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Department of Energy

Richland Field Office

P.O. Box 550

Richland, Washington 99352

MAY 05 1993



93-ERB-144

Mr. George C. Hofer  
Hanford Project Manager  
U.S. Environmental Protection Agency  
Region 10  
1200 Sixth Avenue  
Seattle, Washington 98101

Mr. Roger F. Stanley, Director  
Tri-Party Agreement Implementation  
State of Washington  
Department of Ecology  
Post Office Box 47600  
Olympia, Washington 98504-7600

Dear Messrs. Hofer and Stanley:

HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER CHANGE CONTROL FORM:  
REDESIGNATION OF THE 200-ZP-1 AND 200-ZP-2 OPERABLE UNITS (OUs) AND  
REDEFINITION OF THE 200 WEST AREA GROUNDWATER OUs

Attached for your approval is the subject Class II Change Control Form. The purpose of this change request is to combine the source components of the 200-ZP-1 and 200-ZP-2 OUs and designate this source OU as 200-ZP-2 OU and create a separate, groundwater only OU, designated as 200-ZP-1. Accordingly, waste management units and unplanned release from 200-ZP-1 will be reassigned to 200-ZP-2. The scope of the 200-ZP-1 OU will also collectively address the groundwater beneath the 200-ZP-2, as well as 200-TP-2 and 200-TP-4 OUs. Both 200-TP-2 and 200-TP-4 OUs were originally defined as combination groundwater and source OUs addressing the groundwater beneath the T Plant. The redesignation and reassignment are based on recommendations from the 200 Aggregate Area Management Study Reports.

If you have any questions regarding this change, please contact Mr. P. M. Pak at (509) 376-4798.

Sincerely,

Steven H. Wisness  
Hanford Project Manager



ERD:PMP

Attachment

cc w/attach:  
B. A. Austin, WHC  
C. Cline, Ecology  
M. K. Harmon, EM-442  
D. R. Einan, EPA  
D. D. Teel, Ecology Kennewick Office  
WHC Administrative Record

cc w/o attach:  
R. A. Carlson, WHC  
R. E. Lerch, WHC  
J. L. Monhart, EM-442

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Change Number <b>C-93-04</b>	<b>Federal Facility Agreement and Consent Order          Change Control Form</b> Do not use blue ink. Type or print using black ink.	Date <b>April 26, 1993</b>
Originator <b>P. M. Pak</b>		Phone <b>6-4798</b>
Class of Change <input type="checkbox"/> I - Signatories <input checked="" type="checkbox"/> II - Project Manager <input type="checkbox"/> III - Unit Manager		
Change Title <b>REDESIGNATION OF THE 200-ZP-1 AND 200-ZP-2 OPERABLE UNITS AND REDEFINITION OF THE 200 WEST AREA GROUNDWATER OPERABLE UNITS</b>		
Description/Justification of Change <p>The Hanford Federal Facility Agreement and Consent Order (TPA) Change Request Package M-12-90-4 provides for assessment on an aggregate area scale and identifies the need for redefinition of operable unit (OU) boundaries. Specifically, the Z Plant and 200 West Groundwater Aggregate Area Management Study Reports (AAMSRs) were prepared in accordance with this change request. To fulfill the TPA M-13-04 Interim Milestone, "Submittal of the 200-ZP-1 Work Plan (WP) to EPA and Ecology by August 31, 1993," it is expected that the scope of the 200-ZP-1 WP will implement recommendations of these AAMSRs.</p> <p style="text-align: center;">Continued on Page 2.</p>		
Impact of Change <p style="text-align: center;">Continued on Page 3.</p>		
Affected Documents <b>Hanford Federal Facility Agreement and Consent Order, Volume 2, Appendix C.</b>		
Approvals <input type="checkbox"/> Approved <input type="checkbox"/> Disapproved  DOE _____ Date _____ EPA _____ Date _____ Ecology _____ Date _____		

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Description/Justification of Change Continued.

