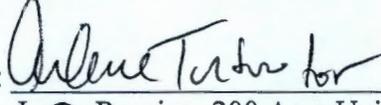
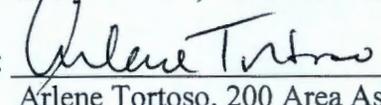
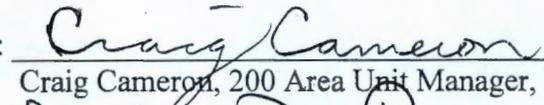
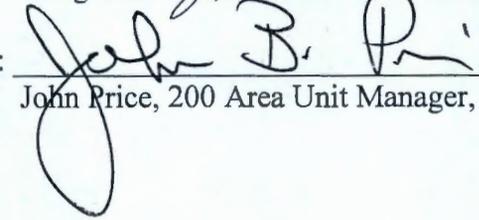


Meeting Minutes Transmittal/Approval
Unit Managers' Meeting
200 Area Groundwater and Source Operable Units
1200 Jadwin, Richland, Washington
June 21, 2007

APPROVAL:  Date: 7/18/07
Larry Romine, 200 Area Unit Manager, DOE/RL

APPROVAL:  Date: 7/18/07
Arlene Tortoso, 200 Area Assistant Manager, DOE/RL

APPROVAL:  Date: 7/18/07
Craig Cameron, 200 Area Unit Manager, EPA

APPROVAL:  Date: 7/18/2007
John Price, 200 Area Unit Manager, Ecology

RECEIVED
JUL 23 2007

EDMC

**HARD COPY DISTRIBUTION
UNIT MANAGERS' MEETING,
200 AREA GROUNDWATER SOURCE OPERABLE UNITS
June 21, 2007**

DOE/RL

(No hard copy distribution)

EPA

Craig Cameron

B1-46

Ecology

John Price

H0-57

FH

Janice Williams (original)

E6-35

Administrative Record (2)

H6-08

Correspondence Control

A3-01

Minutes of the 200 Area Unit Managers' Meeting of June 21, 2007 are attached. Minutes are comprised of the following:

Attachment 1	Agenda
Attachment 2	Attendance Record
Attachment 3	Agreements and Issues List
Attachment 4	Action Item List
Attachment 5 Status	Operable Units and Facilities
Attachment 6	200-UP-1 Rebound Study, Technetium-99
Attachment 7	200-UP-1 Rebound Study, Uranium
Attachment 8	Locations of wells UP-6, UP-7, UP-8, UP-9, UP-10 and UP-12
Attachment 9	Tc-99 Increase @ S-Farm (including Location Map, and Discussion)
Attachment 10	200-ZP-1 Tech-99 Field Screening Data at Extraction Wells 299-W15-44 and 299-W15-765
Attachment 11	200-ZP-1 Nitrate Field Screening Data at Extraction Wells 299-W15-44 and 299-W15-765
Attachment 12	Trend data for Carbon Tetrachloride in Well 299- W15-6
Attachment 13	Depth-discrete analytical results for Carbon Tetrachloride in Well 299-11-48
Attachment 14	Photo of manifold failure on the Purolite resin treatability skid
Attachment 15	Photo of manifold failure on the Purolite resin treatability skid
Attachment 16	Table 3-1 Preliminary Sampling Parameters and Frequency

Attachment 17	Table D2-1 Analytical Performance Requirements for Contaminant of Concern Analysis
Attachment 18	Comparison of Maximum Carbon Tetrachloride Rebound Concentrations Monitored at 200-PW-1 Soil Vapor Extraction Sites
Attachment 19	Emails-Request to Collect Grab Samples in 299-E23-2 Well and Sampling and Analysis Schedule for 200-PO-1 OU Near-Field Wells.
Attachment 20	Analytical results for opportunistic groundwater sample taken at 216-A-4 crib borehole.
Attachment 21	G and O Well Location Map
Attachment 22	A, B, D, and E Well Location Map
Attachment 23	K Well Location Map
Attachment 24	Path Forward, 200-SW-1/2 RI/FS Work Plan Development, May 15, 2007
Attachment 25	Change Notice for Modifying Approved Documents/Workplans in Accordance with the Tri-Party Agreement Action Plan, Section 9.0, <i>Documentation and Records</i>

200 AREA UNIT MANAGERS' MEETING DRAFT AGENDA

1200 Jadwin/Rm 1-C-1

June 21, 2007

8:30 – 10:15 AM

GROUNDWATER AND SOURCE OPERABLE UNITS

- Status Review of OUs
- Outstanding Action Items/Issues

200-UW-1, 200-CW-3 AND FACILITIES

- Status Review
- Outstanding Action Items/Issues

200 Area Unit Managers Status Meeting
June 21, 2007

Please print clearly and use black ink

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
Rick Oldham	FH S&GWRP	E.C.O.	2-2426
JOHN MORSE	NOG-RL		376-0057
Jennifer Nuzum	FH Env Prot		373-7185
STEWART CIMON	ODOE		(591) 963 0853
Frank Roddy	DOE	SW 183, SW 1, UKI, MW 1, MG 1	372-0945
Arlene Tortosa	DOE	200-Aue Proj.	373-9631
Jon Lindberg	FH	200-PD-1	376-4511
Rod Wbos	EPA		376-3799
Virginin Rohay	-FH	200-PW-1	373 3803
Mandy Jones	Ecology		372-7916
Craig Cameron	EPA		376-8665
R. P. BOB	FH		373-3208
John Winterholder	FH		322-8144
Zelma Jackson	ECY	200 A.	
John Price	ECY	Proj Mgr	372-7921
Jeanette Hyatt	FH	Env Compl.	376-7923
Larry Fitch	FH	S&GRP	376-7536
MIKE HUCKEY	FH	CW-5 ES-1 PM	373 3092
Jaym J. Joly	DOE-RL	201A	376-7087

200 Area Unit Managers Status Meeting
June 21, 2007

Please print clearly and use black ink

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
Glen Trimer	FH	UP-1/06-1	430-1013
Pam Ankrum	FH	UR-1, MG-1, etc	373-7222
MARCO	DOE	Pres man	326-8375
James Williams	FH	Lead UMM	372-3553
Sandra Lilligren	NPT		202-843-7375
Dennis Fulk	SPP		
Mark Byrnes	FH	Task Lead	373-3996
Greg Thomas	FH	Task Lead	373-3907
Tom Watson	FH	Area Mgr	376-5450
Rick Engelmann	FH	FH-TPA	376-7485
Stuart Luttrell	FH	FH-Gwater	376-4531
Mark Benedek	FH	FH-BC Cabs	6-0002
Brian Charbonneau	DOE	UUM	373-6137
Ron Brunk	FH	CSI Cw-1	376-2663
Caren Berlin	FH	Task Lead	574-2388
Julie Robertson	FH	UCanyon	8768162

**Issue Resolution Meeting
Agreements and Issues List
June 21, 2007
200 Area Unit Managers' Meeting**

Issue: Supplemental Characterization Work Plan Approval (Ecology)

Issue Statement: Supplemental Characterization Work Plan approval is needed from Ecology. Field Work will be delayed if approval is not received by 6/29/07.

Agreement: Delegation of Authority for June UMM Meeting.

- Margo Voogd is delegated to act on Larry Romine's behalf for the June 200 Area UMM.
- Zelma Jackson is delegated to act on John Price's behalf for the June 200 Area UMM.

Agreement: Change of format for UMM meetings

Beginning next UMM meeting, status review on all OUs will be given first, followed by Action Items/Issues at the end.

Agreement: Move of 200-UR-1 sites to 200-MG-1

All 200-UR-1 sites should be moved to 200-MG-1 (except West Lake and BC Control area). The list of the waste sites that will be reassigned from UR-1 to MG-1 will be officially incorporated in the TPA Appendix C.

200 Area Unit Managers' Meeting

OPEN ACTION ITEM TRACKING

Action #	Action/Subject	Assigned To	Owed To	Assigned Date	Original Due Date	Adjusted Due Date	Status
78	Present IS-1 DQO briefing to HAB. RL to request time slot on HAB River & Plateau Committee for this briefing.	DOE-Leary	All	8/23/06	9/21/06		Due date TBD per K. Leary.
80	Send report from Remedial Action Decision Making panel (Tom Fogwell)	FH-Byrnes	ECY/EPA Price/Goswami/Cameron	10/18/06	11/16/06		Panel requested more time to complete their report.
95	RL needs to close-out the time critical-removal action on UW-1	FH-Triner	RL-Romine (Leary)	5/17/07	6/21/07	7/21/07	Draft TCRA language presented at the 6/21/07 UMM. Ecology provided comments.
96	EPA needs to approve the TW-1/2 Work Plan Addendum.	EPA-Lobos	RL-Foley	6/21/07			
97	RL must formally transmit DOE/RL-200-14, Rev 0 to EPA for approval.	RL-Foley	EPA-Lobos	6/21/07			
98	A response from Ecology to an email from Bryan Foley, sent to John Price in May and again on June 19, 2007, regarding a request to approve the last published version of the TW-1/2/PW-5 Remedial Investigation Report based on a commitment to address specific outstanding regulator concerns from the last report in the next revision of the TW-2 Feasibility Study. This was brought up at the 200-Area UMM on June 21, 2007.	Ecology-Price	RL-Foley	6/21/07			

CERCLA 5-Year Review Action Items

Action #	Action/Subject	Assigned To	Due Date	Status
13-1	Complete a data quality objective process and sampling plan to further characterize the technetium-99 groundwater plume near T Tank Farm.	Fluor Hanford		Complete
14-1	Assess treatment options to address technetium-99 near T Tank Farm.	Fluor Hanford		Complete
15-1	Complete data quality objective process and sampling plan to further characterize the high soil conductivity measurements detected at B/C cribs and trenches.	Fluor Hanford	12/1/2007	
16-1	Increase the pump size in 200-ZP-1 extraction wells 299-W15-45 and 299-W15-47.	Fluor Hanford		Complete
17-1	Evaluate expanding the soil-vapor extraction operations. Also, specifically review converting former groundwater extraction well 299-W15-32 to a soil-vapor extraction well.	Fluor Hanford		Complete
18-1	Prepare an explanation of significant difference for 200-UP-1 Interim ROD	Ecology	6/1/2008	

200 AREA UNIT MANAGERS' MEETING OPERABLE UNITS AND FACILITIES STATUS

June 21, 2007

UP-1, CS-1 CW-1 OU Group

200-UP-1

(M-15-17A, 11/30/10, Feasibility Study/Proposed Plan) Ecology

- Tc-99 and uranium concentrations are still below the interim RAOs of 9,000 pCi/L and 480 µg/L respectively (**Attachments 6 and 7**).
- RI/FS Work Plan:
 - Six of 12 new 200-UP-1 wells (UP1, UP2, UP3, UP4, UP5, and UP11) required by the RI/FS Work Plan have been installed.
 - Planning for the remaining six wells (UP-6, UP-7, UP-8, UP-9, UP-10, and UP-12) has started. Confirmation of locations occurred on 6/18/07 with Ecology (**Attachment 8**).
- Tc-99 Increase @ S-Farm (**Attachment 9**)
 - The Tc-99 levels in well W22-44 increased from 3400 pCi/l to 6440 pCi/l in the last sampling (March of 2007). The derived groundwater standard is 900 pCi/l.
 - The well is located directly east of S farm; maps have historically shown these wells to form a plume of Tc-99 and nitrate (approximate dimensions 300 ft by 900 ft).
 - Data suggest a rather narrow wave of increased 99Tc is passing through. The groundwater flow direction is currently to the east. Pre-1996 flow was to the south east.
 - Past investigations concluded that the Tc-99 plume is associated with past tank leaks. The crib 216-S-3 released approximately 4.2 million liters between 1953 and 1956.
- Pump & Treat
 - On 4/19/07, the pumps in wells W-19-36 and W-19-43 were restarted. Currently, the project is pumping approximately 12 gpm. These two wells address the higher uranium groundwater concentrations found in the area (~395 micrograms/liter).
 - As of 6/2/07 ~764,620 gallons had been pumped to LERF Basin #43.
 - Treatment of the water is scheduled to start August 20.

200-CS-1

Feasibility Study/Proposed Plan

- Activities to support Draft B of the feasibility study and proposed plan continue.

Remediation Investigation Report

There has been an open question since January 2005 regarding the approval status of the 200-CS-1 Remedial Investigation Report. Subsequently the Draft A FS and PP were submitted in March 2006. The FS, Revision 0 was submitted to Ecology for approval on November 30, 2004. On January 28, 2005, Ecology sent a letter stating that "USDOE should update those tables to match the presentation format agreed upon for the 200-PW-2/4 RI report." RL is including relevant reformatted analytical data tables, which were included in the Rev. 0 RI Report, in Draft B of the Feasibility Study scheduled for submittal in September 2007. Therefore, RL requests Ecology approval of the RI Report, Rev. 0, as submitted, and Ecology concurrence that the Draft B FS, with the updated and reformatted tables, can close out the January 2005 Ecology comment.

200-CW-1

(M-015-38B, 5/31/09, Feasibility Study/Proposed Plan) Ecology

- Supplementary remedial investigation field work is scheduled to begin in July. Approval of the SAP and WCP is needed by June 29.
 - The SAP for the supplementary remedial investigation field work was submitted on March 2, and received on March 8.
- The Waste Control Plan was submitted on June 15.

ZP-1, PW-1/3/6 OU Group

200-ZP-1

(M-15-48B, 9/30/07, Feasibility Study/Proposed Plan) EPA

- Remediation Treatment Status:
 - Between October 1, 2006 and June 3, 2007 the 200-ZP-1 pump-and-treat system average pumping rate was approximately 258 gpm.
 - Currently 8 of ten 200-ZP-1 extraction wells are on line pumping at approximately 235 gpm. Extraction wells #8 and #9 are offline due to the Purolite resin skid issue that is discussed in detail below.
 - Extraction well #6 was offline for a couple of weeks as the electrical conduit was struck by a vehicle. This well is back on line and barricade has been put up to prevent this from happening again.
 - **Attachments 10 and 11** show the most recent Tc-99 and nitrate concentrations in extraction wells 299-W15-765 and 299-W15-44 prior to them being taken off line due to a failed manifold in well 299-W15-765. More details presented below.

