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PART V, CLOSURE GROUP 19 CONDITIONS
HEXONE STORAGE AND TREATMENT FACILITY

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1 **PART V, CLOSURE GROUP 19 CONDITIONS**
2 **HEXONE STORAGE AND TREATMENT FACILITY**

3 **UNIT DESCRIPTION**

4 The Hexone Storage and Treatment Facility (HSTF) is a non-operational treatment, storage, and/or
5 disposal (TSD) unit containing two below-grade, single-shell carbon-steel tanks (276-S-141 and 276-S-
6 142) and associated ancillary equipment (e.g., pumps and aboveground and underground piping). The
7 HSTF is located in the southeast corner of the 200 West Area of the Hanford Site. The HSTF received
8 liquid mixed waste from the Reduction-Oxidation (REDOX) Plant and possibly small amounts of
9 reagent-grade methyl isobutyl ketone (hexone) waste from the Hot Semiworks Facility. The HSTF was
10 used from 1951 through 1967 to store hexone for makeup solvent for the REDOX Plant. After 1967, the
11 HSTF contained distilled hexone that had been used in the REDOX Plant. The 276-S-142 Hexone
12 Storage Tank also contained normal paraffin hydrocarbon (NPH) and tributyl phosphate (TBP) from a
13 one-time reactor fuel separation effort in 1966.

14 Between 1966 and 1988, various amounts of water were added to the tanks. In 1990, a temporary
15 distillation system was used to remove organics from the underground tank waste as an interim treatment,
16 and operations were completed in June 1992. The remaining volume of mixed waste in each tank is
17 approximately 500 liters (130 gallons) (less than 1 percent of the tank volume). In 2002, the remainder of
18 the tanks were filled with grout in two pours with a cold seam to mitigate ignitability concerns. The
19 nature and quantity of mixed waste that was managed by the HSTF is known and identified on the Part A
20 Form.

21 The closure of the HSTF may be coordinated with the remedial actions associated with implementation of
22 the 200-IS-1 Operable Unit (OU) final remedy in the 200 Area. If groundwater cleanup is necessary, it
23 will be coordinated with the 200-UP-1 OU (OU) in the manner outlined in the *Hanford Federal Facility*
24 *Agreement and Consent Order* (HFFACO) Action Plan, Section 5.5, and in accordance with the schedule
25 in HFFACO Milestone M-037-10.

26 **LIST OF ADDENDA**

27 Addendum A Part A Form
28 Addendum B Sampling and Analysis Plan – Reserved
29 Addendum C Process Information – Reserved
30 Addendum D Groundwater Monitoring Plan - Reserved
31 Addendum E Security Requirements - Reserved
32 Addendum F Preparedness and Prevention Plan – Reserved
33 Addendum G Personnel Training
34 Addendum H Closure Plan and Post-Closure Plan
35 Addendum I Inspection Schedule
36 Addendum J Contingency Plan – Reserved

