

Meeting Minutes Transmittal/Approval
Unit Managers' Meeting
200 Area Groundwater and Source Operable Units
1200 Jadwin Avenue, Richland, Washington
June 15, 2006

APPROVAL: *Larry Romine* Date: 7/19/06
Larry Romine, 200 Area Unit Manager, DOE/RL

APPROVAL: *Arlene C. Tortoso* Date: 7/19/06
Arlene Tortoso, 200 Area Assistant Manager, DOE/RL

APPROVAL: *Craig Cameron* Date: 7/19/06
Craig Cameron, 200 Area Unit Manager, EPA

APPROVAL: *John B. Price* Date: 7/19/2006
John Price, 200 Area Unit Manager, Ecology

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Minutes of the 200 Area Unit Managers' Meeting of June 15, 2006 are attached. Minutes are comprised of the following:

Attachment 1	Agenda
Attachment 2	Attendance Record
Attachment 3	Groundwater Operable Units Status
Attachment 4	Table A-2, 200-ZP-1 Chemical Monitoring Well List; Table A-4, List of Supplemental Wells Supporting CERCLA
Attachment 5	Table B-1, Expedited Response Action Vapor Extraction/Monitoring Locations
Attachment 6	Approval of the Carbon Tetrachloride Expedited Response Action Soil Vapor Extraction System Operating Plan for FY 2006.
Attachment 7	Carbon Tetrachloride Monthly Rebound Monitoring Results
Attachment 8	WTP Seismic Boreholes Drilling Mud Disposition
Attachment 9	Process Description for Minor Changes to Waste Management Plans and Waste Control Plans, 200 Area UMM Action #67
Attachment 10	Source Operable Units and Facilities Status
Attachment 11	Agreements and Issues List
Attachment 12	Action Item List

200 AREA UNIT MANAGERS' MEETING DRAFT AGENDA

1200 Jadwin/Rm 1-C1

June 15, 2006

GROUNDWATER OPERABLE UNITS STATUS (8:30-9:15)

SOURCE OPERABLE UNITS AND FACILITIES STATUS (9:15-9:45)

ISSUE RESOLUTION MEETING (10:00-11:30)

- (See Issues List)

General

- Outstanding Action Items
- Open for Regulatory Topics or Action Items
 - TPA Change Package Approvals

200 Area Unit Managers Status Meeting
June 15, 2006

Please print clearly and use black ink

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
Jenve Stults	Ecology	200 scil	372-7956
Dennis Faulk	EPA		
Reed Lobos	EPA		
Shawny Ciman	OREGON	200	(541) 963-0853
Gloria Cummins	FH	PO-1	372 2484
Ann Shattuck	FH	DW-LMW-1	376-8756
Arlene Tortoso	DOE	200-Arec Lead	373-9631
MARTIN GARDNER	DTS	NONE (WTP)	372-8029
Tom Brouns	PNNL	NONE (WTP)	372-6265
Greg Thomas	Fit	200-BP-5	373-3907
John Price	Ecology	Proj. Mgr	372-7921
Stewart Luttrell	PNNL	GW Mon	376-6023
Penny Berlin	DTS		376-0114
Virginia Rohay	FH	200-PW-1	373-3803
MIKE HICKEY	FH	TASK LEAD	373.3092
R B HOBBS	FH		373-3285
Craig Cameron	EPA		376-8665
J B Berger	Fit	GW	373-3004
Ron Brunke	Fit	BCP	376-2663
Larry Rouse	DOE	200 A	376 4747

200-UP-1, 200-ZP-1, AND 200-ZP-2 GROUNDWATER OPERABLE UNITS

June 15, 2006

GROUNDWATER OPERABLE UNITS STATUS

200-UP-1 OU

- Rebound Study:
 - DOE-RL will be formally sending the draft rebound study letter report on to Ecology in near future.
 - Tc-99 and uranium concentrations are still below the interim RAOs of 900 pCi/L and 48 ug/L respectively.
- RI/FS Work Plan:
 - Six of 12 new 200-UP-1 wells (UP1, UP2, UP3, UP4, UP5, and UP11) have been installed. The remaining six new 200-UP-1 wells are currently scheduled to be installed in FY2007.

200-ZP-1 OU

- Remediation Treatment Status:
 - Between May 1, 2006 and May 30, 2006 the 200-ZP-1 pump-and-treat system average pumping rate was approximately 250 gpm.
 - As noted last month, the Tc-99 concentrations in extraction wells 299-W15-765 and 299-W15-40 are climbing.
- DNAPL Investigation Status:
 - The hookup of well 299-W15-6 to the 200-ZP-1 treatment system will be completed by the end of June.
 - Vista will be performing vertical sampling (using hydraulic hammer rig) by Z-9 in June.
 - Vista Engineering will hold the next Project Technical Workshop on the carbon tetrachloride investigation on 6/27-6/28.
- New Well Status:
 - Drilling began at ZP-1 well C5101 (TPA proposed CY2007) on June 1, 2006. The drill depth on June 12 was 168 ft.
- RI/FS Status:
 - DOE received approval of 200-ZP-1 Sampling and Analysis Plan for drilling the new wells from EPA by letter.
 - RI Report Draft A was delivered to EPA on May 31, 2006 to meet TPA

milestone M-015-48A.

- EPA approved the most current version of the ZP-1 Waste Management Plan, DOE/RL-2000-40, Rev 6. Included in Rev. 6 are some well additions to Tables A-2 and A-4 (Attachment 4).
- In the February 15, 2006 FS kickoff meeting, EPA offered, if DOE was interested, that the M-015-48B milestone could be moved from May 31, 2007 to September 30, 2007 to bring it in alignment with the 200-PW-1 RI/FS schedule. Based on this FH is now working towards delivering the Draft A FS/PP to EPA by September 30, 2007.

- Tc-99 Investigation Status:

- The draft DQO summary report is being prepared for stakeholder review.
- The Sampling and Analysis Plan for drilling two new wells in FY06 is currently being prepared.
- The Sampling and Analysis Plan for the other characterization activities developed through the DQO process is being prepared.

200-PW-1 (200-ZP-2) OU

- Soil Vapor Extraction System (SVE):

- The active SVE system started up April 3, 2006 as scheduled.
- Between May 8 and June 4, 2006, the system average extraction rate was 297 cfm.
- FH will be working closely with Vista Engineering to help them test the effectiveness of steam injection on enhancing the recovery of CCl₄.
- Well 299-W15-48 (Z-9 slant well) is being completed as a vapor extraction well. Table B-1 (Expedited Response Action Vapor Extraction/Monitoring Locations) in DOE/RL-2000-40, Rev. 6 (Waste Management Plan for the Expedited Response Action for 200 West Area Carbon Tetrachloride Plume and the 200-ZP-1 and 200-PW-1 Operable Units) was revised to add this well. The footnote to this table allows revisions to be presented at Unit Manager Meetings for approval and documented in the Unit Manager Meeting minutes. EPA approved this change. The revised table is attached (Attachment 5).

Well 299-W15-48 also was added to Table 4 of the Carbon Tetrachloride Expedited Response Action Soil Vapor Extraction System Operating Plan for FY2006. DOE-RL and EPA approved the revised SVE operating plan (Attachment 6).

- The passive system remains operational.
- Monthly monitoring (Attachment 7, Figures 1-3)
 - Comparison of Maximum Carbon Tetrachloride Rebound Concentrations.
 - Monthly Carbon Tetrachloride Concentrations for monitoring wells update.
 - Soil Gas Vapor Concentrations at passive wells update.

200-PO-1 GROUNDWATER OPERABLE UNIT

June 15, 2006

GROUNDWATER OPERABLE UNIT STATUS

200-PO-1 OU

- Regulatory Path Forward: (no change)
 - A tentative path forward is currently being negotiated as part of M-015-00 milestone discussions.
- SAP: (no change)
 - DOE-RL is currently implementing the approved 200-PO-1 SAP.
- DQO:
 - The DQO process continued for a 200-PO-1 Investigation Plan/Feasibility Study effort. A meeting with decision makers was requested by Ecology at the last UMM, to discuss the internal draft DQO report and issues.
- Wells:
 - Integrating with Waste Sites on planned 216-A-4 characterization well. Plan to complete proposed well as a groundwater monitoring well.
 - Integrating with ORP on planned wells at WTP.
 - Three entry wells and one corehole are planned. FH will be conducting detailed groundwater sampling in one well, C4997.
 - A discussion was held on the WTP wells rotary drilling mud pit location. EPA and Ecology agreed that the proposed location in the 200-BP-5 OU would be acceptable. (Attachment 8, Figures 1 and 2).
 - Integrating with BC Cribs project to replace pumps at two wells in BC Cribs for sampling. The wells are 299-E13-9 and 299-E13-11.
- Science & Technology
 - A SOW has been prepared for High Resolution Reflection Seismic Pilot Study in 200 East Area. Information on the pilot study has been shared with DOE and the regulators.
 - Plans are being made to test an in-situ tritium sensor in the 299-E17-18 well adjacent to 216-A-36B Crib south of PUREX.

200-BP-5 GROUNDWATER OPERABLE UNIT

June 15, 2006

GROUNDWATER OPERABLE UNIT STATUS

DQO Report

- The draft DQO report is approximately 98% complete
- The DQO was sent to the stakeholders for review May 9th
- Comments are due June 15th
- The final copy is due to be released in mid to late July.

Technology Screening: Draft report was completed and six technologies were carried through the process for further evaluation during the RI/FS process. The technologies included:

- Monitored Natural Attenuation
- Pump and Treat
- Injectable Apatite Solution
- Stabilization by polyphosphate
- Anaerobic Bioremediation
- In Situ Redox Manipulation.

Work Plan: Work plan is in progress. The initial draft is scheduled to be completed by the end of September. Work is currently focused on detailing sampling and analyses for the proposed wells from the DQO. Some critical targets of investigation include the following:

- Fine grained soil zones
- Lateral spreading
- Isotopic signatures of various waste sources.

Well Sampling: Results of the March sampling of 299-E33-9 were reported in May. A comparison is present below of the last sampling result in 2004 and the March sampling results from 2006.

- | | |
|------------------------------|----------------------------|
| • Uranium in 2004 (590 ug/L) | Uranium in 2006 (785 ug/L) |
| • Nitrate in 2004 (124 mg/L) | Nitrate in 2006 (233 mg/L) |
| • Tc-99 in 2004 (3360 pCi/L) | Tc-99 in 2006 (5670 pCi/L) |

Geophysical Well Surveys: Wells 299-E33-18, 299-E33-41 and 299-E33-44 are scheduled for geophysical surveying by Stoller.

Drilling SAP: The drilling SAP for three of the groundwater wells is incorporating the sampling and analyses being identified for the work plan. The SAP was submitted for another quick internal review prior to sending to the Agencies. The SAP is planned for concurrent EPA and DOE review near the end of June. The drilling SAP will include the following scope:

- Drill 3 new remedial investigation wells.
 - 1) A well to define the width of the uranium plume to the north of well 299-E33-26 and south of well 699-49-55.
 - 2) A well to define the concentration of technetium between well 699-49-57A and well 699-52-57.
 - 3) A well to define contamination in the Rattlesnake Ridge confined aquifer upgradient of well 299-E33-12.

Table A-2. 200-ZP-1 Chemical Monitoring Well List

• Shading indicates current changes.

