

Meeting Minutes Transmittal/Approval
Project Managers' Meeting
200 Area Groundwater and Source Operable Units
October 15, 2009

APPROVAL: *Al Farabee* DATE: 10/15/09
Al Farabee, 200 Area Project Manager, DOE/RL

APPROVAL: *Briant Charboneau* DATE: 10/15/09
Briant Charboneau, 200 Area Unit Manager, DOE/RL

APPROVAL: *Craig Cameron* DATE: 10/15/09
Craig Cameron, 200 Area Project Manager, EPA

APPROVAL: *Les Fort* DATE: 10/15/2009
Les Fort, 200 Area Project Manager, Ecology

HFFACO Action Plan Section 4.1 requires signature of agreements and commitments made during the Project Manager Meeting. Approval of these minutes documents approval of agreements and commitments documented in Attachment 4 to these minutes. Approval does not apply to any other attachments, which are included in these minutes for informational purposes.

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Minutes of the 200 Area Project Managers' Meeting of October 15, 2009 are attached. Minutes are comprised of the following.

Attachment 1	Attendance Record
Attachment 2	Agreements and Issues List
Attachment 3	Action Item List
Attachment 4	Operable Units and Facilities Status
Attachment 5	APPROVAL OF THE TETRACHLORIDE EXPEDITED RESPONSE ACTION (200-PW-1 OPERABLE UNIT) SOIL VAPOR MONITORING PLAN FOR OCTOBER 2009 THROUGH MARCH 2010
Attachment 6	TPA-CN-285

200 Area Project Managers' Status Meeting
October 15, 2009

Please print clearly and use black ink

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
LES FORT	ECY		372-7984
Janice Williams	CHPRC		372-3553
Shelley Simon	ODOE		(91) 963-0853
DL Foss	PRC		438-2705
Doey Chyni	DOE-RL-0040		373-9396
Randy Utley	WDOH		946-0534
Jim Hansen	DOE RL		376-4648
Curt Walker	CHPRC		373-2218
Arlene Tortoso	DOE-RL		373-9631
Margo Voss	DOE-RL		376-8375
John Mansley	DOG-RL		376-005-
Kelma Juechko	ECY		372-7290
Craig Cameron	EPA		376-8665
Asopuru Okemgbo	Ecology		372-7956
Catherine Louie	DOE-RL		376-6834
KD Kellebrand	DOE-RL		373-9626

**200 Area Project Managers' Meeting
Agreements and Issues List
October 15, 2009**

Agreement: TPA-CN-285. DOE/RL-2006-50, 200-UR-1 Unplanned Release
Waste Group Operable Unit SAP (rev.0, reissue)

Issue: None identified.

Delegations for October 15, 2009 PMM meeting:

EPA	Craig Cameron
Ecology	Les Fort
DOE/RL	Arlene Tortoso Doug Chapin for Al Farabee

200 Area Project Managers' Meeting
October 15, 2009

Attachment 3
CHPRC-0900225.6

OPEN ACTION ITEM TRACKING

Action #	Action/Subject	Assigned To	Owed To	Assigned Date	Original Due Date	Adjusted Due Date	Status
117	DOE to provide a schedule for completing the ECO Risk Assessment.	RL- Jim Hansen	EPA/Ecology	1/15/09	2/19/09	9/11/09	Open: A meeting was held to discuss the path forward to produce a Rev. B. Action will remain open until a white paper the updated schedule is available.
123	Hold a meeting on SW characterization data	RL-Frank Roddy Kevin Leary	Ecology	8/20/2009	9/11/2009	10/15/2009	Closed: RL (Kevin Leary) met with Ecology.
124	Discuss IC's for U Area	RL	EPA	9/11/2009	10/15/2009	10/19/2009	RL to review and bring to Nov. PMM.
125	Schedule for West Lake SAP.	RL		10/15/2009	11/19/2009		

200 AREA PROJECT OCTOBER STATUS UPDATES

October 15, 2009

Central Plateau Geographic Remediation

Key Facility Negotiations (RL: Al Farabee) – (Tina Crane)

- Technical discussions continue.

Schedule Status: Timeline has been extended to coincide with the Central Plateau Clean-up Strategy Negotiations.

Regulator Comments

CP MIS Utilization (RL: Briant Charboneau/Frank Roddy) – (Dave Chojnacki)

- The haul road is completed. Contract has been issued for the excavation of the pond site. Waste profile development is in process. It has been determined the ERDF cans will be utilized for waste removal due to the anticipated levels of contamination. Projected start date for the excavation is scheduled for mid October.

Schedule Status: On schedule.

Regulator Comments

U-Zone Remediation

221-U Disposition (RL: Wade Woolery) – (Tina Crane)

- Samples of the crust layer, liquid and core from the D-10 Tank in 221-U Cell 30 have been analyzed. RL received data summary report briefing September 28, 2009.
- D&D preparation activities are ongoing in the railroad tunnel, on the bridge crane, and with re-lamping of the facility

Schedule Status: Canyon work activities on schedule.

Regulator Comments

U-Ancillary Facilities (RL: Wade Woolery) – (Tina Crane)

- D&D operations are ongoing. Demolition preparation, such as application of fixative, and asbestos removal activities continue in 224-U/UA.

Schedule Status: U Plant Ancillary Facilities work activities on schedule.

