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FACT SHEET
PART V, CLOSURE UNIT GROUP 12, 216-A-36B CRIB

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1 **FACT SHEET**

2 **PART V CLOSURE UNIT GROUP 12, 216-A-36B CRIB**

3 **UNIT DESCRIPTION**

4 The 216-A-36B Crib is a manmade, liquid effluent disposal facility. It is permitted as an unlined
5 surface impoundment. This crib is inactive and is included in the 200-EA-1 Operable Unit. The 216-
6 A-36B Crib is south of the Plutonium-Uranium Extraction (PUREX) Facility.

7 The 216-A-36B Crib is 7 meters (23 feet) deep, 150 meters (492 feet) long, and 2.3 to 3.4 meters (7.5 to
8 11 feet) wide at the base. A 15.2 centimeter (6-inch) diameter, perforated distributor pipe runs the
9 length of the crib. The pipe is about 6.7 meters (22 feet) below grade, within a 0.8 meter (2.5 feet) thick
10 layer of gravel.

11 The 216-A-36 B Crib received waste effluent from PUREX operations. It operated from 1966 until
12 October 1972, and again from November 1982 to September 6, 1987. (The dates for facility operations
13 and physical descriptions of this crib may differ in various Hanford Site reports.)

14 The 216-A-36 B Crib has been retired and is backfilled with 7 meters (23 feet) of clean soil. It
15 naturally revegetated over time.

16 **TYPE AND QUANTITY OF WASTE**

17 The Permittees have investigated potential soil and groundwater contamination through:

- 18 • Remedial investigations.
- 19 • Groundwater monitoring data.
- 20 • Available historical process operations and disposal knowledge.
- 21 • Waste site summary reports from Hanford's Waste Information Data System database.
- 22 • Documents referenced in DOE/RL-2010-93, Rev. 0, *Interim Status Groundwater Plan for the*
23 *216-A-36B PUREX Plant Crib*, November 1, 2010.

24 The nature and quantity of mixed waste managed at the 216-A-36B Crib is listed on the Part A Form
25 (Addendum A). The crib received dilute nitrate acid, as well as a solution of ammonium nitrate and
26 ammonium fluoride from PUREX. The PUREX process used a boiling solution of ammonium fluoride
27 and ammonium nitrate to dissolve zirconium-alloy cladding from fuel elements (DOE/RL-2010-93).
28 Off-gas from this process went through a water scrubber before discharge to the air. The resulting
29 liquid waste stream was discharged to the 216-A-36 B Crib.

30 **BASIS FOR PERMIT CONDITIONS**

31 Two Tri-Party Agreement milestones affect cleanup of the crib. Milestone M-037-02 requires the
32 Permittees to submit a revised closure plan for the crib before June 30, 2014. Milestone M-037-10
33 requires the closure to be complete by September 30, 2020.

34 **Interfacing RCRA and CERCLA Closure Requirements**

35 The State of Washington's Dangerous Waste Regulations allow the director of the Department of Ecology
36 to substitute alternative groundwater monitoring requirements for the requirements prescribed for
37 regulated units under [WAC 173-303-645](#) when the regulated unit is situated amongst other solid waste
38 management units or areas of concern and it is likely that releases from the regulated unit and the solid
39 waste management unit have comingled

40 Ecology can accept the CERCLA groundwater monitoring program as required by the Tri-Party
41 Agreement to fulfill its RCRA requirements if Ecology determines that the groundwater program will
42 support a remedy that is protective of human health and the environment. The criteria for meeting
43 protectiveness are the performance standard in [WAC 173-303-610\(2\)\(a\)](#).

1 Releases of contaminants to groundwater from this regulated unit have occurred, and these releases have
2 comingled with plumes from solid waste management units. Therefore, the Permittees can choose to
3 request approval for the use of alternative groundwater monitoring protection requirement provision in
4 [WAC 173-303-645](#)(1)(e) as specified in condition II.F.2.

