

**DISTRIBUTION
PROJECT MANAGERS' MEETING,
200 AREA GROUNDWATER SOURCE OPERABLE UNITS
March 18, 2010**

DOE/RL

(No hard copy distribution)

EPA

Craig Cameron

B1-46

Ecology

Nina Menard

H0-57

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Administrative Record (2)

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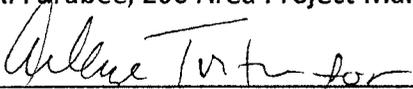
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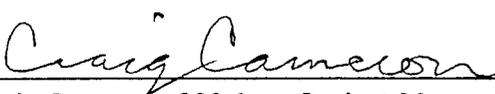
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 200-CW-3 200-PW-3 200-UW-1 200-SLO-1
 200-MG-1 200-PW-4 200-15-1 200-SW-2
 200-MG-2 200-CS-1 200-PW-2 200-MW-1
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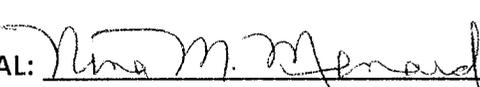
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Meeting Minutes Transmittal/Approval
Project Managers' Meeting
200 Area Groundwater and Source Operable Units
March 18, 2010

APPROVAL:  DATE: 3/18/10
Al Farabee, 200 Area Project Manager, DOE/RL

APPROVAL:  DATE: 3/18/10
Briant Charboneau, 200 Area Unit Manager, DOE/RL

APPROVAL:  DATE: 3/18/2010
Craig Cameron, 200 Area Project Manager, EPA

APPROVAL:  DATE: 3/18/2010
Nina Menard, 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.

Minutes of the 200 Area Project Managers' Meeting of March 18, 2010 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	M-16-10-02; Revise the activity schedule contained in the RD/RAWP for the 221U Facility
Attachment 6	TPA-CN-335; SAP for Model Group 5 within 200-CW-1

200 Area Project Managers' Status Meeting
March 18, 2010

Please print clearly and use black ink

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
Lance Williams	CHPRE	Facilitator	372 3553
Jean Wanni	YN-ERWM		945-1100
Nina Menard	ECY		372-7941
Shelley Simon	ODOE	(541)	9163-0853
Doug Chapin	DOE-RL-0040		373-9396
Jim Hansen	RL		376 4648
T. McCann	CHPRE	Over Area	376-9789
Black	"	"	438-7144
Kurt Kibler	"	DED	438-2586
John Culver	WDOH		946-0790
Baye Foley	DOE		376-7087
Kevin Lear	DOE RL	200 Area	373-7285
John Morse	DOE RL	FED	376-0057
Arlene Tortoso	DOE RL	200 Area OU lead	373-9631
Naomi Hale	DOE RL	UP-1	376-5527
AL Farabee	" "	FED	376-8089
Ellwood Glassbrenner	DOE RL		376 5828
Emil Laja	EPA		376-4919

**200 Area Project Managers' Meeting
Agreements and Issues List
March 18, 2010**

Agreement: M-16-10-02; Revise the activity schedule contained in the RD/RAWP for the 221U Facility; This change package revises the schedule for the activities described in Section 3.3 of the RD/RAWP to support the proposed interim milestone dates. The schedule changes specifically addressed by this change are found in Table 3-2, Figure 3-1, Figure 3-2, Figure 3-3, and Figure 3-4 of the RD/RAWP (Attachment 5)

Agreement: TPA-CN-335; SAP for Model Group 5 within 200-CW-1; Eight samples for characterization of the 216-U-10 Pond waste site from C5766, C5767, C5768, and C5773 will be collected via four direct pushes instead of four auger holes (Attachment 6)

Agreement: The Parties have agreed that the April 200A PMM is canceled due to schedule conflicts with EPA

Issue: None identified.

Delegations for March 18, 2010 PMM meeting:

EPA	Craig Cameron
Ecology	Nina Menard
DOE/RL	Brian Foley Doug Chapin

200 Area Project Managers' Meeting
 March 18, 2010

Attachment 3
 CHPRC-1000209

OPEN ACTION ITEM TRACKING

Action #	Action/Subject	Assigned To	Owed To	Assigned Date	Original Due Date	Adjusted Due Date	Status
	No Open Action Items						

200 AREA PROJECT MARCH STATUS UPDATES

March 18, 2010

Central Plateau Geographic Remediation

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

- The agreement in principle for negotiation of Central Plateau Facility disposition activities was signed by Tri-Parties August 13, 2008. Technical discussions began October 30, 2008.
- Key Facility Negotiations has been combined with Central Plateau Milestone Negotiations.

Schedule Status: Key Facility Negotiations is on schedule with Central Plateau Milestone Negotiations.

Regulator Comments

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

- MIS project is still on hold until the Hazard Categorization review is completed.
- Waste Control Plan has been completed and accepted by ERDF.

Schedule Status: On schedule.

Regulator Comments

U-Zone Remediation

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

- Eleven cells are credited with being finished with equipment loading. Loading the next three cells is delayed due to required equipment (crane) repairs. This delay is offset by significant efficiencies found in loading previous cells.
- The bridge crane was unavailable for the majority of the month of February due to wheel bearing and electrical collector failures. Both issues will be remediated first week in March.
- Size reduction activities continue.
- Fixative has been applied to the “R” doors and northwest stairway.
- Bids on the grout conveyance system continue to be evaluated.
- Planning has started on the transfer of the D-10 tank in cell 30 to T Plant.

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. Asbestos removal in 224-U D Cell and 224-UA Calciner Cells G, H, J, K, L, and M is scheduled to be complete by the end of March 2010. 224-U/UA demolition activities are scheduled to begin in April 2010.

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 and is reported on later in this presentation.

200 North Remediation

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

- Sample analysis results generated through performance of the removal action have been received and evaluated; removal action report documenting response action completion is underway.
- An advance sample summary for the excavated area from each building has been distributed to RL and EPA for consideration in discussions regarding the “no further evaluation” determination for the remaining soils in accordance with SAP (DOE/RL-2009-17).
- Backfilling/Contouring/Application of soil fixatives as appropriate is planned for March 2010.