- Trend data for carbon tetrachloride in well 299-W15-6 is presented in **Attachment 12**.
- Design work has been completed for hooking up wells 299-W11-45 and 299-W11-46 to the ETF transfer lines. The RFP has been prepared and is out for bid. Field work scheduled to start first week of July.
- RI/FS Status:
 - FS Report:
 - Document is on schedule.
 - Revisions are being made based on internal draft comments.
 - Will be walking DOE-RL through Decisional Draft on Thursday, June 28, 2007.
 - A meeting was held on June 14, 2007 with tribal representatives to discuss the tribal risk scenario.
- Tc-99 Investigation Status:
 - T Tank Farm Investigations:
 - Drilling has reached total depth in well T-4 well (C5243, 299-W11-48). The depth-discrete analytical results for carbon tetrachloride are presented in **Attachment 13**. A 90 ft screen is being installed in this well to optimize the well as a potential future extraction well.
 - Redrilling has started on the T-5 well (C5244, 299-W10-32). The outer drill casing broke while switching between double-walled and triple-walled casing. The borehole had reached a total depth of 192 ft when the problem was encountered.
 - Purolite Resin Treatability Testing:
 - On the evening of Thursday, May 24, 2007, the manifold on the Purolite resin treatability skid by well 299-W15-765 failed (**Attachment 14 and 15**). This is the piece that allows water to flow into the top of the resin tank. Review of data logging for the system shows that the pump ran for 1 minute and 20 seconds after the first indication of flow fluctuation, prior to being automatically shutdown. A maximum of 117 gallons of water could have been released, a good portion of which was captured by the containment structure. Water and saturated soil (to a depth of one foot surrounding the skid) was put into drums.
 - DOE-RL, EPA, and Ecology were contacted shortly after the spill was identified.
 - Photographs were taken throughout the cleanup.
 - The second Purolite resin skid (299-W15-44) was taken offline so that we can assure that no changes in design are needed.
 - The MSE design engineer visited the failed system the following week. Design drawings are in the process of being modified at this time to require several changes. Some of these changes will likely require additional support uprights for both treatment skids. The skid for well 299-W15-765 will likely be modified to require a flexible hose

when connecting to the resin canister, and both the resin canister and tank will likely be within the same containment structure.

- Tables 3-1 from DOE/RL-2006-64, Rev. 0, "*Treatability Test Plan for Using Purolite Resin to Remove Technetium-99 from 200-ZP-1 Groundwater*" have been revised (see **Attachment 16**) to clarify:
 - PNNL laboratory will be performing Tc-99 field screening analyses using ICP/MS, while WSCF will be performing Tc-99 fixed laboratory analyses using Liquid Scintillation Counting (LSC).
 - All samples will be analyzed using ICP/MS method and 25% for LSC as confirmation analysis.
 - Field screening and fixed laboratory analyses for nitrate will be required to be performed for the first month of testing, after this only fixed laboratory testing will be required.
 - Influent and effluent samples will be collected Monday and Thursday each week.
 - Dennis Faulk and Arlene Tortoso approved these changes.
- Table D2-1 from DOE/RL-2006-64, Rev. 0, "*Treatability Test Plan for Using Purolite Resin to Remove Technetium-99 from 200-ZP-1 Groundwater*" have been revised (see **Attachment 17**) to clarify:
 - The analytical method for phosphate can be run by Method 300.0 as well as 365.1, 365.2, or 365.3 as stated in Rev. 0.
 - Clarifies that field screening method for Tc-99 is ICP/MS.
 - Dennis Faulk and Arlene Tortoso approved these changes.

200-PW-1, 200-PW-3, & 200-PW-6

(M-15-45B, 9/30/07, Feasibility Study/Proposed Plan) EPA

- The PW-1/3/6 FS is progressing. FH internal review is complete and comments are being incorporated.
- Decisional Draft is scheduled for delivery to RL on July 2, 2007.
- EPA's comments on the PW-1/3/6 Remedial Investigation Report, Draft A, are being incorporated.
- Meeting held June 14, 2007 to discuss how DOE will consider the CTUIR scenario as part of the FS.
- Soil Vapor Extraction System (SVE):
 - The SVE system was turned back on April 2, 2007 at Z-9 Area. The average flow rate through May 13, 2007 was 260 cfm.
 - System was shut down for a few hours the week of April 23 for flow meter replacement.
 - The three monitoring wells in the vicinity of Z-9 that are being converted to SVE wells are scheduled to be completed and put on line in the next couple of weeks.
 - The passive system remains operational.
 - Monthly monitoring results for May 2007 are presented in **Attachment 18**.

CW-2/4/5 & SC-1 OU Group

**200-CW-2, CW-4, CW-5, & SC-1 (no change)
(M-15-40D, 4/30/08, Feasibility Study/Proposed Plan) EPA**

- RL has requested a TPA change package be prepared for the 200-SC-1 OU RI/FS.

TW-1 & PW-5 OU Group

**200-TW-1 & 200-PW-5
(M-15-42D, 12/31/11, Feasibility Study/Proposed Plan for TW-1 & PW-5) EPA**

- Need to resolve status of Work Plan Addendum addressing the treatability test at BC Cribs and Trenches.

TW-2 OU Group

**200-TW-2 (no activity)
(M-15-42E, 12/31/11, Feasibility Study/Revised Recommended Remedy(ies) for TW-2) Ecology**

PO-1, PW-2/4, MW-1 OU Group

**200-PO-1
(M-13-10A, 9/30/07, RI/FS Work Plan) Ecology**

- DQO
Work continued on an internal draft of the 200-PO-1 DQO Report in support of the RI/FS Work Plan.
- SAP
Work continued on a draft 200-PO-1 Characterization SAP to support the RI/FS Work Plan development. This SAP along with the existing Monitoring SAP (DOE/RL-2003-04 Rev.1) will be included in the Draft A Work Plan due to Ecology September 30, 2007.
- WORK PLAN
Work continued on drafting the 200-PO-1 Draft A Work Plan.
- RI SAMPLING
Attempting to collect opportunistic water samples in wells being decommissioned and need approval of addendum to current routine monitoring SAP until Work Plan SAP is approved (**See Attachment 19**).

Opportunistic groundwater sample taken at 216-A-4 crib borehole. Analytical results provided in **Attachment 20**.

200-PW-2 & 200-PW-4 (no change)

(M-15-43D, 12/31/10, Feasibility Study and Revised Recommended Remedy(ies)) Ecology

- At the March UMM Ecology stated that a letter is forthcoming on the TSD closure plans and the FS.

200-MW-1

(M-15-44B, 12/31/08, Feasibility Study/Proposed Plan) EPA

- Drilling the high-risk borehole at 216-A-2 Crib began on June 4, 2007. Additional training designed to safely take samples is ongoing in the shallow (less than 15 ft) portion of the borehole where activity level is expected to be low or at background. As of June 18, total depth was 28.5 ft bgs.

BP-5 & LW-1/2 OU Group

200-BP-5

(M-13-06B, 3/31/07, RI/FS Work Plan, Completed) EPA

(M-15-21A, 10/31/10, Feasibility Study/Proposed Plan) EPA

Electrical Resistivity Characterization Survey, Modeling and Report:

- Well to well and surface inversions are being run simultaneously on separate machines and are due to be completed June 22.
- Preliminary well to well results were reviewed by Fluor Hanford on May 31st. This information is being used for revision of well placement for the proposed wells A, B, D and E identified in the BP-5 Work Plan Draft A.
- Surface resistivity inversion data for BY cribs was completed June 8th for depth evaluation and location refinement of the D and E wells.
- The CHG report is scheduled for release September 28, 2007.

Work Plan:

- Received comments from EPA and Oregon May 16.
- Completed preliminary comment resolution.
- Scheduling review with EPA.

Preparing planning documents for two groundwater monitoring wells this summer.

- Staked the proposed G and O wells (see Figure 1 **Attachment 21**)
- Currently working the excavation permits, waste DQO, and Description of Work.
- Revising BP-5 Waste Control Plan for two wells.
- Drilling is scheduled to start late July.

Preparing planning documents for FY08 wells.

- Staked the proposed A, B, D and E wells June 14th (see Figure 2, **Attachment 22**).
- Staked K well this week (see Figure 3, **Attachment 23**).

Conceptual Model Report.

- Report is underway.
- Report due date is September FY08.

Groundwater Results:

- A new computer system was installed and verified from March through May.
- Data from February through April has been loaded and is being reviewed.
- Updates will be provided next month.

200-LW-1/200-LW-2 (no change)

(M-15-46B, 12/31/11, Feasibility Study/Recommended Remedy) Ecology

- Project Management responsibilities have been transitioned from Pam Ankrum to Greg Thomas.
- Re-baseline planning for additional characterization has been completed.
- A Strategy for closure of the RI Report per TPA Change Number M-15-06-05 is being developed.

UR-1, MG-1/2, ECO, & BP-1 OU Group

200-UR-1

- Radiological surveys for BC Control Area continue.
- West Lake DQO is in process. Caution will be exercised in performing activities around West Lake due to cultural sensitivity of the area.
- West Lake opportunistic field sampling complete – analysis in progress.
- All 200-UR-1 sites except West Lake and BC Control Area moving to 200-MG-1 Operable Unit (per previous agreement).

200-MG-1/200-MG-2 Model Group 1 Sites

(M-15-49A, 12/31/08, MG-1 Feasibility Study/Recommended Remedy) Ecology

(M-15-49B, 12/31/08, MG-2 Feasibility Study/Proposed Plan) EPA

- Strategy development for preparation of 200-MG-1/2 Feasibility Studies initiated.
- Incorporation of 200-ST-1 and 200-UR-1 sites into 200-MG-1 in process. Final incorporation pending submittal/approval of TPA Change Requests.

Ecological Risk Assessment

- Environmental Risk Assessment sampling data evaluation and report preparation in process.

- A meeting that was originally planned to be held in August with the Tribes and other external stakeholder participants on the Ecological Risk Assessment may need to be moved to September. The purpose of the meeting is to review Phase III data collection results..

BC-1, IS-1, SW-1/2 OU Group

200-BC-1

(M-15-51, 4/30/10, Feasibility Study/Proposed Plan) EPA

- EPA comments received on Draft A DQO summary report and SAP addressing electrical resistivity correlation. Plan to incorporate recommendations of the Expert Panel.
- Approval of SAP for Phase 1 of the excavation-based treatability test is imminent.
- Draft A of the Treatability Test Plan, including SAP, was transmitted to EPA 6/18/07.

200-IS-1

(M-13-27, 6/30/07, RI/FS Work Plan) Ecology

- The 200-IS-1 WP is on schedule, delivery to Ecology by June 30, 2007.

200-SW-1/2

(M-13-28, 9/30/07, RI/FS Work Plan) Ecology

Alignment meetings have been held with DOE-RL, Ecology and FH to discuss scope, schedule and content of the RI/FS Work Plan (Draft B) deliverable. An agreement involving a phased characterization-strategy was developed and signed by both DOE-RL and Ecology on May 22, 2007 (see **Attachment 24**).

D&D OUs

200-CW-3 EPA

- Excavation of site -5 is complete. MIS sampling and sample analysis for site 5 are complete. Currently processing data for back fill concurrence.
- Continued work on the close out reports for sites -2 and -3.
- Site -7 excavation started May 21, 2007.

200-UW-1 Ecology

- 200-W-42 VCP / UPR-200-W-163. – Under a Time Critical Removal Action (TCRA) excavation on the Phase I portion of the 200-W-42 pipeline was completed; it was backfilled on 9/30/06. Phase II backfill has been excavated and contamination was still present at the 15 foot depth below ground surface. Additional characterization may be required for remedial action decision-making. Excavation area monitoring (contamination and air) continues. Ecology recognizes that the removal action objectives have been achieved, and that the removal action is consistent with the

anticipated remedial action to the maximum extent practicable. DOE is the lead agency and must make the latter determination.

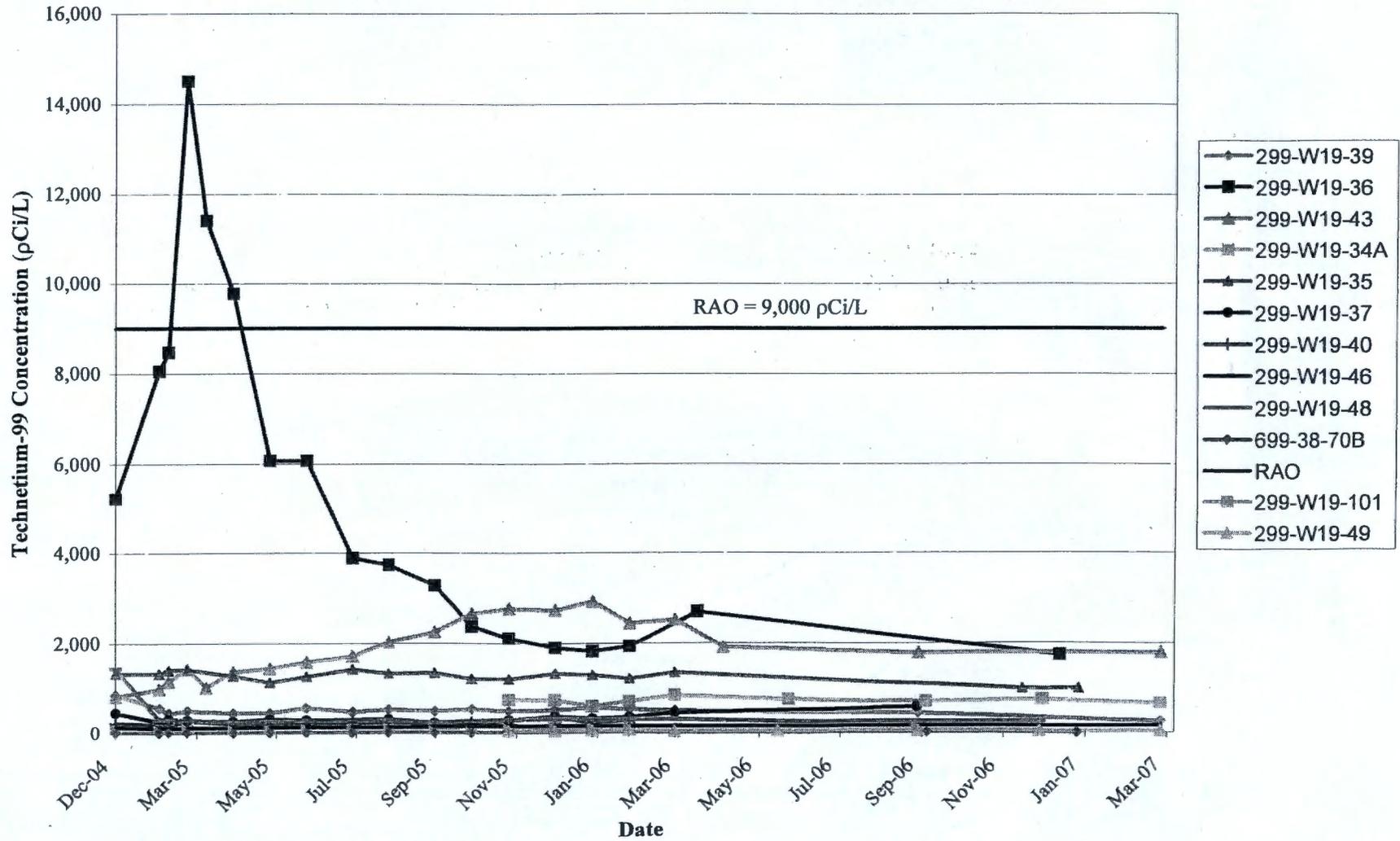
- Revised draft ROD completed the week of May 14th to incorporate EPA Region X and Tri-Party agency comments. Workshops were completed on 6/15/07.
- Responsiveness summaries to public comments on TPA Change Request for reclassifying Crib 216-U-12 to a RCRA Past Practice (RPP) unit were sent for final review week of 1/15/07. Approval will be requested at the June IAMIT meeting.
- TPA Change Request to change 216-U-15 from a CPP to a RPP has been reviewed and updated. Package will be transmitted with U-12 package for final review. No public review is anticipated for this portion of the change request. Approval will be requested at the June IAMIT meeting.
- DOE continued working on remedial action goals (RAGs) for 200-UW-1. Currently, FH is preparing a technical basis letter to be transmitted to the regulators in June describing how the approach being proposed satisfies the applicable or relevant and appropriate requirements of WAC 173-340-747(8).
- A cultural review of the Area C borrow source has been challenged by Yakama Tribes and Washington State Department of Archaeology & Historic Preservation (DAHP). DOE-RL is drafting letters to the DAHP and Tribes.
- The Sampling & Analysis Plan for the 241-U-361 Settling Tank was approved and is attached for the record (**Attachment 25**).
- Phase II of the 241-U-361 Settling Tank (sampling tank sludge) has begun. Tank sampling planned for late June.