Regulator Comments

200-UW-1

- 200-UW-1 is part of the U-Zone remediation but is reported on later in this presentation.

200 North Remediation

212-N, P, R (RL: Wade Woolery) – (Tina Crane)

- Superstructure demolition of 212-N and 212-R is complete. Basin demolition is complete at 212-N and is about 90% complete at 212-R. Structure demolition is about 60% complete at 212-P.

Schedule Status: 212-N, P, R Demolition project on schedule.

Regulator Comments

200-CW-3 Waste Sites (RL: Wade Woolery) – (Tina Crane)

- Waste site sampling is complete. Sampling summary reports are complete. Site contouring and backfilling activities for CS/NFA sites are ongoing with project completion expected in January 2010.

Schedule Status: On schedule.

Regulator Comments

Rail Car Disposition Options Study (RL: Frank Roddy) – (Tina Crane)

- Several options identified in the study are currently being investigated
 - Potential re-use of some or all of the cars.
 - Utilization of the ERDF ROD Amendment and the necessary documentation needed for the disposition purposes.
 - Modification of existing CERCLA documentation to include disposition of the rail cars.
- Initial investigation of each rail car has begun to identify characterization activities needed to comply with disposition activities.

Schedule Status: TBD.

Regulator Comments

EPA requests an EE/CA to be completed for the rail cars.

200-BC Control Area (BCCA) Ecology Lead (RL: Doug Chapin) – (Curt Walker/Ron Brunke)

- As a result of the preliminary data from the recent helicopter survey, and a follow-on down posting survey, approximately four acres of Zone A was down posted from a Contamination Area to Soil Contamination Area/Radiological Buffer Area. This allowed the area to be utilized as a materials staging area, improving traffic safety and excavation efficiency.
- On October 05, 2009, soil excavation was begun in Zone A. On October 07, 2009, super dump truck driver training and ERDF procedure revisions were completed, the prestart-up review was approved, and six truck loads of contaminated soil excavated from Zone A were hauled and disposed of at ERDF. Soil excavation work in Zone A continues.
- DOE-RL and Ecology approved the final TPA-CN-285 (BCCA SAP Appendix) on October 06, 2009, and October 08, 2009, respectively.

Schedule Status: On Schedule.

Regulator comments:

Central Plateau Groundwater and Source Operable Units

**200-UP-1 Ecology Lead (RL: Naomi Hake) – (Curtis Wittreich)
(M-15-17A, 9/30/10, Combined Remedial Investigation/Feasibility Study Report, and Proposed Plan)**

- Preparation of the combined RI/FS report continues on schedule.
- The Draft A of Revision 3 to the 200-UP-1 OU Groundwater Remedial Design/Remedial Action Work Plan (DOE/RL-97-36, Rev 3) is currently under regulator review. Ecology requested a 30-day extension with a new submittal date of November 2, 2009.
- 200-UP-1 interim action pump-and-treat system in the vicinity of U Plant is in operation with two extraction wells.

Schedule Status: On schedule.

Regulator Comments:

**200-ZP-1 EPA Lead (RL: Arlene Tortoso) – (Mark Byrnes)
(M-16, -124, 8/31/10, Submit 200 ZP-1 Remedial Design Report)**

Remediation Treatment Status:

- 10 of the 14 groundwater extraction wells are on line pumping water at a rate of approximately 220 gpm. Four other extraction wells are temporarily offline due to minor problems related to water level transducers and/or pump.
- Extraction wells W11-45 and W11-46 are both on line pumping water to ETF at a rate of approximately 45 gpm.
- The 60% design review is now complete. Comments are currently being incorporated.
- Engineering design is near complete for connecting extraction well 299-W15-225 (EW-1) to the ZP-1 treatment building. Engineering is developing a design to upgrade the ZP-1 process heater/chiller unit.

- Drilling of new extraction wells EW-4 (C7024), EW-5 (C7027), and EW-19 (C7029) has started. The EW-4 (C7024), EW-5 (C7027), and EW-19 (C7029) wells are currently at a depth of 475 ft, 470.4 ft, and 380.1 ft bgs respectively. Some problems have been encountered in well EW-19 (C7029) with the binding of downhole casing.
- Resin testing is ongoing at the Corvallis laboratory to determine the amount of carbon tetrachloride that the Purolite A530E and SIR 1200 resins will uptake.
- Currently merging the CERCLA Monitoring Plan with the Performance Monitoring Plan. The next meeting with RL, EPA, and Ecology will be scheduled in the first week of November.
- ARRA: Continuing to preparing sample authorization forms and other sampling paperwork in support of ARRA drilling. Groundwater sampling and analytical testing from ARRA wells has also begun.

Schedule Status: On schedule.

Regulator Comments

200-PW-1, 200-PW-3, & 200-PW-6 EPA Lead (RL: Arlene Tortoso) – (Kathy Davis, Mark Byrnes, Virginia Rohay PW-1 SVE)

- Discussions are being held with EPA to address new comments on the PW-1/3/6 Feasibility Study as well as comments from Ecology.
- DOE responded to EPA's request to include the unassigned pipelines around PFP in the 200-PW-1,3,6 OUs. DOE's response was that the pipelines should be assigned to 200-IS-1 and not be included in the 200-PW-1,3,6 OUs.
- DOE and EPA have agreed on a path forward to issue the combined Proposed Plan with the CW-5 Operable Unit.