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

Regulator Comments

200-CW-3 Waste Sites (RL: Frank Roddy) – (Tina Crane)

- Initial waste site sampling is complete.
 - Reclassification forms for CS/NFA sites have been submitted for EPA approval. Those for the pipelines (600-285-PL, 600-286-PL, and 600-287-PL) have been approved by EPA. The remaining three (for 200-N-3, UPR-200-N-1 and UPR-200-N-2) have just received EPA approval with completion anticipated in March 2010.
 - Sampling summary reports for the three RTD sites were completed and transmitted to RL.
- TPA changes notices for RAWP and SAP to incorporate verification sampling at 216-N-1, 216-N-4 and 216-N-6 sites have been reviewed and approved by RL and EPA. Excavation of 216-N-1 is complete. Excavation in progress on 216-N-4.

Schedule Status: On schedule.

Regulator Comments

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

- 212-N,-P, -R EE/CA is in revision to incorporate disposition of railcars. Addenda / revision of follow-on regulatory document (Action Memo, work plan, etc.) to follow as applicable.

Schedule Status: The EE/CA Addendum is anticipated to go out for public review in late March, or early April, 2010.

Regulator Comments

200-BC Control Area (BCCA) Ecology Lead (RL: Doug Chapin) – (Bo Wier)

- **BCCA North (Zone A)**: Excavation of contaminated soil was continued using six super dump trucks in service. As of the week of March 15, 2010, approximately 4,800 tons were disposed of at ERDF (~65,800 tons over ~17 acres, cumulative).
- **BCCA North (Zone B)**: Removal of elevated hot spots continue. Approximately 570 acres have been down posted to date.
- **BCCA South (Zone C)**:
 - CHPRC continues document clearance of their subcontractor's September 2009 BCCA and West Lake aerial (helicopter) radiological survey report and is expected to provide copies to RL the week of March 15, 2010. Once done, CHPRC will be scheduling a report briefing to RL and the regulators in order to determine the nature and extent of potential remediation that, along with what CERCLA documents, will be required for Zone C, which is approximately 4,160 acres (~ 6.5 square miles). The aerial survey detected the presence of elevated, radiological contaminated soil in Zone C.
 - Cultural surveys began on March 15, 2010.
 - Ecological surveys are scheduled to begin the week of March 22, 2010.

Schedule Status: On Schedule.

Regulator Comments

200-MG-1 Ecology Lead (RL: Frank Roddy) – (Field Work: Bo Wier; Action Memo: Greg Berlin; All other regulatory documents: Tina Crane)

- Ecology review of AM for second batch (37) of sites in outer area was completed and RL has replied with responses to their comments. All but one comment are resolved.
- Work Plan and SAP are in revision to address second batch (37) of sites with entry into formal review cycle anticipated in March 2010.
- Cultural Review Report of 5 of the second batch of sites will go out for public review.
- Contractor is ready to start work on the second batch of sites.
- Confirmatory Sample No Further Action (CSNFA) Sites
 - Initial sampling of site 600-218 indicates that RTD is required.
 - Sampling was completed for site 600-262.
 - Sampling sites 600-38 and 600-40 is anticipated in March, 2010.
 - Preliminary field measurements for UPR-600-12 revealed elevated radiological levels. Evaluations are ongoing concerning whether RTD is necessary.
- Waste Site Reclassification forms and response action completion report (RAR) for sites 200-E-110 and 600-21 are in RL. RL is disapproving them since they do not have cost estimates as required by EPA.
- Initial field RTD activities for 600-36 are complete pending sampling results. Sampling was performed on February 22, 2010.
- Site 600-51 is field complete. The RAR is being prepared.

Schedule Status: On Schedule.

Regulator Comments

200-MG-2 EPA Lead (RL: Frank Roddy) – (Greg Berlin)

- The 200-MG-2 Action Memorandum was finalized in December 2009.

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)

- Revision 3 to the 200-UP-1 OU Groundwater Remedial Design/Remedial Action Work Plan (DOE/RL-97-36) was issued.
- Continued remedial design for the WMA S-SX extraction system to capture the Tc-99 plumes. Performed initial hydraulic capture zone analyses for the Tc-99 plumes that indicate a two well extraction system at 50 gpm total would be sufficient to capture the plumes at concentrations greater than 9000 pCi/L (10 x MCL).
- Preparation of the 200-UP-1 OU RI/FS report and revision to the 200-ZP-1 Proposed Plan continues. A regulator briefing will be scheduled to discuss the approach to preparing the 200-UP-1 proposed plan for the purpose of amending the 200-ZP-1 ROD.
- The U Plant P&T System extraction wells were cleaned (brushed and surged) resulting in a modest increase in pumping rate. An additional chemical treatment is being planned to remove the remaining scale from the well screens.

Schedule Status: The Draft A combined RI/FS report and Proposed Plan revision is scheduled to be completed by September 2010.

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:

- 12 of the 14 groundwater extraction wells are on line pumping water at a rate of approximately 260 gpm. Extraction well 299-W15-47 is offline due to electrical problems. Extraction well 299-W15-36 will be kept offline due to very low flow rates.
- Extraction wells 299-W11-45 and 299-W11-46 are both running and are pumping at a combined rate of ~51 gpm to ETF.
- A 90% design review meeting with EPA occurred on February 17, 2010. EPA did not have any comments on the 90% design.
- Drilling and sampling of nine permanent extraction/injection wells is complete. Initiated drilling of three new FY10 extraction wells. Two of these wells are near total depth. The third well is at a depth of 179 feet.
- The Draft A Performance Monitoring Plan has been transmitted to EPA for review. EPA comments are due April 2, 2010.
- Subcontractor has mobilized to the field to support the hookup of ZP-1 extraction well 299-W15-225 (EW-1).

- Currently preparing two separate test plans to support laboratory testing of a variety of resins for uranium removal, as well as the testing of activated carbon as a less expensive way of removing Tc-99 from groundwater, as opposed to using resins.
- The Operations and Maintenance Plan for the 200-West Area Groundwater Treatment Facility has been issued to RL for transmittal to EPA for review.

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)

- A meeting was held on February 25, 2010 with EPA and Ecology to discuss the modeling for the groundwater protectiveness evaluation. A follow-up meeting was then held on March 11th to present the COPC screening for groundwater protectiveness and the specific parameters for the groundwater modeling. The Draft C FS is in preparation to include the evaluation of pipelines connected to the waste sites in PW-1/3/6 and CW-5, the revised groundwater protectiveness evaluation, and introduce the new exposure scenarios for the CP Strategy.