The Z Plant Source AAMSR compiled and evaluated the existing body of knowledge to support the *Hanford Site Past-Practice Strategy* (DOE/RL-91-04, March 1992) decision making process. Each waste management unit (WMU) and unplanned release within the aggregate area was assessed to determine the most expeditious path for remediation within the statutory requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Resource Conservation Recovery Act (RCRA). A review of existing pertinent data regarding Z Plant Aggregate Area WMUs and unplanned releases was summarized and evaluated in this study. The final Z Plant AAMSR, Revision 0, was transmitted to EPA and Ecology on February 1, 1993.

The 200 West Groundwater AAMSR also compiled and evaluated the existing body of knowledge to support the *Hanford Site Past-Practice Strategy* (DOE/RL-91-04, March 1992) decision making process. Each constituent of concern within the groundwater aggregate area was assessed to determine the most expeditious path for remediation within the statutory requirements of the CERCLA. A review of existing pertinent data regarding 200 West Groundwater Aggregate Area constituents of concern was summarized and evaluated in this study. The final 200 West Groundwater AAMSR, Revision 0, was transmitted to EPA and Ecology on February 22, 1993.

Z Plant and 200 West Groundwater AAMSR Conclusions

Redesignation of the 200-ZP-1 and 200-ZP-2, both of which were originally defined as combination groundwater and source operable units, was suggested based on the data evaluation in the Z Plant AAMSR. It was recommended that the source components of the 200-ZP-1 and 200-ZP-2 OUs be combined. This source OU should be designated as 200-ZP-2 OU. A separate groundwater OU should be designated as 200-ZP-1.

The strategy for separating the source and groundwater OUs was based on two factors: 1) the definition of plume geometries is based on hydrogeologic regimes not geographical boundaries and 2) the remedial actions are tied directly to specific contaminant plumes. Redefinition of groundwater OUs in the 200 West Area was suggested based on the data evaluation in the 200 West Groundwater AAMSR. To maximize the efficiency of the investigation of groundwater flow and contamination, it was recommended that two separate groundwater OUs be defined for the 200 West Area and vicinity on the basis of flow patterns and plume distribution. The southern groundwater OU, tentatively called GW-OU-1, was identified to address U Plant and the plumes originating in that area, including the uranium, nitrate (mostly), and <sup>99</sup>Tc plumes. Some plumes (e.g., tritium) emanating from the S Plant source aggregate area would be encompassed by this GW-OU-1. This groundwater OU is now designated as 200-UP-1, as defined in TPA Change Request M-12-92-1. The northerly groundwater OU, tentatively called GW-OU-2, included those plumes in the Z and T Plant source aggregate areas and included the carbon tetrachloride, chloroform, TCE, fluoride, arsenic, and <sup>239, 240</sup>Pu plumes. Upon approval of this TPA Change Request, the 200-ZP-1 (tentatively called GW-OU-2 in the 200 West Groundwater AAMSR) will collectively address the groundwater investigations associated with the 200-ZP-2, 200-TP-2, and 200-TP-4 OUs. Both 200-TP-2 and 200-TP-4 were originally defined as combination groundwater and source operable units.

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The two groundwater operable units would be divided on the basis of the hydrologic flow system present under the aggregate area. Two parallel hydrologic regimes can be defined, both emanating from the groundwater mound found beneath the location of the former U Pond (216-U-10). Groundwater flow on the north and northeast sides of the mound generally flows north-northeast towards Gable Gap. Groundwater south and east of the mound generally flows east-southeast towards a point south of the 200 East Area. The distributions of the contaminant plumes in the 200 West Groundwater Aggregate Area reflect these flow conditions. Contaminant plumes in the one regime or the other generally do not mix. These two groundwater flow regimes can, therefore, be the basis of the two groundwater operable units. The line of their division runs approximately along the northern edge of the U Plant Source Aggregate Area (see attached figure), as derived from groundwater potentiometric maps and the extent of the various known plumes.