FACILITIES STATUS

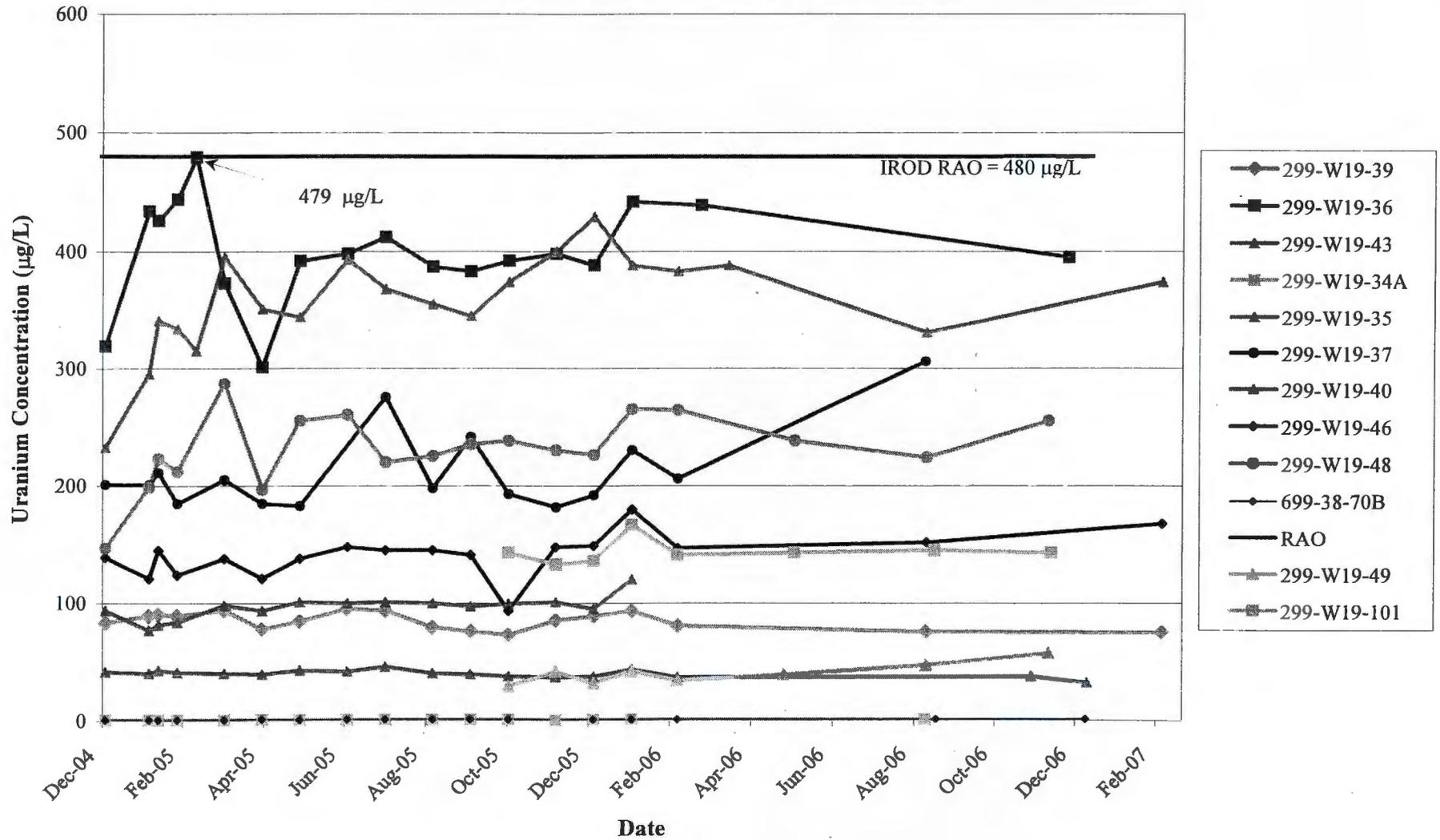
- **221-U Facility/Canyon Disposition Initiative (CDI)**
 - Completed FY07 remedial design engineering alternatives studies:
 - Void fill/grout study (Issued June 2007)
 - Cell 30 vessel contents removal study (Issued May 2007)
 - Railroad tunnel reactivation study (Issued May 2007).
 - Transmitted responses to regulator comments on the Draft A *Remedial Design/Remedial Action Work Plan for the 221-U Facility* and a draft Tri-Party Agreement agreement-in-principle for Central Plateau facility disposition.
 - Finalizing the canyon waste acceptance study (June 2007).
 - Briefed Ecology on draft PUREX canyon DQO summary report text for DQO steps 1 through 4; preparing to set up interviews with Tribal representatives and ODOE.
- **Facility Binning**

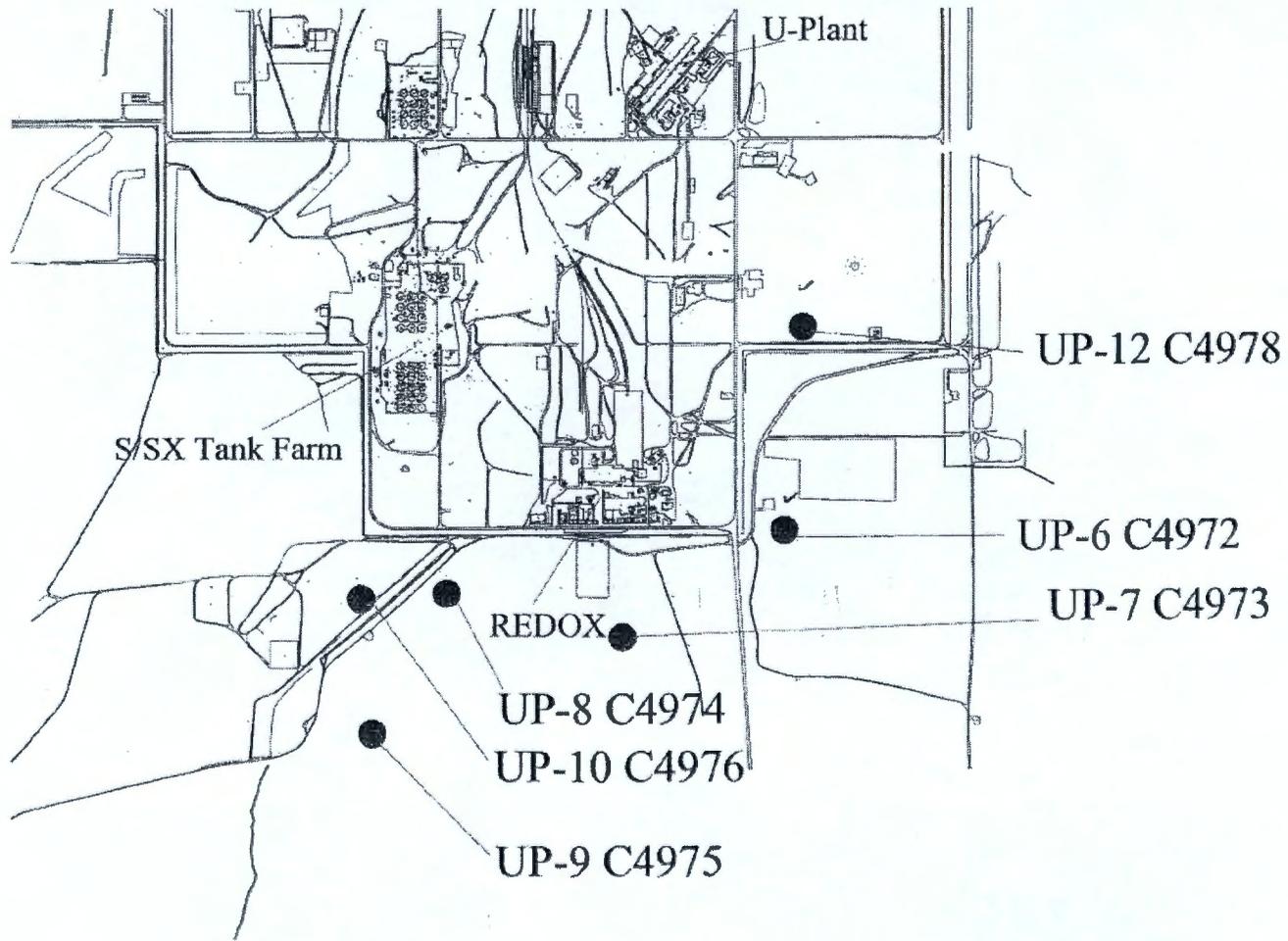
RL transmitted a draft Tri-Party Agreement agreement-in-principle for Central Plateau facility disposition to EPA and Ecology on June 18, 2007.

200-UP-1, Rebound Study, Technetium-99 (pCi/L)



200-UP-1, Rebound Study, Uranium ($\mu\text{g/L}$)

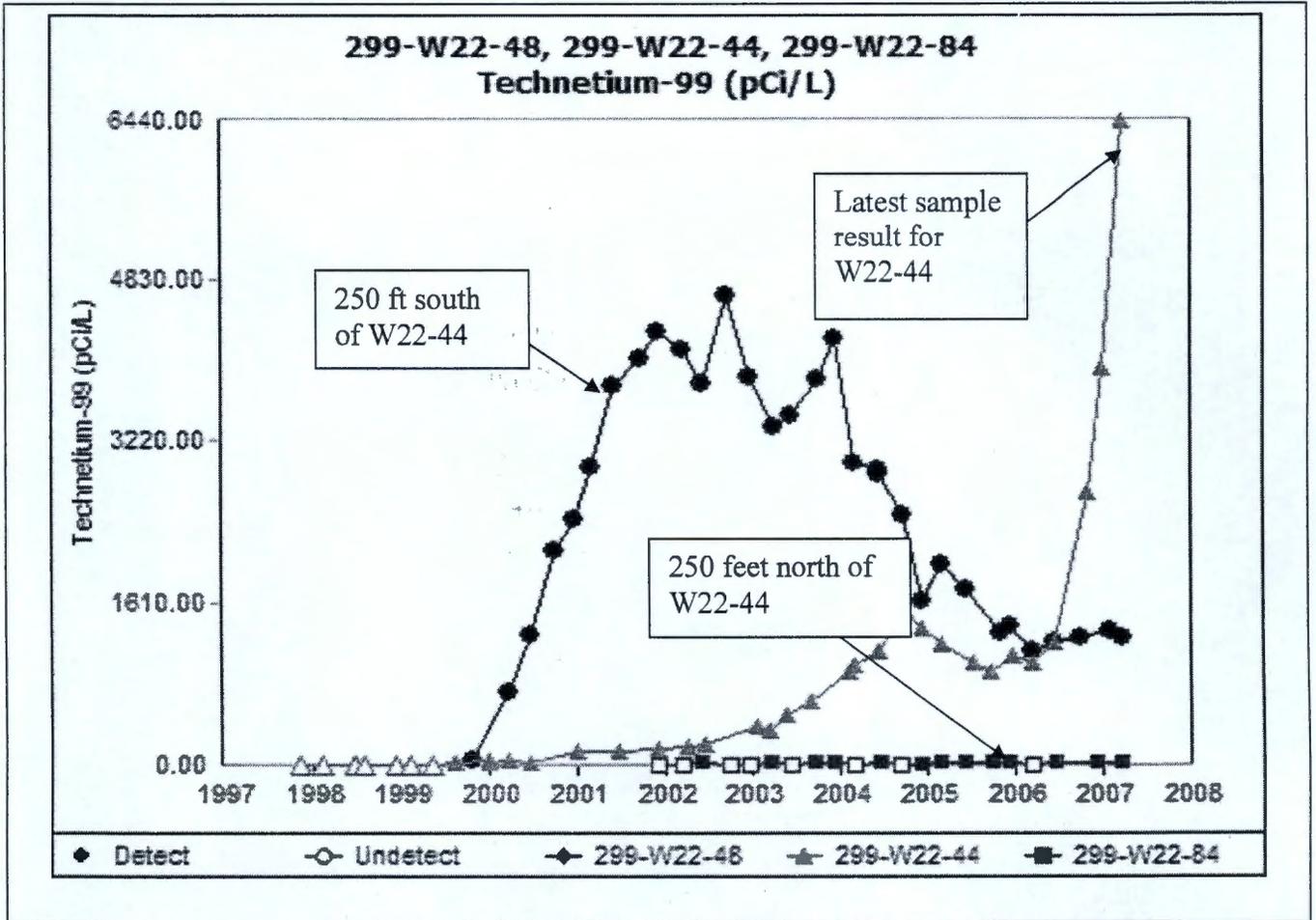




Attachment 9, Figure 1

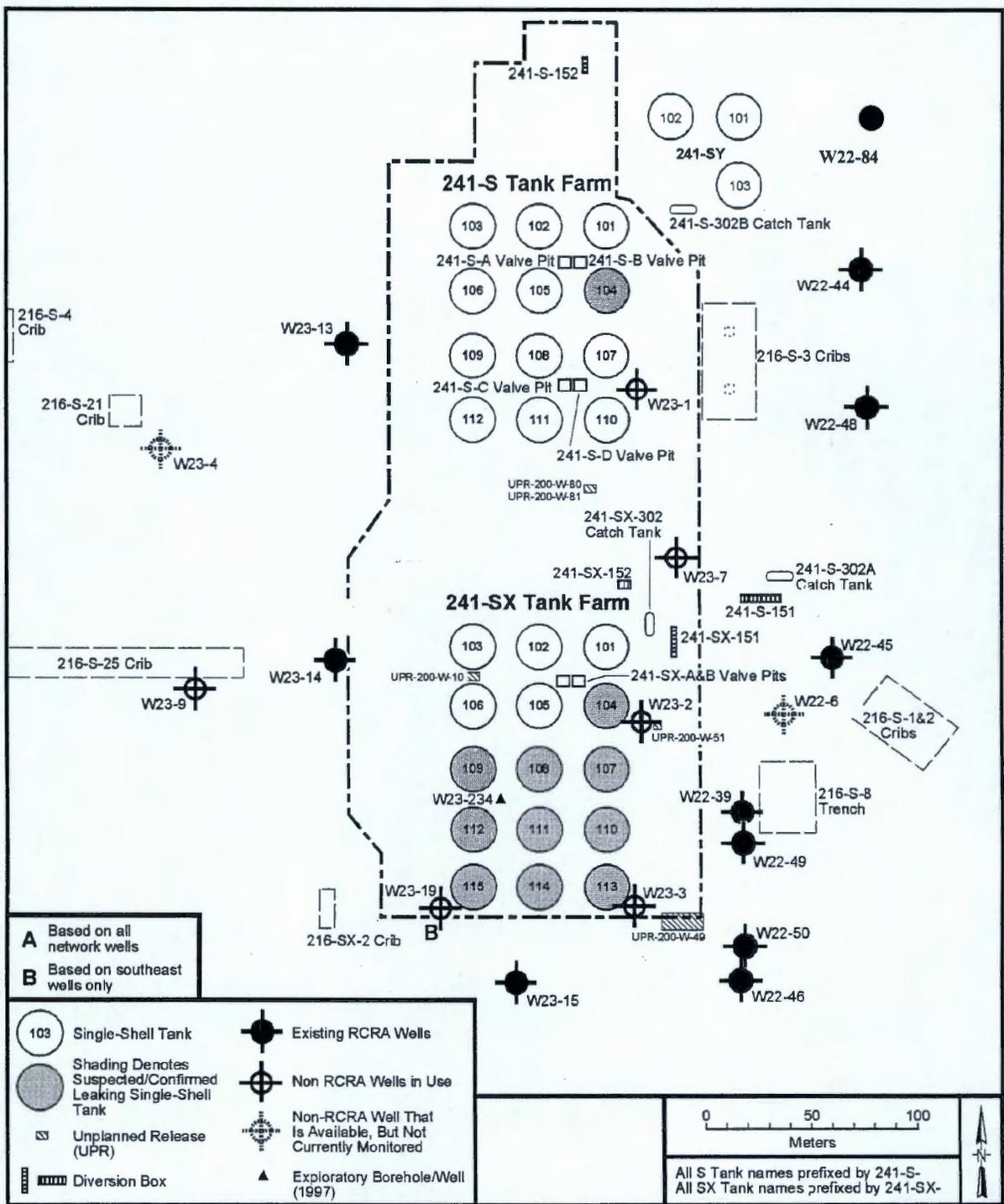
Increase in ⁹⁹Tc at S Farm – Discussion

Recent sampling result – W22-44 (green) increased ⁹⁹Tc levels from 3400 pCi/l to 6440 pCi/l in the last sampling (March of 2007). The derived groundwater standard is 900 pCi/l.