Soil Vapor Extraction System (SVE):

- Monthly monitoring results for February 2010 for the soil vapor probes and wells were consistent with the results from previous monitoring.
- The new SVE unit at Z-9 was started up March 1, 2010, while the unit at Z-1A started up March 2, 2010. Both units are running smoothly.
- The SVE operating plan for FY 2010 was signed by RL and EPA prior to startup.

Schedule Status: A revised schedule was provided to EPA for the 200-PW 1/3/6 FS and a combined Z Area Liquid Waste Discharge Proposed Plan (combined with 200-CW-5).

Regulator Comments

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

Desiccation Pilot Test:

- An RFP for procurement of the dry air injection system has been prepared and is now being prepared to be issued as an RFP. Engineering for the instrumentation and monitoring systems, as well as power distribution continue and procurement of instrument monitoring is nearing completion. Boring of the first instrumented 20

additional boreholes at the BC Cribs and Trenches site to support the Desiccation Pilot Test was initiated on February 26, 2010.

Characterization Testing:

- The test report on soil characterization and permeability has been approved and released. This report compiles the results of the borehole analysis, permeameter results, laboratory desiccation tests and modeling, and characterization field test results.

Uranium Sequestration Testing (PNNL):

- Testing continues on large scale soil test columns that will be used as the basis for adaptation to a field scale test scheduled for FY11 supporting uranium sequestration.

Soil Flushing and Soil Grouting (PNNL):

- Testing continues on soil flushing as a mechanism to contact targeted contamination in the vadose zone with a leaching solution as well as testing on grouting as a mechanism to contact targeted contamination in the vadose zone to react, stabilize, or isolate the contaminants. Both of these tests will be used to evaluate the possibility of large scale treatment and application and information derived from these tests will also be used for modeling distribution, locations, and effectiveness of these particular technologies.

Schedule Status: TPA milestone M-015-54 (1/31/2010) was met ahead of schedule.

Regulator comments:

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

- A change package has been prepared and is under Agency review to incorporate most of the CS-1 waste sites into the Outer Area Operable Unit (all except 216-B-63 and 216-A-29).

Schedule Status: The proposed milestone for the Outer Area Operable Unit has been submitted for Agency review.

Regulator Comments

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

- A revised draft FS incorporating updated alternatives and other changes based on previous EPA comments has been prepared. CHPRC is currently updating that

“decisional draft” based on DOE staff comments. An updated “Draft C” FS is expected for DOE review in March. The Draft C FS is scheduled to be provided for EPA review in June.

Schedule Status: A revised schedule was provided to the EPA for 200-CW-5 FS and the Z Area Liquid Waste Discharge 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)

- A change package has been prepared and is under Agency review to include the outer area 200-CW-1 Ponds in a new Outer Area FS/PP.
- The remaining 200-CW-1 supplemental and the Gable pipeline characterization sampling began March 4, 2010. A change notice is being processed to update the SAP to replace four shallow auger holes with 4 direct pushes at the 216-U-10 pond.

Schedule Status: The current TPA milestone (M-15-38B) requires submittal of the FS and PP for the Outer Area Ponds on November 30, 2010. A change package has been prepared and is under Agencies review that adjusts this milestone to allow sufficient time to incorporate all the sites and approach for the Outer Area.

Regulator Comments

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

- The final Treatability Test Report was distributed March 12, 2010.
- CHPRC work on technology screening and alternatives development sections for the draft 200-BC-1 FS is 90 percent complete with the remaining work associated with the deep vadose technologies.

Schedule Status: On schedule.

Regulator Comments

200-SC-1 EPA Lead (RL: Greg Sinton) – (Mike Hickey)
(TPA schedule to be established through M-15-40E)

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

Schedule Status: A change package that addresses the 200-SC-1 schedule has been prepared and is under Agency review and approval, as specified in the M-15-40E interim milestone.

Regulator Comments

200-UW-1 Ecology Lead (RL: Kevin Leary) – (Mike Hickey)

- The Draft DQO and Draft A SAP for the field characterization (i.e., deep boreholes) at the 216-U-8 and 216-U-12 Cribs was submitted to the Agencies.
- Preparation of an EE/CA for the U Plant Area is underway. The EE/CA will include both waste sites and structures to support field remediation implementation.
- The revision of the Draft On-Scene Coordinator Report for the Time-Critical Removal Action at 200-W-42 is nearing completion.
- A meeting was held with Ecology to discuss the revised date for the 200-UW-1 Proposed Plan. During this meeting, DOE discussed the work elements necessary to complete the deep boreholes and obtain the information Ecology requested to be included in the Proposed Plan. Ecology requested a time to consider the new schedule.

Schedule Status: Discussions are underway with Ecology to revise the date for the 200-UW-1 proposed plan based upon the inclusion of the borehole data. Comments from Ecology on the 216-U-8 and 216-U-12 Cribs SAP were requested by March 12, 2010.

Regulator Comments

200-IS-1 Ecology Lead (RL: Kevin Leary) – (Greg Berlin)

- A revision to the 200-IS-1 RI/FS Work Plan is underway to meet the June 30, 2010 deadline identified in the current work plan (see schedule status below).
- Updates to the Hexone Closure Plan are underway.

Schedule Status: A change package has been prepared and is under Agency review to add a TPA milestone for the revision of the 200-IS-1 RI/FS Work Plan

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:

- The 216-B-12 borehole reached groundwater February 8, 2010 at 306 feet bgs. The ten Tier I analyses for the samples collected from the 216-B-12 are underway.

Schedule Status: A change package that addresses the 200-PW-2/4 schedule has been prepared and is under Agency review, as specified in the proposed M-15-42E interim milestone.

Regulator Comments

200-BP-5 EPA Lead (RL: Doug Hildebrand) – (Curtis Wittreich)
(M-15-82, 12/31/10, Treatability Test Plan; M-15-21A, 12/31/2012, Feasibility Study/Proposed Plan)

- Remedial Investigation:
 - The drilling/sampling of the K, L, and M wells were completed and samples analyses continued. The total depth for the K Well (adjacent B-6 Rev. well) and M well (adjacent B-12 Crib) was ~375 ft bgs.
 - Preparation of the 200-BP-5 RI Report continued. Issued a data quality assessment report for groundwater monitoring data in support of the RI Report.
 - Continued the preparation of the B Complex Treatability Test Plan for the U/Tc plume.

