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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99354 • (509) 372-7950

September 29, 2009

Mr. Mark S. French, Program Manager
Richland Operations Office
United States Department of Energy
P.O. Box 550, MSIN: A3-04
Richland, Washington 99352

Re: Transmittal of the Signed Waste Site Reclassification Form for the Remaining Sites Verification Package (RSVP) for 100-D-31:6 and Documentation of the Department of Ecology's (Ecology) Comparison of Site Data with Washington Administrative Code (WAC) 173-340 (2007) Requirements

Dear Mr. French:

Enclosed is the signed TPA-MP-14 Waste Site Reclassification Form for the 100-D-31:6, 184-D Powerhouse Sewer Pipelines for interim reclassification to "interim closed out" (enclosure 1). Ecology's approval of this interim reclassification is based on the requirements for waste site reclassification identified in the *Remedial Design Report/Remedial Action Work Plan for the 100-Area*, DOE/RL-96-17, Revision 5, which identifies WAC 173-340 (1996) cleanup levels.

In anticipation of the final Record of Decision (ROD) for the 100-D Area, we evaluate data for consistency with corrective action requirements that will be updated within the final ROD. Therefore, we compared the data in the RSVP for 100-D-31:6 against WAC 173-340 (2007) requirements (enclosure 2). Ecology will consider this evaluation when the 100-D-31:6 waste site is evaluated for final reclassification under the final ROD.

If there are any questions, contact Jacqueline Seiple at 509-372-7925 or me at 509-372-7916.

Sincerely,

Mandy Jones
Acting Environmental Restoration Project Manager
Nuclear Waste Program

js/aa
Enclosures (2)

cc: See page 2

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cc w/enc:

Joanne Chance, USDOE
John Neath, USDOE
Megan Proctor, WCH
Stuart Harris, CTUIR
Gabriel Bohnee, NPT
Russell Jim, YN
Susan Leckband, HAB
Ken Niles, ODOE
Administrative Record: 100-D Area
Environmental Portal
Hanford Operating Record General File
USDOE-RL Correspondence Control

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WASTE SITE RECLASSIFICATION FORM		
Date Submitted: <u>3/9/2009</u>	Operable Unit(s): <u>100-DR-1</u>	Control Number: 2008-054
Originator: <u>M. L. Proctor</u>	Waste Site Code: <u>100-D-31:6</u>	
Phone: <u>372-9227</u>	Type of Reclassification Action:	
	Closed Out <input type="checkbox"/> Interim Closed Out <input checked="" type="checkbox"/> No Action <input type="checkbox"/>	
	RCRA Postclosure <input type="checkbox"/> Rejected <input type="checkbox"/> Consolidated <input type="checkbox"/>	

This form documents agreement among parties listed authorizing classification of the subject unit as Closed Out, Interim Closed Out, No Action, RCRA Postclosure, Rejected, or Consolidated. This form also authorizes backfill of the waste management unit, if appropriate, for Closed Out and Interim Closed Out units. Final removal from the NPL of No Action and Closed Out waste management units will occur at a future date.

Description of current waste site condition:

The 100-D-31:6 subsite consisted of the underground sewer pipelines that originated at the 184-D powerhouse. The site has been remediated and presently exists as an open excavation. Remediation and verification sampling of this site have been performed in accordance with remedial action objectives and goals established by 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* (Remaining Sites ROD), U.S. Environmental Protection Agency, Region 10, Seattle, Washington. The selected action involved: (1) evaluating the site using available process information, (2) remediating the site, (3) demonstrating through verification sampling that cleanup goals have been achieved, and (4) proposing the site for reclassification to Interim Closed Out.

Basis for reclassification:

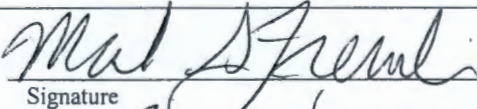
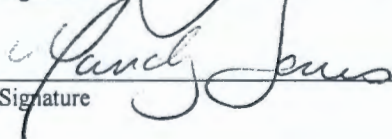
In accordance with this evaluation, the verification sampling results support a reclassification of this site to Interim Closed Out. The current site conditions achieve the remedial action objectives and the corresponding remedial action goals established in the Remaining Sites ROD. The results of verification sampling show that residual contaminant concentrations do not preclude any future uses (as bounded by the rural-residential scenario) and allow for unrestricted use of shallow-zone soils (i.e., surface to 4.6 m [15 ft] deep). The results also demonstrate that residual contaminant concentrations are protective of groundwater and the Columbia River. Site contamination did not extend into the deep zone soils; therefore, institutional controls to prevent uncontrolled drilling or excavation into the deep-zone are not required. The basis for reclassification is described in detail in the *Remaining Sites Verification Package for the 100-D-31:6, 184-D Powerhouse Sewer Pipelines* (attached).

