FACT SHEET

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

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

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 11 feet) wide at the base. A 15.2 centimeter (6-inch) diameter, perforated distributor pipe runs the length of the crib. The pipe is about 6.7 meters (22 feet) below grade, within a 0.8 meter (2.5 feet) thick layer of gravel.

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

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

TYPE AND QUANTITY OF WASTE

The Permittees have investigated potential soil and groundwater contamination through:

- Remedial investigations.
- Groundwater monitoring data.
- Available historical process operations and disposal knowledge.
- Waste site summary reports from Hanford’s Waste Information Data System database.

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

BASIS FOR PERMIT CONDITIONS

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

Interfacing RCRA and CERCLA Closure Requirements

The State of Washington’s Dangerous Waste Regulations allow the director of the Department of Ecology to substitute alternative groundwater monitoring requirements for the requirements prescribed for regulated units under WAC 173-303-645 when the regulated unit is situated amongst other solid waste management units or areas of concern and it is likely that releases from the regulated unit and the solid waste management unit have comingled.

Ecology can accept the CERCLA groundwater monitoring program as required by the Tri-Party Agreement to fulfill its RCRA requirements if Ecology determines that the groundwater program will support a remedy that is protective of human health and the environment. The criteria for meeting protectiveness are the performance standard in WAC 173-303-610(2)(a).
Releases of contaminants to groundwater from this regulated unit have occurred, and these releases have
comingled with plumes from solid waste management units. Therefore, the Permittees can choose to
request approval for the use of alternative groundwater monitoring protection requirement provision in
WAC 173-303-645(1)(e) as specified in condition II.F.2.

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

CLOSEUP AND POST-CLOSURE

Milestone M-037-02 requires the Permittees to submit, by June 30, 2014, a revised closure plan that
meets the closure plan requirements described in WAC 173-303-610. Condition V.12.B.1 requires that
the Permittees submit a revised closure plan and post-closure plan by June 30, 2014. Condition
V.12.B.7 requires submittal of a revised sampling and analysis plan when the closure plan is submitted.
Ecology may accept the final CERCLA remedial actions for the 200-EA-1 Operable Unit, including
institutional controls, as satisfying the contingent post-closure care and maintenance requirements of
WAC 173-303-650(6)(e)(i) and WAC 173-303-610(8). A post-closure groundwater monitoring plan
will be submitted with a final closure plan.

Closure Activities

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

Groundwater

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

RECORDKEEPING AND REPORTING

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

SECURITY

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

CONTINGENCY PLAN

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

Condition II.A describes the requirements for facility contingency planning and refers to the
requirements of Attachment 4, Hanford Emergency Management Plan.
INSPECTIONS
Addendum I contains the inspection schedule. Since this unit is inactive, the permit requires an inspection once a year. If any potential threats to human health or the environment arise, the Permittees will increase inspections to quarterly until the threats are removed.

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

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

STATE ENVIRONMENTAL POLICY ACT (SEPA) DETERMINATION sets a deadline of June 30, 2014. The SEPA determination for this unit is in the Hanford-Wide Permit Fact Sheet.
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