- Issued the depth discrete groundwater sampling plan (PNNL-19129) for select wells in the B Complex Area in support of the RI. Completed the sampling of 8 of 14 wells.

Schedule Status: The 200-BP-5 Conceptual Transport Model Report is expected to be finalized by March FY10. The Draft A RI Report is scheduled to be completed by December 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. Milestone M-15-21A requires submittal of the Draft A Feasibility Study and Proposed Plan by December 31, 2012.

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)

- The decisional draft of the 200-PO-1 Groundwater OU RI Report, DOE/RL-2009 is was prepared and is currently under DOE review.

Schedule Status: The Draft A RI Report is scheduled to be completed by June 2010. Milestone M-15-73 requires submittal of the Draft A Feasibility Study and Proposed Plan by December 31, 2011.

Regulator Comments –

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

- RL/Ecology working groups, including EPA participation, are resolving comments on the SLW and NRDWL closure plans regarding soil cap design, groundwater monitoring requirements, regulatory path forward, and public involvement preparation. The Ecology/RL technical workshops have resulted in revised draft closure plans to be reviewed by participants and then jointly discussed in a follow-on workshop scheduled to be held the week of March 29, 2010. The expedited effort is intended to make use of available American Recovery and Reinvestment Act funding prior to October 2011 towards the closure of these landfills.

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

- The results from the geophysical investigations (SGW-43771) and the passive organic vapor sampling (SGW-42563) were entered into the Administrative Record.

Schedule Status: A change package that addresses the 200-SW-2 schedule has been prepared and is under Agency review and approval, as specified in the M-15-40E interim milestone.

Regulator Comments

200-MW-1 EPA Lead (RL: Frank Roddy) – (Mike Hickey)
(M-15-44B, 2/28/2010, Feasibility Study, M-015-44C, 02/28/2011, Submit Proposed Plan)

- The Draft A FS was delivered to RL on February 18, 2010 and then submitted to EPA on February 25, 2010. Transmittal of this document meets TPA milestone M-015-44B.

Schedule Status: EPA is reviewing the Draft A FS

Regulator Comments

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:

- Fourteen Tier I analyses are underway for the samples collected from the 216-B-6 Borehole. The reduced number of analyses is due to the less than anticipated contamination encountered during drilling.

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 has been prepared and is under review by the Agencies, as specified in the proposed M-15-446B interim milestone.

Regulator Comments

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

- DOE met with EPA and Ecology on February 25, 2010 and discussed the status of ecological risk assessment activities in the Central Plateau. DOE is scheduling follow up meetings to discuss with the agencies selected technical topics related to ecological risk, including biointrusion, development of ecological PRGs and integration with RI/FSs, particularly the Outer Area RI/FS. These meetings will be initiated towards the end of March-early April.

Schedule Status:

The ecological risk assessment schedule will support development of the proposed plans for the Outer and Inner Areas. A revised draft is scheduled to be provided to the agencies in June 2010. DOE is working to integrate the ecological risk assessment with other scheduled Hanford Site risk assessments, including the Outer Area baseline risk assessment and the River Corridor Baseline Risk Assessment.

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.
- As of March 5th, 2010, 24 wells have been decommissioned. First contract awarded early December 2009. Planning for 55 wells continues with 41 Gable Mtn. wells going to SHPO 4-1-10 and 14 that will be added to existing contract. Planning started on next 88 wells. Currently either planning (143) or executing (68) for a total of two hundred and eleven wells (211).

Schedule Status: Decommissioning field work began January 19, 2010.

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: A change package that addresses the 200-TW-1 & PW-5 schedule has been prepared and is under Agency review, 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: A change package that addresses the 200-TW-2 schedule has been prepared and is under Agency review, as specified in the proposed M-15-42E interim milestone.

Regulator Comments

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

- The Draft A West Lake Sampling and Analysis Plan has been prepared and includes sampling of salt, salt-soil mixtures, sediment, surface water, and groundwater with testing for radionuclides, metals, polychlorinated biphenyls (PCBs) (solid matrices only), and general chemistry parameters. The Draft A SAP will be transmittal to Ecology for review.
- A meeting was held with Ecology to discuss the past and future activities, including schedule for development and implementation of the West Lake sampling.

Scheduled Status: Transmittal of the Draft A West Lake SAP is planned for April.

Regulator Comments

Change Number M-16-10-02	Federal Facility Agreement and Consent Order Change Control Form Do not use blue ink. Type or print using black ink. NEGOTIATION SENSITIVE, THE INFORMATION CONTAINED IN THIS DOCUMENT MAY BE PRIVILEGED, CONFIDENTIAL AND PROTECTED FROM DISCLOSURE UNDER THE ATTORNEY CLIENT PRIVILEGE OR WORK DOCTRINE AND IS NOT SUBJECT TO FOIA	Date March 26, 2010
Originator O.A. Farabee		Phone (509) 376-8089
CLASS OF CHANGE <input type="checkbox"/> I - Signatories <input type="checkbox"/> II - Executive Manager <input checked="" type="checkbox"/> III - Project Manager		
CHANGE TITLE Revise the activity schedule contained in the Remedial Design/Remedial Action Work Plan for the 221U Facility		
DESCRIPTION/JUSTIFICATION OF CHANGE The Remedial Design/Remedial Action Work Plan (RD/RAWP) for the 221U Facility (DOE/RL-2006-21, Revision 0) is a primary document as defined in Tri-Party Agreement Action Plan Section 9, <i>Documentation and Records</i> . The schedule contained in Section 3.3 of the RD/RAWP identifies completion dates for key activities that support completion of the remedial action for the 221U Facility. Tri-Party Agreement change package M-16-09-03 identifies interim milestones for demolition of the 221U canyon structure and installation of the engineered barrier. This change package revises the schedule for the activities described in Section 3.3 of the RD/RAWP to support the proposed interim milestone dates. The schedule changes specifically addressed by this change are found in Table 3-2, Figure 3-1, Figure 3-2, Figure 3-3 and Figure 3-4 of the RD/RAWP.		
IMPACT OF CHANGE The modification supports completion of the proposed milestones for 221 U Facility remediation. This change package was developed in conjunction with accompanying change package M-16-09-03 (remediation milestones.)		
AFFECTED DOCUMENTS Hanford Site internal planning, management, and budget documents (e.g., USDOE and USDOE contractor Baseline Change Control documents; Multi-Year Work Plan; Sitewide Systems Engineering Control Documents, and Project Management Plans). Section 3.3 of the primary document, <i>Remedial Design/Remedial Action Work Plan (RD/RAWP) for the 221U Facility</i> (DOE/RL-2006-21), is revised.		
APPROVALS FOR O.A. Farabee Catherine Houe 3/26/10 X Approved ___ Disapproved <small>DOE</small> Date Craig E. Cameron 3/29/10 X Approved ___ Disapproved <small>EPA</small> Date Federal St Bond 3/26/10 X Approved ___ Disapproved <small>Ecology</small> Date		Page 1 of 6