5 Condition V.12.E.2 requires the Permittees to submit a final status groundwater monitoring plan in
6 conjunction with a final closure plan. The final closure plan along with permit conditions will qualify as
7 the enforceable document.

8 **CLOSURE AND POST-CLOSURE**

9 Milestone M-037-02 requires the Permittees to submit, by June 30, 2014, a revised closure plan that
10 meets the closure plan requirements described in [WAC 173-303-610](#). Condition V.12.B.1 requires that
11 the Permittees submit a revised closure plan and post-closure plan by June 30, 2014. Condition
12 V.12.B.7 requires submittal of a revised sampling and analysis plan when the closure plan is submitted.

13 Ecology may accept the final CERCLA remedial actions for the 200-EA-1 Operable Unit, including
14 institutional controls, as satisfying the contingent post-closure care and maintenance requirements of
15 [WAC 173-303-650](#)(6)(c)(i) and [WAC 173-303-610](#)(8). A post-closure groundwater monitoring plan
16 will be submitted with a final closure plan.

17 **Closure Activities**

18 Conditions V.12.B.2 through V.12.B.6 list what the Permittees must include, at a minimum, in the closure
19 plan. Requirements include a schedule for closure, identification of cleanup levels and standards, and a
20 sampling and analysis plan. The Permittees will comply with the closure requirements of [WAC 173-303-](#)
21 [610](#)(5) for cleanup of underlying soils.

22 **Groundwater**

23 Condition V.12.E.1 requires the Permittees to implement the interim status groundwater monitoring
24 plan in Addendum D. Condition V.12.E.2 requires the Permittees to submit a final status groundwater
25 monitoring plan with the closure plan required in Condition V.12.B.1. Interfacing of RCRA and
26 CERCLA for groundwater is discussed above.

27 **RECORDKEEPING AND REPORTING**

28 Condition V.12.F requires the Permittees to place documentation of all work conducted (such as results
29 of monitoring, testing, and analytical work and quality assurance and control data) in the Hanford
30 Facility Operating Record.

31 **SECURITY**

32 The 216-A-36 B Crib is within the secured area of Hanford. Access to the closure unit is subject to the
33 general security provision of Condition II.L. Security provisions, access controls, and signage specific to
34 this unit will comply with the requirements of [WAC 173-303-310](#).

35 **CONTINGENCY PLAN**

36 Because the 216-A-36B Crib no longer accepts liquid waste and is not in operation, there is no need for
37 a unit-specific contingency plan. However, to ensure the safety of Hanford workers and to protect
38 public health and the environment during closure of the unit, the Permittees must follow contingency
39 planning and emergency management requirements for Hanford.

40 Condition II.A describes the requirements for facility contingency planning and refers to the
41 requirements of Attachment 4, *Hanford Emergency Management Plan*.

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1 **INSPECTIONS**

2 Addendum I contains the inspection schedule. Since this unit is inactive, the permit requires an
3 inspection once a year. If any potential threats to human health or the environment arise, the Permittees
4 will increase inspections to quarterly until the threats are removed.

5 **TRAINING**

6 The Permittees will include the training requirements in Addendum G of this permit in a written training
7 plan, as required by Condition II.C.1 and [WAC 173-303-330](#)(2)(a) and (b). The plan will include the job
8 classifications identified for 216-A-36B Crib closure work.

9 **REQUESTED VARIANCES OR ALTERNATIVES**

10 Condition V.12.B.1 requires a schedule for submitting a revised closure plan. The schedule is justified
11 because the removal and remediation work will take longer than the 180 days required by [WAC 173-303-](#)
12 [610](#) (4)(b). Milestone M-037-02 sets June 30, 2014, as the date the Permittees must submit a revised
13 closure plan, contingent closure plan, and post-closure plan.

14 **STATE ENVIRONMENTAL POLICY ACT (SEPA) DETERMINATION** sets a deadline of June 30, 2014

15 The SEPA determination for this unit is in the Hanford-Wide Permit Fact Sheet.

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