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Department of Ecology
NWP - Richland

Waste Site Reclassification Form

Date Submitted: 9/07/06 **Originator:** L. M. Dittmer **Phone:** 372-9664	**Operable Unit(s):** 100-HR-1 **Waste Site ID:** 132-H-1 **Type of Reclassification Action:** Rejected ☐ Closed Out ☐ Interim Closed Out ☒ No Action ☐	**Control Number:** 2006-053 **Lead Agency:** Ecology

This form documents agreement among the parties listed below authorizing classification of the subject unit as rejected, closed out, interim closed out, or no action and authorizing backfill of the site, if appropriate. Final removal from the National Priorities List (NPL) of no action, interim closed-out, or closed-out sites will occur at a future date.

Description of current waste site condition:

The 132-H-1 waste site includes the 116-H exhaust stack burial trench and the buried stack foundation (which contains an embedded vertical 15-cm (6-in) condensate drain line). The 116-H reactor exhaust stack and foundation were decommissioned and demolished using explosives in 1983, with the rubble buried in situ beneath clean fill at least 1 m (3.3 ft) thick. The drain line connecting the stack base to the 1608-H effluent pumping station was removed incidentally during previous remedial actions around the 105-H Reactor Building (CVP-2000-00029, CVP-2006-00003) and does not require further remedial action. Radiological characterization was performed prior to final decommissioning, including the collection of concrete core samples from the stack at five different elevations. Sample results were used to support dose assessment calculations prepared in accordance with *Allowable Residual Contamination Levels for Decommissioning Facilities in the 100 Areas of the Hanford Site* (Kennedy and Napier 1983). The ARCL calculations indicated that the potential dose to the maximally exposed individual in 1983 would be 4.8 mrem/yr and as such the stack could be buried in situ. A RESidual RADioactivity (RESRAD) evaluation was performed in 2006 using the 1983 sampling results (after accounting for radioactive decay) to support the interim closed out decision. The evaluation accounts for radioactive decay from 1983 to 2006 and predicts the maximum dose rate is 0.0752 mrem/yr above background over 1,000 years. RESRAD also showed that of the contaminants detected only tritium is predicted to reach groundwater within 1,000 years. The maximum tritium concentration in groundwater is predicted to be less than the remedial action goal (20,000 pCi/L). Therefore, the dose limits for the rural-residential (15 mrem/yr) and groundwater (4 mrem/yr) pathways will not be exceeded.

Basis for reclassification:

The site achieves the remedial action objectives and the corresponding remedial action goals established in the *Remedial Design Report/Remedial Action Work Plan for the 100 Area*, DOE/RL-96-17, Rev. 5, U.S. Department of Energy, Richland Operations Office, and the *Interim Action Record of Decision for the 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 Operable Units, Hanford Site, Benton County, Washington*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington. Residual concentrations support future land uses that can be represented (or bounded) by a rural-residential scenario and pose no threat to groundwater or the Columbia River based on RESRAD modeling. This site does not have a deep zone; therefore, no deep zone institutional controls are required. The basis for reclassification to interim closed out is described in detail in the *Remaining Site Verification Package for 132-H-1, 116-H Reactor Stack Burial Site* (attached). The data used for this evaluation were not obtained from environmental media and are not intended to be incorporated into the River Corridor Baseline Risk Assessment. Waste site-specific evaluations will be performed to determine which data are appropriate for an ecological risk assessment and/or to assess the risk these sites present to ecological receptors.

K. Bazzell DOE-RL Project Manager	Signature	6/8/2007 Date
J. Price Ecology Project Manager	Signature	6/26/2007 Date
NA EPA Project Manager	Signature	Date