299-W6-2	299-W11-18	299-W15-34	299-W22-44
299-W6-3	299-W11-25B ^{c,d}	299-W15-35	299-W22-45
299-W6-6	299-W11-30	299-W15-36	299-W22-46
299-W6-7	299-W11-32	299-W15-38	299-W22-48
299-W6-10	299-W11-37	299-W15-39	299-W22-49
299-W7-1	299-W11-39	299-W15-40	299-W22-50
299-W7-3	299-W11-40	299-W15-41	299-W22-79
299-W7-4	299-W11-41	299-W15-42	299-W22-80
299-W7-5	299-W11-42	299-W15-43	299-W22-81
299-W7-7	299-W11-43	299-W15-44	299-W22-82
299-W7-8	299-W11-45 ^e	299-W15-45	299-W22-83
299-W7-9	299-W11-46 ^e	299-W15-46	299-W22-84
299-W7-11	299-W11-47 ^e	299-W15-47	299-W22-85
299-W7-12	299-W11-48 ^c	299-W15-49	299-W23-4
299-W8-1	299-W11-86 ^b	299-W15-50	299-W23-15
299-W10-1	299-W12-1	299-W15-152	299-W23-19
299-W10-4	299-W13-1	299-W15-763	299-W23-20
299-W10-5	299-W14-5	299-W15-765	299-W23-21
299-W10-8	299-W14-6	299-W17-1	299-W26-7
299-W10-13	299-W14-11	299-W18-1	299-W26-12
299-W10-14	299-W14-13	299-W18-16	299-W26-13
299-W10-17	299-W14-14	299-W18-21	299-W27-2
299-W10-19	299-W14-15	299-W18-22	699-34-88
299-W10-20	299-W14-16	299-W18-23	699-38-70
299-W10-21	299-W14-17	299-W18-24	699-39-79
299-W10-22	299-W14-18	299-W18-27	699-43-89
299-W10-23	299-W14-19	299-W18-28	699-44-64
299-W10-24	299-W14-71 ^b	299-W18-30	699-45-69A
299-W10-25 ^c	299-W14-72 ^b	299-W18-31	699-47-60
299-W10-26	299-W15-1	299-W18-32	699-48-71
299-W10-27	299-W15-2	299-W18-40	699-48-77A
299-W10-28	299-W15-6	299-W18-86	699-48-77C
299-W10-31 ^c	299-W15-7	299-W18-95	699-48-77D
299-W10-32 ^c	299-W15-11	299-W19-4	699-50-74
299-W11-3	299-W15-15	299-W19-12	699-55-60A ^a
299-W11-6	299-W15-16	299-W19-41	LLWMA-8
299-W11-7	299-W15-17	299-W19-42	LLWMA-13
299-W11-10	299-W15-30	299-W19-44	LLWMA-17
299-W11-12	299-W15-31A	299-W19-45	
299-W11-13	299-W15-32	299-W22-2	
299-W11-14	299-W15-33	299-W22-10	

^aFormerly 699-51-60

^b200-ZP-1 new wells to be installed in vicinity of Old Laundry Facility and T Plant.

^cWells added to support Tc⁹⁹ investigations by T Tank Farm.

^dAbandoned/decommissioned - replaced by 299-W11-46.

^eAbandoned/decommissioned - replaced by 299-W10-31.

Table A-4. List of Supplemental Wells Supporting CERCLA

Well Numbers	Comments
<i>Shallow Monitoring Wells</i>	
299-W10-1	SST(T) tank farm assessment
299-W10-13	LLBG(3) detection monitoring
299-W10-14	LLBG(3) detection monitoring
299-W10-17	SST(TX/TY) tank farm assessment
299-W10-19	LLBG(3) detection monitoring
299-W10-20	LLBG(3) detection monitoring
299-W10-21	LLBG(3) detection monitoring
299-W10-22	SST(T) tank farm assessment
299-W10-23	SST(T) tank farm assessment
299-W10-24	SST(T) tank farm assessment
299-W10-25	LLBG(7) detection monitoring
299-W10-26	SST(TX/TY) tank farm assessment
299-W10-27	SST(TX/TY) tank farm assessment
299-W10-28	SST(T) tank farm assessment
299-W10-29	LLBG(20) detection monitoring
299-W10-30	LLBG(21) detection monitoring
299-W10-31	LLBG detection monitoring (replaced well 299-W10-25)
299-W10-4	SST(T) tank farm assessment
299-W10-8	SST(T) tank farm assessment
299-W11-12	SST(T) tank farm assessment
299-W11-24	SST(T) tank farm assessment
299-W11-30	SST(T) tank farm assessment
299-W11-39	SST(T) tank farm assessment
299-W11-40	SST(T) tank farm assessment
299-W11-41	SST(T) tank farm assessment
299-W11-42	SST(T) tank farm assessment
299-W11-7	SST(T) tank farm assessment
299-W14-13	SST(TX/TY) tank farm assessment
299-W14-14	SST(TX/TY) tank farm assessment
299-W14-15	SST(TX/TY) tank farm assessment
299-W14-16	SST(TX/TY) tank farm assessment
299-W14-17	SST(TX/TY) tank farm assessment
299-W14-18	SST(TX/TY) tank farm assessment

Table A-4. List of Supplemental Wells Supporting CERCLA

Well Numbers	Comments
299-W14-5	SST(TX/TY) tank farm assessment
299-W14-6	SST(TX/TY) tank farm assessment
299-W15-15	LLBG(4) detection monitoring
299-W15-16	LLBG(4) detection monitoring
299-W15-17	LLBG(4) detection monitoring
299-W15-40	SST(TX/TY) tank farm assessment
299-W15-41	SST(TX/TY) tank farm assessment
299-W15-224	LLBG(4) detection monitoring
299-W15-763	SST(TX/TY) tank farm assessment
299-W15-765	SST(TX/TY) tank farm assessment
299-W18-21	LLBG(4) detection monitoring
299-W18-22	LLBG(4) detection monitoring
299-W18-23	LLBG(4) detection monitoring
299-W18-24	LLBG(4) detection monitoring
299-W18-30	SST(U) tank farm assessment
299-W18-31	SST(U) tank farm assessment
299-W18-40	SST(U) tank farm assessment
299-W19-12	SST(U) tank farm assessment
299-W19-41	SST(U) tank farm assessment
299-W19-42	SST(U) tank farm assessment
299-W19-44	SST(U) tank farm assessment
299-W19-45	SST(U) tank farm assessment
299-W22-10	SST(S) tank farm assessment
299-W22-2	SST(S) tank farm assessment
299-W22-44	SST(S) tank farm assessment
299-W22-45	SST(S) tank farm assessment
299-W22-46	SST(S) tank farm assessment
299-W22-48	SST(SX) tank farm assessment
299-W22-49	SST(SX) tank farm assessment
299-W22-50	SST(SX) tank farm assessment
299-W22-79	U-12 crib assessment
299-W22-80	SST(SX) tank farm assessment
299-W22-81	SST(SX) tank farm assessment
299-W22-82	SST(SX) tank farm assessment

Table A-4. List of Supplemental Wells Supporting CERCLA

Well Numbers	Comments
299-W22-83	SST(SX) tank farm assessment
299-W22-84	SST(S) tank farm assessment
299-W22-85	SST(SX) tank farm assessment
299-W23-15	SST(S) tank farm assessment
299-W23-19	SST(S) tank farm assessment
299-W23-19	SST(SX) tank farm assessment
299-W23-20	SST(SX) tank farm assessment
299-W23-21	SST(SX) tank farm assessment
299-W23-4	SST(SX) tank farm assessment
299-W26-12	S-10 detection monitoring
299-W26-13	S-10 detection monitoring
299-W26-7	S-10 detection monitoring
299-W27-2	S-10 detection monitoring
299-W7-1	LLBG(3) detection monitoring
299-W7-11	LLBG(3) detection monitoring
299-W7-12	LLBG(3) detection monitoring
299-W7-3	LLBG(3) detection monitoring
299-W7-4	LLBG(3) detection monitoring
299-W7-5	LLBG(3) detection monitoring
299-W7-7	LLBG(3) detection monitoring
299-W7-8	LLBG(3) detection monitoring
299-W7-9	LLBG(3) detection monitoring
299-W8-1	LLBG(3) detection monitoring
699-36-93	Environmental Monitoring
699-49-79	Environmental Monitoring
699-49-100C	Environmental Monitoring
699-50-85	Environmental Monitoring
699-51-75	Environmental Monitoring
699-55-76	Environmental Monitoring
699-55-89	Environmental Monitoring
<i>Deep Monitoring Wells</i>	
299-W6-3	Monitors near bottom of aquifer
299-W6-6	Monitors near bottom of aquifer
299-W7-3	Monitors near bottom of aquifer

Table A-4. List of Supplemental Wells Supporting CERCLA

Well Numbers	Comments
299-W10-14	Monitors near bottom of aquifer
299-W11-32	PNNL-10422, piezos, 15 m (50 ft) (mid-depth) below water table
299-W11-46 (C4950) [redrill of 299-W11-25B (C4669)]	Tank farm assessment
299-W14-9	Screened in lower unit 5, 6, and all of 9 across mud unit
299-W14-11	TX-TY Tank Farm assessment
299-W15-17	Monitors near bottom of aquifer
299-W18-1	large open interval 0 to 60 m (0 to 200 ft) to below water table, needs recompletion
299-W18-22	Monitors at bottom of aquifer
299-W19-4	Open across mud unit 5-9, needs recompletion, large open interval 0 to 78.8 m (0 to 260 ft) below water table
299-W27-2	Monitors at bottom of aquifer
699-48-77C	Monitors mid-depth in aquifer
699-48-77D	Monitors near the State Approved Land Disposal Site

APPENDIX B

EXPEDITED RESPONSE ACTION VAPOR EXTRACTION/MONITORING LOCATIONS

Table B-1. 200-PW-1 Soil Vapor Extraction/Monitoring Locations^a. (6 Pages)

CPT Probe	Depth (ft)	Type				
CPT-1A	35	55	68	91		Probes
CPT-2	46					Rod
CPT-3	52					Rod
CPT-4	103					Rod
CPT-4A	10	25	50	75	91	Probes
CPT-4B	5	25	50	75	90	Probes
CPT-4C	10	25	50	75	107	Probes
CPT-4D	10	25	40	75	99	Probes
CPT-4E	10	25	75	103		Probes
CPT-4F	10	25	50	75	109	Probes
CPT-4G	100					Probes
CPT-4H	75					Probes
CPT-4J	25					Probes
CPT-4L	50					Probes
CPT-4M	5	25	49	66	80	Probes
CPT-4N	6	25	47			Probes
CPT-5	48					Rod
CPT-7A	32	52				Probes
CPT-8A	113					Rod
CPT-9A	60	70	91			Probes
CPT-10	107					Rod
CPT-11	75					Rod
CPT-12	47					Rod
CPT-13A	9	30	50	70		Probes
CPT-14A	12	21	40	61		Probes
CPT-15	12	26	46			Probes
CPT-16	10	25	45	65		Probes
CPT-17	10	25	50			Probes
CPT-18	15	35	50	75		Probes

Table B-1. 200-PW-1 Soil Vapor Extraction/Monitoring Locations^a. (6 Pages)