Soil Vapor Extraction System (SVE):

- Monthly monitoring results for September 2009 for the soil vapor probes and wells were consistent with the results from previous monitoring.
- The two new SVE units have been shut down for the winter, as scheduled.
- The monitoring plan for October 2009 through March 2010 was approved by the RL and EPA Project Managers on 09/30/09. The signed plan will be attached to the Project Managers' Meeting minutes for transmittal to the Administrative Record.
- Average flow rate for SVE #1 at the Z-9 crib: 209 SCFM
- 25.1 lbs of CCl4 removed.
- Average flow rate for SVE #2 at the Z-1A area: 262 SCFM
- 23.8 lbs of CCl4 removed

Schedule Status: A revised schedule is under development to resolve new comments in the PW-1/3/6 Feasibility Study and a combined Proposed Plan (combined with 200-CW-5).

Regulator Comments

Deep Vadose Treatability Test M-15-53 (RL: John Morse) – (Glen Chronister)

(M-15-54, 1/31/2010, Submit report on Reactive Gas testing for sequestration of Uranium that will support remedial action decision making)

- Desiccation Pilot Test:
 - Pilot Test activities for Desiccation are underway with the primary focus on establishing a contract for drilling of 20 boreholes needed for instrumenting and logging for the Pilot Test. A Statement of Work is also in development that will be used to contract the procurement of a dry air delivery system for the project. Additionally, a contract was just released to the MSA contractor for design and construct of a 13.8 KV power supply needed to operate the three phase 480 volt equipment used in the Pilot Test.
- Characterization Testing:
 - Characterization Testing was completed on July 28, 2009, and the associated data derived from this test is being prepared in a comprehensive test report that is on schedule to be transmitted to RL in December of 2009.

- Desiccation Lab Testing (PNNL):
 - FY09 Laboratory experiments supporting pilot test design are complete. Tests focused on tracer gas use, evaluation of desiccation in heterogeneous media, and incorporation of results into flow and transport modeling. The associated report has been written and was transmitted from PNNL to CHPRC at the end of September. Additional testing will be performed in FY11 that will investigate re-wetting as a result of recharge and water vapor transport.
- Uranium Sequestration Testing (PNNL):
 - PNNL has completed dosing and mobility extraction testing on all the test columns for FY09. PNNL has drafted the associated test report and transmitted it to CHPRC at the end of September. This report will be included in a related TPA milestone due on January 31, 2010. Additional testing has been selected to be performed in FY10 to support a large scale field test to be performed in FY11.
- Surface Barrier Study (PNNL):
 - PNNL has completed their analysis (a comprehensive review of documents that have already been generated and will emphasize gap analysis and recommendations) and issued a report to CHPRC at the end of September. This report was also transmitted to DOE-RL for review and comment.

Schedule Status: On schedule to meet TPA milestone.

Regulator Comments

200-CS-1 Ecology Lead (RL: Greg Sinton) – (Ron Brunke)

- Discussions are on-going concerning incorporation of most of the CS-1 waste sites into an outer area ROD (all except 216-B-63 and 216-A-29).

Schedule Status: No near term milestone, other than for M-16-00.

Regulator Comments

200-CW-5 EPA Lead (RL: Greg Sinton) – (Kathy Davis)

- DOE and EPA have agreed on a path forward to issue the combined Proposed Plan with the PW-1/3/6 Operable Unit. The CW-5 Feasibility Study will be updated to increase comparability with the PW-1/3/6 Feasibility Study to better support public meetings.

Schedule Status: A revised schedule is under development to support the production of a revised Feasibility Study for CW-5 and a combined Proposed Plan (combined with 200-PW 1/3/6).

Regulator Comments

200-CW-1 Ecology Lead (RL: Greg Sinton) – (Ron Brunke)
(M-015-38B, 11/30/2010, Feasibility Study/Proposed Plan)

- Discussions are on-going about including most of the CW-1 sites in a new “Outer Area” ROD (all but 216-T-4B and 216-U-10).
- Remaining CW-1 supplemental characterization sampling is now anticipated to be accomplished in 2010.

Schedule Status: The M-15-08-07 TPA change package was signed August 11, 2009 and maintains the M-15-38B FS/PP due date of November 30, 2010. The change package issued for public comment had a proposed due date of September 30, 2011, but this was revised to the original date (November 30, 2010), with a scope change to limit the scope to the outer area waste sites.

Regulator Comments

200-BC-1 EPA Lead (RL: Greg Sinton) - (Mike Hickey)
(M-15-51, 9/30/10, Feasibility Study/Proposed Plan)

- Draft Data Quality Assessment report is in internal review.
- Compiling data for RESRAD analysis.

Schedule Status: On schedule.

Regulator Comments

200-SC-1 EPA Lead (RL: Greg Sinton) – (Mike Hickey)
(M-15-40E, 12/31/10, Feasibility Study/ Proposed Plan for 200-SC-1)

- The project safe store report was finalized and this project is in safe store.

Schedule Status: The project activities funded for this OU in FY09 are related to completing FY08 field activities and consolidating project information and actions to date. A change package that addresses the 200 SC-1 schedule is planned to be prepared by December 31, 2009, as specified in the M-15-40E interim milestone.