Table 3-2 of *Remedial Design/Remedial Action Work Plan (RD/RAWP) for the 221U Facility* (DOE/RL-2006-21, Revision 0) is revised as shown below:

Table 3-2. Key Schedule Items for the 221-U Facility.

Activity	Completion Date
Facility reactivation	August 31, 2011
Equipment size reduction 90% design and submit Remedial Design Report (RDR) addendum ^a	January 30, 2012
Initiate Cell 30 90% design ^a	November 30, 2013 ^b
Complete canyon grouting 90% design and submit RDR addendum ^a	May 1, 2014
Complete partial canyon demolition 90% design and submit RDR addendum ^a	July 29, 2016
Complete U Plant Canyon (221 U Facility) Demolition ^c	September 30, 2017
Complete engineered barrier 90% design and submit draft RDR ^a	August 13, 2019
Complete U Plant (221 U Facility) Barrier Construction ^c	September 30, 2021
Finalize O&M Plan	November 29, 2021

O&M = operations and maintenance.

- a. 90% Design documents, whether stand-alone or addenda, are TPA primary documents and shall be processed in accordance with the TPA Action Plan, Section 9, *Documents and Records*.
- b. The start date of November 30, 2013, for Cell 30 waste removal design activities is a commitment made by the Tri Parties and recorded in *Hanford Federal Facility Agreement and Consent Order Resolution of Dispute Agreement at the Inter-Agency Management Integration Team (IAMIT) Level for the 221-U Facility RD/RA Work Plan*, dated June 26, 2008 (see Appendix A).
- c. Activity is a TPA Milestone.

Figure 3-3. Schedule of Remedial Action Activities: Barrier Installation

ID	Task Name	Start	Finish	2018				2019				2020				2021				2022			
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
1	Construct Barrier	6/25/2018	12/2/2021	[Gantt bar spanning from Q4 2018 to Q4 2021]																			
2	90% Design and Work Plan Preparation	6/25/2018	8/13/2019	[Gantt bar spanning from Q4 2018 to Q2 2019]																			
3	Procurement and Preparation	6/17/2019	2/7/2020	[Gantt bar spanning from Q4 2019 to Q1 2020]																			
4	Stabilize Barrier Base	2/10/2020	4/8/2020	[Gantt bar spanning from Q1 2020 to Q2 2020]																			
5	Construct Barrier	4/9/2020	9/30/2021	[Gantt bar spanning from Q2 2020 to Q3 2021]																			
6	Revegetate	10/1/2021	11/29/2021	[Gantt bar spanning from Q4 2021 to Q1 2022]																			
7	Prepare for O&M	12/3/2020	11/29/2021	[Gantt bar spanning from Q4 2020 to Q1 2022]																			
8	Prepare / Finalize O&M Plan	12/3/2020	11/29/2021	[Gantt bar spanning from Q4 2020 to Q1 2022]																			

TRI-PARTY AGREEMENT

Change Notice Number TPA-CN- 335	TPA CHANGE NOTICE FORM	Date: 03/15/2010
Document Number, Title, and Revision: DOE/RL-2006-57 Rev 0 Reissue, <i>Sampling and Analysis Plan for Supplemental Remedial Investigation Activities at Model Group 5, Large-Area Ponds, Waste Sites Located Within the 200-CW-1 Operable Unit.</i>		Date Document Last Issued: 02/28/2008
Originator: Briant L. Charboneau		Phone: 373-6137

Description of Change:
Eight samples for characterization of the 216-U-10 Pond waste site from C5766, C5767, C5768 and C5773, will be collected via four direct pushes instead of four auger holes.

Briant L. Charboneau and Nina Menard agree that the proposed change
DOE **Lead Regulatory Agency**
modifies an approved workplan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, Section 9.0, *Documentation and Records*, and not Chapter 12.0, *Changes to the Agreement*.

Specific changes:
Table 1-7, Page 1-19, Each 'auger' is replaced with 'direct push' and the number of samples is corrected from 6 to 8
Section 3.1.4, Page 3-4, 'hollow stem auger' is replaced with 'direct push' and text related to only samples via an auger is deleted.
Section 3.1.4, Page 3-5 'auger' is replaced with 'direct push'
Figure 3-6, Page 3-12, 'Planned Auger Samples' is replaced with 'Direct Push Sample' and borehole numbers are added
Table 3-1, Page 3-20, Each 'auger' is replaced with 'direct push' and the number of samples is corrected from 6 to 8
Table 3-2, Page 3-22, Each 'auger' is replaced with 'direct push' and the number of samples is corrected from 6 to 8. The numbers of total samples, boreholes and samples are updated/corrected. 216-U-11 'Ditch' is corrected to "Pond". No. of shallow Pushes for 216-U-10 Pond is corrected to 5 to include the 'worst case location' specified on Table 1-7.

Note: Affected pages attached with added text shaded and deleted text in ~~strikeout~~

Justification and Impacts of Change:
Radiation Controls assessment of the 216-U-10 sampling plan based on the results of the geophysical logging completed in Summer 2008, resulted in a strong recommendation for changing augers to direct pushes to obtain the samples. The required samples at and below the organic mat (pond bottom) will be obtained using direct pushes.

Due to the contamination levels expected, a number of additional controls would be needed mainly due to the additional volume of soil produced by the auger. These would likely include a full enclosure and additional personal protective equipment.

With the change to direct push, the required samples can be made without the additional controls needed to protect workers and the environment.