Well location – directly east of S farm; maps have historically shown these wells to form a plume of ⁹⁹Tc and nitrate (approximate dimensions 300ft by 900 ft)

Location Map of Waste Management Area S-SX and Surrounding Facilities^a



^a Knepp (2002a)

Data suggest a rather narrow wave of increased ⁹⁹Tc is passing through. Groundwater flow direction is currently to the east. Pre-1996 flow was to the south east.

Attachment 9, Figure 3

Past interpretation concluded that the ^{99}Tc plume is associated with past tank leaks. The crib 216-S-3 released approximately 4.2 million liters between 1953 and 1956.

Tank Farms – leak source

The Hanlon report indicates 24,000 gallons leaked from S-104. Estimates of the quantity of ^{99}Tc range from approximately 0.04 to 4 curies. (most recent SIMS inventory as noted in SST PA vs 2002 FIR)

A September '96 leak of 500,000 gallons of raw water ran into the northern end of S farm potentially providing a driving force to accelerate the movement of the S-104 leaked contaminants to the groundwater.

In 2006, a HRR leak injection test was conducted adjacent to S-102. The injection point was about 150 meters directly west of W22-44. The approved test put over 13,000 gal of sodium thiosulfate solution in the ground at about 45-50 ft. below grade which provides an incremental increase of potential driving force for contaminates.

Recent geophysical data (electrical resistivity) provide a qualitative indication that the S-104 leak does extend to the groundwater. The methodology is undergoing testing and validation

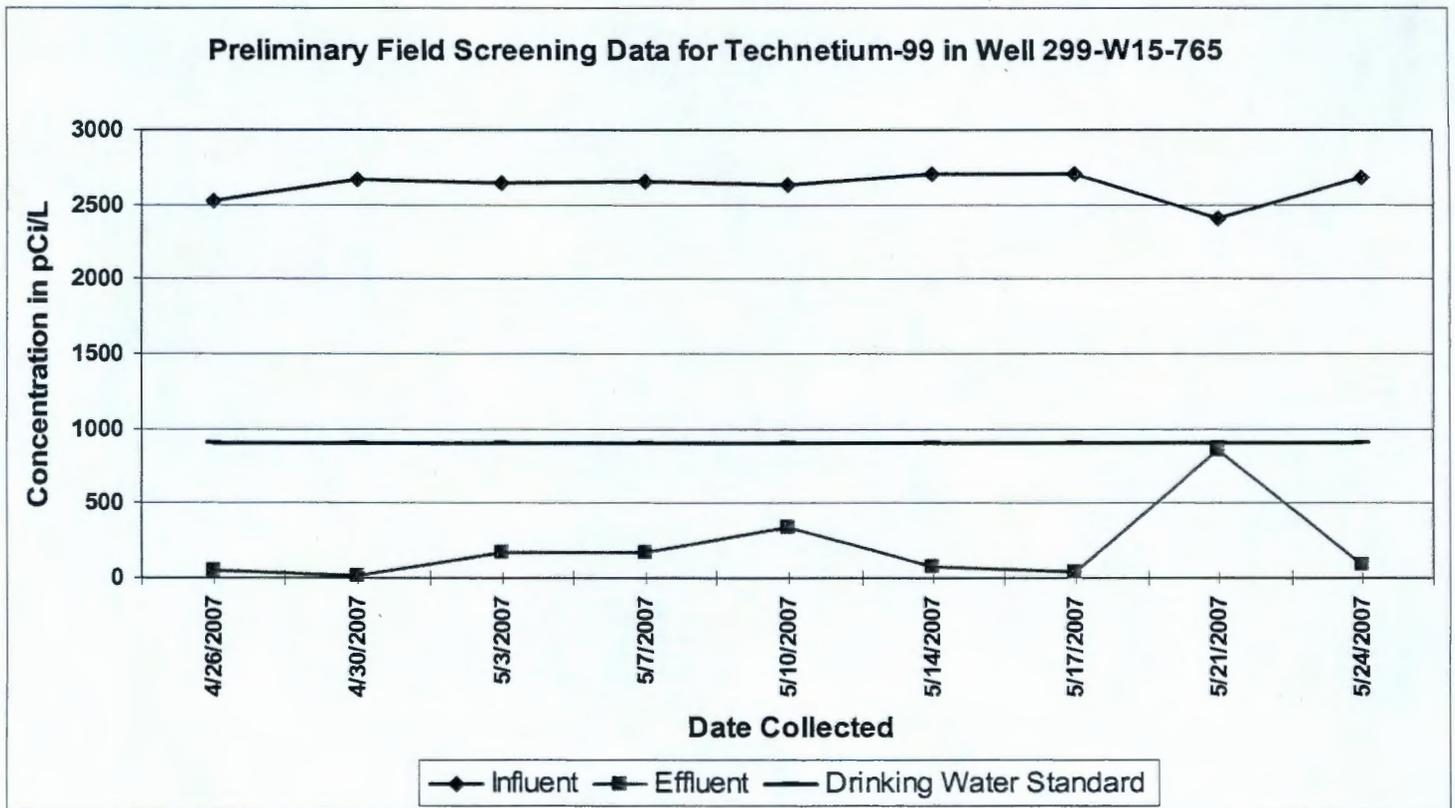
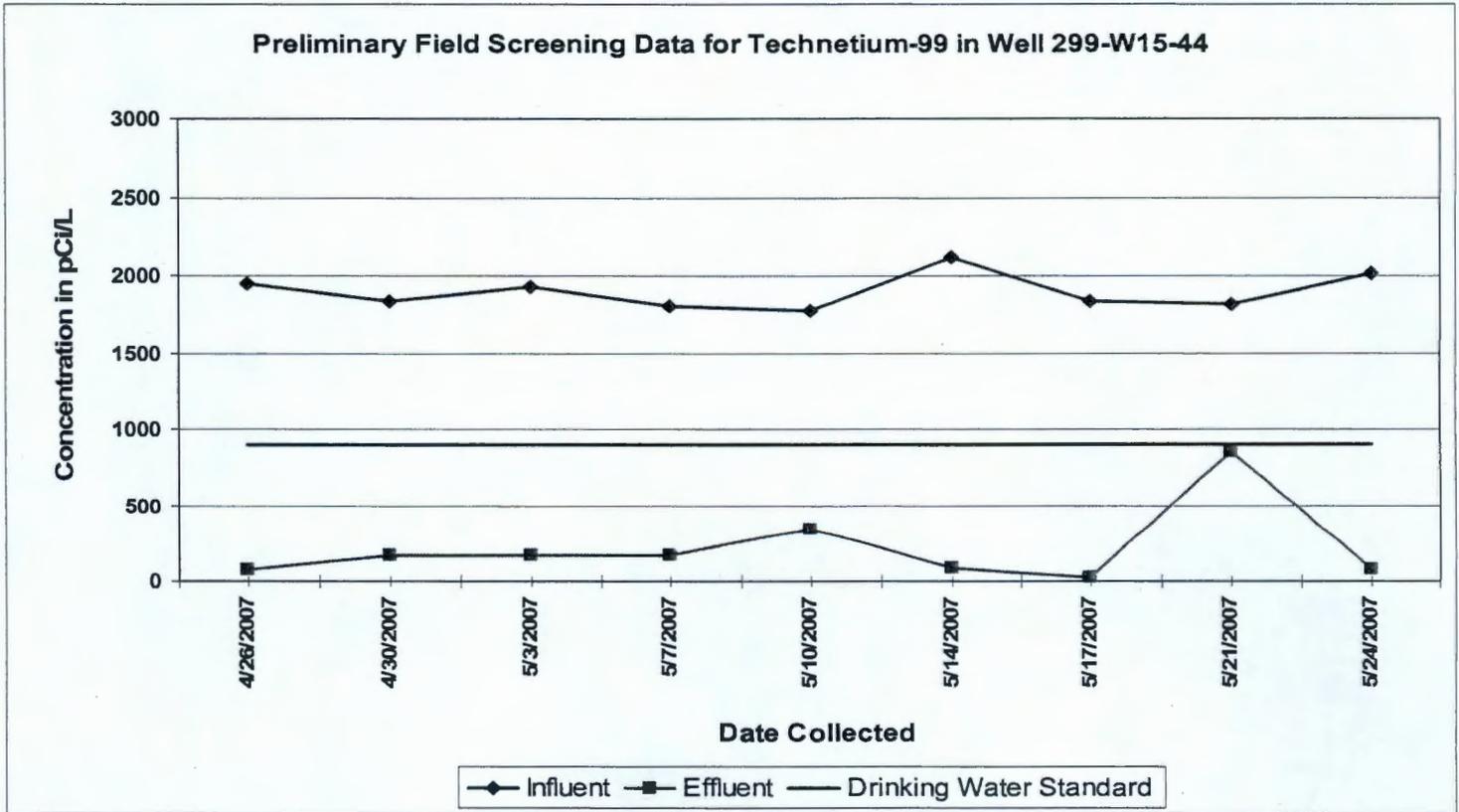
All tanks in S farm have been interim stabilized – drained of pumpable liquid.

Tank Farms – recent retrievals

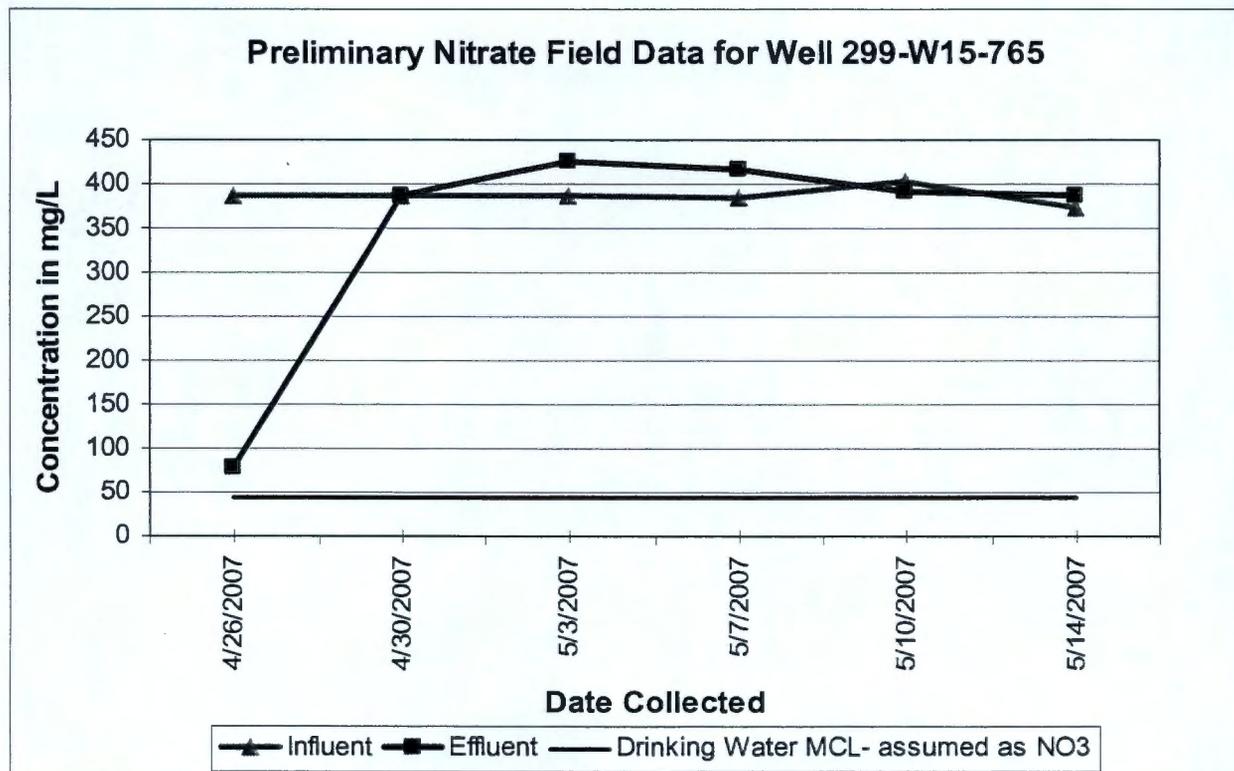
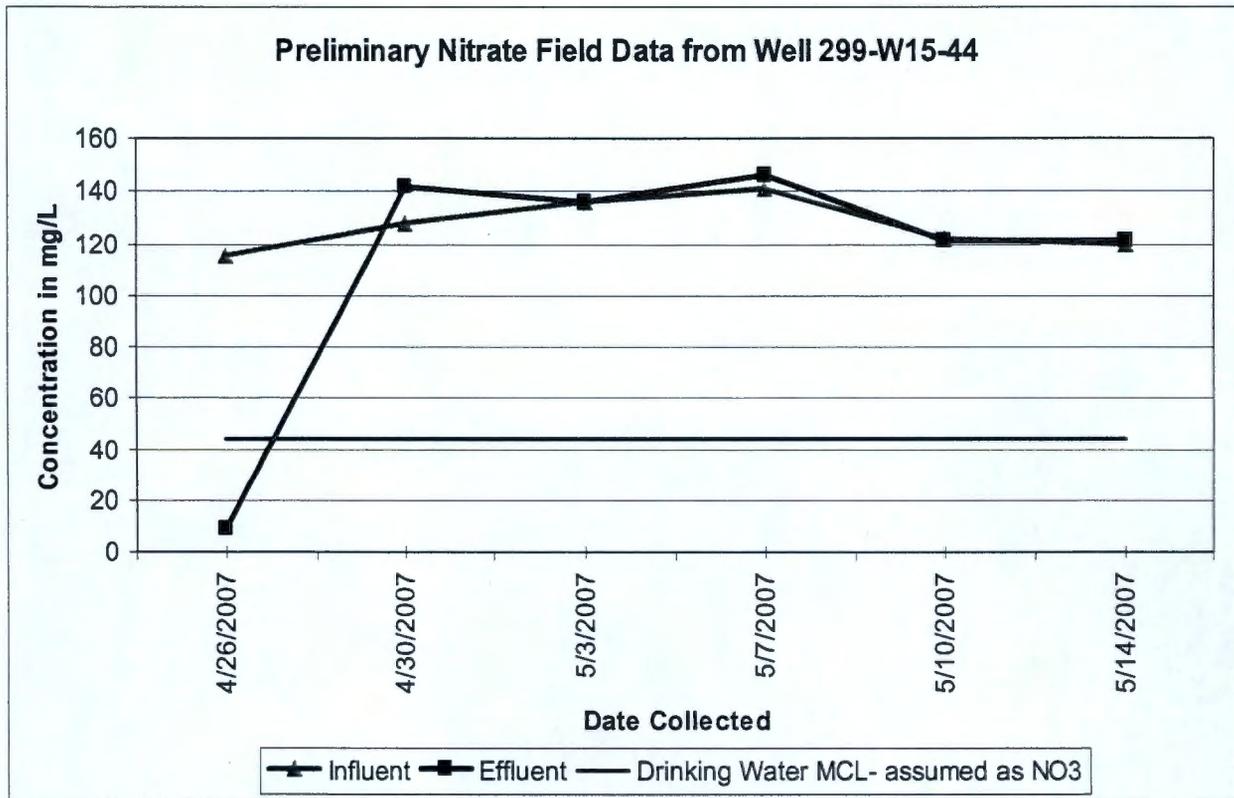
Recent waste retrievals of tank waste has occurred in S-102 and S-112. The retrieval at S-102 is currently on hold. Leak detection includes in-tank, moisture and electrical resistivity monitoring. The data do not indicate any leak occurred during retrieval.