Regulator Comments

200-UW-1 Ecology Lead (RL: Kevin Leary) -- (Marty Doornbos)

- Prepared responses to review comments on 200-UW-1 OU remedial action goals (RAGs) modeling methodology. Conducted a comment resolution meeting on September 29, and a second meeting is planned for late October to resolve remaining issues.
- DQOs and SAPs to support future field characterization work at the 216-U-8 and 216-U-12 Cribs are being finalized and will undergo internal review in October.
- The Proposed Plan for 200-UW-1 is currently being revised.
- The Draft On-Scene Coordinator Report for the Time-Critical Removal Action at 200-W-42 is being finalized.

Schedule Status: Preparation of the revised 200-UW-1 Proposed Plan is on schedule to be delivered to Ecology by March 31, 2010.

Regulator Comments

EPA and Ecology recommends that the document be transmitted, and then referenced in the UW-1 FS/PP. This will allow the document to be referenced in other FS/PPs and this will get the RAGs document into the Administrative Record.

200-IS-1 (RL: Kevin Leary) -- (Greg Berlin)
(M-13-27, 6/30/07, RI/FS Work Plan)

- 241-CX Tank System Closure Plan, Rev 0 was transmitted to the Ecology December 22, 2008.
- On June 9, 2009 DOE and Ecology agreed on final changes to the CX Tank System Closure Plan; the document was revised (to Rev 1) and sent to RL.

Schedule Status: No FY09 activities are scheduled for this OU with the exception of the 241-CX Tank System Closure Plan. Updates for the Hexone Tanks Closure Plan are underway.

Regulator Comments:

200-PW-2 & 200-PW-4 Ecology Lead (RL: Doug Hildebrand) – (Mike Hickey)
(M-15-43D, 12/31/10, Feasibility Study and Revised Recommended Remedy(ies))

216-B-12 and 216-C-1 Boreholes: Request for Proposals for drilling contracts issued.

Schedule Status: Field work planning continued with the welling drilling scheduled to begin in the late fall 2009.

Regulator Comments

200-BP-5 EPA Lead (RL: Doug Hildebrand) – (Curtis Wittreich)
(M-15-21A, 12/31/2012, Feasibility Study/Proposed Plan)

- Remedial Investigation:
 - 200-BP-5 Conceptual Transport Model Report for the WMA B/BX/BY and surrounding area has been drafted by PNNL and is undergoing project review.
 - Completed and loaded into HEIS, PNNL analytical results from five FY08 wells, (299-E33-205, 299-E33-340 through 299-E33-342, and 699-52-55B).
 - K well drilling is scheduled to start October 2009.

Schedule Status: An initial draft of the 200-BP-5 Conceptual Transport Model Report has been completed and is expected to be finalized by early FY10. Drilling of the K, L and M wells is scheduled to start in the fall of 2009 with the K well and be complete by July 2010. Milestone M-15-82 requires submittal of a treatability test plan for the U/Tc plume near WMA B/BX/BY by December 31, 2010 and is on schedule.

Regulator Comments

**200-PO-1 Ecology Lead (RL: Doug Hildebrand) – (Curtis Wittreich)
(M-15-73, 12/31/2011, Submit FS Report and PP for 200-PO-1)**

- Remedial Investigation:
 - Collected 19 groundwater samples out of 27 available groundwater wells planned for decommissioning (200-PO-1 OU Work Plan Appendix A Table A3-3) as of August 7, 2009. Extreme Fire Danger concerns are impacting the sampling schedule. Anticipate sampling to be completed by October 15, 2009.
 - Completed the draft 200-PO-1 Geophysical Summary Report documenting seismic and airborne EM studies performed in FY08.
 - Remedial Investigation Report:
 - Preparation of the RI/FS report continues.

Schedule Status: The Draft A Remedial Investigation Report is scheduled to be completed by March 2010. Proposed Milestone M-15-73 requires submittal of the Draft A Feasibility Study and Proposed Plan by December 30, 2011.

Regulator Comments

200-SW-1 Ecology Lead (RL: Kevin Leary) – (Ron Brunke)

- A meeting was held on September 10, 2009, on the NRDWL and SWL landfills, to review the supplemental data package content, discuss permitting path forward and schedule a site visit. A site visit was held in October, and a formal Ecology review of the closure plans will begin soon.

200-SW-2 Ecology Lead (RL: Frank Roddy) – (Greg Berlin)

- RI/FS Work Plan (Rev 0) was approved by RL and Ecology on December 22, 2008.

- Geophysical investigations have been performed at 218-E-10, 218-E-12B, 218-W-4B, and 218-W-4C to support procedural closure of unused TSD landfill areas; final report preparation is underway. Passive organic vapor samplers (~350 total) have been installed in 200 East and West Area landfills, removed and shipped for lab analyses; the investigation report should be completed by December 2009.

Schedule Status: Non-intrusive characterization tasks (i.e., surface geophysics and passive organic vapor sampling) are now funded using ARRA support. Field activities began in August and continue into FY2010.

Regulator Comments

Ecology stated that there were issues with the location of wells on the plots. (SW-1)
RL has been requested to resolve this issue.

200-MW-1 EPA Lead (RL: Frank Roddy) – (Mike Hickey)
(M-15-44B, 2/28/2010, Feasibility Study/Proposed Plan)

- Incorporating internal draft comments on the feasibility study
- Proposed Plan is in the internal review cycle.