Approvals:

<u>Briant L. Charboneau</u> DOE Project Manager	3-16-2010 Date	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved
<u>Craig Cameron</u> EPA Project Manager	3/19/2010 Date	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved
<u>Nina M. Menard</u> Ecology Project Manager	3-17-2010 Date	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved

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Table 1-7. Summary Sampling Design. (2 Pages)

Planned Survey or Analytical Methodology	Key Features of Design*
<i>UPR-200-W-124 (Overflow Area of the 216-S-17 Pond) - CW-2</i>	
Geophysical logging	<u>Specific location/area of concern:</u> Determine nature and extent of contamination emanating from the dike overflow at the southwest corner of the pond by installing two shallow pushes into overflow area soil and geophysically log pushes using spectral-gamma instruments.
Soil sampling	None.
<i>216-T-4B Pond - CW-4</i>	
Geophysical logging	<u>Specific location/area of concern:</u> Determine general extent of contamination in the primary pond location and the ditch that fed the pond by installing two shallow pushes into ditch soil and two shallow pushes into pond soil and geophysically log pushes using spectral-gamma instruments.
Soil sampling	Collect one soil sample from the worst case location with the highest Cs-137 concentration. <u>Soil samples will be analyzed for contaminants identified in Table 1-2.</u>
<i>216-U-10 Pond - CW-5</i>	
Geophysical logging (gamma and moisture)	<p><u>Specific location/area of concern:</u> Determine general extent of contamination in the primary pond location, contamination at the pond bottom (i.e., organic mat), and contamination at borehole depth by installing the following:</p> <ul style="list-style-type: none"> (a) Four shallow pushes into ditch soil (b) One borehole to 42.7 m (140 ft) below ground surface to resolve prior data quality issues (Table 1-2). (c) Four augered holes (d) Two deep pushes (one pair) (e) Geophysically log the 10 existing direct push casings, if possible after an initial field evaluation. <p>Geophysically log shallow pushes and borehole using spectral-gamma logging instruments. Additionally log the first push of the pair of deep pushes with slim hole gamma and moisture estimating tools. Based on the geophysical results of the first push of each pair, select up to three depths to collect soil samples from the second push in the pair.</p>
Soil sampling	<ul style="list-style-type: none"> (a) Collect one soil sample from the worst case location with the highest Cs-137 concentration from the shallow pushes (C5966) (b) Borehole sampling: Collect one sample at depth, at a minimum. (c) Auger direct push holes C5766, C5767, C5768, and C5773. From each auger direct push hole sample at and below the organic mat (pond bottom) for a total of eight six samples. (d) Collect soil samples from the second push of the deep-push pair at a depth representative of the bottom of the pond and at two depths having elevated moisture levels for a total of six soil samples. <p><u>Soil samples will be analyzed for contaminants identified in Table 1-2.</u></p>
<i>216-U-11 Ditch - CW-5</i>	
Geophysical logging (gamma and moisture)	<p><u>Specific location/area of concern:</u> Determine general extent of contamination in the primary ditch sections and in the shallow overflow area between the ditch sections by installing five shallow pushes in ditch soil and geophysically log pushes using spectral-gamma instruments.</p> <p>Install two deep pushes (one pair) in the ditch for a total of two pushes. Additionally log the first push of each pair of deep pushes with a slim hole gamma and moisture estimating tools. Based on the geophysical results of the first push of each pair, select up to three depths to collect soil samples from the second push in the pair.</p>
Soil sampling	Collect soil samples from the second push of the deep-push pair at a depth representative of the bottom of the pond and at two depths having elevated moisture levels for a total of six soil samples. <u>Soil samples will be analyzed for contaminants identified in Table 1-2.</u>

*Number of pushes, samples, augered samples, and boreholes is found in Tables 3-2 and 3-3.

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The borehole soil sampling associated with this SAP will be performed in accordance with established sampling practices and requirements pertaining to sample collection, collection equipment, and sample handling. Samples will be collected for the focused list of COPCs identified in Table 3-1 to fulfill specific supplemental data needs identified during the DQO. Borehole soil samples will be collected and managed as described in Table 2-4. Samples will undergo laboratory analysis for radiological and nonradiological COPCs or analytical suites identified in Table 3-1 in accordance with analytical requirements in Tables 2-1 and 2-2. Samples will be analyzed at an onsite laboratory. Physical property samples, generally collected from boreholes to provide site-specific values to support the RESidual RADioactivity (RESRAD) dose model (ANL, 2002, *RESRAD for Windows*, Version 6.21), are not required for this focused sampling activity.

Soil samples generally are collected from the borehole using a split-spoon sampler equipped with up to four separate stainless-steel liners. Site personnel will not overdrive the sampling device. Soil will be transferred to a pre-cleaned, stainless-steel mixing bowl, homogenized, and then containerized in accordance with contractor sampling procedures. Cuttings and split-spoon samples could be field screened for radioactivity and/or organic contaminants, although organic vapors are not a concern in the vadose-zone soils of the pond waste sites.

Problems with sample collection, custody, or data acquisition that adversely impact the quality of data or that impair the ability to acquire data, or failure to follow procedure, will be documented in accordance with internal corrective action procedures, as appropriate. Soil sample preservation, containers, and holding times for chemical and radiological analytes of interest are presented in Table 2-4. Final sample collection requirements will be identified on the Sampling Authorization Form.

3.1.4 Test-Pit Excavation and Sampling and Analysis

Test pits will be excavated to obtain sample material at the 216-U-10 Pond (Section 3.2). Test pits are shallow excavations into the vadose zone to view soil materials and collect samples. The test pits will be excavated with an excavator and only need to be large enough to obtain the samples at the pond bottom or to a maximum target depth of 7.6 m (25 ft). Site-specific test-pit locations may be adjusted in the field to account for site conditions. Sampling at these locations will be conducted using a hollow stem auger ~~direct push~~. ~~Continuous coring will accompany the advance of the auger.~~ The field geologist will select the samples through the presence of residual radioactivity (field instruments) and visual examination of the soil.

