

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

File: 541 Review
HANFORD PROJECT OFFICE

JUN 27 2012

U.S. EPA

12-EMD-0070

JUN 22 2012

Mr. D. A. Faulk, Program Manager
Office of Environmental Cleanup
Hanford Project Office
U.S. Environmental Protection Agency
309 Bradley Boulevard, Suite 115
Richland, Washington 99352

Dear Mr. Faulk:

HANFORD SITE THIRD COMPREHENSIVE ENVIRONMENTAL RESPONSE,
COMPENSATION AND LIABILITY ACT FIVE-YEAR REVIEW REPORT, APRIL 2012

This letter provides clarification for the exceptions identified in the U.S. Environmental Protection Agency's (EPA's) letter to M. S. McCormick, dated May 16, 2012. The Errata Sheet (Enclosure) that clarifies text in the, "Hanford Site Third Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Five-Year Review Report (DOE/RL-2011-56, Revision 1" will be placed in the Administrative Record, and made available on the Hanford web site with the Report. The following are the exceptions identified by EPA and the U.S. Department of Energy's clarifications.

Exception 1: "We do not concur with the protectiveness statement for the 200-CU- 1 (U Plant) operable unit. This protectiveness determination outlined in Section 3.3.5.2.3 is related to the operable units (200-CB-1, 200-CP-1, and 200-CR-1) described in Section 3.3.5 - Canyons and Associated Waste Sites, since there is no decision in place for these operable units. However, a ROD was issued for 200-CU-1, and Section 3.3.5.2 provides enough information to determine protectiveness. Therefore the protectiveness statement should be revised."

Clarification 1: Revise Section 3.3.5.2.3, Protectiveness Statement to read: The final remedy for the 221-U Plant has not been completed. The remedy at 200-CU-1 (221-U Plant) selected under the September 2005 record of decision (ROD) is expected to be protective of human health and the environment upon completion of the final remedy. The current interim actions ensure that exposure pathways that could result in unacceptable risks are being controlled.

B Plant (200-CB-1 Operable Unit)

The B Plant, one of the original fuels-separation facilities, was constructed between August 1943 and February 1945; and operated until 1952. B Plant used the bismuth phosphate process to separate plutonium from irradiated fuel. In 1968, B Plant was converted to a waste-fractionation plant as part of a program to solidify high-level waste. B Plant also played a role in removing strontium-90 and cesium-137 from PUREX Plant acid waste and high-level supernatant liquids, as well as sludges from self-boiling liquid waste to manufacture sealed

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source capsules containing cesium-137 and strontium-90. The capsules are currently stored underwater in the Waste Encapsulation and Storage Facility adjacent to B Plant.

Exception 2: "The protectiveness determination for the 300-FF-5 operable unit should also include a statement that exposure pathways that could result in unacceptable risks are being controlled (via Institutional Controls)."

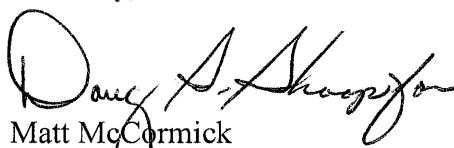
Clarification 2: Revise Section 4.6.6, Protectiveness Statement to read: The remedy at 300-FF-5 Groundwater OU is not protective because the interim remedy selected of monitoring the expected attenuation of the uranium is not predicted to meet the groundwater cleanup standards. As a result, the remedial actions and remedial action objectives for the final remedy are being evaluated. Exposure pathways that could result in unacceptable risks are being controlled (via institutional controls). Further information will be obtained by completing the River Corridor Baseline Risk Assessment. It is expected that these actions will be completed by 2016, at which time a protectiveness determination will be made. In April 2010, the 300 Area Remedial Investigation/Feasibility Study Sampling and Analysis Plan for the 300-FF-1, 300-FF-2 and 300-FF-3 Operable Units, DOE/RL-2009-45 was issued.

Exception 3: "We do not concur with Issue 1, that states: 'Permeable reactive barrier test has not been conducted in the upper vadose zone.' The non-concurrence is based on the following reasons: The contaminant of concern is not identified; no operable unit is identified; and the time frame of September 30, 2015, is well past the date that all RODs in the 100 Area are expected to be issued. In general, any tests should be completed during the remedial investigation/feasibility study process to aid in remedy selection."

Clarification 3: DOE agrees Issue/Action 1 will be deleted from table 1.

If you have any questions, please contact me, or your staff may contact Ray J. Corey, Assistant Manager for Safety and Environment on, (509) 376-0108.

