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Final

Meeting Minutes Transmittal/Approval
Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units
740 Stevens Center, Room 1200, Richland, Washington
June 24, 1993

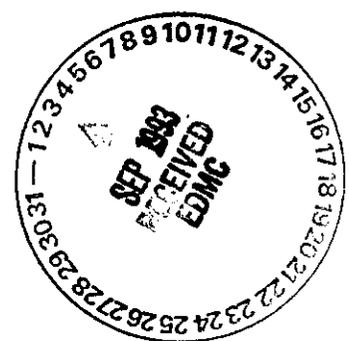
FROM/APPROVAL: *Paul M. Pak* for Paul Pak Date 7-29-93
Paul M. Pak, 200 Aggregate Area Unit Manager, RL (A5-19)

APPROVAL: *Paul & Beamer* For Doug Sherwood Date 7/29/93
Douglas R. Sherwood, 200 Aggregate Area Unit Manager, EPA (B5-01)

APPROVAL: *Nancy Goswami* for D. Goswami Date 7/29/93
Dib Goswami, 200 Aggregate Area Unit Manager, WA Dept of Ecology

Meeting Minutes are attached. Minutes are comprised of the following:

- Attachment #1 - Meeting Summary
- Attachment #2 - Attendance Sheet
- Attachment #3 - Agenda
- Attachment #4 - Action Item Status List
- Attachment #5 - 200 Area Groundwater Proposed Agreements
- Attachment #6 - Accelerated Remediation of Groundwater in the 200 Area



Prepared by: *Kay Kimmel* Date: 7/29/93
Suzanne Clarke, Kay Kimmel, GSSC (A4-35)

Concurrence by: *R. Carlson* for COW Date: 7/29/93
Curt Wittreich, WIC Coordinator (H6-03)

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**Attachment #1
Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units
June 24, 1993**

Meeting and Summary of Commitments and Agreements

1. SIGNING OF THE MAY 200 AREA UNIT MANAGER'S MEETING MINUTES:

Meeting minutes were reviewed and approved with no changes.

2. ACTION ITEM UPDATE. See Attachment 4 for status:

2AAMS.7 CLOSED 06/24/93
Paul Beaver

3. NEW ACTION ITEMS (INITIATED June 24, 1993):

2AAMS.8 EPA to develop a position concerning the proposed agreement in principle
Doug Sherwood specifying milestone documents for 200-ZP-1, 200-UP-1 and 200-BP-5 Operable
Units.

4. INFORMATION ITEMS:

- 200 Area Groundwater Proposed Agreement - Provided as a handout (see Attachment #5), all present agreed that an agreement in principle would be required in order to meet milestones with documents that would allow work to proceed without impacting existing milestones. The RL proposal included the following documents: 200-ZP-1 - IRM Proposed Plan; 200-UP-1 - LFI Work Plan including a defined Treatability Testing Program; and 200-BP-5 - a Treatability Test Plan. An NPL Agreement/Change Control Form will be the vehicle to document this agreement.
- 200-UP-1 - Curt Wittreich to set up a scoping meeting. Meeting to include a discussion on 200-UP-2 DOWs.
- The paper, *Accelerated Remediation of Groundwater in the 200 Area*, is provided as Attachment #6.

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Please print clearly and use black ink

200 Aggregate Area Unit Manager's Meeting
Official Attendance Record
June 24, 1993

Attachment #2

Page 1 of 1

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
KAY KIMMER	MAREC (D&M)	PL Support	509-376-1985
Brian Drost	USGS	EPA Support	206-593-6510
Andie D'Angles	REC	EPA Support	206-624-2692
Stacy Bradley	WAD	Agreement Planning	509-376-3382
David Hollen	Ecology	UM/Support	509-736-3027
Tracy Ziebarth	Ecology	UM	736-3014
Paul Beaver	EPA	UM BP-5	6-8665
LUIS WITTEICH	WAC	UM	6-1862
DAN PARKER	WAC	UM	2-1031
Jam Innis	EPA	UM	6-4919
Hai Dong	WAC	WAC-ER Program	6-0568
PM Pak	WAC RL	UM	6-4798
Mike Alkhamisy	COE/DOE		6-9580
Brian Innis	WAC	O.U. Support	2-3670

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Attachment #3
Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units
June 24, 1993