CPT Probe	Depth (ft)	Type				
CPT-20	81					Rod
CPT-21	96					Rod
CPT-21A	45	65	86			Probes
CPT-24	45	70	95	118		Probes
CPT-25	20	32	52			Probes
CPT-26	28	48	68			Probes
CPT-27	15	33				Probes
CPT-28	40	60	87			Probes
CPT-29	23	46				Probes
CPT-30	28	48	68			Probes
CPT-31	25	50	76			Probes
CPT-32	25	50	70			Probes
CPT-33	40	60	80			Probes
CPT-34	40	60	86			Probes
CPT W15-6/65 ft	65					Probes
CPT W15-84/39ft	39					Probes
CPT-C3871	57					Probes
CPT-C3872	62					Probes
CPT-C3873	44					Probes
CPT-C3874	31					Probes
CPT-C3875	62					Probes
CPT-C4058	31					Probes
299-W15-6	154	210	69	94		Well
299-W15-8	165	195	93	113		Well
299-W15-9	162	189	88	113		Well
299-W15-32	193.9	210				Well
299-W15-46	219	223				Well
299-W15-48	209.5	223				Well
299-W15-82	75	90				Well
299-W15-84	75	90	166	196		Well
299-W15-85	83	98				Well
299-W15-86	107	137				Well
299-W15-95	73	98	129	159		Well
299-W15-216	174.5	184.5	70	80		Well

Table B-1. 200-PW-1 Soil Vapor Extraction/Monitoring Locations^a. (6 Pages)

CPT Probe	Depth (ft)	Type				
299-W15-217	106	121				Well
299-W15-218	180.5	195.5	98.5	113.5		Well
299-W15-219	167	182	87	102		Well
299-W15-220	80	95	155	170		Well
299-W15-223	102.7	117				Well
299-W18-1	195	226				Well
299-W18-2	200	226				Well
299-W18-6	190	226	94.5	124.5		Well (passive sve)
299-W18-7	168.5	226				Well (passive sve)
299-W18-9	180	217				Well
299-W18-10	147	218	97	127		Well (passive sve)
299-W18-11	180	218	97	127		Well (passive sve)
299-W18-12	177.5	218				Well (passive sve)
299-W18-87	122	127	62	65.5	30-35.5	Well
299-W18-89	105	127				Well
299-W18-93	60	74				Well
299-W18-94	65	75				Well
299-W18-95	80	80				Well
299-W18-96	122	132				Well
299-W18-97	60	72				Well
299-W18-98	63	74				Well
299-W18-99	90	100				Well
299-W18-150	110	115	62	87		Well
299-W18-152	86	116				Well
299-W18-153	75	105				Well
299-W18-157	78	108				Well
299-W18-158	117	122	72	92		Well
299-W18-159	89	119				Well
299-W18-163	89.5	116.5	52.5	77.5		Well
299-W18-165	94	124				Well
299-W18-166	96	126				Well
299-W18-167	86	126.5				Well
299-W18-168	94	124				Well
299-W18-169	93	123				Well

Table B-1. 200-PW-1 Soil Vapor Extraction/Monitoring Locations^a. (6 Pages)

CPT Probe	Depth (ft)	Type				
299-W18-171	17.5	22	53.5	73.5	112-127	Well
299-W18-174	106.5	126.5				Well
299-W18-175	87	117				Well
299-W18-246	165	175	120	130		Well (passive sve)
299-W18-247	162	172	119	129		Well (passive sve)
299-W18-248	123.5	138.5				Well
299-W18-249	122	137				Well
299-W18-252	165	185	113	133		Well (passive sve)
W15-218SST/ 86 ft	86					Stainless steel tube
W15-219SST/ 70 ft	70					Stainless steel tube
W15-219SST/ 130 ft	130					Stainless steel tube
W15-219SST/ 155 ft	155					Stainless steel tube
W15-220SST/ 52 ft	52					Stainless steel tube
W15-220SST/ 118 ft	118					Stainless steel tube
W15-220SST/ 185 ft	185					Stainless steel tube
W18-252SST/ 100 ft	100					Stainless steel tube
W18-252SST/ 145 ft	145					Stainless steel tube
W18-252SST/ 210 ft	210					Stainless steel tube
71-01/ 5 ft	5					Shallow probe
71-02/ 5 ft	5					Shallow probe
71-03/ 5 ft	5					Shallow probe
71-04/ 5 ft	5					Shallow probe
71-05/ 5 ft	5					Shallow probe
71-06/ 5 ft	5					Shallow probe
79-01/ 5 ft	5					Shallow probe
79-02/ 5 ft	5					Shallow probe
79-03/ 5 ft	5					Shallow probe
79-04/ 5 ft	5					Shallow probe
79-05/ 5 ft	5					Shallow probe
79-06/ 5 ft	5					Shallow probe
79-07/ 5 ft	5					Shallow probe
79-08/ 5 ft	5					Shallow probe
79-09R/ 5 ft	5					Shallow probe
79-10/ 5 ft	5					Shallow probe

Table B-1. 200-PW-1 Soil Vapor Extraction/Monitoring Locations^a. (6 Pages)

CPT Probe	Depth (ft)	Type				
79-11/ 5 ft	5					Shallow probe
79-12/ 5 ft	5					Shallow probe
79-13/ 5 ft	5					Shallow probe
85-01R/ 5 ft	5					Shallow probe
85-02/ 5 ft	5					Shallow probe
86-02/ 5 ft	5					Shallow probe
86-03/ 5 ft	5					Shallow probe
86-04/ 5 ft	5					Shallow probe
86-05/ 5 ft	5					Shallow probe
86-05-01/ 5 ft	5					Shallow probe
86-06/ 5 ft	5					Shallow probe
86-07R/ 5 ft	5					Shallow probe
86-08/ 5 ft	5					Shallow probe
86-09/ 5 ft	5					Shallow probe
87-01R/ 5 ft	5					Shallow probe
87-02/ 5 ft	5					Shallow probe
87-03/ 5 ft	5					Shallow probe
87-04/ 5 ft	5					Shallow probe
87-05/ 5 ft	5					Shallow probe
87-06/ 5 ft	5					Shallow probe
87-09/ 5 ft	5					Shallow probe
93-01/ 5 ft	5					Shallow probe
94-01/ 5 ft	5					Shallow probe
94-02/ 5 ft	5					Shallow probe
94-03R/ 5 ft	5					Shallow probe
94-04/ 5 ft	5					Shallow probe
94-05/ 5 ft	5					Shallow probe
94-07/ 5 ft	5					Shallow probe
94-08/ 5 ft	5					Shallow probe
94-09/ 5 ft	5					Shallow probe
94-10/ 5 ft	5					Shallow probe
95-01/ 5 ft	5					Shallow probe
95-02/ 5 ft	5					Shallow probe
95-05/ 5 ft	5					Shallow probe

Table B-1. 200-PW-1 Soil Vapor Extraction/Monitoring Locations^a. (6 Pages)

CPT Probe	Depth (ft)	Type				
95-06/ 5 ft	5					Shallow probe
95-07/ 5 ft	5					Shallow probe
95-08/ 5 ft	5					Shallow probe
95-09/ 5 ft	5					Shallow probe
95-10/ 5 ft	5					Shallow probe
95-11/ 5 ft	5					Shallow probe
95-12/ 5 ft	5					Shallow probe
95-13/ 5 ft	5					Shallow probe
95-14/ 5 ft	5					Shallow probe
95-15/ 5 ft	5					Shallow probe
103-01/ 5 ft	5					Shallow probe
C-1/ 5 ft	5					Shallow probe
N-2/ 5 ft	5					Shallow probe
N-4/ 5 ft	5					Shallow probe
N-5/ 5 ft	5					Shallow probe
N-6/ 5 ft	5					Shallow probe
N-7/ 5 ft	5					Shallow probe
N-9/ 5 ft	5					Shallow probe
W-1/ 5 ft	5					Shallow probe
W-5/ 5 ft	5					Shallow probe
RST 2-2/ 5 ft	5					Shallow probe
RST 2-3/ 5 ft	5					Shallow probe
RST 2-4/ 5 ft	5					Shallow probe
RST 4-1/ 5 ft	5					Shallow probe
RST 4-2/ 5 ft	5					Shallow probe
RST 4-3/ 5 ft	5					Shallow probe

^a As changes to this list are identified, revisions to this table will be presented at Unit Manager meetings for approval and documented in Unit Manager meeting minutes .

APPROVAL OF THE CARBON TETRACHLORIDE EXPEDITED RESPONSE ACTION
SOIL VAPOR EXTRACTION SYSTEM OPERATING PLAN FOR FY 2006

The Unit Managers for the Carbon Tetrachloride Expedited Response Action (200-PW-1 Operable Unit) approve the attached FY 2006 Soil Vapor Extraction System Operating Plan.

A. C. Tortoso 6/15/06 D. A. Faulk 6/15/06

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

Date	D. A. Faulk	Date
	U.S. Environmental Protection Agency	
	Region 10, Hanford Office	

FY 2006 SOIL VAPOR EXTRACTION SYSTEM OPERATING PLAN FOR THE
CARBON TETRACHLORIDE EXPEDITED RESPONSE ACTION
(200-PW-1 OPERABLE UNIT)

Soil vapor extraction will be used at the 200-PW-1 Operable Unit (OU) during FY 2006 to remove carbon tetrachloride from the vadose zone. The primary objectives for this remediation are protection of the groundwater and mass removal. Only the 14.2 m³/min soil vapor extraction (SVE) system will be operated. Two sites will be remediated using SVE: the 216-Z-9 (Z-9) site and the 216-Z-1A/Z-18/Z-12 (Z-1A) site. Specific on-line wells have been selected prior to start-up at each site based on vapor monitoring, previous concentration trends, and location. These site-specific plans are included in this operating plan for approval by the Unit Managers prior to implementation. Based on characterization data collected at on-line wells during operation, the mix of on-line wells may be reconfigured during operations to optimize removal. These adjustments to the mix of on-line wells will not be submitted to the Unit Managers for approval prior to implementation but will be reported at Unit Manager Meetings. Ongoing passive soil vapor extraction will be maintained at Z-1A wells.

Soil vapor monitoring will be conducted at vadose zone locations near the groundwater, the Cold Creek unit (formerly called the Plio-Pleistocene layer), and the ground surface at the Z-1A and Z-9 sites while they are not being actively remediated using SVE. The soil vapor monitoring plan for both sites from April 2006 through September 2006 is included with this operating plan for approval prior to implementation. Monitoring results will be reported at the Unit Manager Meetings. If carbon tetrachloride vapor concentrations increase such that the carbon tetrachloride contamination may impact human health or the environment (including groundwater), the Unit Managers will decide on the appropriate response to mitigate the problem (e.g., relocating the vapor extraction system to address the problem).

The anticipated schedule for SVE operations and soil vapor monitoring is:

April 2006 through June 2006:	Operate the SVE system at the Z-1A site Monitor soil vapor concentrations at the Z-9 site
July 2006 through September 2006:	Operate the SVE system at the Z-9 site Monitor soil vapor concentrations at the Z-1A site

Vista Engineering Technologies, L.L.C. (VET) is planning to conduct vadose zone investigations at the Z-1A site in March 2006. VET plans to have these investigations completed before April 2006 in support of the start of vapor extraction operations at Z-1A. The Unit Managers agree that soil vapor extraction operations may be initiated a few days after April 1 in the event that VET needs a few extra days to complete their investigation.

This soil vapor extraction system operating plan was revised in June 2006 to add new well 299-W15-48 (C3427) to the list of wells available for soil vapor extraction system operations at the 216-Z-9 site, July through September 2006 (Table 4).

SOIL VAPOR EXTRACTION SYSTEM OPERATING PLAN AT THE
216-Z-1A, 216-Z-18, AND 216-Z-12 SITE
April 2006 – June 2006

Twenty-six wells at the 216-Z-1A, 216-Z-18, and 216-Z-12 site (Z-1A site) are identified for potential soil vapor extraction (Table 1). Selected wells will be prepared for potential hook-up to the soil vapor extraction system during April through June 2006.