The retrieval at S-112 is completed. Leak detection monitoring included in-tank and moisture monitoring. The data do not indicate any leak occurred during retrieval.

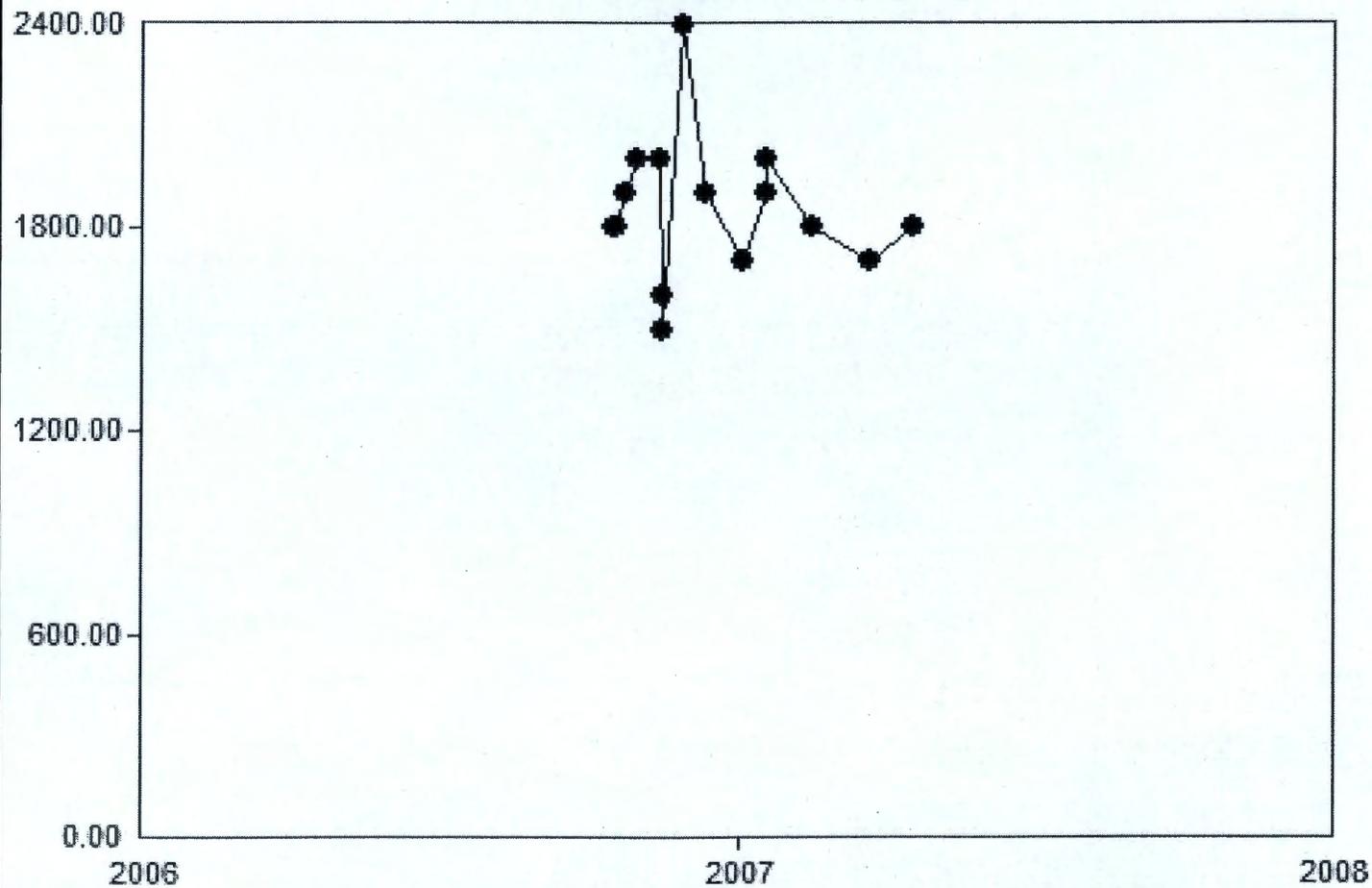
200-ZP-1 Technetium-99 Field Screening Data
 (April 26th to May 24th within extraction wells 299-W15-44 and 299-W15-765)



200-ZP-1 Nitrate Field Screening Data
 (April 26th to May 14th 2007 within extraction wells 299-W15-44 and 299-W15-765)



299-W15-6
Carbon tetrachloride (ug/L)

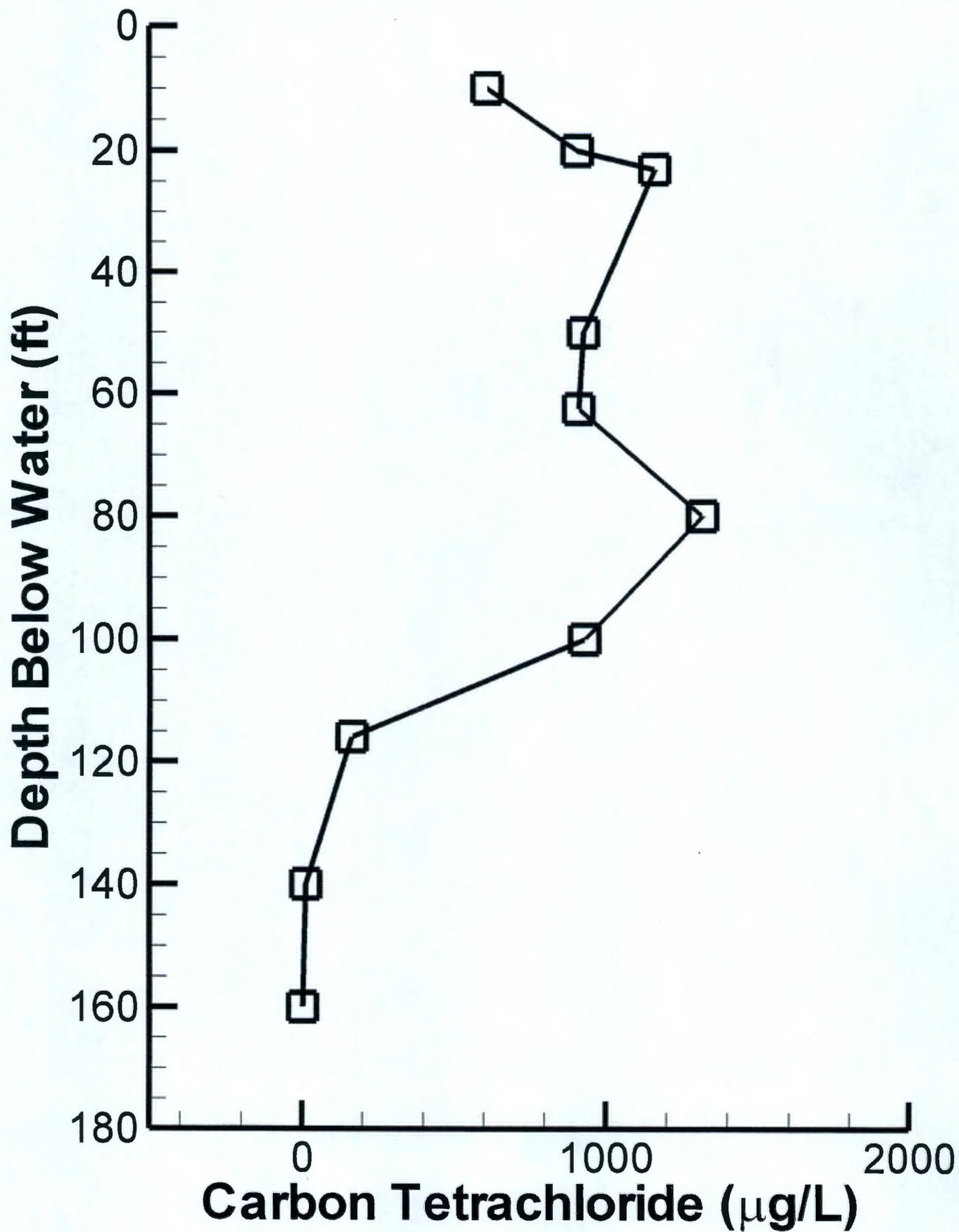


— Trend

◆ Detect

○ Undetect

299-W11-48



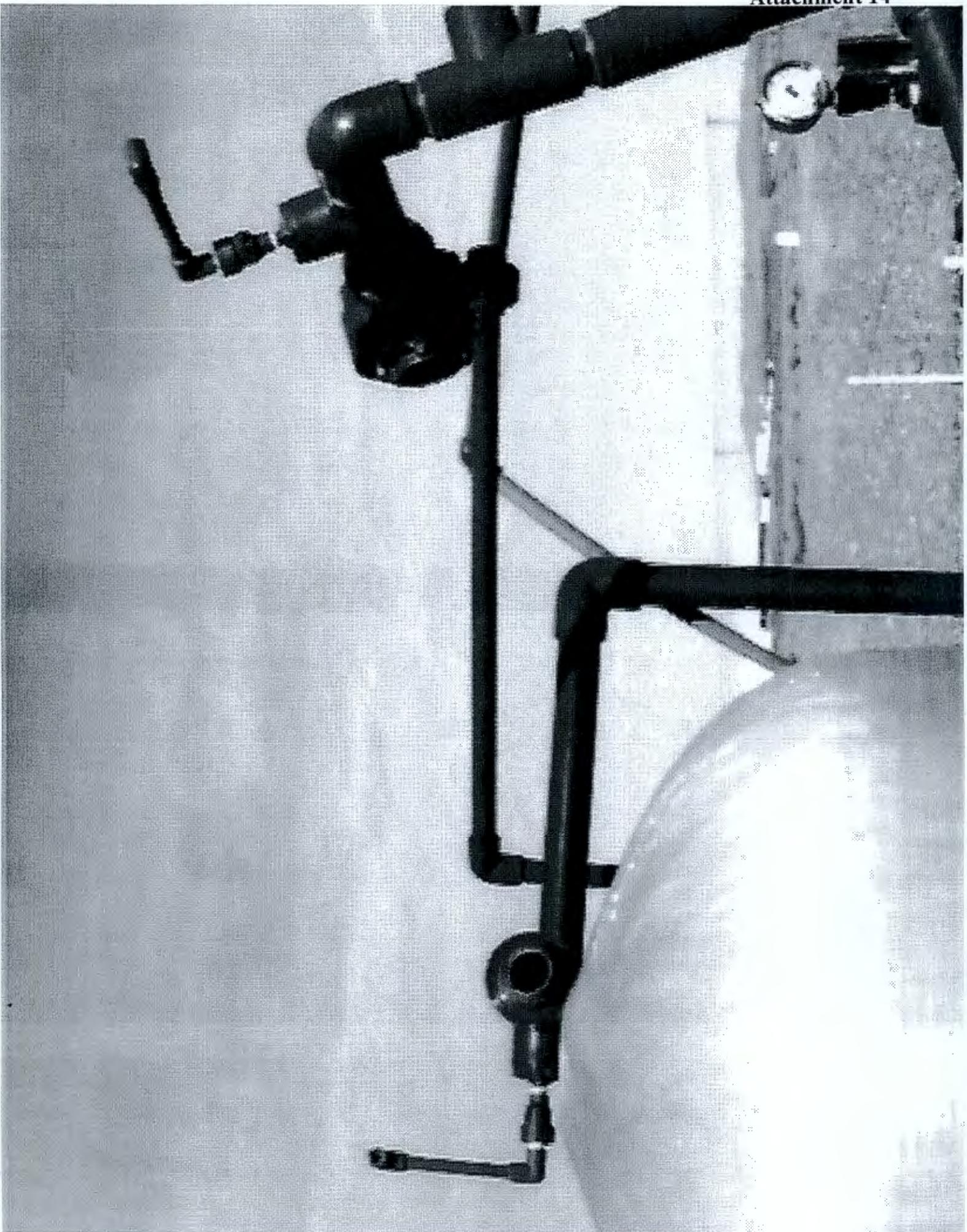




Table 3-1. Preliminary Sampling Parameters and Frequency.

	Anions (EPA Method 300.0) ^a				Alkalinity (EPA Method 310.1) ^a	Technetium- 99 ^{ad}	Carbon Tetrachloride (SW-846 Method 8260B) ^a	pH (Water Quality Meter) ^a
	Nitrate ^b	Sulfate	Chloride	Phosphate				
<i>Baseline</i>								
299-W15-765	X	X	X	X	X	X	X	X
299-W15-44	X	X	X	X	X	X	X	X
<i>299-W15-765</i>								
Influent (two times per week)	X					X		
Effluent (two times per week)	X					X		
Influent (weekly)		X	X	X	X		X	X
Effluent (weekly)		X	X	X	X		X	X
A530E resin post-study samples ^f	X	X	X	X	X	X	X	
<i>299-W15-44</i>								
Influent (two times per week)	X					X		
Effluent (two times per week)	X					X		
Influent (weekly)		X	X	X	X		X	X
Effluent (weekly)		X	X	X	X		X	X
A530E resin post-study samples ^f	X	X	X	X	X	X	X	

NOTE: PNNL will act as the primary laboratory for field screening analyses, while WSCF will act as the primary laboratory for fixed laboratory analyses.