Agenda

200 Area Activities

- **200-BP-11 Discussion - Jeff Phillips/Paul Beaver/Paul Pak/Bob McLeod**
- **200-BP-5 Discussion - Jeff Phillips/Paul Beaver/Paul Pak/Bob McLeod**
- **200-UP-2 Discussion - Nancy Uziemblo/Dave Einan/Paul Pak/Bob McLeod**

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Attachment #4

Action Item Status List
Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units
June 24, 1993

Item No.	Action/Source of Action	Status
2AAMS.7	Prepare a strategy defining the recommended regulatory methodology to utilize for 200-BP-5 to enable initial remediation to begin on an accelerated schedule. Action: Paul Beaver	Closed 06/24/93
2AAMS.8	EPA to develop a position concerning the proposed agreement in principle specifying milestone documents for 200-ZP-1, 200-UP-1 and 200-BP-5 Operable Units.	Open 06/24/93

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200 AREA GROUNDWATER PROPOSED AGREEMENTS

The following areas must be agreed to in principal by July 1, 1993 to allow work to proceed with out impacting existing TPA Milestones, to ensure the work that is conducted is consistent with the spirit of the ongoing negotiations, and to place the 200 Area groundwater program in a position to rapidly implement the likely outcomes of the negotiations. This proposal utilizes the same assumptions which were provided to the regulators at the June 10, 1993 TPA negotiation meeting at N-Reactor.

- 1) The 200-ZP-1 LFI workplan Milestone (due August 31, 1993) will be changed to a 200-ZP-1 IRM Proposed Plan. The IRM Proposed plan will be based on the recommendations of the 200 West Groundwater AAMSR, will specify the remediation alternative(s) which will be tested at the field-scale under a treatability test program, and will specify other characterization or engineering activities necessary to support the interim record of decision (IROD). The plan will be concise, provide an overall schedule for the above activities, and will outline the remedial strategy. The IRM Proposed Plan will focus on the ERA and IRM volatile organic contaminants identified in the 200 West Groundwater AAMSR. It is understood that the IROD will be written with sufficient flexibility to allow for the refinement and optimization of the treatment schemes. The proposed CCl_4 Groundwater ERA will be dropped as a separate activity and will be integrated within the IRM Proposed Plan. Work will also be immediately initiated to upgrade one of the EPA pump and treat pilot systems to support near term field testing. Work will also proceed with evaluating and demonstrating the use of in-well sparging as part the Arid-Site VOC Integrated Demonstration.
- 2) The 200-UP-1 LFI workplan will be revised during the regulatory comment disposition cycle to become an LFI workplan with a defined treatability testing program. The workplan will detail a schedule for accomplishing these activities. The treatability test(s) will include pilot scale testing and will focus on the Uranium and Technetium contaminant plumes identified in the 200 West Groundwater AAMSR. Following the completion of the LFI and the treatability tests an IRM proposed plan would be prepared. Work will also be immediately initiated to upgrade one of the EPA pump and treat pilot systems to support the treatability tests.

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- 3) The 200-BP-5 LFI workplan milestone (due december 31, 1993) will be changed to a 200-BP-5 Treatability Test Plan (TTP). This plan will contain a detailed evaluation and screening of a limited range of available technologies/alternatives and recommend treatability test(s) be performed for the most viable technology(ies). The plan will detail schedule for implementing these tests which are expected to be field scale efforts with minimal bench/lab scale testing. This plan will focus on the IRM contaminants identified in the 200 East Groundwater AAMSR (both from the BP-5 reverse well and those associated with the 200-BP-1 groundwater plume). Following completion of the activities specified in the TTP an IRM Proposed Plan will be prepared.

More detailed planning proposals (including detailed schedules, document hierarchies, and cost estimates) will be prepared to support development of tri-party agreement change requests for these three operable units.

If the above approach is acceptable in principal please indicate by signing below.

DOE Representative

EPA Representative

Ecology Representative

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ACCELERATED REMEDIATION OF GROUNDWATER IN THE 200 AREA**Action**

Initiate testing of existing technologies and accelerate remediation of primary contaminants from the groundwater at high priority sites in the 200 Area.

Objective

Demonstrate and evaluate the effectiveness of existing technologies to remove high priority contaminants from the groundwater in the 200 Area and continue cleanup activities if deemed appropriate.