The last non-operational soil vapor monitoring at Z-1A prior to SVE restart will take place in mid to late March 2006. At that time, any sampling tubes will be removed from potential on-line wells. The current wellhead assemblies (configured for non-operational soil vapor monitoring) will not be disturbed until the monitoring has been completed and the tubing removed.

Passive soil vapor extraction is being conducted at the following Z-1A wells with lower intervals open between the Cold Creek unit and groundwater: 299-W18-6L, 299-W18-7, 299-W18-10L, 299-W18-11L, 299-W18-12, 299-W18-246L, 299-W18-247L, 299-W18-252L (Table 2).

For initial start-up operations at Z-1A, extraction will be implemented at five planned intervals in the Z-1A tile field: 299-W18-165, 299-W18-166, 299-W18-167, 299-W18-168, and 299-W18-174 (Table 1) (Figure 1). Start-up operations in FY 2001, FY 2002, FY 2003, FY 2004, and FY 2005 were also initiated using these five extraction intervals (a sixth interval selected in FY 2001 produced virtually no flow). Selecting the same set of initial wells will allow the rebound in FY 2006 to be compared to the rebound in previous years. (Note: The selection of initial on-line wells may need to be modified to accommodate the vadose zone investigations being conducted at Z-1A by Vista Engineering Technologies. However, every attempt will be made to use wells 299-W18-165, 299-W18-166, 299-W18-167, 299-W18-168, and 299-W18-174, as planned.)

These five intervals will be characterized on the first day of operations. During continued operations, all on-line wells will be characterized each week and all off-line wells, if requested, will be characterized during the 2nd, 4th, 6th, 8th, 10th, and final weeks, according to the attached sampling and analysis plan (Table 3). As before, the mix of on-line wells will be periodically changed during operations, based on changing concentrations, extraction interval locations, and operating experience. In general, the initial extraction wells will be nearer the primary carbon tetrachloride source (Z-1A Tile Field) and wells added later will expand operations away from this source.

The 200-PW-1 OU technical lead organizes and maintains spreadsheets of the characterization data on a desktop computer. The characterization data are included in the annual performance evaluation report.

SOIL VAPOR EXTRACTION SYSTEM OPERATING PLAN AT THE
216-Z-9 SITE
July 2006 – September 2006

Twenty-four wells at the 216-Z-9 site (Z-9 site) are identified for potential vapor extraction (Table 4). Selected wells will be prepared for potential hook-up to the soil vapor extraction system during July through September 2006.

The last non-operational soil vapor monitoring at Z-9 prior to SVE restart will take place in mid to late June 2005. At that time, any sampling tubes will be removed from potential on-line wells. The current wellhead assemblies (configured for non-operational soil vapor monitoring) will not be disturbed until the monitoring has been completed and the tubing removed.

For initial start-up operations at Z-9, extraction will be implemented at four planned intervals: 299-W15-217, 299-W15-82, 299-W15-9U, and 299-W15-9L (Table 4) (Figure 1). Start-up operations at Z-9 in FY 1998, FY 1999, FY 2001, FY 2002, and FY 2004 were also initiated using these four extraction intervals. (A slightly different set of initial wells was used in FY 2005). Selecting the same set of initial wells will allow the rebound in FY 2006 to be compared to the rebound in previous years. (The SVE system was not operated at the Z-9 site during FY2003 to avoid interfering with the characterization sampling to be conducted during drilling of well 299-W15-46.)

These four intervals will be characterized on the first day they are placed into operation. During continued operations, all on-line wells will be characterized each week and all off-line wells, if requested, will be characterized during the 2nd, 4th, 6th, 8th, 10th, and final weeks, according to the attached sampling and analysis plan (Table 3). The mix of on-line wells will be periodically changed during operations, based on changing concentrations, extraction interval locations, and operating experience. In general, the initial extraction wells will be nearer the carbon tetrachloride source (Z-9 Trench) and wells added later will expand operations away from this source.

The 200-PW-1 OU technical lead organizes and maintains spreadsheets of the characterization data on a desktop computer. The characterization data are included in the annual performance evaluation report.

VADOSE ZONE MONITORING PLAN FOR SOIL VAPOR EXTRACTION SITES
April 2006 – September 2006

Non-Operational Monitoring and Passive Soil Vapor Extraction Monitoring

This plan describes planned non-operational monitoring and passive soil vapor extraction monitoring to be conducted during April through September 2006 for the 200 West Area Carbon Tetrachloride Expedited Response Action (200-PW-1 Operable Unit). Non-operational monitoring will be conducted at the 216-Z-9 (Z-9) site during April through June 2006 while the soil vapor extraction (SVE) system is operating at the 216-Z-1A/Z-18/Z-12 (Z-1A) site. Non-operational monitoring will be conducted at the Z-1A site during July through September 2006 while the SVE system is operating at the Z-9 site. Passive soil vapor extraction monitoring will be conducted at the Z-1A site from April 2006 through September 2006.

Vista Engineering Technologies, L.L.C. will be conducting field investigations in the Z-9 and Z-1A areas during April 2006 through September 2006 as part of the investigation of dense, nonaqueous-phase liquid carbon tetrachloride (DOE/RL-2004-78). Non-operational monitoring and/or passive soil vapor extraction monitoring will be temporarily suspended at any existing well and/or probe that is being used to support these investigations. Other monitoring locations at the Z-9 and Z-1A sites will be adjusted as needed to accommodate these field activities.

Scope: Monitor carbon tetrachloride soil vapor concentrations at selected probes and wells during non-operation of the soil vapor extraction (SVE) system (Tables 5 and 6). At any particular time, all of the probes and some of the wells will be “non-operational,” i.e., they will not be connected to the SVE system. Eight of the non-operational wells have a passive soil vapor extraction system installed at the wellhead.

Passive soil vapor extraction is a remediation technology that uses naturally induced pressure gradients between the subsurface and the surface to drive soil vapor to the surface. In general, falling atmospheric pressure causes subsurface vapor to move to the atmosphere through wells, while rising atmospheric pressure causes atmospheric air to move into the subsurface. The passive soil vapor extraction systems will be used to remove carbon tetrachloride from the vadose zone.

Passive extraction wells will vent through aboveground canisters containing granular activated carbon (GAC). The wells will be monitored monthly using the sampling method used for the non-operational wells. The carbon tetrachloride vapor concentration will be monitored both upstream and downstream of the GAC. The measured vapor concentrations will be used to estimate the amount of carbon tetrachloride extracted through each well during the month.

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

- Collect soil vapor samples in accordance with GRP-EE-01-5.1
- Analyze soil vapor samples for carbon tetrachloride using the B&K field screening instrument in accordance with GRP-EE-05-4.0 at field screening level QC-1 (HNF-20635, Appendix B)
- Evaluate concentration trends for the Fluor Hanford Waste Disposal/Groundwater

Remediation Project

- Report results to 200-PW-1 Operable Unit Managers
- Include results in annual reports

Purpose and Objectives: The purpose of non-operational monitoring is to measure carbon tetrachloride concentrations in the vadose zone during the shutdown of the SVE system.

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

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

Duration: Non-operational monitoring and passive soil vapor extraction monitoring will be conducted from April 2006 through September 2006 during FY 2006.

Monitoring Frequency: Monitoring will be conducted monthly.

Monitoring Locations: Locations were selected to focus carbon tetrachloride monitoring near the vadose-atmosphere and vadose-groundwater interfaces and near the Cold Creek unit (Table 5). These monitoring locations may be revised by the 200-PW-1 OU task lead based on developing trends, accessibility, and/or recommendations of the sampler. The 200-PW-1 Operable Unit Managers will be advised of any changes to the monitoring locations. Monitoring locations are shown on Figures 2 and 3.

Data Management: The field screening data obtained from non-operational wells and probes and passive extraction wells are entered into a controlled field logbook, which is maintained by Lockheed Martin Services Inc (LMSI) Records Information Management (RIM) department. The 200-PW-1 OU technical lead organizes and maintains spreadsheets of the field screening data on a desktop computer. The field screening data are included in the annual performance evaluation report.

References:

DOE/RL-2004-78, 2004, Work Plan for Integrated Approach for Carbon Tetrachloride Source Term Location in the 200 West Area of the Hanford Site, U.S. Department of Energy, Richland Operations Office, Richland, Washington 99352.

GRP-EE-05-4.0, *Analysis of Volatile Organic Compounds in Vapor Samples Using the Bruel and Kjaer 1301 and Innova 1312 Multi-Gas Analyzers*, Fluor Hanford, Inc., Richland, Washington.

GRP-EE-01-5.1, *Soil-Gas Sampling*, Fluor Hanford, Inc., Richland, Washington.

HNF-20635, *Groundwater Remediation Project Quality Assurance Project Plan (GRP-QA-001)*, Appendix B, "Additional QA Requirements Specific to Onsite Measurement," Fluor Hanford, Inc., Richland, Washington.

Table 1. Wells Available for Soil Vapor Extraction System Operations at the 216-Z-1A/Z-18/Z-12 Site, April through June 2006

Potential On-Line Wells	Reason	Initial Wells
299-W18-6U	Mass removal	
299-W18-89	Mass removal	
299-W18-93	Mass removal	
299-W18-94	Mass removal	
299-W18-96	Mass removal	
299-W18-97	Mass removal	
299-W18-98	Mass removal	
299-W18-99	Mass removal	
299-W18-152	Mass removal	
299-W18-153	Mass removal	
299-W18-157	Mass removal	
299-W18-158L	Mass removal	
299-W18-159	Mass removal	
299-W18-163L	Mass removal	
299-W18-165	Mass removal	X
299-W18-166	Mass removal	X
299-W18-167	Mass removal	X
299-W18-168	Mass removal	X
299-W18-169	Mass removal	
299-W18-171L	Mass removal	
299-W18-174	Mass removal	X
299-W18-246U	Mass removal	
299-W18-247U	Mass removal	
299-W18-248	Mass removal	
299-W18-249	Mass removal	
299-W18-252U	Mass removal	

Table 2. Passive Soil Vapor Extraction Wells at the 216-Z-1A/Z-18/Z-12 Site, FY 2006

Passive Soil Vapor Extraction Wells	Reason
299-W18-6L	Groundwater Protection
299-W18-7	Groundwater Protection
299-W18-10L	Groundwater Protection
299-W18-11L	Groundwater Protection
299-W18-12	Groundwater Protection
299-W18-246L	Groundwater Protection
299-W18-247L	Groundwater Protection
299-W18-252L	Groundwater Protection

Table 3. Sampling and Analysis Plan for Soil Vapor Extraction System Operations, April through September 2006

When to Monitor	on-line wells	off-line wells	vacuum wellhead	flow	CCl4	CHCl3	CH2Cl2	MEK
					carbon tetrachloride	chloroform	methylene chloride	MEK
first day of operations	X		X	X	X	X	X	X
beginning of 2nd week	X	X	X	X	X	X	X	X
beginning of 3rd week	X		X	X	X	X	X	X
beginning of 4th week	X	X	X	X	X	X	X	X
beginning of 5th week	X		X	X	X	X	X	X
beginning of 6th week	X	X	X	X	X	X	X	X
beginning of 7th week	X		X	X	X	X	X	X
beginning of 8th week	X	X	X	X	X	X	X	X
beginning of 9th week	X		X	X	X	X	X	X
beginning of 10th week	X	X	X	X	X	X	X	X
beginning of 11th week	X		X	X	X	X	X	X
beginning of 12th week	X		X	X	X	X	X	X
last day of operations	X	X	X	X	X	X	X	X
Fax copy of monitoring records to 200-PW-1 OU Technical Lead (Virginia Rohay at 373-3974) by close of day following monitoring.								