Schedule Status: On schedule to meet modified TPA interim milestone M-015-44B.

Regulator Comments

200-MG-1/200-MG-2 Model Group 1 Sites (RL: Frank Roddy) – (Greg Berlin)
(M-15-49a, 12/31/08, MG-1 EE/CA) *Ecology Lead*
(M-15-49B, 12/31/08, MG-2 EE/CA) *EPA Lead*

- The 200-MG-1 EE/CA (Rev. 0, 194 waste sites) was published in June 2009.
- The 200-MG-1 AM (Rev. 0, 11 Outer Zone waste sites) was approved and published in July 2009.
- The 200-MG-1 SAP (Rev. 0, 11 Outer Zone waste sites) was published in September 2009.
- A draft 200-MG-1 RAWP (11 Outer Zone waste sites) has been prepared, reviewed by Ecology, and is in the process of finalization.
- The 200-MG-2 EE/CA (Rev. 0, 34 waste sites) was published in May 2009.
- A draft 200-MG-2 AM (Draft A, 34 waste sites) has been prepared and transmitted to EPA. Comments were received from EPA on September 01, 2009; comment responses were shared with EPA on September 28, 2009.

Schedule Status: On schedule.

Regulator Comments

EPA requests that work proceeds on the AM for MG-2.

200-LW-1/200-LW-2 Ecology Lead (RL: Frank Roddy) – (Mike Hickey)
(M-15-46B, 12/31/11, Feasibility Study/Recommended Remedy) *Ecology*

216-B-6 Borehole C5860:

- Field work planning continued.
- Drilling of this borehole is scheduled for the end of October 2009.

Schedule Status: Other than the C5860 borehole (above), the project activities funded for this OU in FY09 are related to completing FY08 field activities and consolidating project information and actions to date. A change package that addresses the 200-LW-1/2 schedule is planned to be prepared by December 31, 2009 as specified in the proposed M-15-446B interim milestone. Obtain samples at the 216-B-6 (“K-well”) borehole April 27, 2009 – October 26, 2010.

Regulator Comments

Ecological Risk Assessment (RL: James Hansen) – (John Lowe)

Work continues on the revisions to the Central Plateau Ecological Risk Assessment Report. Work has begun to more fully document and improve the transparency of the ecological risk assessment data, with the assistance of Neptune and Company. Activities associated with the CP ERA are being coordinated with the RI/FS for sites in OUs that are located in the proposed “Outer Area” of the Central Plateau.

Schedule Status: The schedule for the ecological risk assessment will support proposed plans for the Outer and Inner Areas. A revised draft report is scheduled to be provided to DOE in January 2010.

Regulator Comments

Well Decommissioning Status: (RL: Frank Roddy) - (Chris Wright)

- Initial screening of candidates for decommissioning being performed with groundwater and source OU leads, DOE, and Ecology.
- Funding from ARRA for 350 wells.

Schedule Status: Decommissioning field work planned to begin September/October of 2009.

Regulator Comments

200-TW-1 & 200-PW-5 EPA Lead (RL: Arlene Tortoso) – (Mike Hickey)
M-15-42D, 12/31/11, Feasibility Study/Proposed Plan for TW-1 & PW-5)

Schedule Status: No FY09 activities are scheduled for this OU. A change package that addresses the 200-TW-1 & PW-5 schedule is planned to be prepared by December 31, 2009 as specified in the proposed M-15-42D interim milestone.

Regulator Comments

200-TW-2 Ecology Lead (RL: Arlene Tortoso) – (Mike Hickey)
(M-15-42E, 12/31/11, Feasibility Study/Revised Recommended Remedy(ies) for TW-2)

Schedule Status: No FY2009 activities are scheduled for this OU. A change package that addresses the 200-TW-2 schedule is planned to be prepared by December 31, 2009 as specified in the proposed M-15-42E interim milestone.

Regulator Comments

200-UR-1 Ecology Lead (RL: Frank Roddy) – (Ron Brunke)

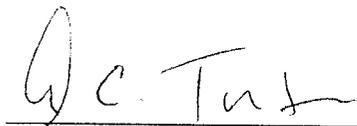
- Work continues on preparation of the West Lake SAP.

Scheduled Status: On schedule.

Regulator comments

APPROVAL OF THE CARBON TETRACHLORIDE EXPEDITED RESPONSE ACTION
(200-PW-1 OPERABLE UNIT) SOIL VAPOR MONITORING PLAN FOR
OCTOBER 2009 THROUGH MARCH 2010

The Project Managers for the Carbon Tetrachloride Expedited Response Action (200-PW-1 Operable Unit) approve the attached Soil Vapor Monitoring Plan for October 2009 through March 2010.

