173-303-140.
- 12 **III.3.O.2.f** The Permittees will remove any accumulated liquids from container storage areas in
13 200 Area ETF according to the requirements of Addendum C, Section C.3.10 and
14 C.3.10.2, to ensure containers are not in contact with free liquids and to prevent overflow
15 of the container storage area secondary containment.
- 16 **III.3.O.2.g** The Permittees will comply with the requirements for air emissions from containers in
17 Addendum C, Section C.6.3.2. (WAC 173-303-692)
- 18 **III.3.O.2.h** The accumulation of liquid waste stored in the 2025ED Load-In Station will not be
19 greater than the capacity of the containment pit and sump. [WAC 173-303-630(7)(b),
20 WAC 173-303-630(7)(c)]
- 21 **III.3.O.2.i** Containers with free liquids must be placed on spill pallets when placed in the Outdoor
22 Container Storage Area. (WAC 173-303-630)
- 23 **III.3.P TANK SYSTEMS**
- 24 **III.3.P.1 Tank System Requirements**
- 25 **III.3.P.1.a** The Permittees will develop a schedule for conducting Integrity Assessments (IA). The
26 schedule will meet the requirements of Addendum I, Section I.1.2.2, and consideration of
27 the factors in WAC 173-303-640(2)(e) or WAC 173-303-640(3)(b) as applicable:
- 28 **III.3.P.1.b** The Permittees will maintain a copy of the schedule required by Permit Condition
29 III.3.P.1.a, in the Hanford Facility Operating Record, LERF and 200 Area ETF file, and
30 conduct periodic integrity assessments according to the schedule. The Permittees will
31 document results of integrity assessments conducted according to the IA in the Hanford
32 Facility Operating Record, LERF and 200 Area ETF file.
- 33 **III.3.P.1.c** If a tank system is found to be leaking, or is unfit for use, the Permittees must follow the
34 requirements of WAC 173-303-640(7), incorporated by reference.
35 [WAC 173-303-640(3)(b)]
- 36 **III.3.P.2 Tank System Operating Requirements**
- 37 **III.3.P.2.a** The Permittees will comply with the requirements of WAC 173-303-640(5)(a),
38 incorporated by reference.
- 39 **III.3.P.2.b** The Permittees will comply with the requirements of Addendum C, Section C.4.4.2.
40 [WAC 173-303-640(5)(b)]
- 41 **III.3.P.2.c** The Permittees will comply with the requirements of Addendum C, Section C.4.5.
42 [WAC 173-303-640(5)(d)]

- 1 **III.3.P.2.d** The Permittees will comply with the requirements of WAC 173-303-640(7), incorporated
2 by reference, in response to spills or leaks from tanks systems at 200 Area ETF.
3 [WAC 173-303-640(5)(c)]
- 4 **III.3.P.2.e** The Permittees will ensure that the Waste Processing Strategy required by
5 Permit Condition III.3.B.7.a, provides for the immediate treatment or blending of waste
6 accepted for management at the 200 Area ETF such that the resulting waste or mixture is
7 no longer reactive or ignitable when further managed in 200 Area ETF tank systems.
8 [WAC 173-303-640(9)]
- 9 **III.3.P.2.f** The Permittees will comply with the requirements of WAC 173-303-640(10),
10 incorporated by reference.
- 11 **III.3.P.2.g** The Permittees will document their contribution to sitewide volatile organic compounds
12 (VOCs) emissions pursuant to Permit Condition II.AA, *Air Emission Standards for*
13 *Process Vents* by determining actual emission rates VOCs at ETF for each campaign. The
14 permittees will determine the hourly and 12-month rolling total VOC emissions from all
15 affected process vents at ETF based on engineering calculations or performance tests
16 using actual operating parameters and processing times for each campaign. If
17 performance tests are used to determine vent emissions, emission reductions, or total
18 organic compound concentrations achieved by add-on control devices, the performance
19 tests must conform with the requirements of 40 CFR 264.1034(c). Performance test
20 results, if used, and engineering calculations will be documented in the Hanford Facility
21 Operating Record, LERF and 200 Area ETF file.
- 22 **III.3.Q SURFACE IMPOUNDMENTS**
- 23 **III.3.Q.1** The Permittees will maintain the four LERF Basins according to the requirements of
24 WAC 173-303-650(2)(f), incorporated by reference.
- 25 **III.3.Q.2** The Permittees will operate the LERF Basins according to the requirements of
26 Addendum C, Section C.5.3, and Addendum I, Section I.1.2.3.1 to prevent overtopping.
27 [WAC 173-303-650(2)(c)]
- 28 **III.3.Q.3** The Permittees will develop and maintain, and operate the LERF Basins to ensure that
29 any flow of waste into the impoundment can be immediately shut off in the event of
30 overtopping or liner failure. [WAC 173-303-650(2)(d)]
- 31 **III.3.Q.4** The Permittees will comply with the requirements of WAC 173-303-650(2)(g),
32 incorporated by reference.
- 33 **III.3.Q.5** The Permittees will comply with the requirements of WAC 173-303-650(4)(b),
34 incorporated by reference.
- 35 **III.3.Q.6** The Permittees will comply with the requirements of WAC 173-303-650(4)(c),
36 incorporated by reference. The certification required by this Permit Condition must be
37 provided to Ecology no later than seven calendar days after the date of the certification. A
38 copy of the certification will be placed in the Hanford Facility Operating Record, LERF
39 and 200 Area ETF file required by Permit Condition II.I.1. [WAC 173-303-650(4)(c)]
- 40 **III.3.Q.7** The Permittees will comply with the requirements of WAC 173-303-650(5)(b),
41 incorporated by reference, in response to events in WAC 173-303-650(5)(a), incorporated
42 by reference.
- 43 **III.3.Q.8** The Permittees will comply with the requirements of WAC 173-303-650(5)(d) for any
44 LERF Basin that has been removed from service in accordance with Permit Condition
45 III.3.Q.7 that the Permittees will restore to service. [WAC 173-303-650(5)(d)]