Because of the interrelations of the contaminant plumes in the 200 West Area, it is considered best to have a relatively small number of groundwater operable units. It is also important, however, to keep the size and complexity of groundwater operable units small enough so that each can handle all groundwater issues in that portion of the 200 West Area. It is believed that these considerations can best be addressed by redefining operable units to create two groundwater operable units.

#### Impact of Change Continued.

Redesignating the 200-ZP-1 and 200-ZP-2 OUs into one source OU, 200-ZP-2, and one groundwater only OU, 200-ZP-1, will significantly contribute to the following: (1) better defining plume geometries as they are based on hydrogeologic regimes not on geographical boundaries; and, effectively addressing the groundwater remedial actions as they are directly tied to specific contaminant plumes. Further, redefining the scope of the 200-ZP-1 to address the groundwater beneath the 200-ZP-2, 200-TP-2, and 200-TP-4 OUs will also augment the effectiveness of remedial actions by comprehending the interrelated contaminant plumes and by collectively handling all groundwater issues in these portions of the 200 West Area.

#### SPECIFIC CHANGES

##### Appendix C of the TPA Action Plan:

1. All waste management units and unplanned releases listed under 200-ZP-1 shall be moved to 200-ZP-2, and 200-ZP-2 designated as unit category CPP. Please refer to the attached table.
2. Redesignate the 200-ZP-1 Operable Unit as a groundwater only operable unit which will address the groundwater beneath the 200-ZP-2, 200-TP-2, and 200-TP-4 Operable Units. 200-ZP-1 should be designated as unit category CPP and given a priority of A.

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TABLE OF SPECIFIC CHANGES

The following waste management units and unplanned releases shall be transferred from 200-ZP-1 to 200-ZP-2:

- o 241-Z-361 SETTLING TANK
- o 216-Z-1 AND 216-Z-2 CRIBS
- o 216-Z-3 CRIB
- o 216-Z-12 CRIB
- o 216-Z-18 CRIB
- o 216-Z-13 FRENCH DRAIN
- o 216-Z-14 FRENCH DRAIN
- o 216-Z-15 FRENCH DRAIN
- o 216-Z-1A DRAIN FIELD
- o UN-200-W-23
- o UN-200-W-74
- o UN-200-W-75
- o UN-200-W-89
- o UN-200-W-90
- o UN-200-W-91
- o UN-200-W-103
- o UN-200-W-159
- o 2607-Z SEPTIC TANK AND DRAIN FIELD

The following unplanned release shall be transferred from 200-ZP-1 to 200-ZP-3:

- o UN-200-W-11

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# CORRESPONDENCE DISTRIBUTION COVERSHEET

Author: S. H. Wisness, RL  
 Addressee: G. C. Hofer, EPA  
                   R. F. Stanley, Ecology  
 Correspondence No.: Incoming: 9303930

Subject: HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER CHANGE CONTROL  
 FORM: REDESIGNATION OF THE 200-ZP-1 AND 200-ZP-2 OPERABLE UNITS (OUs)  
 AND REDEFINITION OF THE 200 WEST AREA GROUNDWATER OUs

## INTERNAL DISTRIBUTION

Approval	Date	Name	Location	w/att
		Correspondence Control	A3-01	X
		President's Office	B3-01	
		M. R. Adams	H6-01	X
		L. D. Arnold	B2-35	X
		B. A. Austin	B2-35	X
		R. A. Carlson	H6-03	X
		G. D. Carpenter	H6-20	X
		C. K. DiSibio	B3-15	X
		H. D. Downey	H6-27	X
		M. Harris	H6-08	X
		R. E. Lerch	B3-63	X
		P. J. Mackey	B3-15	X
		H. E. McGuire (Level 1)	B3-63	X
		S. R. Moreno	B3-06	
		R. D. Morrison	B2-35	X
		D. L. Parker	H6-03	X
		J. K. Patterson	H6-27	X
		T. M. Wintczak	H6-27	X
		C. D. Wittreich	H6-03	X
		R. D. Wojtasek (Assignee)	H6-27	X
		EDMC	H6-08	X
		TPA File (M-12)	B2-35	X

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