 
_____ 9/30/09 _____ 9/30/09

A. C. Tortoso
U.S. Department of Energy
Richland Operations Office

Date E. Laija Date
U.S. Environmental Protection Agency
Region 10, Hanford Office

CARBON TETRACHLORIDE EXPEDITED RESPONSE ACTION SOIL VAPOR MONITORING PLAN FOR OCTOBER 2009 THROUGH MARCH 2010

Summary

This plan describes non-operational monitoring and passive soil vapor extraction monitoring to be conducted during October 2009 through March 2010 for the 200 West Area Carbon Tetrachloride Expedited Response Action (200-PW-1 Operable Unit). Operation of the soil vapor extraction (SVE) systems will be temporarily suspended during this time, and monitoring will be conducted at both the 216-Z-9 (Z-9) site and the 216-Z-1A/Z-18/Z-12 (Z-1A) site. Passive soil vapor extraction will be maintained at Z-1A wells during this time. Operating plans for use of the SVE systems will be submitted to the Unit Managers for approval prior to implementation.

Soil vapor monitoring will be conducted at vadose zone locations near the groundwater, the Cold Creek unit, and the ground surface at the Z-1A and Z-9 sites while they are not being actively remediated using the SVE systems. Anomalies in the monitoring results will be reported at the 200 Area Unit Manager Meetings. If carbon tetrachloride vapor concentrations increase such that the carbon tetrachloride contamination may impact human health or the environment (including groundwater), the Unit Managers will decide on the appropriate response to mitigate the problem (e.g., relocating the SVE systems to address the problem).

Purpose and Objectives

The purpose of non-operational monitoring is to measure carbon tetrachloride concentrations in the vadose zone during the shutdown of the SVE systems.

The objectives of monitoring the non-operational wells and soil vapor probes are (1) to measure carbon tetrachloride concentrations and trends near the vadose-atmosphere and vadose-groundwater interfaces to evaluate whether non-operation of the SVE systems is negatively impacting atmosphere or groundwater; and (2) to be cognizant of carbon tetrachloride concentrations and trends near the lower permeability Cold Creek unit to provide an indication of concentrations that can be expected during restart of SVE operations and to support selection of on-line wells.

The objectives of monitoring the passive soil vapor extraction system wells, which are all open near the vadose-groundwater interface, are: (1) to measure carbon tetrachloride concentrations and trends near the vadose-groundwater interface; and (2) to quantify the mass of carbon tetrachloride removed using this technology.

Scope and Methods

Carbon tetrachloride soil vapor concentrations will be monitored at selected soil vapor probes and wells during non-operation of the SVE systems (Tables 1 and 2). At any particular time, all

of the soil vapor probes and wells will be “non-operational,” i.e., they will not be connected to the SVE systems.

Eight of the non-operational wells have a passive soil vapor extraction system installed at the wellhead. Passive extraction wells will vent through aboveground canisters containing granular activated carbon (GAC). The carbon tetrachloride vapor concentration will be monitored both upstream and downstream of the GAC.

For monitoring the non-operational soil vapor probes and wells and the passive extraction wells, the components of this scope are:

- Collect soil vapor samples in Tedlar bags for field screening
- Analyze soil vapor samples for carbon tetrachloride using a field screening instrument (e.g., the Bruel and Kjaer 1302 multi-gas analyzer)
- Evaluate concentration trends and report anomalous results to 200-PW-1 Operable Unit Project Managers
- Include results in annual reports

Duration

Non-operational monitoring and passive soil vapor extraction monitoring will be conducted from October 2009 through March 2010 during FY 2010.

Monitoring Frequency

Monitoring will be conducted monthly.

Monitoring Locations

Locations were selected to focus carbon tetrachloride monitoring near the vadose-atmosphere and vadose-groundwater interfaces and near the Cold Creek unit (Table 1). These monitoring locations may be revised by the 200-PW-1 technical lead based on developing trends, accessibility, and/or recommendations of the sampler. The 200-PW-1 Operable Unit Project Managers will be advised of any changes to the monitoring locations. Monitoring locations are shown on Figure 1.

Data Management

The field screening data obtained from non-operational wells and soil vapor probes and passive extraction wells are entered into a controlled field logbook, which is maintained by Lockheed Martin Services Inc (LMSI) Records Information Management (RIM) department. The 200-PW-1 OU technical lead organizes and maintains spreadsheets of the field screening data on a desktop computer. The field screening data are entered into the Hanford Environmental Information System (HEIS) database.

Data Reporting

All of the field screening data, and associated quality control data, are included in the annual performance evaluation report for soil vapor extraction operations (e.g., SGW-40456, *Performance Evaluation Report for Soil Vapor Extraction Operations at the 200-PW-1 Operable Unit Carbon Tetrachloride Site, Fiscal Year 2008*). The 200-PW-1 Operable Unit Project Managers will be advised of any anomalous results or new trends, based on comparison with results of previous carbon tetrachloride monitoring and evaluation, by the 200-PW-1 OU technical lead.

Quality Assurance/Quality Control

Quality assurance/quality control requirements for sampling and analysis will be conducted at a level appropriate to field screening for volatile organic compounds, in accordance with the project quality assurance project plan [CHPRC-00189, *CH2M Hill Plateau Remediation Company Environmental Quality Assurance Program Plan*]. At a minimum, one field duplicate sample will be collected for every 20 vapor samples collected. A carbon tetrachloride standard and a blank sample will be analyzed at the beginning of the analysis of the vapor samples.

References

CHPRC-00189, *CH2M Hill Plateau Remediation Company Environmental Quality Assurance Program Plan*, Rev. 0, CH2M Hill Plateau Remediation Company, Richland, Washington.