^a All fixed laboratory analyses should be run using a standard 45-day turnaround time.

^b For the first four weeks after startup, all sets of samples (influent and effluent) will be analyzed for nitrate by field screening and fixed laboratory methods. After the first four weeks, only the fixed lab samples will be collected and submitted to the lab for analysis.

^c A set of samples consisting of an influent and an effluent are to be collected on Monday and Thursday each week. Both sets of samples will be analyzed by ICP/MS screening (quick turn-around). One quarter of the influent and effluent samples will be analyzed by the fixed lab.

^d Fixed laboratory analysis for Technetium-99 is to be conducted using LSC.

^f If premature breakthrough of the IX resin is found to occur during testing, it may be advisable to perform a post-test analysis of the resin to determine the mass adsorption of technetium-99, other competing anions, and possible fouling agents (e.g., carbon tetrachloride) in order to determine possible causes for the poor IX resin performance. Resin may also need to be sampled for waste-designation purposes.

EPA = U.S. Environmental Protection Agency

ICP/MS = inductively coupled plasma mass spectrometry

IX = ion exchange

LSC = liquid scintillation counting

PNNL = Pacific Northwest National Laboratory

WSCF = Waste Sampling Characterization Facility

Attachment 17

Table D2-1. Analytical Performance Requirements for Contaminant of Concern Analysis

Type of COC	COCs	Survey or Analytical Method ^a	CRDL ^b µg/L	Precision Required	Accuracy Required
Nonradiological COCs					
Volatile organics	Carbon tetrachloride	SW-846, Method 8260 ^b	3	c	c
Non-metals	Nitrate	300.0 ^d	75	c	c
	Sulfate	300.0 ^d	500	c	c
	Chloride	300.0 ^d	200	c	c
	Phosphate	300.0, 365.1, 365.2, or 365.3	50	c	c
	Alkalinity	310.1	5,000	c	c
Radiological COCs					
Beta emitters	Tc-99	Liquid scintillation	20 pCi/L	±30%	70-130%
	Tc-99	ICP/MS ^e	100 pCi/L	±30%	70-130%

^a Analytical method selection is based on available methods by laboratories currently contracted to the Hanford Site. Equivalent methods may be substituted in future sampling and analysis instructions or other documents. Four-digit methods are from EPA's SW-846 (EPA 1997); other methods referenced to source.

^b Typical CRDL or minimum detectable concentrations are based on current Hanford laboratory contracts. Detection limits in subsequent documents may differ depending on method selection and the contract laboratory. Units are "µg/L" for nonradiological COCs and "pCi/L" for radiological COCs (unless otherwise noted).

^c Precision and accuracy in accordance with cited procedure.

^d Method from *Standard Methods for Examination of Water and Wastewater* (Eaton et al. 1995).

^e ICP/MS analytical method will be used for field screening (quick turnaround).

COC = contaminant of concern

CRDL = contract-required detection limit

ICP/MS = inductively coupled plasma mass spectrometry

Comparison of Maximum Carbon Tetrachloride Rebound Concentrations
Monitored at 200-PW-1 Soil Vapor Extraction Sites
FY 2003 - FY 2007

200-PW-1		July 2002 (Z-9) or October 2003 (Z-1A) - March 2004		July 2002 (Z-9) or April 2004 (Z-1A) - September 2004		October 2004 - June 2005		July 2005 - June 2006		July 2006 - May 2007	
Location	Site	Maximum Rebound	months*	Maximum Rebound	months*	Maximum Rebound	months*	Maximum Rebound	months*	Maximum Rebound	months*
(Well or Probe)		Carbon Tetrachloride	of	Carbon Tetrachloride	of	Carbon Tetrachloride	of	Carbon Tetrachloride	of	Carbon Tetrachloride	of
/feet bgs		(ppmv)	rebound	(ppmv)	rebound	(ppmv)	rebound	(ppmv)	rebound	(ppmv)	rebound
CPT-17/ 10 ft	Z-9	9.0	21	9.9	27	11.4	5	2.5	12		
CPT-18/ 15 ft	Z-9	2.4	21	2.5	27	3.1	5	0	12	1.6	9
CPT-4A/ 25 ft	Z-1A										
CPT-27/ 15 ft	Z-9									0	9
CPT-4E/ 25 ft	Z-1A			2.4	0	2.4	9	2.4	0	3.3	8
CPT-16/ 25 ft	Z-9	2.6	21	3.6	27	4.4	5	1.6	12	1.0	9
CPT-31/ 25 ft	Z-12										
CPT-32/ 25 ft	Z-1A	5.9	6			8.6	9	6.4	6	8.0	8
CPT-30/ 28 ft	Z-18	0	6			1.6	9	1.2	6	0	8
CPT-13A/ 30 ft	Z-1A	1.8	6	1.9	0	8.3	9	4.1	0	5.8	8
CPT-7A/ 32 ft	Z-1A	9.5	6	1.9	0	4.4	9	3.8	0	3.9	8
CPT-27/ 33 ft	Z-9	2.7	21	2.7	27	8.4	5	1.8	12		
CPT-1A/ 35 ft	Z-12	18.3	6	18.0	0	14.0	9	17.2	0	10.0	8
CPT-18/ 35 ft	Z-9									0	9
CPT-28/ 40 ft	Z-9					5.4	0			59.3	8
CPT-33/ 40 ft	Z-18					3.9	9			1.8	8
CPT-34/ 40 ft	Z-18			1.8	0	3.0	9	2.0	0	1.4	8
CPT-21A/ 45 ft	Z-9					7.9	0				
CPT-30/ 48 ft	Z-18									4.2	9
W15-220ST/ 52 ft	Z-9										
CPT-9A/ 60 ft	Z-9	35.9	21	35.9	27	32.4	5	29.2	12	16.2	10
CPT-28/ 60 ft	Z-9					68.3	0				
CPT-C3872 / 63 ft	Z-1A					15.5	9	9.9	6	15.2	8
CPT-16/ 65 ft	Z-9			4.2	27	6.7	5	5.6	0		
CPT-21A/ 65 ft	Z-9	150	21	150	27	170	0	167	12	153	10
CPT-1A/ 68 ft	Z-12					13.7	9			6.2	8
CPT-30/ 68 ft	Z-18										
CPT-13A/ 70 ft	Z-1A										
CPT-24/ 70 ft	Z-9			9.1	27			5.2	12		
CPT-32/ 70 ft	Z-1A					5.5	9			6.0	8
W15-219SST/ 70 ft	Z-9			5.7	22						
CPT-4A/ 75 ft	Z-1A										
CPT-18/ 75 ft	Z-9			8.3	27			4.3	12		
CPT-31/ 76 ft	Z-12										
CPT-33/ 80 ft	Z-18										
W15-82/ 83 ft	Z-9	85.8	21	85.8	27	95.8	5	8.1	12	3.9	9
CPT-21A/ 86 ft	Z-9	244	21	244	27	209	5	223	12	194	10
CPT-34/ 86 ft	Z-18										
W15-95U/ 86 ft	Z-9										
W15-218SST/ 86 ft	Z-9										
CPT-28/ 87 ft	Z-9	258	21	258	27	246	5	245	12	216	10
CPT-4B/ 90 ft	Z-1A										
CPT-1A/ 91 ft	Z-12										
CPT-4A/ 91 ft	Z-1A										
CPT-9A/ 91 ft	Z-9										
W15-85/ 91 ft	Z-9										
W18-252SST/ 100	Z-1A										
W18-152/ 101 ft	Z-12	12.4	6			16.0	9	16.2	6	16.3	8
W15-8U/ 103 ft	Z-9							10.4	12	14.1	9
CPT-4E/ 103 ft	Z-1A										
W18-167/ 106 ft	Z-1A	266	6			196	9	174	6	3.0	8
CPT-4F/ 109 ft	Z-1A					11.9	9			5.2	8
W18-165/ 109 ft	Z-1A	205	6			35.2	9	394	6	2.5	8
W15-217/ 114 ft	Z-9	458	21	467	27	374	5	19.7	12	16.5	9
CPT-24/ 118 ft	Z-9			15.3	27			23.9	12		
W15-220SST/ 118	Z-9			26.0	27			25.2	12		
W18-158L/ 120 ft	Z-1A										
W15-219SST/ 130	Z-9			0	22						
W18-249/ 130 ft	Z-18	41.0	6			64.9	9	24.1	6	19.7	8
W18-248/ 131 ft	Z-1A	180	6			249	9	67.0	6	131	8
W15-95L/ 144 ft	Z-9	40.3	21	40.3	27	26.7	5	25.7	12	18.0	9
W15-219SST/ 155	Z-9			9.5	22						
W15-220L/ 163 ft	Z-9			7.5	27			13.2	12		
W18-247L/ 167 ft	Z-18					9.3	passive	7.8	passive	5.7	passive
W18-246L/ 170 ft	Z-1A					22.0	passive	25.3	passive	14.7	passive
W15-219L/ 175 ft	Z-9			23.0	27			12.2	12		
W18-252L/ 175 ft	Z-1A					18.0	passive	16.9	passive	12.2	passive
W15-9L/ 176 ft	Z-9	13.1	21	13.1	27	2.1	5	5.4	12	7.9	9
W15-84L/ 180 ft	Z-9	25.9	21	25.9	27	23.0	5	14.0	12		
W15-6L/ 182 ft	Z-9										
W18-10L/ 183 ft	Z-18					12.2	passive	14.1	passive	13.8	passive
W15-220SST/ 185	Z-9										
W18-7/ 197 ft	Z-1A					24.6	passive	33.8	passive	39.3	passive
W18-12/ 198 ft	Z-18					9.9	passive	9.4	passive	4.8	passive
W18-11L/ 199 ft	Z-18					7.3	passive	9.0	passive	8.4	passive
W18-6L/ 208 ft	Z-1A					23.2	passive	24.4	passive	15.8	passive
W15-46/ 217 ft	Z-9							4.7	12	5.7	9

* - based on location (Z-1A/18/12 or Z-9) of monitoring point; specific points may be beyond SVE zone of influence during particular operating configurations

- Z-18 and Z-12 wells off-line Oct 96 - Apr 98

- CPT-1A, CPT-9A, and possibly CPT-7A appeared to be beyond SVE zone of influence in Oct 96 based on differential pressure (BHI-01105, p. 6-1)

- CPT-9A, CPT-21A, CPT-28 beyond SVE zone of influence in May 96 based on CCl4 concentrations and airflow modeling based on measured vacuums (BHI-01105, p. 6-1)

Carbon Tetrachloride Rebound Concentrations
Monitored at 200-PW-1 Soil Vapor Extraction Sites
July 2006 - May 2007

200-PW-1		07/26/2006	08/30/2006	09/26/2006	10/25/2006	11/30/2006	12/19/2006	01/31/2007	02/27/2007	03/21/2007	04/18/2007	05/29/2007
Location (Well or Probe) /feet bgs	Site	CCI4 (ppmv)	CCI4 (ppmv)	CCI4 (ppmv)	CCI4 (ppmv)	CCI4 (ppmv)	CCI4 (ppmv)	CCI4 (ppmv)	CCI4 (ppmv)	CCI4 (ppmv)	CCI4 (ppmv)	CCI4 (ppmv)
CPT-17/ 10 ft	Z-9				1.2	1.2	1.2	1.4	1.6	1.5		
CPT-18/ 15 ft	Z-9											
CPT-27/ 15 ft	Z-9				0	0	0	0	0	0		
CPT-4E/ 25 ft	Z-1A	0	0	0							3.2	3.3
CPT-16/ 25 ft	Z-9				0	1.0	0	0	1.0	0		
CPT-32/ 25 ft	Z-1A	0	0	0	0	1.2	2.1	3.4	6.0	5.7	8.0	7.6
CPT-30/ 28 ft	Z-1A	0	0	0							0	0
CPT-13A/ 30 ft	Z-1A	2.4	2.5	2.4	3.3	2.9	5.8	1.6	5.0	2.2	1.8	3.7
CPT-7A/ 32 ft	Z-1A	2.0	1.9	1.2	1.9	2.5	2.6	3.2	3.4	3.8	3.9	2.7
CPT-27/ 33 ft	Z-9											
CPT-1A/ 35 ft	Z-12	11.0	13.4	10.2	10.0	4.6	5.1	4.4	7.3	2.8	4.2	1.2
CPT-18/ 35 ft	Z-9				0	0	0	0	0	0		
CPT-28/ 40 ft	Z-9	5.5	4.3	4.8							8.6	59.3
CPT-33/ 40 ft	Z-18	0	1.3	1.6							1.5	1.8
CPT-34/ 40 ft	Z-18	0	1.3	1.3							1.2	1.4
CPT-21A/ 45 ft	Z-9											
CPT-30/ 48 ft	Z-9				0	4.2	3.1	2.9	1.5	1.1		
CPT-9A/ 50 ft	Z-9	32.8	40.7	43.3	30.6	42.6	42.0	43.7	39.5	27.4	39.7	39.1
CPT-9A/ 60 ft	Z-9	12.8	9.8	15.7	14.2	16.2	13.1	13.2	7.2	10.7	12.9	12.1
CPT-28/ 60 ft	Z-9											
CPT-C3872 / 63 ft	Z-1A	2.1	2.2	2.4	3.5	5.5	6.1	7.8	12.2	10.1	11.5	15.2
CPT-9A/ 64 ft	Z-9	33.8	33.8	33.9	28.1	32.3	28.9	16.7	29.9	26.1	23.4	31.4
CPT-16/ 65 ft	Z-9											
CPT-21A/ 65 ft	Z-9	153	132	137	123	120	123	127	138	101	119	105
CPT-1A/ 68 ft	Z-12	13.2	12.5	5.6							6.2	0
CPT-24/ 70 ft	Z-9											
CPT-32/ 70 ft	Z-1A	4.2	4.3	3.5							5.2	6.0
W15-219SST/ 70 ft	Z-9											
CPT-18/ 75 ft	Z-9											
W15-82/ 83 ft	Z-9				0	0	0	2.3	3.9	0		
CPT-21A/ 86 ft	Z-9	179	171	194	159	169	164	189	170	119	161	125
CPT-28/ 87 ft	Z-9	180	185	216	181	202	196	0	209	119	182	147
W18-152/ 101 ft	Z-12	10.8	12.5	13.3	13.0	14.4	13.8	15.1	16.3	13.1	13.8	12.6
W15-8U/ 103 ft	Z-9				2.4	6.1	1.2	4.6	14.1	1.7		
W18-167/ 106 ft	Z-1A	0	0	0	0	0	0	3.0	1.1	0	0	0
CPT-4F/ 109 ft	Z-1A	1.2	2.9	0							4.1	5.2
W18-165/ 109 ft	Z-1A	-(q)	0	0	0	0	0	2.5	2.2	0	0	0
W15-217/ 114 ft	Z-9				0	0	0	7.0	16.5	0		
CPT-24/ 118 ft	Z-9											
W15-220SST/ 118 ft	Z-9											
W18-249/ 130 ft	Z-18	4.6	19.4	18.1	16.8	18.4	8.8	19.7	16.1	16.0	15.0	15.4
W15-219SST/ 130 ft	Z-9											
W18-248/ 131 ft	Z-1A	-(m)	27.2	43.0	42.1	45.3	30.7	52.7	131	4.7	70.0	34.4
W15-95L/ 144 ft	Z-9				10.0	16.2	15.3	16.9	18.0	0		
W15-219SST/ 155 ft	Z-9											
W15-220L/ 163 ft	Z-9											
W15-219L/ 175 ft	Z-9											
W15-9L/ 176 ft	Z-9				4.7	2.3	2.2	3.5	7.9	4.7		
W15-84L/ 180 ft	Z-9											
W15-46/ 217 ft	Z-9				0	0	0	4.0	5.7	0		
		(m) Unable to sample; well in use by Vista Engineering										
		(q) Unable to sample; well in use for geophysical logging										