Table 4. Wells Available for Soil Vapor Extraction System Operations at the 216-Z-9 Site, July through September 2006

Potential On-Line Wells	Reason	Initial Wells
299-W15-6U	Mass removal	
299-W15-6L	Groundwater Protection	
299-W15-8U	Mass removal	
299-W15-8L	Groundwater Protection	
299-W15-9U	Mass removal	X
299-W15-9L	Groundwater Protection	X
299-W15-48 (C3427)	Mass Removal	
299-W15-82	Mass removal	X
299-W15-84U	Mass removal	
299-W15-84L	Mass removal	
299-W15-85	Mass removal	
299-W15-86	Mass removal	
299-W15-95U	Mass removal	
299-W15-95L	Mass removal	
299-W15-216U	Mass removal	
299-W15-216L	Groundwater Protection	
299-W15-217	Mass removal	X
299-W15-218U	Mass removal	
299-W15-218L	Groundwater Protection	
299-W15-219U	Mass removal	
299-W15-219L	Groundwater Protection	
299-W15-220U	Mass removal	
299-W15-220L	Groundwater Protection	
299-W15-223	Mass removal	

Table 5a. Distribution of Selected Monitoring Locations During Soil Vapor Extraction System Operations at the 216-Z-1A/Z-18/Z-12 Site, April through June 2006

Target Zone	Number of Monitoring Locations		
	Z-1A	Z-9	Total
Near-surface (3-25 m below ground surface)	5	9	14
Cold Creek (25-45 m below ground surface)	0	8	8
Groundwater (50-65 m below ground surface)	8 ^a	5	13
Total	13	22	35

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

Table 5b. Distribution of Selected Monitoring Locations During Soil Vapor Extraction System Operations at the 216-Z-9 Site, July through September 2006

Target Zone	Number of Monitoring Locations		
	Z-1A	Z-9	Total
Near-surface (3-25 m below ground surface)	11	3	14
Cold Creek (25-45 m below ground surface)	6	2	8
Groundwater (50-65 m below ground surface)	8 ^a	0	8
Total	25	5	30

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

Table 6a. Non-Operational Wells and Probes Selected for Monitoring During Soil Vapor Extraction System Operations at the 216-Z-1A/Z-18/Z-12 Site, April through June 2006

Target Zone	Z-9	Depth (m)	Comment	Z-1A	Depth (m)	Comment
near-surface	CPT-17 10 ft (blue)	3	southwest of Z-9	CPT-4E 25 ft (white)	8	north central in Z-1A/Z-18/Z-12 field
near-surface	CPT-18 15 ft (white)	5	northwest of Z-9	CPT-13A 30 ft (blue)	10	southeast of Z-1A
near-surface	CPT-16 25 ft (blue)	8	east of Z-9	CPT-7A 32 ft (yellow)	10	farfield northeast of Z-1A
near-surface	CPT-27 33 ft (red)	10	southeast of Z-9	CPT-1A 35 ft (black)	11	west of Z-12
near-surface	CPT-9A 60 ft (blue)	18	farfield north of Z-9	CPT-34 40 ft (green)	12	west of Z-18
near-surface	CPT-16 65 ft (red)	20	east of Z-9			
near-surface	CPT-21A 65 ft (green)	20	south of Z-9			
near-surface	CPT-24 70 ft (green)	21	northwest of Z-9			
near-surface	CPT-18 75 ft (red)	23	northwest of Z-9			
Cold Creek	299-W15-82	25	east side of Z-9			
Cold Creek	CPT-21A 86 ft (red)	26	south of Z-9			
Cold Creek	CPT-28 87 ft (red)	27	farfield south of Z-9			
Cold Creek	299-W15-8U	31	southside of Z-9			
Cold Creek	299-W15-217	35	southwest corner of Z-9			
Cold Creek	CPT-24 118 ft (red)	36	northwest of Z-9			
Cold Creek	299-W15-220 SST/118 ft (red)	36	east of Z-9			
Cold Creek	299-W15-95L	44	north side of Z-9			
ground-water	299-W15-220L 163 ft	50	east of Z-9	299-W18-247L*	51	southeast of Z-18
ground-water	299-W15-219L 175 ft	53	northwest of Z-9	299-W18-246L*	52	west of Z-1A
ground-water	299-W15-84L 180 ft	55	west of Z-9	299-W18-252L*	53	middle of Z-1A/Z-18/Z-12 field
ground-water	299-W15-9L	57	11 m from 299-W15-32 extraction well	299-W18-10L*	55	east side of Z-18
ground-water	299-W15-46	66	southside of Z-9	299-W18-7*	60	east side of Z-1A
ground-water				299-W18-11L*	60	Within Z-18
ground-water				299-W18-12*	60	Within Z-18
ground-water				299-W18-6L*	63	west side of Z-1A

* Passive soil vapor extraction wells

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

Table 6b. Non-Operational Wells and Probes Selected for Monitoring During Soil Vapor Extraction System Operations at the 216-Z-9 Site, July through September 2006

Target Zone	Z-9	Depth (m)	Comment	Z-1A	Depth (m)	Comment
near-surface	CPT-28 40 ft (blue)	12	farfield south of Z-9	CPT-32 25 ft (green)	8	west of Z-1A
near-surface	CPT-21A 45 ft (green)	14	south of Z-9	CPT-4E 25 ft (white)	8	north central in Z-1A/Z-18/Z-12 field
near-surface	CPT-9A 60 ft (blue)	18	farfield north of Z-9	CPT-30 28 ft (green)	9	north of Z-18 (middle of Z-1A/Z-18/Z-12 field)
near-surface				CPT-13A 30 ft (blue)	10	southeast of Z-1A
near-surface				CPT-7A 32 ft (yellow)	10	farfield northeast of Z-1A
near-surface				CPT-1A 35 ft (black)	11	west of Z-12
near-surface				CPT-33 40 ft (green)	12	between Z-18 and Z-12
near-surface				CPT-34 40 ft (green)	12	west of Z-18
near-surface				CPT-C3872 61 ft	19	east side of Z-1A
near-surface				CPT-1A 68 ft (yellow)	21	west of Z-12
near-surface				CPT-32 70 ft (red)	21	west of Z-1A
Cold Creek	CPT-21A 86 ft (red)	26	south of Z-9	299-W18-152	31	northwest corner of Z-12
Cold Creek	CPT-28 87 ft (red)	27	farfield south of Z-9	299-W18-167	32	within Z-1A
Cold Creek				CPT-4F 109 ft (red)	33	north central in Z-1A/Z-18/Z-12 field
Cold Creek				299-W18-165	33	within Z-1A
Cold Creek				299-W18-249	40	northeast corner of Z-18
Cold Creek				299-W18-248	40	east side of Z-1A
ground-water				299-W18-247L*	51	southeast of Z-18
ground-water				299-W18-246L*	52	west of Z-1A
ground-water				299-W18-252L*	53	middle of Z-1A/Z-18/Z-12 field
ground-water				299-W18-10L*	55	east side of Z-18
ground-water				299-W18-7*	60	east side of Z-1A
ground-water				299-W18-11L*	60	within Z-18
ground-water				299-W18-12*	60	within Z-18
ground-water				299-W18-6L*	63	west side of Z-1A

* Passive soil vapor extraction wells

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

Figure 1. Location of Extraction and Monitoring Wells at the 216-Z-1A/Z-18/Z-12 and 216-Z-9 Sites

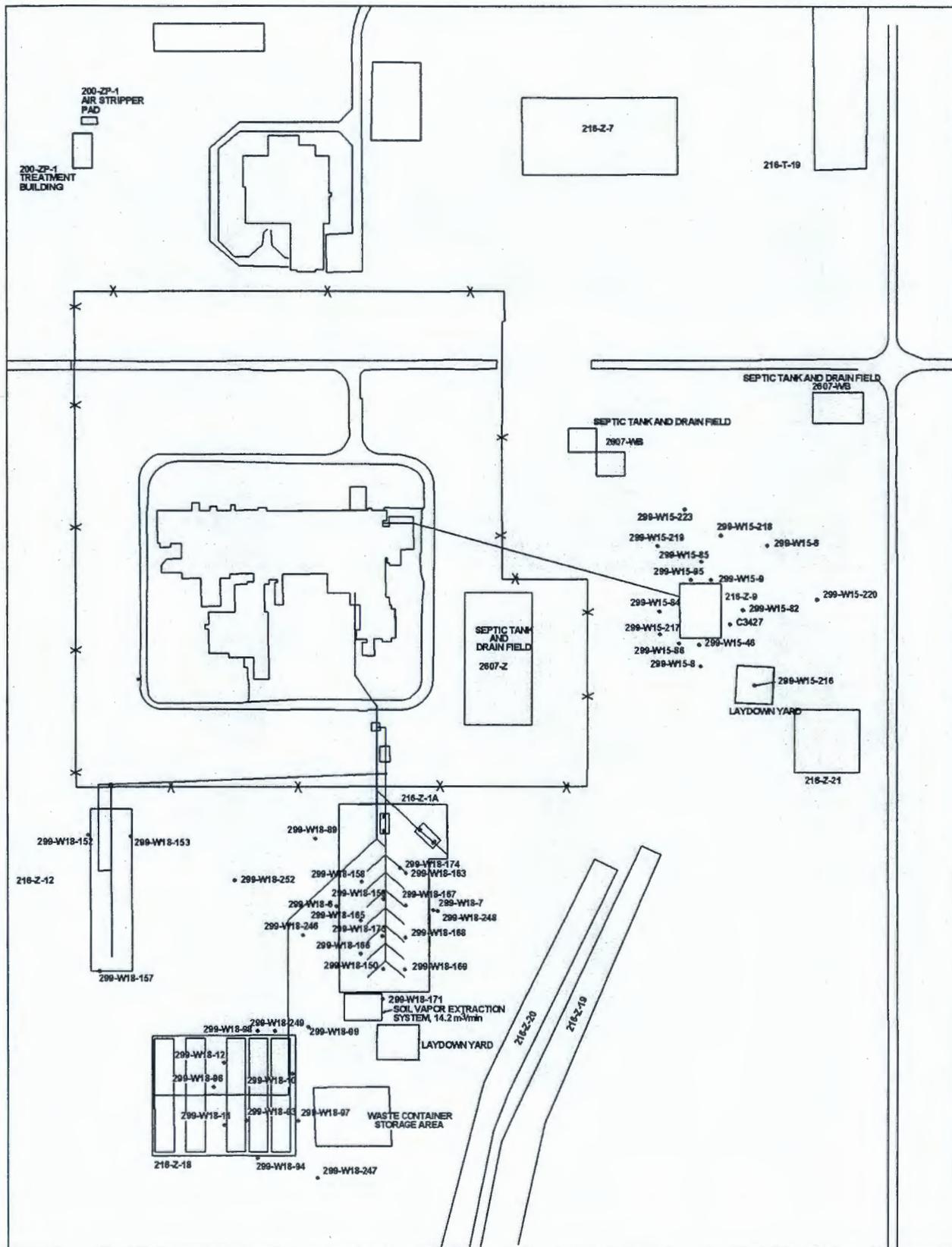
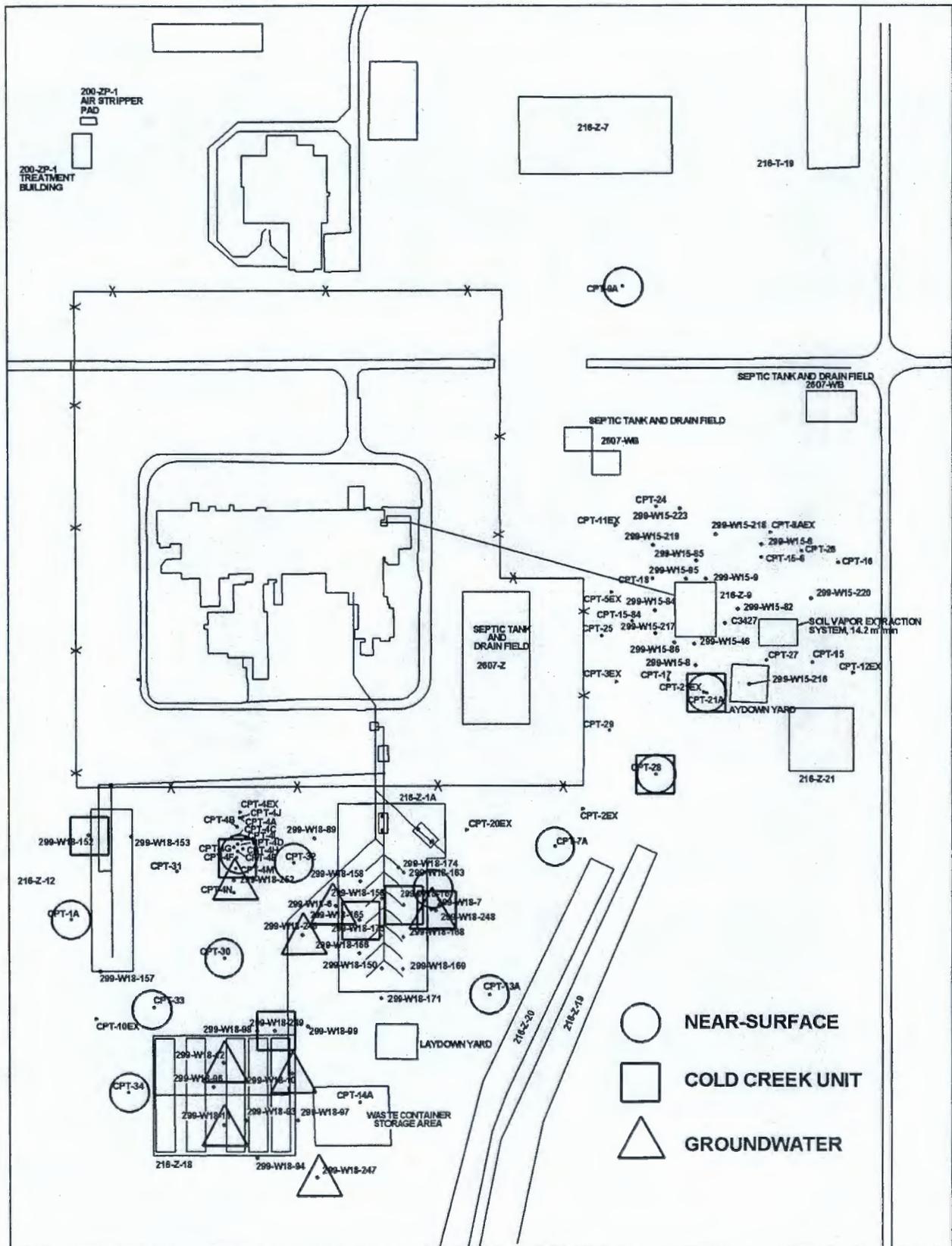