SGW-40456, *Performance Evaluation Report for Soil Vapor Extraction Operations at the 200-PW-1 Operable Unit Carbon Tetrachloride Site, Fiscal Year 2008*, Rev. 0, CH2M Hill Plateau Remediation Company, Richland, Washington.

Table 1. Distribution of Selected Monitoring Locations.

Target Zone	Number of Monitoring Locations		
	Z-1A	Z-9	Total
Near-surface (3-20 m below ground surface)	6	9	15
Cold Creek unit (25-45 m below ground surface)	5	6	11
Groundwater (50-65 m below ground surface)	8 ^a	2	10
Total	19	17	36

^a Approximately eight available monitoring locations near the vadose/groundwater interface in the Z-1A area are being monitored as part of the passive soil vapor extraction system network (Table 2).

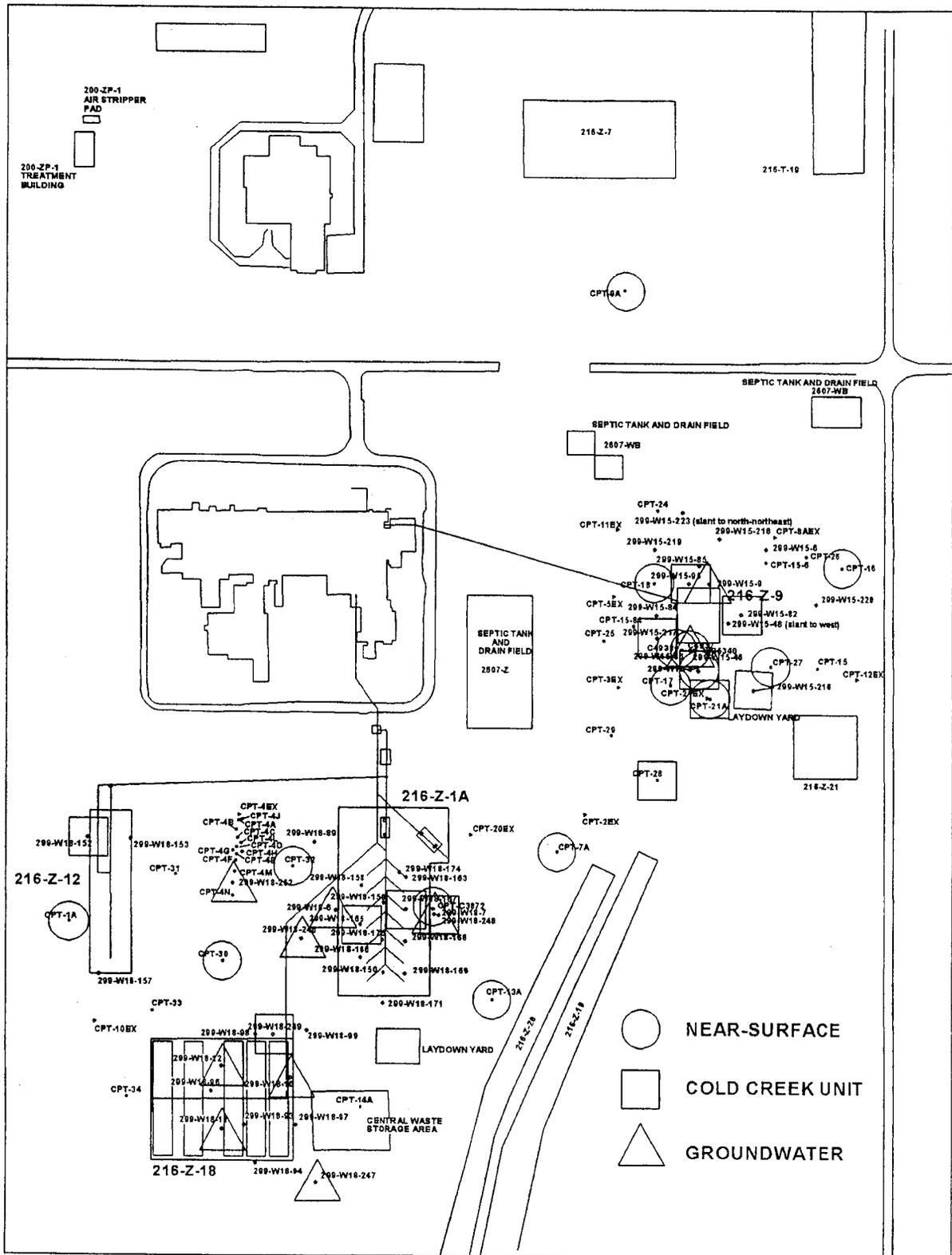
Table 2. Wells and Probes Selected for Non-Operational Monitoring and Passive Soil Vapor Extraction Monitoring.