Carbon Tetrachloride Concentrations
 Monitored at 200-PW-1 Passive Soil Vapor Extraction Wells
 July 2006 - May 2007

200-PW-1	7/26/2006	8/29/2006	9/26/2006	10/26/2006	11/28/2006	12/20/2006	1/30/2007	2/28/2007	3/21/2007	4/16/2007	5/30/2007
Location (Well or Probe) /feet bgs	CCI4 (ppmv)										
W18-6L/ 208 ft	---(b)	---(b)	15.8	3.7	1.4	0	4.8	4.9	8.1	8.5	11.3
W18-7/ 197 ft	11.0	15.3	0	5.6	6.0	2.1	7.8	14.1	11.8	21.1	39.3
W18-10L/ 183 ft	10.0	12.7	11.7	0	0	2.0	12.6	7.0	13.8	1.0	5.7
W18-11L/ 199 ft	3.0	8.4	1.3	0	0	0	4.5	3.4	3.2	0	3.3
W18-12/ 198 ft	0	4.8	0	0	0	0	1.3	0	0	0	0
W18-246L/ 170 ft	---(b)	---(b)	3.7	1.7	0	0	2.2	5.3	4.1	9.6	14.7
W18-247L/ 167 ft	0	5.7	1.0	0	0	0	1.4	0	5.1	0	0
W18-252L/ 175 ft	---(b)	2.1	4.5	8.1	12.2						
(b) disconnected for use by Vista Engineering for cross-well seismic investigation											

Attachment 19, Figure 1

Cummins, Gloria D

From: Jackson, Zelma (ECY) [ZJAC461@ecy.wa.gov]
Sent: Monday, June 11, 2007 12:24 PM
To: Cummins, Gloria D
Cc: Price, John (ECY); Hildebrand, R D (Doug); Watson, Thomas L; Winterhalder, John A; Lindberg, Jon W; Caggiano, Joseph
Subject: RE: Request to collect a grab sample in 299-E23-2 Well

Gloria,

During the PO-1 DQO, Ecology supported and encouraged any opportunistic sampling events during the SAP revision. Joe's questions are relevant and should be addressed. Let us know when the results are in. John Price and I discussed the page change approach and agreed presenting these changes at the next UMM for approval is appropriate. I can be reached at 372-7910. Thanks, Zelma

From: Caggiano, Joseph (ECY)
Sent: Monday, June 11, 2007 11:24 AM
To: Cummins, Gloria D; Jackson, Zelma (ECY)
Cc: Price, John (ECY); Hildebrand, R D (Doug); Watson, Thomas L; Winterhalder, John A; Lindberg, Jon W
Subject: RE: Request to collect a grab sample in 299-E23-2 Well

Gloria,

If there are "piezometers" in this well, where do you plan to take the grab sample? Would it be possible to sample at the various depths at which these tubes are seated? I do not have any problems with taking one or more samples from this well. I'll let Zelma weigh in on this matter, as it is her project. As it is a deep well, I was just wondering if there could at least be a "snapshot" depth profile in the groundwater.

Any thoughts?

Joe

From: Cummins, Gloria D [mailto:Gloria_D_Cummins@RL.gov]
Sent: Monday, June 11, 2007 11:16 AM
To: Jackson, Zelma (ECY); Caggiano, Joseph (ECY)
Cc: Price, John (ECY); Hildebrand, R D (Doug); Watson, Thomas L; Cummins, Gloria D; Winterhalder, John A; Lindberg, Jon W
Subject: Request to collect a grab sample in 299-E23-2 Well

The 200-PO-1 OU project would like to get a grab water sample in a well that is being decommissioned. It is a key well in an area adjacent to the 2101 bldg in the 200 East Area that we have attempted to log but because of the piezo constructions in the well and the difficulty in their removal, will not be able to log but will be able to get a water sample.

The well is in an area where the closest well is 1600 ft away and the rest are over a half mile away. This well is not in the current 200-PO-1 OU SAP and we need to request a page addendum to the SAP as soon as possible, so they can complete decommissioning of the well.

This is a an opportunistic sampling activity that can be identified in a page change to our Routine PO-1 Monitoring SAP for approval at our next UMM, until incorporated into the next SAP revision. This would be similar to the way we addressed the opportunistic sampling last year of the WTP boreholes (see attachments used for that activity). Let me know if a memo and page change approach for approval at our next UMM would work for this grab sample

Attachment 19, Figure 2

aquisition. If so we can work with Doug Hildebrand to prepare the necessary paper work. Thanks.
gdc

Cummins, Gloria D

From: Caggiano, Joseph (ECY) [Jcag461@ecy.wa.gov]
Sent: Tuesday, June 12, 2007 2:26 PM
To: Lindberg, Jon W
Cc: Jackson, Zelma; Cummins, Gloria D; Worley, Scott H
Subject: RE: Request to collect a grab sample in 299-E23-2 Well

I did not realize how little water is left in the well. Not much of a vertical profile of water quality in a 17 foot saturated section. I knew this was an old well and that the "piezometers" might be difficult to remove, as at least one or more are cemented into the well. So, I am OK with one grab sample before decommissioning. Sounds as if geophysical logging is likely not to happen as well.

From: Lindberg, Jon W [mailto:Jon_W_Lindberg@RL.gov]
Sent: Tuesday, June 12, 2007 2:19 PM
To: Caggiano, Joseph (ECY)
Cc: Jackson, Zelma (ECY); Cummins, Gloria D; Worley, Scott H
Subject: RE: Request to collect a grab sample in 299-E23-2 Well

Joe,

Unfortunately, well 299-E23-2 is not in very good shape. The piezometers are broken, and it is all they can do to try to remove as much of the piezometer material as possible. The entire well, including the piezometers, only tapped one unconfined aquifer in the well anyway, and now there is only about 17 feet of water in the well. Therefore, all we can expect from this well is to take one grab sample from the upper portion of the water column just before decommissioning the well.

Jon

From: Caggiano, Joseph (ECY) [mailto:Jcag461@ecy.wa.gov]
Sent: Monday, June 11, 2007 11:24 AM
To: Cummins, Gloria D; Jackson, Zelma
Cc: Price, John (ECY); Hildebrand, R D (Doug); Watson, Thomas L; Winterhalder, John A; Lindberg, Jon W
Subject: RE: Request to collect a grab sample in 299-E23-2 Well

Gloria,

If there are "piezometers" in this well, where do you plan to take the grab sample? Would it be possible to sample at the various depths at which these tubes are seated? I do not have any problems with taking one or more samples from this well. I'll let Zelma weigh in on this matter, as it is her project. As it is a deep well, I was just wondering if there could at least be a "snapshot" depth profile in the groundwater.

Any thoughts?

Joe

From: Cummins, Gloria D [mailto:Gloria_D_Cummins@RL.gov]
Sent: Monday, June 11, 2007 11:16 AM
To: Jackson, Zelma (ECY); Caggiano, Joseph (ECY)
Cc: Price, John (ECY); Hildebrand, R D (Doug); Watson, Thomas L; Cummins, Gloria D; Winterhalder, John A; Lindberg, Jon W

Subject: Request to collect a grab sample in 299-E23-2 Well

The 200-PO-1 OU project would like to get a grab water sample in a well that is being decommissioned. It is a key well in an area adjacent to the 2101 bldg in the 200 East Area that we have attempted to log but because of the piezo constructions in the well and the difficulty in their removal, will not be able to log but will be able to get a water sample.

The well is in an area where the closest well is 1600 ft away and the rest are over a half mile away. This well is not in the current 200-PO-1 OU SAP and we need to request a page addendum to the SAP as soon as possible, so they can complete decommissioning of the well.

This is a an opportunistic sampling activity that can be identified in a page change to our Routine PO-1 Monitoring SAP for approval at our next UMM, until incorporated into the next SAP revision. This would be similar to the way we addressed the opportunistic sampling last year of the WTP boreholes (see attachments used for that activity). Let me know if a memo and page change approach for approval at our next UMM would work for this grab sample aquisition. If so we can work with Doug Hildebrand to prepare the necessary paper work. Thanks.
gdc

Additions to the Sampling and Analysis Plan for the 200-PO-1 Groundwater Operable Unit (DOE/RL-2003-04, Rev.1) to include supplemental sampling of groundwater in wells pending submittal and approval of the next revision.

Table 2.1 Sampling and Analysis Schedule for 200-PO-1 Operable Unit Near-Field Wells

Well ID	Well or Aquifer Tube Name	Co-Sample	Comments	WAC Compliant?	Arsenic	Chromium, Manganese, and Vanadium (filtered)	Iodine-129	Nitrate	Strontium-90	Technetium-99	Tritium	Specific Conductance ^(a)	Temperature ^(a)	Turbidity ^(a)	Gross Alpha	Anions ^(b)	Gross Beta	Metal ^(c)	Water Level ^(a)
A4748	299-E23-2		Sample ^(d) once before decommissioning	N/1961	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

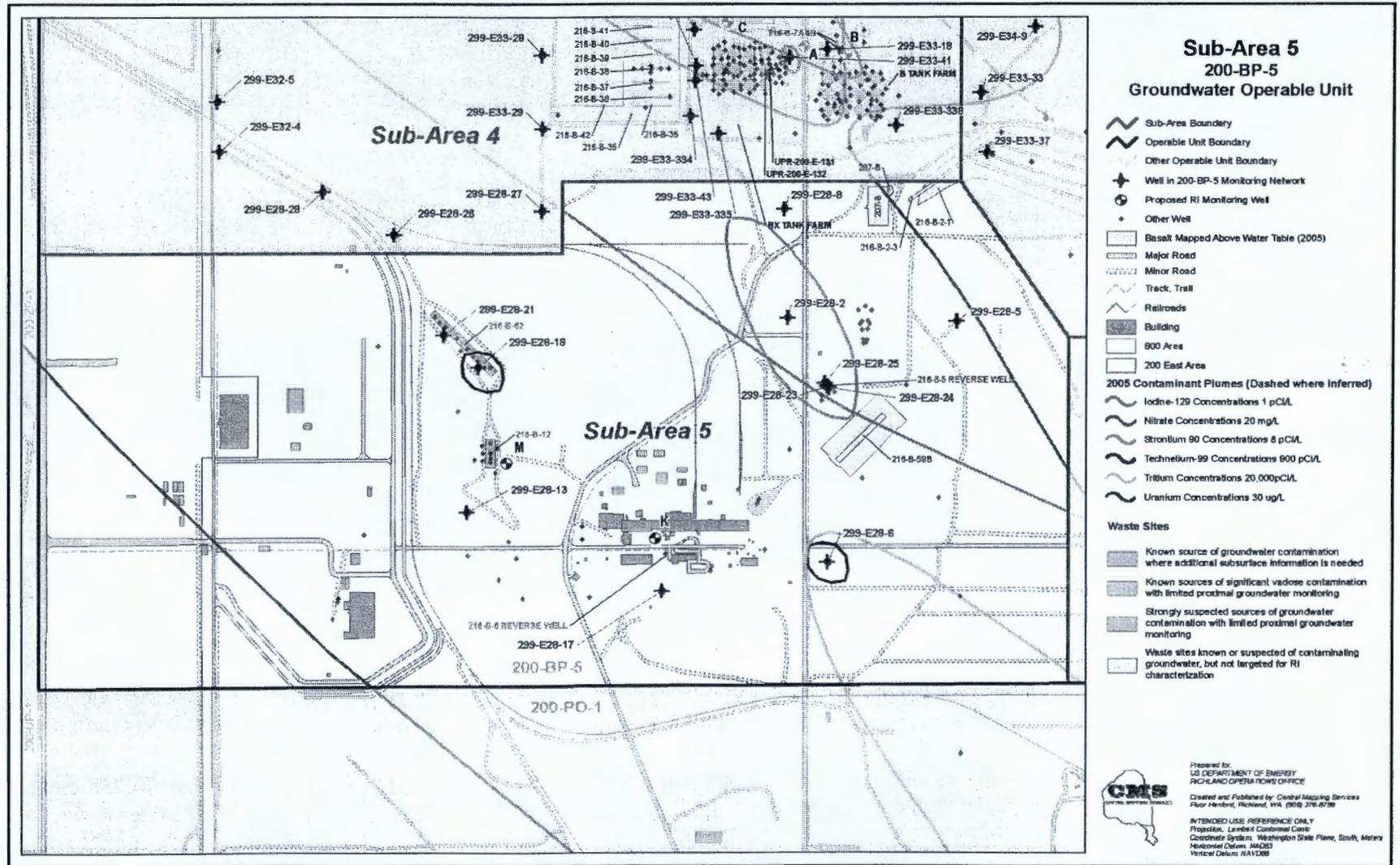
A.1

- (a) Field Measurement
 - (b) Anions – Analytes include but not limited to nitrate.
 - (c) Metals – Analytes include but not limited to chromium, manganese, and vanadium.
 - (d) Wells to be sampled once before decommissioning have the following additional analytes: 1,1,2,2-tetrachloroethane, 1,2-dichloroethene, 1,4-dioxane, 2,4-dinitrophenol, antimony, benzene, bis(2-ethylhexyl)phthalate, bromodichloromethane, cadmium, carbon tetrachloride, dieldrin, dimethoate, dibromochloromethane, fluoride, hexane, heptachlor, heptachlor epoxide, lead, methylene chloride, neptunium-237, nickel, nitrite, nitrobenzene, pentachlorophenol, protactinium-231, selenium-79, thallium, tetrachloroethene, trichloroethene, uranium, vanadium, vinyl chloride, and zinc.
- N Well construction is not compliant with WAC 173-160 resource protection requirements.
- 1 One time sampling.