37 **DEFINITIONS**

38 Reserved

39 **ACRONYMS**

40 Reserved

- 1 **V.19.A COMPLIANCE WITH PERMIT CONDITIONS**
- 2 The Permittees will comply with all permit conditions in this Chapter and its addenda
3 with respect to the applicable requirements in Part I and Part II of the Hanford Facility
4 Dangerous Waste Permit.
- 5 **V.19.B CLOSURE**
- 6 **V.19.B.1** The Permittees will submit a closure plan and post-closure 180 days after the final permit
7 is issued. As part of the closure plan, the Permittees will address contingent closure and
8 contingent post-closure requirements. The contingent closure and post-closure section
9 will include time frames of when detailed plans of a landfill cover would be submitted for
10 Ecology review and approval and when the construction of the landfill cover would begin
11 once the Permittees have determined the unit cannot meet clean closure standards.
- 12 **V.19.B.1.a** The Permittees will submit site specific biological and cultural resources reviews 90 days
13 before the beginning of the closure process. [[WAC 173-303-815](#)(2)(b)(i)].
- 14 **V.19.B.2** The closure plan submitted pursuant to V.14.B.1 will specify dangerous constituents and
15 corresponding closure performance standards to meet the requirements of [WAC 173-303-](#)
16 [610](#)(2)(b)(i) for soils affected by the operations associated with this unit.
- 17 **V.19.B.3** Closure performance standards for soils will satisfy the most stringent (lowest) cleanup
18 level or standard of [WAC 173-340](#), Model Toxics Control Act (MTCA) Cleanup
19 Regulation. The numeric cleanup levels for soils will be calculated according to the
20 MTCA cleanup methods described in [WAC 173-340-700](#) through [WAC 173-340-760](#).
21 Selection of an appropriate MCTA cleanup method will be dependent on the specific
22 cleanup actions required for this site.
- 23 **V.19.B.4** Once the closure plan is incorporated into Addendum H through the permit modification
24 process, the Permittees will close the HSTF according to the requirements in Addendum
25 H. [[WAC 173-303-610](#)(3)(a)]
- 26 **V.19.B.5** The closure plan and sampling and analysis plan will meet the applicable closure
27 requirements of [WAC 173-303-610](#) and [WAC 173-303-640](#)(8) pursuant to the
28 requirements of this Chapter.
- 29 **V.19.B.6** In conjunction with the revised closure plan, the Permittees will submit a revised
30 sampling and analysis plan in accordance with Permit Condition II.D and the schedule
31 specified in HFFACO Milestone M-037-10, which are incorporated by reference herein
32 under the terms of Permit Condition I.A.4.
- 33 **V.19.B.7** In addition to guidance provided by Permit Condition II.D.3 a revised sampling and
34 analysis plan may include the following information:
- 35 **V.19.B.7.a** Process for identifying contaminants
- 36 **V.19.B.7.b** Quality assurance/quality control project plan
- 37 **V.19.B.7.c** Methods for representative soil sampling
- 38 **V.19.B.7.d** Analysis parameters
- 39 **V.19.B.7.e** Analytical documentation
- 40 **V.19.B.8** The Permittees will conduct all sampling and analysis of environmental media pursuant
41 to the requirements of the sampling and analysis plan.
- 42

1 **V.19.C GENERAL WASTE MANAGEMENT REQUIREMENTS**

2 **V.19.C.1** All waste analysis required by this chapter will be conducted according to the approved
3 sampling and analysis plan.

4 **V.19.C.2** Changes to the analytical methods used in this permit will require prior Ecology approval
5 according to [WAC 173-303-830](#), Permit Changes.

6 **V.19.D RECORDKEEPING AND REPORTING**

7 The Permittees will place documentation of all work conducted pursuant to this Chapter
8 including results of all monitoring, testing, or analytical work and associated quality
9 assurance and quality control data in the Hanford Facility Operating Record, as required
10 by Permit Condition II.I.2. [[WAC 173-303-380](#)]

11 **V.19.E SECURITY**

12 The Permittees will post signs at access points to the HSTF stating the following (or an
13 equivalent legend): Danger – Unauthorized Personnel Keep Out. These signs will be
14 written in English, legible from a distance of 15.2 meters (50 feet), and visible from all
15 angles of approach. The signs must bear a legend which identifies the waste in a manner
16 which adequately warns employees, emergency response personnel, and the public of the
17 major risk(s) associated with the waste being stored or treated in the tank system(s).
18 [[WAC 173-303-310](#)(2)(a) and [WAC 173-303-640](#)(5)(d)]

19 **V.19.F PREPAREDNESS AND PREVENTION**

20 Reserved

21 **V.19.G CONTINGENCY PLAN**

22 Reserved

23 **V.19.H INSPECTIONS**

24 **V.19.H.1** The Permittees will follow the inspection schedule in Addendum I and Permit Condition
25 II.X until closure of the unit.

26 **V.19.H.2** In the event of any potential threats to human health or the environment, the Permittees
27 will increase inspections to quarterly until the threats are removed.

28 **V.19.I TRAINING PLAN**

29 The Permittees will comply with the training requirements as described in Permit
30 Condition II.C (Personnel Training), Permit Attachment 5 (Hanford Facility Personnel
31 Training Plan), and Addendum G (Personnel Training).

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