Figure 3. Location of Wells and Probes Selected for Non-Operational Monitoring and Passive Soil Vapor Extraction Monitoring, July through September 2006



Comparison of Maximum Carbon Tetrachloride Rebound Concentrations
Monitored at 200-PW-1 Soil Vapor Extraction Sites
FY 2002 - FY 2006

200-PW-1 (200-ZP-2)		July 2002 - September 2003		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 - May 2006	
Location (Well or Probe) /feet bgs	Site	Maximum Rebound Carbon Tetrachloride (ppmv)	months* of rebound	Maximum Rebound Carbon Tetrachloride (ppmv)	months* of rebound	Maximum Rebound Carbon Tetrachloride (ppmv)	months* of rebound	Maximum Rebound Carbon Tetrachloride (ppmv)	months* of rebound	Maximum Rebound Carbon Tetrachloride (ppmv)	months* of rebound
79-03/ 5 ft	Z-18										
79-06/ 5 ft	Z-1A										
79-11/ 5 ft	Z-1A										
86-05/ 5 ft	Z-9										
86-05-01/ 5 ft	Z-9										
86-06/ 5 ft	Z-9										
87-05/ 5 ft	Z-1A										
87-09/ 5 ft	Z-1A										
94-02/ 5 ft	Z-9										
95-11/ 5 ft	Z-9										
95-12/ 5 ft	Z-9										
95-14/ 5 ft	Z-9										
CPT-13A/ 9 ft	Z-1A										
CPT-16/ 10 ft	Z-9										
CPT-17/ 10 ft	Z-9	6.6	15	9.0	21	9.9	27	11.4	5	2.5	11
CPT-18/ 15 ft	Z-9	2.4	15	2.4	21	2.5	27	3.1	5	0	11
CPT-4A/ 25 ft	Z-1A										
CPT-4E/ 25 ft	Z-1A	1.3	0			2.4	0	2.4	9	2.4	0
CPT-16/ 25 ft	Z-9	1.5	15	2.6	21	3.6	27	4.4	5	1.6	11
CPT-31/ 25 ft	Z-12										
CPT-32/ 25 ft	Z-1A	8.3	6	5.9	6			8.6	9	6.4	6
CPT-30/ 28 ft	Z-18	0	6	0	6			1.6	9	1.2	6
CPT-13A/ 30 ft	Z-1A	1.6	6	1.8	6	1.9	0	8.3	9	4.1	0
CPT-7A/ 32 ft	Z-1A	3.9	6	9.5	6	1.9	0	4.4	9	3.8	0
CPT-27/ 33 ft	Z-9	1.7	15	2.7	21	2.7	27	8.4	5	1.8	11
CPT-1A/ 35 ft	Z-12	22.0	15	18.3	6	18.0	0	14.0	9	17.2	0
CPT-28/ 40 ft	Z-9							5.4	0		
CPT-33/ 40 ft	Z-18							3.9	9		
CPT-34/ 40 ft	Z-18	1.6	0			1.8	0	3.0	9	2.0	0
CPT-21A/ 45 ft	Z-9							7.9	0		
W15-220ST/ 52 ft	Z-9	1.5	1								
CPT-9A/ 60 ft	Z-9	35.9	15	35.9	21	35.9	27	32.4	5	29.2	11
CPT-28/ 60 ft	Z-9							68.3	0		
CPT-C3872 / 61 ft	Z-1A							15.5	9	9.9	6
CPT-16/ 65 ft	Z-9	4.2	15			4.2	27	6.7	5	5.6	0
CPT-21A/ 65 ft	Z-9	90.0	15	150	21	150	27	170	0	167	11
CPT-1A/ 68 ft	Z-12							13.7	9		
CPT-30/ 68 ft	Z-18										
CPT-13A/ 70 ft	Z-1A										
CPT-24/ 70 ft	Z-9	4.7	15			9.1	27			5.2	11
CPT-32/ 70 ft	Z-1A							5.5	9		
W15-219SST/ 70 ft	Z-9	1.9	1			5.7	22				
CPT-4A/ 75 ft	Z-1A										
CPT-18/ 75 ft	Z-9	4.5	15			8.3	27			3.7	11
CPT-31/ 76 ft	Z-12										
CPT-33/ 80 ft	Z-18										
W15-82/ 83 ft	Z-9	85.8	15	85.8	21	85.8	27	95.8	5	8.1	11
CPT-21A/ 86 ft	Z-9	206	15	244	21	244	27	209	5	223	11
CPT-34/ 86 ft	Z-18										
W15-95U/ 86 ft	Z-9										
W15-218SST/ 86 ft	Z-9	1.6	2								
CPT-28/ 87 ft	Z-9	235	15	258	21	258	27	246	5	245	11
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	20.7	6	12.4	6			16.0	9	16.2	6
W15-8U/ 103 ft	Z-9									10.4	11
CPT-4E/ 103 ft	Z-1A										
W18-167/ 106 ft	Z-1A	243	6	266	6			196	9	174	6
CPT-4F/ 109 ft	Z-1A							11.9	9		
W18-165/ 109 ft	Z-1A	328	6	205	6			35.2	9	394	6
W15-217/ 114 ft	Z-9	444	15	458	21	467	27	374	5	19.7	11
CPT-24/ 118 ft	Z-9	27.8	15			15.3	27			23.9	11
W15-220SST/ 118	Z-9	27.5	3			26.0	27			25.2	11
W18-158L/ 120 ft	Z-1A										
W15-219SST/ 130	Z-9	23.1	1			0	22				
W18-249/ 130 ft	Z-18	46.3	6	41.0	6			64.9	9	24.1	6
W18-248/ 131 ft	Z-1A	182	6	180	6			249	9	67.0	6
W15-95L/ 144 ft	Z-9	25.1	15	40.3	21	40.3	27	26.7	5	22.6	11
W15-219SST/ 155	Z-9	6.8	1			9.5	22				
W15-220L/ 163 ft	Z-9	-----	15			7.5	27			13.2	11
W15-219L/ 175 ft	Z-9	-----	15			23.0	27			12.2	11
W15-9L/ 176 ft	Z-9	13.1	15	13.1	21	13.1	27	2.1	5	5.4	11
W15-84L/ 180 ft	Z-9	25.9	15	25.9	21	25.9	27	23.0	5	14.0	11
W15-6L/ 182 ft	Z-9										
W15-220SST/ 185	Z-9	-----	1								
W18-7/ 197 ft	Z-1A										
W18-12/ 198 ft	Z-18										
W18-6L/ 208 ft	Z-1A										
W15-46/ 217 ft	Z-9									4.7	11

* - 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
October 2005 - May 2006