Background

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The 200 East and 200 West Groundwater Aggregate Area Management Studies (AAMS) were issued in FY-92 and FY-93 summarizing and interpreting all existing data from the groundwater in the 200 Area. Using the Hanford Site Past Practice Strategy as a basis for evaluating future actions, it was recommended to separate the groundwater from the source operable units into separate and distinct "groundwater only" operable units. This has been formally done via TPA change request in the 200 West Area by creating the 200-UP-1 and 200-ZP-1 operable units. Similar changes have been discussed among the three parties for the 200 East Area that would result in creation of two "groundwater only" operable units presently identified as 200-BP-5 and 200-PO-1. Formal change packages have not been completed for these two operable units. TPA milestones presently exist for issuance of Limited Field Investigation work plans for the 200-UP-1 (M-13-02 issued 4/30 93), 200-ZP-1 (M-13-04 due 8/31/93) and 200-BP-5 (M-13-06 due 12/31/93) operable units. The scope of work detailed in the LFI work plans has been discussed at length among the three parties with the primary issues being the type of treatability testing to be performed, the contaminants to be addressed by the treatability tests, the amount of characterization required to support risk assessment and remediation objectives, and the process/deliverables (and subject interim milestones) necessary to obtain a record of decision. Additionally, a formal proposal was made to EPA and WDOE by DOE-RL in 2/93 to initiate an Expedited Response Action in the 200-ZP-1 operable unit for the carbon tetrachloride plume in the groundwater. As part of the proposal a pilot scale sparging test was outlined as a method to be tested prior to development of a preferred alternative as determined in the Action Memorandum. To date, no formal response from the regulators has been submitted to DOE-RL.

Scope

Laboratory bench and pilot scale testing will be conducted on groundwater in the 200 Area as described below:

200-UP-1 Operable Unit: Upon agreement by the three parties, bench scale testing will commence immediately to identify a treatment train for the primary groundwater contaminants of Uranium and Technetium. Both portable and permanently fixed (C-018H) treatment capability will be addressed. Concurrently, onsite equipment acquired from the EPA will be significantly modified to be set up in the field near the 216-U-4 reverse well, to implement pilot scale testing of ion exchange techniques for removal of the above stated primary contaminants from the groundwater. The pilot scale test will use existing limited well field capacity. The same configuration (without additional modification) will also be assessed as to its effectiveness on secondary contaminants known to exist in the groundwater. Treated effluent will be reinjected to the aquifer based on modeling to determine the most appropriate location. Other disposal sites (i.e C-018H) will be evaluated and may be utilized if the three parties agree to other disposal options. The existing 200-UP-1 LFI work plan will be converted to a proposed plan for remediation to support an Interim Record of Decision (IROD). The IROD will be prepared by the regulators (concurrent with the pilot test) and will include decision points to assess criteria for continuation of remediation (e.g. continue operations with pilot scale equipment, upgrade, or discontinue operations).

200-ZP-1 Operable Unit: Upon agreement by the three parties, bench scale testing will commence immediately to identify a treatment train for the primary groundwater contaminants of Carbon Tetrachloride, Chloroform, and TCE. Concurrently, onsite equipment acquired from the EPA will be significantly modified to be set up in the field at a location to be determined, to implement pilot scale testing of Ultra Violet Oxidation (UV) techniques for removal of the above stated primary contaminants from the groundwater. The pilot scale test will use existing limited well field capacity. The same configuration (without additional modification) will also be assessed as to its effectiveness on secondary contaminants known to exist in the groundwater. Treated effluent will be reinjected to the aquifer based on modeling to determine the most appropriate location. Other disposal sites (i.e W-049H disposal pond) will be evaluated and may be utilized if the three parties agree to other disposal options. The 200-ZP-1 LFI work plan will be converted to a proposed plan for remediation to support an IROD. The IROD will be prepared by the regulators (concurrent with the pilot test) and will include decision points to assess criteria for continuation of remediation (e.g. continue operations with pilot scale equipment, upgrade, or discontinue operations).

200-BP-5 Operable Unit: Upon agreement by the three parties, bench scale testing will commence early in FY-94 to identify a treatment train for the primary groundwater contaminants of Plutonium and Strontium. Due to the low mobility of plutonium and strontium, bench testing may indicate that pump and treat methods will not yield positive results. If bench testing is

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successful, a new system fabricated onsite will be assembled and set up in the field near the 216-B-5 reverse well, to implement pilot scale testing of filtration/ion exchange techniques for removal of the above stated primary contaminants from the groundwater. The pilot scale test will use existing limited well field capacity. The same configuration (without additional modification) will also be assessed as to its effectiveness on secondary contaminants known to exist in the groundwater. Treated effluent will be reinjected to the aquifer based on modeling to determine the most appropriate location. Other disposal sites (if applicable) will be evaluated and may be utilized if the three parties agree to other disposal options. The 200-BP-5 LFI work plan will be converted to a proposed plan for remediation to support an IROD. The IROD will be prepared by the regulators (concurrent with the pilot test) and will include decision points to assess criteria for continuation of remediation (e.g. continue operations with pilot scale equipment, upgrade, or discontinue operations).