~~Augered holes will be installed in a manner that minimizes the generation of visible emissions (e.g., dust) from the site boundary. If visible emissions cannot be controlled, the activity will be postponed. Samples collected from hollow stem augers will require the use of a large diameter split-spoon sampler that usually necessitates compositing the sample through at least 0.3 to 0.6 m (1 to 2 ft) to get adequate sample sizes for analysis.~~

Soil sampling associated with auger ~~direct pushing~~ will be performed in accordance with established sampling practices and requirements pertaining to sample collection, collection equipment, and sample handling as described in Section 2.2 of this SAP, and Table 3-1. Samples

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will be collected for the focused list of COPCs identified in Table 3-1 to fulfill specific supplemental data needs identified during the DQO. Auger ~~Direct~~ push soil samples will be collected and managed as described in Table 2-4. Samples will undergo laboratory analysis for radiological and nonradiological COPCs identified in Table 3-1 in accordance with analytical requirements in Tables 2-1 and 2-2. Samples will be analyzed at an onsite laboratory. Physical property samples are not required for this focused sampling activity.

Samples will be collected from the waste site sediment layer (e.g., pond bottom/organic mat) as identified through radiological field screening, visual observation, and judgment of the geologist/sampler or at the first detection of contamination (generally above background), whichever is encountered first. Where ALARA considerations allow, samples should be taken directly from the test-pit strata. Alternatively, samples will be collected directly from the core that will target the interval 0.3 m (1 ft) below the specified sample depth.

Sample material will be removed from the sampling tool into a precleaned, stainless-steel mixing bowl, homogenized, and then containerized in accordance with contractor sampling procedures. Samples will be collected from non-wetted soils, whenever possible, when fixant/water is used for dust control. Additional samples may be collected at the discretion of the geologist/sampler based on field screening information, to further verify the location of the pond bottom, depending on the limits of the excavation equipment.

3.2 SITE-SPECIFIC CHARACTERIZATION

For each Model Group 5 site identified in Table 1-2 as requiring supplemental data, the site-specific data-collection activities and the rationale for data collection are identified in Table 3-1.

3.2.1 Preshipment Sample Screening

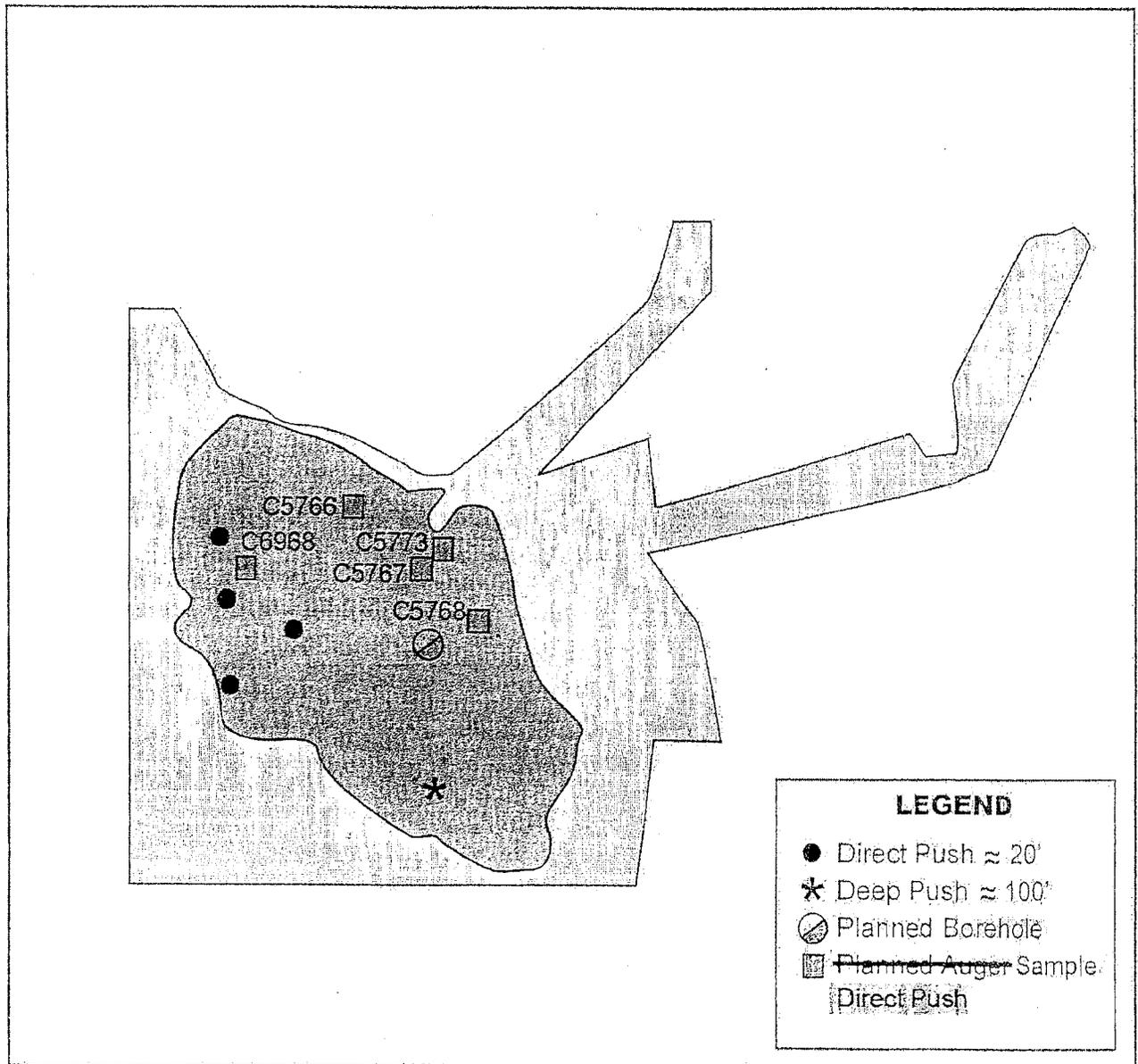
A representative portion of each sample to be shipped to an offsite laboratory will be submitted to the Radiological Counting Facility, 222-S Laboratory, or other suitable onsite laboratory for total activity analysis before it is shipped. Total activities will be used for sample preshipment characterization. Samples that slightly exceed the offsite laboratory criteria discussed in Section 2.2.3 may be reduced in volume to allow offsite shipment. Onsite and offsite laboratories will be identified before field activities are initiated and will be mutually acceptable to Sample and Data Management and to the Waste Site Remediation Task Lead.

3.2.2 Summary of Sampling Activities

The number and types of samples to be collected are summarized in Tables 3-2 and 3-2.

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Figure 3-6. Planned Geophysical Logging and Soil Sampling Locations at the 216-U-10 Pond.
See Table 3-1 for sample details.