- 1 **III.3.Q.9** The Permittees will close any LERF Basin removed from service in accordance with the
2 requirements of Permit Condition III.3.Q.7 or a basin that cannot be repaired or that the
3 Permittees will not to return to service. [WAC 173-303-650(5)(e)]
- 4 **III.3.Q.10** The Permittees will comply with the requirements of Addendum C, Section C.5.10 with
5 respect to management of ignitable or reactive wastes in the LERF Basins.
6 [WAC 173-303-650(7)]
- 7 **III.3.Q.11** The Permittees can place incompatible wastes and materials in the same LERF Basin
8 only if in compliance with the requirements of WAC 173-303-395(1)(b), (c).
9 [WAC 173-303-650(8)]
- 10 **III.3.Q.12** The Permittees will use the action leakage rate in Addendum C, Section C.5.8, for
11 operation of LERF Basins, and comply with the requirements of
12 WAC 173-303-650(10)(b). [WAC 173-303-650(10)]
- 13 **III.3.Q.13** The Permittees will comply with the requirements of WAC 173-303-650(11),
14 incorporated by reference.
- 15 **III.3.Q.14** The Permittees will comply with the requirements of 40 CFR 264, Subpart CC,
16 incorporated by reference by WAC 173-303-692.
- 17 **III.3.Q.15** The Permittees will submit a certification by an independent qualified registered
18 professional engineer attesting to LERF Basin 41 structural integrity of the basin's dikes,
19 liners, and cover systems, as required by WAC 173-303-650(4)(a) and WAC 173-303-
20 806(4)(d)(v). This certification must be provided to Ecology prior to receiving waste at
21 Basin 41. A copy of these certifications will be placed in the Hanford Facility Operating
22 Record, LERF and 200 Area ETF file required by Permit Condition II.I.1.
- 23 **III.3.Q.16** Prior to receipt of any dangerous waste into the LERF Basin 41, the Permittees shall
24 comply with Permit Condition III.3.R.5.
- 25 **III.3.R** **GROUNDWATER**
- 26 **III.3.R.1** The Permittees will comply with the requirements of Addendum D, "Groundwater
27 Monitoring Plan." (WAC 173-303-645)
- 28 **III.3.R.2** All wells constructed pursuant to this Permit will be constructed in compliance with
29 Chapter 173-160 WAC incorporated by reference through WAC 173-303-645(8)(c).
- 30 **III.3.R.3** Maintain the *Liquid Effluent Retention Facility Engineering Evaluation* report in the
31 Hanford Facility Operating Record, LERF and 200 Area ETF, which satisfies the
32 requirements in WAC 173-303-806 and -645.
- 33 **III.3.R.4** Prior to receipt of WTP waste into the LERF, the permittees shall provide an updated
34 *Liquid Effluent Retention Facility Engineering Evaluation* report and update as applicable
35 the Addendum D, "Groundwater Monitoring Plan."
- 36 **III.3.R.5** Prior to receipt of waste water into LERF Basin 41, a new groundwater well,
37 representative of the groundwater flow around the LERF Basin 41, shall be installed,
38 deemed operational and added to the Permit via a Class 2 permit modification. The
39 Class 2 permit modification shall include an updated Addendum D, "Groundwater
40 Monitoring Plan," as required by Permit Condition III.3.R.4.

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