Sincerely,


Matt McCormick
Manager

EMD:CEC

Enclosure

cc: See page 3

Mr. D. A. Faulk
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cc w/o encl:

G. Bohnee, NPT

T. Brincefield, EPA Region 10, Environmental Cleanup Office

L. Buck, Wanapum

C. J. Guzzetti, EPA

S. Harris, CTUIR

J. A. Hedges, Ecology

R. Jim, YN

S. Leckband, HAB

K. Niles, Oregon DOE

W. Watson, EPA Region 10, Office of Regional Counsel

cc w/encl:

Administrative Record: CERCLA 5-Year Review

Enclosure 1

ERRATA SHEET

**Hanford Site Third Comprehensive Environmental Response, Compensation and Liability
Act (CERCLA) Five-Year Review Report**

(DOE/RL-2011-56, Revision 1)

ERRATA SHEET

Hanford Site Third CERCLA Five-Year Review Report

(DOE/RL-2011-56, Revision 1)

This Errata Sheet supersedes DOE/RL-2011-56, Revision 1, as follows:

3.3.5.2.3 Protectiveness Statement

The remedy at 200-CU-1 (221-U Plant) selected under the September 2005 ROD is expected to be protective of human health and the environment upon completion of the final remedy. The current interim actions ensure that exposure pathways that could result in unacceptable risks are being controlled.

3.3.5.2.4 B Plant (200-CB-1 Operable Unit)

The B Plant, one of the original fuels-separation facilities, was constructed between August 1943 and February 1945; and operated until 1952. B Plant used the bismuth phosphate process to separate plutonium from irradiated fuel. In 1968, B Plant was converted to a waste-fractionization plant as part of a program to solidify high-level waste. B Plant also played a role in removing strontium-90 and cesium-137 from PUREX Plant acid waste and high-level supernatant liquids, as well as sludges from self-boiling liquid waste to manufacture sealed source capsules containing cesium-137 and strontium-90. The capsules are currently stored underwater in the Waste Encapsulation and Storage Facility adjacent to B Plant.

4.6.6 Protectiveness Statement

The remedy at 300-FF-5 Groundwater OU is not protective because the interim remedy selected of monitoring the expected attenuation of the uranium is not predicted to meet the groundwater cleanup standards. As a result, the remedial actions and remedial action objectives for the final remedy are being evaluated. Exposure pathways that could result in unacceptable risks are being controlled (via Institutional Controls). Further information will be obtained by completing the *River Corridor Baseline Risk Assessment*. It is expected that these actions will be completed by 2016, at which time a protectiveness determination will be made. In April 2010, the *300 Area Remedial Investigation/Feasibility Study Sampling and Analysis Plan for the 300-FF-1, 300-FF-2 and 300-FF-3 Operable Units*, DOE/RL-2009-45 was issued.

Table 1. CERCLA Five-Year Review Issues and Actions

Issues and Actions	Affects Current Protectiveness ¹ (Yes / No)	May Affect Future Protectiveness ² (Yes / No)	TPA Lead Regulator	Action Due Date
100 Area				
Issue 1: Recent data indicates a low spot in the surface of the Ringold Upper Mud in the 100-HR-3 OU that may trap hexavalent chromium in the aquifer, which in combination with a likely continuing vadose source of hexavalent chromium at the adjacent 100-D-100 waste site results in persistent hexavalent chromium concentrations in groundwater southeast of the 182-D Reservoir	No	Yes		
Action 1.1: Remove, treat, and dispose of the chromium source discovered in the deep vadose zone at 100-D-100.	No	Yes		4/30/2014
Issue 2: Leakage and spills from the 182-D Reservoir and export water system may contribute to movement of contaminants into the vadose zone.	No	Yes		
Action 2.1: Complete the engineering export water scoping study to evaluate whether the 182-D Reservoir and export water system is necessary to support the Hanford Cleanup Mission.	No	Yes		3/31/2012
300 Area				
Issue 3. Remediation approach in interim action ROD (EPA/ESD/R10-00/524) for natural attenuation is not effective in meeting groundwater remediation goals in the 300 Area.	Yes	Yes		
Action 3.1. Submit proposed plan for a ROD to support meeting groundwater remediation goals.	Yes	Yes	EPA	12/31/2011
¹ Does this issue/action currently affect the protectiveness of the remedy? ² Will this issue/action affect the protectiveness of the remedy in the future?				