200-PW-1 (200-ZP-2)		10/25/2005	11/01/2005	11/28/2005	12/20/2005	01/26/2006	02/23/2006	03/28/2006	04/28/2006	05/26/2006		
Location (Well or Probe)	Site	CCI4 (ppmv)										
/feet bgs												
CPT-17/ 10 ft	Z-9	--(n)	1.4	1.2	1.2	1.3	1.5	1.7	2.0	2.2		
CPT-18/ 15 ft	Z-9	0		0	0	0	0	0	0	0		
CPT-4E/ 25 ft	Z-1A								2.4	1.7		
CPT-16/ 25 ft	Z-9	1.6		1.2	1.4	1.1	1.1	1.1	1.0	0		
CPT-32/ 25 ft	Z-1A			1.1	3.4	4.0	4.8	6.4				
CPT-30/ 28 ft	Z-1A	1.2		0	1.1	0	0	0				
CPT-13A/ 30 ft	Z-1A	3.6		4.1	3.9	3.6	3.5	3.3	3.6	3.8		
CPT-7A/ 32 ft	Z-1A	2.3		2.7	2.2	2.8	3.3	3.8	2.4	2.4		
CPT-27/ 33 ft	Z-9	1.8		0	0	0	0	0	0	0		
CPT-1A/ 35 ft	Z-12	17.2		9.1	3.6	7.7	6.0	7.4	6.2	8.9		
CPT-28/ 40 ft	Z-9											
CPT-33/ 40 ft	Z-18											
CPT-34/ 40 ft	Z-18	1.8							1.3	1.7		
CPT-21A/ 45 ft	Z-9											
CPT-9A/ 50 ft	Z-9	52.8		50.9	50.6	48.1	50.4	46.1	46.9	49.0		
CPT-9A/ 60 ft	Z-9	25.5		21.2	18.6	17.4	11.4	16.0	17.3	24.4		
CPT-28/ 60 ft	Z-9											
CPT-C3872 / 61 ft	Z-1A	4.0		4.3	3.7	5.1	6.3	9.9				
CPT-9A/ 64 ft	Z-9	38.6		36.9	36.9	33.4	36.2	36.6	33.1	36.4		
CPT-16/ 65 ft	Z-9								5.3	5.6		
CPT-21A/ 65 ft	Z-9	151		137	140	139	146	145	139	160		
CPT-1A/ 68 ft	Z-12											
CPT-24/ 70 ft	Z-9								4.4	5.2		
CPT-32/ 70 ft	Z-1A											
W15-219SST/ 70 ft	Z-9											
CPT-18/ 75 ft	Z-9								3.4	3.7		
W15-82/ 83 ft	Z-9	8.1		1.4	--(m)	--(m)	--(m)	--(m)	2.2	6.8		
CPT-21A/ 86 ft	Z-9	208		196	--(p)	186	194	201	192	204		
CPT-28/ 87 ft	Z-9	241		219	224	213	226	217	217	223		
W18-152/ 101 ft	Z-12	12.7		14.2	14.5	15.4	15.2	16.2				
W15-8U/ 103 ft	Z-9	10.4		2.6	5.1	3.1	4.5	1.3	1.5	2.8		
W18-167/ 106 ft	Z-1A	63.1		174	--(m)	--(m)	--(m)	--(m)				
CPT-4F/ 109 ft	Z-1A											
W18-165/ 109 ft	Z-1A	65.1		394	220	161	160	164				
W15-217/ 114 ft	Z-9	16.1		1.7	8.4	11.5	19.7	12.1	1.0	8.6		
CPT-24/ 118 ft	Z-9								22.9	23.9		
W15-220SST/ 118 ft	Z-9								17.9	22.0		
W18-249/ 130 ft	Z-18	22.5		22.0	12.2	12.4	17.1	24.1				
W15-219SST/ 130 ft	Z-9											
W18-248/ 131 ft	Z-1A	67.0		23.1	--(m)	--(m)	--(m)	--(m)				
W15-95L/ 144 ft	Z-9	15.8		16.7	19.0	19.9	22.6	20.6	17.8	17.8		
W15-219SST/ 155 ft	Z-9											
W15-220L/ 163 ft	Z-9								2.4	9.3		
W15-219L/ 175 ft	Z-9								4.5	12.2		
W15-9L/ 176 ft	Z-9	4.0		0	0	4.0	5.4	3.5	1.5	2.4		
W15-84L/ 180 ft	Z-9								4.2	14.0		
W15-46/ 217 ft	Z-9	3.0	--(o)	0	0	4.7	--(p)	2.1	0	2.6		
(m) Unable to sample; well in use by Vista Engineering												
(n) Unable to sample; aboveground tubing needs to be repaired. Repaired and sampled on 11/1/2005.												
(o) On 10/25/05, well 299-W15-46 sampled at a depth of approximately 172 ft. E-tape could only be advanced to a depth of 173 ft.												
(p) Unable to pull representative sample.												

Carbon Tetrachloride Concentrations
 Monitored at 200-PW-1 Passive Soil Vapor Extraction Wells
 October 2005 - May 2006

200-PW-1 (200-ZP-2)	10/19/2005	11/23/2005	12/15/2005	1/27/2006	2/28/2006	3/27/2006	4/28/2006	5/26/2006
Location (Well or Probe) /feet bgs	CCl4 (ppmv)							
W18-6L/ 208 ft	19.8	---(b)						
W18-7/ 197 ft	0	9.2	11.7	15.8	16.2	15.3	33.8	20.3
W18-10L/ 183 ft	8.4	11.6	4.0	12.1	13.0	3.9	14.1	11.4
W18-11L/ 199 ft	0	5.9	0	7.6	9.0	0	5.4	7.2
W18-12/ 198 ft	0	1.6	0	4.9	9.4	1.3	0	2.4
W18-246L/ 170 ft	13.0	---(b)						
W18-247L/ 167 ft	0	0	2.4	5.1	7.6	0	3.0	1.8
W18-252L/ 175 ft	0	---(b)						
(b) in use by Vista Engineering for cross-well seismic investigation								

WTP Seismic Boreholes Drilling Mud Disposition (Presentation to Unit Managers Meeting June 15, 2006)

Background

Up to five boreholes and one corehole will be drilled at the WTP construction site to support U.S. Department of Energy Office of River Protection seismic studies. Each hole will be approximately 1300 ft. deep. Previously the UMM approved the drilling of these boreholes to be included in the Waste Control Plan for the 200-PO-1 OU; the plan has been revised and approved (May 2006). Drilling through the basalt will be accomplished using mud rotary drilling. Mud rotary drilling is a drilling method that involves the continuous circulation of fluids (commonly referred to a drilling mud) in the borehole as the drill bit is advanced.

Proposed Disposition of Drill Cuttings and Drilling Mud

- The project is proposing to use an existing excavated but unused area (216-E-28 Pond) to dispose of uncontaminated drill cuttings and drilling mud to the ground (i.e., reserve pit, or mud pit); proposal does not include a liner of any sort.
- The current plan is to use an area about 150 ft. by 250 ft. of the much larger 216-E-28 excavation site. The actual reserve pit dimensions will be 100ft. by 150 ft. with a depth of 8 ft. The pit will have portable chain link security fencing on the perimeter to provide access control.
- Drill cuttings and drilling mud will be surveyed and/or sampled, analyzed, and approved for volumetric release prior to placement in the reserve pit.
- In the pit, the mud will gel, and then as liquids evaporate, the mud will dry.
- After the project is complete, the pit will be covered (or filled in) with the soils used to excavate it.

Proposed Exception to Disposal Location

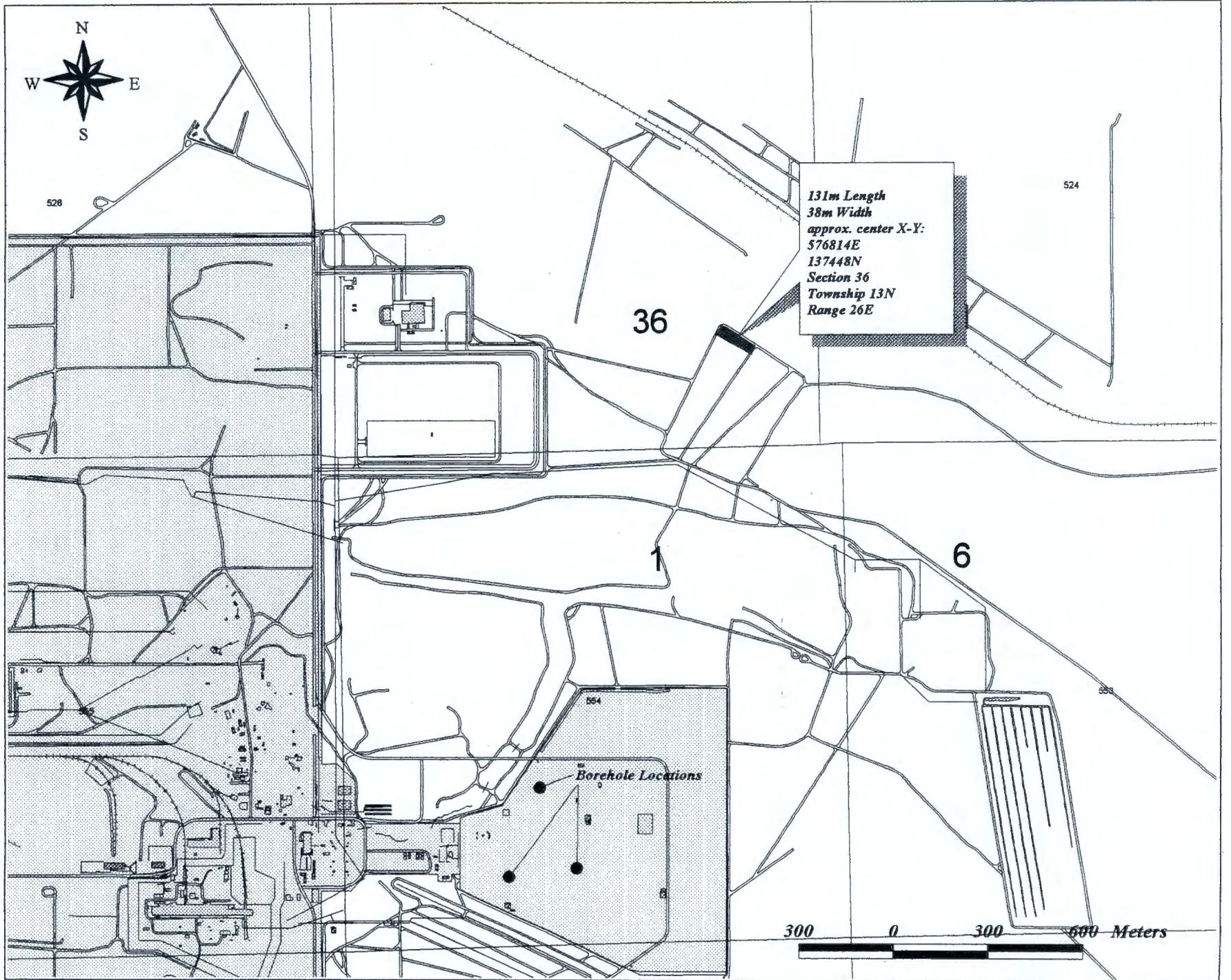
- The Waste Control Plan for the 200-PO-1 OU allows the disposal of slurry waste to the ground, near the point of generation. Because the point of generation is within the WTP construction zone, the proposal is to use the excavated unused area mentioned above.
- A Fluor Hanford Site Evaluation (land use permit) use of 216-E-28 has been approved.
- The reserve pit will also be used to dispose of all clean (non-regulated) cuttings from drilling.

Rationale for Proposal

- Drilling mud has been "pre-designated" and will not be a regulated dangerous waste according to WAC 173-303.
- The DQO requires that the mud be tested prior to disposal to ensure no co-mingling has occurred between the unconfined aquifer in the saturated zone and the confined aquifer in the basalt. The testing will verify that the drilling mud and cuttings meet the volumetric release standards for radionuclides. Analysis results from testing will be provided to the regulators.

Requested Action

- Concur with the proposed disposition of drilling mud and clean drill cuttings into the reserve pit to be constructed at the 216-E-28 site.



Attachment 8, Figure 2

Process Description for Minor Changes to Waste Management Plans and Waste Control Plans

200 Area UMM Open Action #67

Minor changes including, but not limited to, borehole or push location additions, waste container storage area locations, and modifications to well decommissioning, chemical monitoring, and supplemental well lists, shall be sent via e-mail to the affected regulatory agency project manager or assigned alternate, and be accompanied by a telephone call describing the urgency of the requested change.

The affected agency will respond to such requests via e-mail, indicating their acceptance or rejection of the request.

E-mail acknowledgement of acceptance is sufficient documentation to proceed with work related to the change.

The e-mail acceptance and a hard copy of the waste management or waste control plan change(s) will be presented at the next month's 200 Area Unit Manager's Meeting for formalization via entry into the meeting minutes and Administrative Record.

200 AREA UNIT MANAGERS' MEETING SOURCE OPERABLE UNITS AND FACILITIES STATUS

June 15, 2006

SOURCE OPERABLE UNITS STATUS

M-15 TPA Milestones

- Technical discussions of milestones began the week of February 13, 2006.