SAF_NUM	well_name	samp_interval_top	samp_interval_bottom	samp_interval_units	owner_id	samp_num	media	collection_purpose	samp_est_date	filtered	lab_code	method_name	method_category	method_class	con_id	con_long_name	sdg_num	dilut_factor	value_rpd	counting_error	MDA	total_err	anal_units	lab_q	valid_q	rev_q
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	71-55-6	1,1-Dichloroethane	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	73-34-5	1,1,2,2-Tetrachloroethane	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	79-00-5	1,1,2-Trichloroethane	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	75-34-3	1,1-Dichloroethane	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	75-35-4	1,1-Dichloroethane	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8270_SVOA_GCMS	ORGANIC	SVQA	120-82-1	1,2,4-Trichlorobenzene	WSCF20070597	1	2.2			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	107-06-2	1,2-Dichloroethane	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	540-50-0	1,2-Dichloroethane (Total)	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	78-57-5	1,2-Dichloropropane	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8270_SVOA_GCMS	ORGANIC	SVQA	106-46-7	1,4-Dichlorobenzene	WSCF20070597	1	1.4			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	71-36-3	1-Butanol	WSCF20070597	1	100			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8270_SVOA_GCMS	ORGANIC	SVQA	872-30-4	1-Methyl-2-pyrrolidone	WSCF20070597	1	5.5			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8270_SVOA_GCMS	ORGANIC	SVQA	121-14-2	2,4-Dinitrotoluene	WSCF20070597	1	0.49			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	78-93-3	2-Butanone	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8270_SVOA_GCMS	ORGANIC	SVQA	95-57-8	2-Chlorophenol	WSCF20070597	1	0.49			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	561-78-6	2-Hexanone	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	108-10-1	2-Pentanone, 4-Methyl	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8270_SVOA_GCMS	ORGANIC	SVQA	95-55-7	4-Chloro-3-methylphenol	WSCF20070597	1	0.49			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8270_SVOA_GCMS	ORGANIC	SVQA	100-02-7	4-Nitrophenol	WSCF20070597	1	0.98			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8270_SVOA_GCMS	ORGANIC	SVQA	83-32-9	Acenaphthene	WSCF20070597	1	2.5			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	67-54-1	Acetone	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	AMCMBISO_IE_PREC_AEA	RAD	RAD	14598-10-2	Americium-241	WSCF20070597	1	-0.079		0.2	0.11	pCi/L	U		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8082_PCB_GC	ORGANIC	PEST/PCB	12874-1-2	Aroclor-1216	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8082_PCB_GC	ORGANIC	PEST/PCB	11104-28-2	Aroclor-1221	WSCF20070597	1	0.2			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8082_PCB_GC	ORGANIC	PEST/PCB	11141-16-5	Aroclor-1232	WSCF20070597	1	0.098			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8082_PCB_GC	ORGANIC	PEST/PCB	53469-21-9	Aroclor-1242	WSCF20070597	1	0.098			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8082_PCB_GC	ORGANIC	PEST/PCB	12873-29-9	Aroclor-1248	WSCF20070597	1	0.098			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8082_PCB_GC	ORGANIC	PEST/PCB	11028-29-1	Aroclor-1254	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8082_PCB_GC	ORGANIC	PEST/PCB	11096-92-5	Aroclor-1260	WSCF20070597	1	0.098			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8082_PCB_GC	ORGANIC	PEST/PCB	37324-23-5	Aroclor-1262	WSCF20070597	1	0.098			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8082_PCB_GC	ORGANIC	PEST/PCB	11100-14-4	Aroclor-1268	WSCF20070597	1	0.098			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	71-43-2	Benzene	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	75-27-4	Bromodichloromethane	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	75-25-2	Bromochloromethane	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	74-83-9	Bromomethane	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	200.8_METALS_ICPMS	INORGANIC	METALMULT	7440-43-9	Cadmium	WSCF20070597	1	0.1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	75-15-0	Carbon disulfide	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	56-23-5	Carbon tetrachloride	WSCF20070597	1	1.8			ug/L	J			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	GAMMA_GS	RAD	RAD	10045-87-3	Cesium-137	WSCF20070597	1	7.9	4.9		pCi/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	300.0_ANIONS_IC	INORGANIC	WETCHEM	124-45-1	Chloride	WSCF20070597	20	22100			ug/L	D		F	
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	108-90-7	Chlorobenzene	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	75-00-3	Chloroethane	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	67-66-3	Chloroform	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	74-87-3	Chloromethane	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	200.8_METALS_ICPMS	INORGANIC	METALMULT	7440-47-3	Chromium	WSCF20070597	1	1.78			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	156-59-2	cis-1,2-Dichloroethylene	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	10061-01-5	cis-1,2-Dichloropropene	WSCF20070597	1	1			ug/L	U			
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC06	GW	C	4/10/2007 8:45 N		WSCF	GAMMA_GS	RAD	RAD	10198-40-0	Cobalt-60	WSCF20070597	1	-2.4		7.6	4.4	pCi/L	U		
F07-021</																										

SAF_NUM	well_name	samp_interval_top	samp_interval_bottom	samp_interval_units	owner_id	samp_num	media	collection_purpose	samp_date_time	filtered	lab_code	method_name	method_category	method_class	con_id	con_long_name	sdg_num	dist_factor	value_rtd	counting_error	MDA	total_er	anal_units	lab_q	valid_q	rev_q
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	BRTOT_BEP_PRECIP_GPC	RAD	RAD	8R-RAD	Total beta radiostrontium	WSCF20070597	1	0.92		1.1	1.1	pCi/L	U		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	WTPH_DIESEL	ORGANIC	GENORG	TPHDIESEL	Total petroleum hydrocarbons - diesel range	WSCF20070597	1	120				ug/L	U		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	WTPH_GASOLINE	ORGANIC	GENORG	TPHGASOLINE	Total petroleum hydrocarbons - gasoline range	WSCF20070597	1	50				ug/L	U		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	WTPH_DIESEL	ORGANIC	GENORG	TPHKEROSENE	Total petroleum hydrocarbons - kerosene range	WSCF20070597	1	120				ug/L	U		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	158-60-5	trans-1,2-Dichloroethylene	WSCF20070597	1	1				ug/L	U		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	10061-02-8	trans-1,3-Dichloropropene	WSCF20070597	1	1				ug/L	U		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	8270_SVOA_GCMS	ORGANIC	SVOA	128-73-8	Tributyl phosphate	WSCF20070597	1	0.48				ug/L	U		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	79-01-8	Trichloroethane	WSCF20070597	1	1				ug/L	U		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	TRITIUM_EIE_LSC	RAD	RAD	10028-17-8	Tritium	WSCF20070597	1	420000			230	84000	pCi/L		F
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	200.8_METALS_ICPMS	INORGANIC	METALMULT	7440-61-1	Uranium	WSCF20070597	1	79.5				ug/L			F
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	UI50_IE_PRECIP_AEA	RAD	RAD	U-233/234	Uranium-233/234	WSCF20070597	1	23			0.015	6	pCi/L		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	UI50_IE_PRECIP_AEA	RAD	RAD	15117-86-1	Uranium-235	WSCF20070597	1	5			0.016	0.44	pCi/L		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	UI50_IE_PRECIP_AEA	RAD	RAD	U-238	Uranium-238	WSCF20070597	1	23			0.015	6	pCi/L		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	75-01-4	Vinyl chloride	WSCF20070597	1	1				ug/L	U		
F07-021	299-E24-23	314	349	R	CENTPLAT	B1MC88	GW	C	4/10/2007 8:45 N		WSCF	8260_VOA_GCMS	ORGANIC	VOA	1330-20-7	Xylenes (total)	WSCF20070597	1	1				ug/L	U		

Figure 3. K Well Location Map.



Path Forward
200-SW-1/2 RI/FS Work Plan Development
May 15, 2007

To help assure that the product to be delivered to Ecology in late September 2007 is acceptable to all parties, this document is drafted and agreed to by representatives of DOE-RL and Ecology. A Collaborative Agreement on this Work Plan was developed and signed by these two parties in March 2005. Both parties and Fluor Hanford have been engaged in collaborative discussions since August 2006 to develop a good understanding of the Party's needs for the DQO for this set of TSD landfills and past practice landfills. Many hours have been spent in the DQO meetings, and we have a good understanding of what is necessary to move forward.

Fluor Hanford is contractually responsible to prepare the RI/FS Work Plan (Draft B), and support DOE-RL's delivery of this product to Ecology by September 30, 2007. Due to complexity in scope and issues associated with these landfills, the Work Plan and RI/FS will be structured in a manner that incorporates a phased approach. The phased approach will be aimed at reaching early agreement on the next stage of field characterization activity. This phased approach is expected to require future revisions to the Work Plan and/or Sampling and Analysis Plan after substantive portions of the next phase(s) of remedial investigation is/are completed.

The decision strategy to be used in this RI/FS Work Plan will center on collecting data and information to evaluate remedial alternatives that will be considered in the feasibility study (FS), including:

- Excavation, treatment (as necessary) and disposal of waste from within individual burial grounds
- Excavation, treatment (as necessary) and disposal of waste from selected sections of individual burial grounds
- Capping of individual burial grounds
- In-situ treatment (e.g., vitrification or grouting) of portions of individual burial grounds
- Some combination of the above
- No action with continued monitoring

Because a good estimate exists for the total length/volume of the landfill trenches, the excavation estimate will be most sensitive to the extent of safety measures that must be implemented while excavating potentially dangerous waste (e.g., carbon tetrachloride), characterizing and/or assessing and routing waste to appropriate disposal facilities, the cost of treatment (as necessary), and the cost of disposal. Most information to estimate these elements of the RTD remedy can be acquired from similar operations being conducted at Hanford and elsewhere. However, it is recognized that additional work is needed for costing the possible disposition activities associated with large, contaminated equipment and waste containers.

The most challenging objective for characterization activities conducted under the work plan will be evaluation of a response scenario in which targeted items within a given landfill are excavated (and perhaps treated) prior to construction of the selected remedy.

Attachment 24, Figure 2

A key assumption is that targeting limited waste items/areas for potential excavation will center on determining whether a current or future threat to groundwater, human health or environment exists.

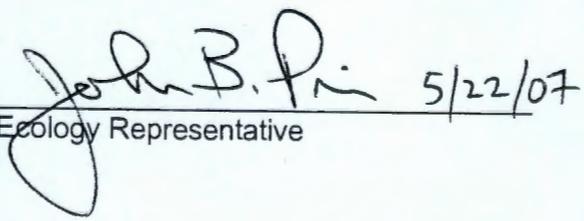
Phase I-A characterization has already been conducted; it consisted of non-intrusive surface radiation surveys, surface geophysics and soil gas surveys. Phase I-B will consist of the use of primarily non-intrusive geophysical and soil gas characterization activities to target areas that may contain either organic vapors or buried masses of metal that may contain liquid organics or areas that contain both. Phase II activities will consist of focused, intrusive investigations of the targets resulting from Phases I-A and I-B which may suggest the potential for DNAPL sources, or other items of interest.

It is assumed that additional characterization beyond Phase II will be required (i.e. Phase III), stemming from the information and data as well as the results of modeling that will evaluate the human health and ecological risk and migration to groundwater following the CERCLA RI/FS process. Scope within Phase III may also be needed to address areas that require particular caution due to worker safety concerns (e.g., burial grounds containing elevated levels of plutonium).

In order to fill data needs in an efficient manner, early elements of the baseline risk assessment and feasibility study will be undertaken in parallel with characterization phases II and III in an effort to use feedback between the investigation and the risk and alternatives evaluation process.



DOE-RL Representative



John B. Pri 5/22/07

Ecology Representative

Attachment 25, Figure 1



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

Change Number	Document Submitted Under Tri-Party Agreement Milestone	Date:	
TPA-CN-166(1)	N/A (2)	06/11/2007	
Document Number and Title: DOE/RL-2006-34 SAMPLING & ANALYSIS PLAN FOR THE 241-U-361 SETTLING TANK (4)		Date Document Last Issued: (5) 08/15/2006	
Originator: (6) Kevin Leary	Phone: (7) (509) 373-7285		
Description of Change:			
<p><u>Briant Charboneau</u> and <u>John Price</u> agree that the proposed change modifies an approved RL (8) Lead Regulatory Agency (9)</p> <p>workplan/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>(10)</p> <p>Section 3.1.5, pg. 3-4 will be deleted (Initial alpha analysis),</p> <p>Section 3.1.6, pg. 3-5 will add a sentence that states: Total alpha analysis will be performed on both the liquid and solid composites.</p> <p>Figure 3-1, pg. 3-3 will be updated to delete the total alpha separate pathway.</p>			
Note: Include affected page number (11)			
Justification and Impacts of Change:			
(12)			
See attached write-up			
Approvals:			
<u>[Signature]</u> (13) RL Project Manager	6/2/07 Date	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved
<u>[Signature]</u> (14) Lead Regulatory Project Manager	6/18/07 Date	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved

REQUEST FOR REVISION

Sampling and Analysis Plan for the 241-U-361 Settling Tank within the 200-UW-1 Operable Unit

DESCRIPTION OF THE PROPOSED MODIFICATION

This document proposes a change to the 241-U-361 Sampling and Analysis Plan (DOE/RL-2006-34, Rev 0) to modify the requirement for total alpha samples on each and every stratum found within the tank core samples.

This requirement is clearly a remnant from the 241-Z-361 SAP and, while relevant and appropriate for the Z tank, is of limited use for the U-361 sludge characterization. This issue was raised during recent discussions with the analytical laboratory when it was discovered that the cost of the individual stratum total alpha analyses was estimated at nearly \$150,000 and over 25% of the total analytical cost.

FH proposes to replace the requirement for individual alpha analyses with total alpha analyses on the sludge composite and duplicate composite, and each of the supernate samples. This would accomplish the DQO data analysis requirements (Step 2), Problem Statements, Required Information (Step 3), and Decision Rules (Step 5) in a much more efficient and cost-effective manner.

DOCUMENT REFERENCES

Current 241-U-361 SAP language:

3.1.5 Initial Alpha Analyses

Two subsamples from each stratum will be collected for total alpha analysis. However, if nondestructive analyses are used to identify the horizontal strata that contain transuranic isotopes in concentrations greater than 100nCi/g, only those strata will be samples for total alpha analyses, for confirmation purposes. The total alpha analysis result will be used to verify whether isotopes are present in concentrations greater than 100nCi/g. This information also will be used to guide compositing of the strata for subsequent radiological and nonradiological analyses.

This language is identical to the language in section 7.2.4 *Initial Alpha Analyses* from the *Data Quality Objectives Summary Report for the 241-U-361 Settling Tank (D&D-29702, Rev. 1)*.

This is also very similar to language found in the *241-Z-361 Sludge Characterization Sampling and Analysis Plan, Rev. 1*.

1.9.3 Initial Alpha, Tank Headspace, and Volatile Analyses of Sludge and Supernate

Attachment 25, Figure 3

Two subsamples from each stratum established for two cores will be collected for total alpha analysis. The total alpha result will be used to determine whether significant TRU material exists in any given stratum and to answer the USQ (Wagoner 1997). The information will also be used to guide compositing of the visual strata for subsequent additional radiological and non-radiological analyses. For planning purposes, four strata from each segment are assumed, with five segments per core for two cores and two total alpha analyses per stratum, for a total of 80 samples.

JUSTIFICATION FOR THE MODIFICATION

Unlike the Z-361 Tank, the U-361 tank does not need to answer any USQ relative to TRU content, and will not use the total alpha results for compositing. The only value of the total alpha results would be to determine whether significant TRU material exists in any given stratum. This is not a requirement of any data need described in the U-361 DQO data analysis requirements (Step 2), Problem Statements or Required Information (Step 3), or Decision Rules (Step 5). Reduction of stratum-specific total alpha with composite-specific total alpha will satisfy all waste characterization requirements for sludge disposal at ERDF. Furthermore, unlike the Z-361 tank, which was nearly certain to contain large amounts of transuranics, the U-361 tank history argues against any significant transuranic content.

The expenditure of nearly \$150,000 for total alpha analyses on each stratum is not justified by the interest in stratum-level content. The U-361 tank contents will not be removed stratum-by-stratum, nor will they be presented to ERDF for disposal on a stratum-by-stratum basis. Characterization of the material as a composite core provides much more applicable information.