Regulator Comments:

Approval of the WSRF documents regulator agreement that the 100-D-31:6 waste site qualifies for "Interim Closed Out" under the Interim Action ROD. In addition, Ecology has evaluated the data for this site against WAC 173-340 (2007) clean-up levels for direct contact, groundwater protection, and river protection. This evaluation is documented in the letter transmitting Ecology's approval of this site's interim reclassification to "Interim Closed Out."

Waste Site Controls:

Engineered Controls: Yes No Institutional Controls: Yes No O&M requirements: Yes No
If any of the Waste Site Controls are checked Yes specify control requirements including reference to the Record of Decision, TSD Closure Letter, or other relevant documents.

M. S. French		8/17/09
DOE Federal Project Director (printed)	Signature	Date
M. Jones		8/24/09
Ecology Project Manager (printed)	Signature	Date
N/A		
EPA Project Manager (printed)	Signature	Date

Enclosure 2

The Department of Ecology's Comparison of Supporting Data for the 100-D-31:6 Remaining Sites Verification Package (RSVP) with WAC 173-340 (2007) Requirements

Overall Summary: WAC 173-340 (2007) soil cleanup levels are exceeded for two contaminants, including hexavalent chromium (using $K_d=0$) and mercury. Ecological protection values are exceeded for several contaminants. Hazard indices are exceeded at a number of samples locations. Further evaluation of this site for final ROD decisions is recommended.

Excavation Samples

Summary of Exceedances (yes = concentration exceeds cleanup/screening level)

Contaminant	Groundwater Protection (1996)	River Protection (1996)	RESRAD (Kd ml/g)	WAC 173-340 Ecological Protection	WAC 173-340 Human Health (2007)
Boron	No	No	--	Yes	No
Copper	No	Yes	Pass (22)	No	No
Hexavalent chromium	No	No	--	No	Yes ⁺
Mercury	Yes	Yes	Pass (22)	Yes	Yes
Vanadium*	No	No	--	Yes*	No

* < background

⁺ using site specific $K_d=0$

Overburden Samples

Summary of Exceedances (yes = concentration exceeds cleanup/screening level)

Contaminant	Groundwater Protection (1996)	River Protection (1996)	RESRAD (Kd ml/g)	WAC 173-340 Ecological Protection	WAC 173-340 Human Health (2007)
Barium*	No	No	--	Yes*	No
Boron	No	No	--	Yes	No
Copper	No	Yes	Pass (22)	No	No
Hexavalent chromium	No	No	--	No	Yes ⁺
Mercury*	No	No	--	Yes*	No
Vanadium*	No	No	--	Yes*	No
Chrysene	No	Yes	Pass (22)	No	No

* < background

⁺ using site specific $K_d=0$, slightly above PQL

Outstanding Issues:

Excavation:

- State ecological protection screening values are exceeded for boron, mercury, and vanadium (<background). EPA screening levels are exceeded for antimony (<state background), manganese (<background), and vanadium (<background) and zinc (<background).
- Groundwater and/or river protection (1996) concentrations are exceeded for copper and mercury; however, copper does not exceed WAC 173-340 (2007) cleanup levels. WAC 173-340 (2007) cleanup levels are exceeded for hexavalent chromium (using site specific $K_d=0$) and mercury.

Overburden Samples:

- State ecological protection screening values are exceeded for barium (<background), boron, mercury (<background), and vanadium (<background). EPA screening levels are exceeded for antimony (<state background), manganese (<background), vanadium (<background) and zinc (<background).
- Groundwater and/or river protection (1996) concentrations are exceeded for copper and chrysene; however, copper and chrysene do not exceed WAC 173-340 (2007) cleanup levels. WAC 173-340 (2007) cleanup levels are exceeded for hexavalent chromium (using site specific $K_d=0$).

General:

- Hazard indices for the soil for protection of groundwater pathway (using WAC 173-340-747, 2007 3-phase model and WAC 173-340-720 equations for groundwater cleanup levels) are greater than one for several samples (including SZ-2, SZ-6, SZ-9, Dup of J17JL7, OB-2 and OB-10) for contaminants that target the kidney. The largest contributor is typically hexavalent chromium (included at $\frac{1}{2}$ its PQL when reported at the PQL), though molybdenum and in some cases mercury also contribute to the HI. Greater than 20% of the samples in the data set exceed a HI of 1 for this pathway, and in some cases the HI exceeds 2; therefore, the data set fails the 3-part test in WAC 173-340 when applied to the HI (which is less stringent than applying this test to cleanup levels).