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

- The borehole has been completed as a vapor extraction well. Decommissioning of the site is ongoing.
- The field summary report for the A-8 borehole has been finalized and is being distributed.
- On 1/23/06, DOE-RL, EPA, Vista Engineering and Fluor concurred that, based on the results of the passive soil vapor survey conducted by Vista in December 2005, no additional passive soil gas surveys are needed for the 200-PW-1 RI.
- Vista Engineering completed cross-well seismic investigations in the 216-Z-9 and 216-Z-1A areas. The results will be used to refine the stratigraphy under the waste site to support evaluation of contaminant migration pathways. The interpretation and final reports for both areas have been received.
- Vista Engineering drilled a well 190 ft deep at the headend of Z-1A to support the test. The well will be geophysically logged before it is completed as an SVE well.
- Vista Engineering is planning to conduct the steam injection test at the Z-1A site in October.
- Vista Engineering will hold the next Project Technical Workshop on the carbon tetrachloride investigation on 6/27-6/28.
- Vista installed the first instrument tree in the air space of the 216-Z-9 trench May 3, 2006 and started collecting data to support the conceptual model of carbon tetrachloride evaporation during disposal. The second instrument tree was installed on May 31, 2006. EPA congratulated DOE on this accomplishment.
- EPA requested that the remediation of Z-9 be coordinated with D&D of the above-ground structures.

200-TW-1, 200-TW-2 & 200-PW-5 (no change)

200-CW-1 & 200-CW-3 (no change)

200-PW-2 & 200-PW-4

- The Draft A FS and Proposed Plan were delivered to Ecology on May 31. Draft A closure plans were submitted to Ecology on April 28, 2006.

200-CS-1

- FS Draft A submitted to Ecology on March 30, 2006.
- PP Draft A submitted to Ecology on March 30, 2006.
- Closure Plans Draft A submitted to Ecology on March 30, 2006.
- Ecology has proposed a permit modification as the decision pathway for the 200-CS-1 OU and 90-day review cycle in accordance with TPA section 9.2.1 of the HFFACO.
- Expect comments by July 3, 2006.

200-CW-5, CW-2, CW-4, & SC-1 (no change)

- Researching discrepancies between the September 1974 Battelle document and the RI data at U-Pond.

Ecological Risk Assessment

- Ecology and EPA reluctance to provide DOE with early approval of Sampling and Analysis Plans in lieu of the normal Tri-Party Agreement review process and schedule.
- Ecology and EPA request that DOE provides a consistent story among the three projects: Groundwater, Central Plateau waste sites and River Corridor
- Division of scope between Central Plateau and River Corridor
- EPA commented that DOE appears to be relying on the need for cleanup of certain waste sites due to human-health drivers as a reason why they don't need to estimate ecological risks for those sites and thus is not following guidance and regulations pertaining to baseline risk assessment. EPA gave the example of early presentations of the feasibility study work on 200-UW-1.

200-IS-1 & 200-ST-1

- Ecology has recommended D&D removal as the closure path for the 241-CX-70, 241-CX-71, 241-CX-72, 276-S-141 and 276-S-142 Tanks.
- Transmitted Steps 6 and 7 of the DQO for Ecology review. Comment review scheduled for June 21 and 22.

200-LW-1/200-LW-2

- Ecology provided comments on the RI Report, June 2, 2006.
- Efforts continued on preparation of FS.

200-MW-1

- Sampling and Analysis plan will be submitted in June. EPA commented that it will not approve the SAP until a Data Quality Objectives process is completed and that effort culminates in a SAP for further characterization of the 216-A-4 Crib including validation of the use of High Resolution Resistivity there.

200-UR-1

- Preparing Rev. 1 of Sampling and Analysis plan to support field work start in June.

200-SW-1/2

- A DQO summary report and the Sampling and Analysis Instruction report for nonintrusive characterization in the 200-SW-2 waste sites were completed (including FH approvals and concurrences from DOE-RL and Ecology). Characterization scope includes geophysical investigations, passive organic vapor sampling, and radiation surveys. Mobile Surface Contamination Monitor (MSCM) radiation surveys have been performed on 218-E-2A and 218-E-8.
- Geophysical data collection was initiated on 6/2/2006. Data was collected at eight burial grounds: 218-E-1, 218-E-2A, 218-E-8, 218-E-12A, 218-W-1, 218-W-2, 218-W-3 and 218-W-11.
- Passive sampling for organic vapors was initiated on 6/12/2006. The scope involves over 130 locations in five burial grounds: 218-W-3A, 218-W-3AE, 218-W-4B, 218-W-4C and 218-W-5.

BC Cribs and Trenches

- Letter from RL to EPA in December offered potential to excavate near-surface contamination under some conditions. Supporting efforts to resolve discrepancies in the remedial actions at BC Cribs include:
 - Status was presented to the HAB on 1/11/06. Path-forward is being developed.
 - Development of excavation criteria is proceeding with focus on “hot spots” representing potential intruder risk.
- EPA provided list of items/issues to RL on May 1, which could clarify the “hot spot” removal discussion. Focus is on consideration of a Treatability Test that would provide information to address potential worker dose uncertainty, the contaminant distribution model(s), refinement of the excavation process, collection of remedial design information, and potential verification of the inventory model.

200-UW-1

- Field work per the Time Critical Removal Action (TCRA) RAWP continues. 200-W-42 pipeline from the south end of 216-U-8 to 216-U-12 crib has been removed. Evaluating path forward due to self identified issues associated with the sample package.
- 200-W-42 pipeline excavation north of 216-U-8 is done and sample results are being QC validated. Backfill Concurrence will be initiated once validation is complete.
- In accordance with the updated TCRA, excavation of the remainder of 200-W-42 pipeline has begun. Removed ~ 21% (i.e., 144') of VCP between 16th Street and U-8. Transferred 305 ERDF cans of waste (185 planned and 120 due to lateral spread of

- contaminants). We are excavating to 15' (where necessary) and evaluating options for areas with high contamination levels which are below 15'.
- Final Draft ROD and responsiveness summaries are being updated to respond to review comments. Workshops are being planned to work through issues. First workshop expected week of 6/12/06.
 - Responsiveness summaries for TPA Change Request for reclassifying Crib 216-U-12 to a RCRA Past Practice (RPP) unit will be reviewed on 6/13/06. Once complete the package will be sent to RL/EPA/Ecology legal for final review. ~~Change is expected to be approved before ROD is approved.~~ *DBP 7-19-06*
 - 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. ~~Change is expected to be approved before the ROD is approved.~~ *DBP 7-19-06* No public review is anticipated prior to change approval.
 - PRGs / RAGs for 200-UW-1 need to be finalized. Modeling methodology and input parameters were presented to both EPA and Ecology. Modeling is proceeding to determine goals based on 1000 and 10000 year MCLs. Draft results expected week of 6/19/06. Once completed, results will be presented to RL, EPA and Ecology to determine acceptable PRGs / RAGs. **Due to finding contamination below 15' at 200-W-42 excavation, establishing acceptable goals needs to be given a high priority.**
 - Haul Road construction into Area C borrow area (paved road and barricade inspection station) is complete and project is being closed.
 - Area C cultural review has not been completed. It is being challenged due to view impact from Rattlesnake Mountain. RL legal is evaluating correspondence that will initiate a 30 day public review.

FACILITIES STATUS

- **Key Facility Surveillance & Maintenance S&M Plans**
Rob Gregory provided a briefing on Upcoming Central Plateau key facilities' Surveillance and Maintenance (S&M) Plan revisions. These plans, which are required by the Tri-Party Agreement, will be brought up to date with these revisions.
- **U Plant Canyon Disposition Initiative (CDI)**
Continued development of Remedial Design Engineering Alternatives Studies
 - Canyon reactivation study (crane, HVAC, and electrical/lighting) (June)
 - Equipment size reduction/cell space optimization study (July)
 - Canyon demolition study (July)Continued development of Remedial Design and Remedial Action Work Plan (RD/RA Workplan)
- **Facility Binning (no change)**
- **Miscellaneous Facility D&D**

- **Miscellaneous Facility D&D**

Planning to D&D five structures (2707E, 2713E, 2715E, 2719E and 2722E) that do not have active utilities and have already undergone initial demolition preparation activities. This effort provides fill-in work and a skills-sharpening opportunity for workers that are now demolishing PFP's 232-Z structure.

- **B-Plant Stack Downgrade to Minor Emission Status (no change)**

- **PUREX Stack Downgrade to Minor Emission Status (no change)**

- **209E, B-Plant, U-Plant, PUREX and REDOX Ventilation Transition to Intermittent Ventilation (no change)**

**Issue Resolution Meeting
Agreements and Issues List
June 15, 2006
200 Area Unit Managers' Meeting**

Agreement: EPA approved the most current version of the 200-ZP-1/200-PW-1 Waste Management Plan, DOE/RL-2000-40, Rev. 6, Waste Management Plan for the Expedited Response Action for 200 West Area Carbon Tetrachloride Plume and the 200-ZP-1 and 200-PW-1 Operable Units.

Agreement: EPA approved the Sampling Analysis Plan, DOE/RL-2006-19, Rev. 0, Sampling and Analysis Plan for Characterizing Groundwater in 200-West Area in Vicinity of Old Laundry Facility and T Plant, by letter to DOE-RL dated June 6, 2006.

**200 Area Unit Managers' Meeting
OPEN ACTION ITEMS & TRACKING**

Action #	Action/Subject	Assigned To	Owed To	Assigned Date	Original Due Date	Adjusted Due Date	Date Complete	Status
67	Develop process to streamline Waste Control Plan revisions associated with pushes and other minor changes.	DOE/ FH-Winterhalder	All	5/18/06	6/15/06		6/15/06	Closed. Minor change process description is attached to the June 15 200-Area UMM meeting minutes.
68	Provide status report on MP-14 status	Ecology - Price	All	5/18/06	6/15/06		6/15/06	Closed. Ecology will meet with EPA and discuss the comments, June 22 meeting.
69	Evaluate status of NEPA documentation at NRDWL	DOE/FH - Brunke	Ecology	5/18/06	6/15/06	7/20/06		Ron Brunke to follow up at next UMM meeting.
70	Update SW-1 waste article in Hanford Update by next UMM meeting	DOE - Roddy	Ecology	6/15/06	7/13/06			
71	Set up a meeting with EPA to provide piece-meal data for BC Cribs	FH - Benecke	EPA	6/15/06	6/23/06			
72	Provide U-Canyon Institutional Controls (IC) to sitewide revision.	FH- Ranade	EPA	6/15/06	7/15/06			

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

DOE/RL

Bryan Foley	A6-38
Larry Romine	RMIS
Arlene Tortoso	RMIS

EPA

Craig Cameron	B1-46
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Ecology

Brenda Jentzen	RMIS
John Price	H0-57
Jennie Stults	H0-57
Jean Vanni	H0-57

FH

Lanny Dusek	RMIS
Gloria Cummins	RMIS
Bruce Ford	RMIS
Jane Borghese	E6-35
Mark Byrnes	RMIS
Virginia Rohay	RMIS
L. Craig Swanson	RMIS
Mary Todd-Robertson	E6-35

CHG

Curt Wittreich	RMIS
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PNNL

Stuart Luttrell	K6-96
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Oregon State/Tribes

Shelly Cimon	EMAIL
Stan Sobczyk	EMAIL
Sandra Lilligren	EMAIL

Administrative Record (2)

H6-08

Correspondence Control

A3-01

Please inform Dee Goodson – FH (373-4456)
of deletions or additions to the distribution list.