Hanford Site Groundwater Management and Control Plan: To assure a coordinated effort to manage the remediation and migration of groundwater, a Hanford Site Groundwater Management and Control Plan would be prepared and issued. The document would include the various ongoing elements of remediation on a sitewide basis, and link the activities to those operable units in which the work is being conducted. The Plan would be updated on an annual basis.

Assumptions

- * Agreement in principle for the above strategy is reached by 6/15/93
- * Field treatment activities can be initiated without public review or issuance of a record of decision
- * NEPA/CX process does not become critical path
- * IRM proposed plans would be issued in lieu of LFI work plans at 200-ZP-1 and 200-BP-5
- * The 200-UP-1 work plan would be reissued as a proposed plan after public review
- * The proposed plan would be the only primary documents for the 200-ZP-1, 200-UP-1, and 200-BP-5 operable units
- * The groundwater in the southern portion of the 200 East area (200-PO-1) has no high priority contaminants and no near term actions would be conducted
- * Characterization activities would be de-emphasized to focus available resources on remediation activities

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- * Once a system is set up and operating in an operable unit it stays dedicated to that operable unit
- * Partially treated effluent can be reinjected to the aquifer
- * Safety assessment does not require a Safety Analysis Report
- * Pump and treat are the primary options evaluated
- * Contaminants with low mobility at the 200-BP-5 Operable Unit (i.e. plutonium and strontium) can be effectively removed from groundwater
- * Winter conditions do not effect startup or continuance of field activities
- * Procurements are not delayed by vendor protest or other circumstances outside the control of the three parties
- * Disposal of secondary wastes (e.g. resins) will be at on-site low level burial grounds
- * Bench scale tests will confirm treatment assumptions made for concurrent equipment procurement
- * Cultural Resource Assessment will not impact the critical path

Schedule

- * Issue draft IRM proposed plan for 200-ZP-1 8/31/93
- * Complete bench scale testing activities for 200-UP-1 and 200-ZP-1 11/15/93
- * Revise 200-UP-1 work plan to an IRM proposed plan 12/15/93
- * Initiate startup of field equipment at 200-ZP-1 1/15/94 and 200-UP-1 2/15/94
- * Issue draft IRM proposed plan for 200-BP-5 12/31/93
- * Issue Hanford Site Groundwater Remediation Management and Control Plan 2/28/94
- * Complete bench scale testing activities for 200-BP-5 4/15/94
- * Regulators issue IROD at the 200-ZP-1 Operable Unit 4/30/94
- * Initiate startup of field equipment at 200-BP-5 6/15/94
- * Regulators issue IROD at the 200-UP-1 Operable Unit 6/30/94
- * Regulators issue IROD at the 200-BP-5 Operable Unit 8/31/94

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Distribution

Unit Manager's Meeting: 200 Aggregate Area/200 Area Operable Units
June 24, 1993

~~Roger D. Freeberg~~ /Julie K. Erickson /Paul Pak DOE-RL, ERD (A5-19)
Mike Thompson DOE-RL, EAP/RPB (A5-15)
Diane Clark DOE-RL, TSD/SSB (A5-55)
Mary Harmon DOE-HQ (EM-442)

Doug Sherwood 200 Aggregate Area Manager, EPA (B5-01)
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Audree DeAngeles PRC, Support to EPA

Dib Goswami WDOE (Kennewick)
Larry Goldstein WDOE (Lacey)

Lynn Albin Washington Dept. of Health

Curt Wittreich WHC (H6-03)
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Mel Adams (Please route to:) WHC (H6-01)
 Rich Carlson WHC (H6-03)
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 Wayne Martin PNL (K1-19)
 Mark Hanson PNL (K1-51)
 Roy Gephart PNL (K1-22)
 Steve Slate PNL (K1-19)
 Joan Keller PNL (K1-21)
 Ben Johnson PNL (K1-78)

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Please inform Suzanne Clarke (376-8189) or Kay Kimmel (376-1985) of Mactec/Dames & Moore (A4-35) of deletions or additions to the distribution list.

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