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Table 3-1. Key Features of Model Group 5, Large-Area Ponds, Sampling Design. (7 Pages)

Survey or Analytical Methodology	Key Features of Design	Sampling Design Rationale
<i>216-U-10 Pond</i>		
<p>Geophysical logging – shallow push and high-resolution spectral-gamma logging; deep push and slim hole gamma and neutron logging; augered borings with soil sampling; cable tool drilling with high-resolution gamma logging and soil sampling</p>	<p><i>Medium:</i> Soil</p> <p><i>Specific Location/Area of Concern:</i> Nature and extent of contamination in the primary pond location and ditch that fed the pond.</p> <p><i>Investigation Method:</i> This investigation will require installation of shallow-push and deep-push borings, test pits (auger holes), and a borehole as identified in Figure 3-6.</p> <p>Four shallow pushes will be installed to a depth of 6 m (20 ft) as shown in Figure 3-6 and will be logged with a high-resolution gamma tool for Cs-137 and other gamma emitters.</p> <p>One deep push will be installed in the south end of the pond (Figure 3-6) and logged with slim hole gamma and neutron tools. The deep push will be driven to 30 m (100 ft) or refusal, whichever comes first. Three soil samples will be collected: one at the pond bottom and two at levels indicated having high moisture contents.</p> <p>Four locations will be sampled by auger and soil samples collected from the historical pond bottom (Figure 3-6).</p> <p>One new borehole approximately 42.7 m (140 ft) deep will be installed in the immediate vicinity of existing Borehole 299-W23-231 (Figure 3-7). The borehole will be geophysically logged and three soil samples collected.</p> <p>The ten existing deep probes will be examined and logged, if feasible, with the small diameter gamma logging system.</p> <p><i>Parameter:</i> Gamma-emitting contaminants including Cs-137 and elevated moisture levels.</p>	<p>Use gamma activity including Cs-137 and elevated moisture zones for tracking the extent of contamination.</p> <p>Deep soil samples and the proposed borehole will be used to address the significance of contaminants moving through the groundwater pathway.</p> <p>Analysis of augered samples will be used to estimate the level of uranium contamination.</p>
<p>Soil sampling: two samples from each of four three direct push augered boreholes; three samples from the borehole, and three samples from the deep push (total of 13 soil samples)</p>	<p>Auger Direct push soil samples: At four separate locations, auger direct push soil samples will be taken to locate and identify the depth and thickness of the organic mat. The mat will be located visually or by use of hand-held radiological survey instruments through the examination of core material removed during auger direct pushing. Once the organic mat at each test pit is located, take two samples – one of the mat material and one of soil directly below the mat -- at each of the four three locations for a total of eight six test-pit samples.</p> <p><i>Borehole sample(s):</i> Collect one sample at the pond bottom equating to the pond sediment layer (organic mat). Collect one sample at 4.6 m (15 ft) bgs and one sample at depth (approximately 42.7 m or 140 ft bgs).</p> <p><i>Shallow-push sample(s):</i> One soil sample will be selected based on the results of the geophysical logging of the shallow pushes.</p> <p><i>Deep-push samples:</i> Take one sample at the suspected pond bottom (based on Cs-137 levels) and two additional samples at depths indicated by elevated moisture levels. Samples will be collected using the dual well sampling tool associated with deep pushes.</p> <p><i>Contaminants:</i> Nonradionuclides include antimony, cadmium, manganese, cyanide, selenium, total uranium, silver, thallium, fluoride, and nitrate.⁹</p> <p>Radionuclides include Cs-137, Eu-154, Sr-90, Tc-99, Np-237, Pu-239/240, Am-241, and uranium isotopes.</p>	<p>Auger Direct push soil samples will be used to sample the organic mat at the pond bottom and the location of most contamination because of sorption of contaminants onto organic materials.</p> <p>The borehole will be used to clear up an outstanding data quality issue and to evaluate uranium with depth.</p> <p>Shallow-push samples taken at the Cs-137 hotspots are intended to represent worst-case conditions at the pond and facilitate evaluation of a partial-removal alternative.</p> <p>Deep-push samples will be collected to evaluate risk associated with the groundwater pathway.</p>

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Table 3-2. Summary of Model Group 5 Shallow Push and Drilling Sample Collection Requirements. (2 Pages)

Site	Number of Shallow Pushes and Boreholes	Sample Collection Methodology	COPCs	Sample Location Information				Analytical Requirements and Parameters ^c	
				Sample Location ^a	Sample Depth (ft bgs)	No. of Samples from Shallow Pushes & Drilling	No. of Field Quality Control Samples Dup/Rinsate	Radionuclides	Nonradionuclides
216-A-25 Pond	2	Push	Table 3-1	--	≤ 15 ^b	2	1 ^d	Table 2-1	Table 2-2
216-B-3 Pond	5	Push	Table 3-1	Footnote a	≤ 15 ^b	1 ^e	0	Table 2-1	Table 2-2
216-S-16 Pond	9	Push	Table 3-1	Footnote a	≤ 15 ^b	1	0	Table 2-1	Table 2-2
216-S-17 Pond	10	Push	Table 3-1	Footnote a	≤ 15 ^b	1	0	Table 2-1	Table 2-2
UPR-200-W-124	2	N/A	--	--	--	--	--	--	--
216-T-4B Pond	4	Push	Table 3-1	Footnote a	≤ 20 ^b	1	0	Table 2-1	Table 2-2
216-U-10 Pond	1	Augered boreholes (4) (Fig 3-6)	Table 3-1	Sediment layer and 1 ft below (Fig 3-6)	TBD	2 at each augered borehole (8 total) (Fig 3-6)	0	Table 2-1	Table 2-2
216-U-11 Ditch Pond	4	Borehole (3) Push (1)	Table 3-1	Sediment layer, 15 ft bgs and depth (140 ft bgs) (Fig 3-6)	Sediment layer (TBD), 15 ft and 140 ft	3	1 ^d	Table 2-1	Table 2-2
216-U-11 Ditch Pond	5	N/A	--	TBD (Fig 3-6)	< 20 ^b	1	--	Table 2-1	Table 2-2
Total number of shallow pushes: 43									
Number of boreholes (drilled and augered): 5									
Total number of samples: 169									
Minimum number of field quality control samples: 2 duplicate samples and 8 equipment rinsate samples									