Target Zone	Z-9	Depth (m)	Comment	Z-1A	Depth (m)	Comment
near-surface	CPT-17 10 ft (blue)	3	southwest of Z-9	CPT-32 25 ft (green)	8	west of Z-1A
near-surface	CPT-16 25 ft (blue)	8	east of Z-9	CPT-13A 30 ft (blue)	10	southeast of Z-1A
near-surface	CPT-27 33 ft (red)	10	southeast of Z-9	CPT-7A 32 ft (yellow)	10	farfield northeast of Z-1A
near-surface	CPT-18 35 ft (blue)	11	northwest of Z-9	CPT-1A 35 ft (black)	11	west of Z-12
near-surface	CPT-9A 60 ft (blue)	18	farfield north of Z-9	CPT-30 48 ft (blue)	15	north of Z-18 (middle of Z-1A/Z-18/Z-12 field)
near-surface	CPT-21A 65 ft (green)	20	south of Z-9	CPT-C3872	19	east side of Z-1A
near-surface	C4937	20	south of Z-9	---	---	---
near-surface	C4938	20	south of Z-9	---	---	---
near-surface	C5340	20	south of Z-9	---	---	---
Cold Creek	W15-82	25	east side of Z-9	W18-165	33	within Z-1A
Cold Creek	CPT-21A 86 ft (red)	26	south of Z-9	W18-152	34	northwest corner of Z-12
Cold Creek	CPT-28 87 ft (red)	27	farfield south of Z-9	W18-167	37	within Z-1A
Cold Creek	W15-8U	31	south of Z-9	W18-249	41	northeast corner of Z-18
Cold Creek	W15-217	35	southwest corner of Z-9	W18-248	41	east side of Z-1A
Cold Creek	W15-95L	44	north side of Z-9	---	---	---
ground water	W15-8L	55	south of Z-9	W18-247L*	51	southeast of Z-18
ground water	W15-9L	57	north of Z-9, 11 m from W15-32 extraction well	W18-246L*	52	west of Z-1A
ground water	---	---	---	W18-252L*	53	west of Z-1A (middle of Z-1A/Z-18/Z-12 field)
ground water	---	---	---	W18-10L*	55	east side of Z-18
ground water	---	---	---	W18-7*	57	east side of Z-1A
ground water	---	---	---	W18-6L*	60	west side of Z-1A
ground water	---	---	---	W18-11L*	60	Z-18
ground water	---	---	---	W18-12*	60	Z-18

* Passive soil vapor extraction wells

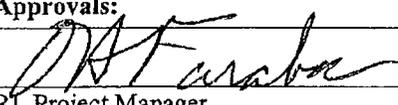
Note: Colors refer to the color coding on the soil vapor probe tubing.

Figure 1. Location of Wells and Probes Selected for Non-Operational Monitoring and Passive Soil Vapor Extraction Monitoring





**Change Notice for Modifying Approved Documents/Workplans
In Accordance with the Tri-Party Agreement Action Plan,
Section 9.0, Documentation and Records**

Change Number TPA-CN-285	Document Submitted Under Tri-Party Agreement Milestone N/A	Date: 10/06/2009		
Document Number and Title: DOE/RL-2006-50, 200-UR-1 Unplanned Release Waste Group Operable Unit Sampling and Analysis Plan (Revision 0, Reissue).		Date Document Last Issued: February 2007		
Originator: O.A. Farabee, RL		Phone: 509-376-8089		
Description of Change:				
<p>O.A. Farabee, RL and L.A. Fort, the Washington State Department of Ecology (Ecology), the lead regulatory agency, agree that the proposed change modifies an approved work plan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, <i>Documentation and Records</i>, and not Chapter 12.0, <i>Changes to the Agreement</i>.</p> <p>The following changes are made to the DOE/RL-2006-50, 200-UR-1 Unplanned Release Waste Group Operable Unit Sampling and Analysis Plan (Revision 0, Reissue, February 2007):</p> <p>Appendix A, <i>BC Controlled Area Post-Removal Action Verification Sampling and Analysis Plan</i>, is added, as a lower-tier sampling and analysis plan SAP to the 200-UR-1 Unplanned Release Waste Group OU SAP. (Note: Appendix A also includes its Attachment 1, <i>Analytical Data for the BC Controlled Area</i>).</p>				
Justification and Impacts of Change:				
<p>The 200-UR-1 OU includes the BC Controlled Area, an unplanned release waste site, UPR-200-E-83. The Appendix A to the DOE/RL-2006-50 SAP is a lower-tier SAP that provides a post-removal action verification sampling design for the BC Controlled Area, UPR-200-E-83. The radiological surveys and soil analytical data resulting from the implementation of this lower-tier SAP will be used to verify completeness of the removal actions in accordance with the unrestricted release provisions of DOE/RL-2006-50. These changes will be included in the next revision to DOE/RL-2006-50, 200-UR-1 Unplanned Release Waste Group Operable Unit Sampling and Analysis Plan (Revision 0, Reissue, February, 2007). The addition of Appendix A and its Attachment 1, <i>Analytical Data for the BC Controlled Area</i>, were discussed in a meeting between RL, CHPRC, and Ecology on August 24, 2009. This CN is based on resolution and incorporation of Ecology comments received on August 26, 2009, comment incorporation discussions between Ecology and CHPRC on September 02-03, 2009, as well as follow-on comments received on September 17, 2009. Attachment 1 includes existing analytical data as a response to one of Ecology's comments.</p>				
Approvals:				
 RL Project Manager		10/6/09 Date	<input type="checkbox"/> Approved	<input type="checkbox"/> Disapproved
 Ecology Project Manager		10/8/09 Date	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved
		Date	<input type="checkbox"/> Approved	<input type="checkbox"/> Disapproved

**DISTRIBUTION
PROJECT MANAGERS' MEETING,
200 AREA GROUNDWATER SOURCE OPERABLE UNITS
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