

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

DOE/RL

Steve Bertness	A6-39
Bryan Foley	A6-38
Larry Romine	RMIS
Arlene Tortoso	RMIS

EPA

Craig Cameron	B1-46
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Ecology

Brenda Jentzen	RMIS
Tina Masterson-Heggen	H0-57
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

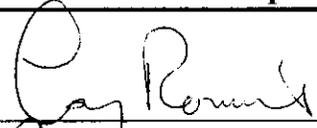
Stuart Luttrell	K6-96
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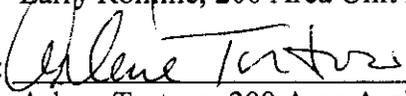
Administrative Record (2)	H6-08
Correspondence Control	A3-01

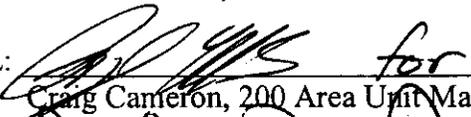
Please inform Dee Goodson – FH (373-4456)  
of deletions or additions to the distribution list.

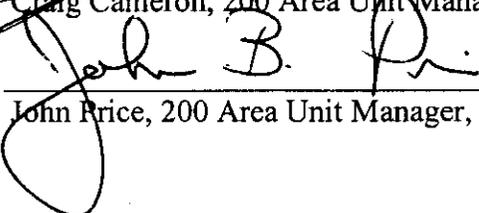
**Meeting Minutes Transmittal/Approval  
Unit Managers' Meeting  
200 Area Groundwater and Source Operable Units  
1200 Jadwin Avenue, Richland, Washington  
September 15, 2005**

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APPROVAL:  Date: 10-21-05  
Larry Romine, 200 Area Unit Manager, DOE/RL

APPROVAL:  Date: 10/20/05  
Arlene Tortoso, 200 Area Assistant Manager, DOE/RL

APPROVAL:  for Date: 10/20/05  
Craig Cameron, 200 Area Unit Manager, EPA

APPROVAL:  Date: 10/24/2005  
John Price, 200 Area Unit Manager, Ecology

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

Attachment 1	Attendance Record
Attachment 2	Agenda
Attachment 3	Groundwater Operable Units Status
Attachment 4	Groundwater Operable Units Status Figures
Attachment 5	Source Operable Units and Facilities Status
Attachment 6	Source Operable Units and Facilities Status Figures
Attachment 7	Agreements and Issue Resolution Meeting
Attachment 8	Agreements and Issue Resolution Figures
Attachment 9	Action Item List

200 Area Unit Managers Status Meeting  
September 15, 2005

Please print clearly and use black ink

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
Stuart Lutonell	PNML	GW. Man.	376-6023
Lanston Dusek	FH	Source/Fac.	438-1756
Jarvice Willoam	FH		372-3553
Mark Byrnes	FH	Task Lead	373-3996
Arlene Tortoso	DOE	GW UUM	373-9631
John Price	Ecology	TMA Proj Mgr	372-7921
Larry Remine	DOE	ZOOA	376 4747
Dennis Smith	EPA		
Rod Lobos	EPA		
Craig Cameron	EPA		
John Winterholder	FH	ECO	372-8144
J V Borghese	FH	GW	
Virginia Rolay	FH	PW-1	373-3803
Mary Todd Robertson	FH	ZOO AREA WASTE MGR	373-3920
Bryan L. Foley	DOE-RL	ZOO Mgr	376-7087
Kevin Leary	DOE-RL	CDI ZOO-UW-1 TS-1	373-7285
Jean Vanri	ECO	Relay Mgr	372-7930
Gloria Cummings	FH		372-2484

# 200 AREA UNIT MANAGERS' MEETING AGENDA

1200 Jadwin/Rm 1-C1  
September 15, 2005

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

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

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

- (See Issues List)

## **General**

- Outstanding Action Items

# 200 AREA UNIT MANAGERS' MEETING GROUNDWATER OPERABLE UNITS STATUS

1200 Jadwin/Rm 1-C1  
September 15, 2005

## GROUNDWATER OPERABLE UNITS STATUS

### 200-UP-1 OU

- Update on Rebound Study:
  - Study started January 26.
  - Tc-99 and uranium concentrations remain below remedial action objectives in all monitoring wells.
- Remediation Treatment Status:
  - The first nine rounds of groundwater sampling were successfully implemented February 2, 9, 23, March 30, April 27, May 25, June 29, July 27 and August 31 (Attachment 4, Figures 1, 2, 3, and 4).
- DOE-RL to provide status of delivery of RI/FS Work Plan to Ecology.
- RI Report has started.
  - Need a meeting date time with John Price and Zelma Jackson to discuss options for addressing baseline risk assessment and MTCA data analysis requirements. John Price will check with his staff on availability.
- John Price (Ecology) agreed that the baseline risk assessment component of the 200-UP-1 Remedial Investigation (RI) Report can be rolled into the Feasibility Study due to that fact that all of the RI data will not be available at the time the RI Report is prepared. However, John Price noted that if the RI Report does not include a full data set, Ecology might not review the document.

### 200-ZP-1 OU

- Remediation Treatment Status:
  - Average Pumping Rate for October 1 through August 28, 2005: 192 gpm (Attachment 4, Figure 5)
  - All nine extraction wells are currently online. We are currently pumping at ~275 gpm. Within the next month, the engineering group is expecting to have valves and pumps in treatment building upgraded so that we can achieve higher pumping rates.

- Investigation Status:
  - Vista Engineering's DNAPL investigation completed all CPT work in vicinity of Z-1A. They are currently performing push-pull tests between Z-9 and Z-1A. Thermal measurements are going forward under Z-9 cover. Planning more depth-discrete groundwater sampling in several wells (e.g., 299-W15-6). Collecting Cold Creek fine grained samples in coming months (using casing driver).
- New Well Status:
  - Should know next month how many new wells can be installed in FY2006 to help define extent of deep CCL4 contamination detected in vicinity of Old Laundry Facility and T Plant. This number will be based on the FY2006 budget.
  - Dennis Faulk (EPA) noted that the data should drive the number of groundwater wells installed in FY2006, not the budget.
  - Dennis Faulk asked that FH schedule a meeting to update him on the 5-Year Review findings the week of September 26.
- RI/FS Status:
  - RI Report preparation is scheduled to begin October 1, 2005.
    - Dennis Faulk noted that a baseline assessment will be done as part of the RI/FS.
    - John Price noted that Ecology would not likely review an RI Report until a complete data set is available. DOE can send data questions to Ecology as needed.
    - Dennis Faulk noted that EPA has a list of Contaminants of Potential Concern (COPC's) and is working on a list of Contaminants of Concern (COC's). He would like to see a consistent process followed for listing COPC's and COC's for 200-ZP-1 and 200-UP-1.
  - Feasibility Study/Proposed Plan is scheduled to begin October 1, 2006.

#### **200-PO-1 OU**

- The Sampling and Analysis Plan was provided to DOE for formal transmittal to Ecology and approval.
- Interviews are being conducted for the DQO.
  - Dennis Faulk noted that a RCRA/CERCLA integration path forward needs to be developed for 200-PO-1. An action item was taken for DOE to schedule a meeting with Ecology to discuss the RI/FS (RFI/CMS) path forward.

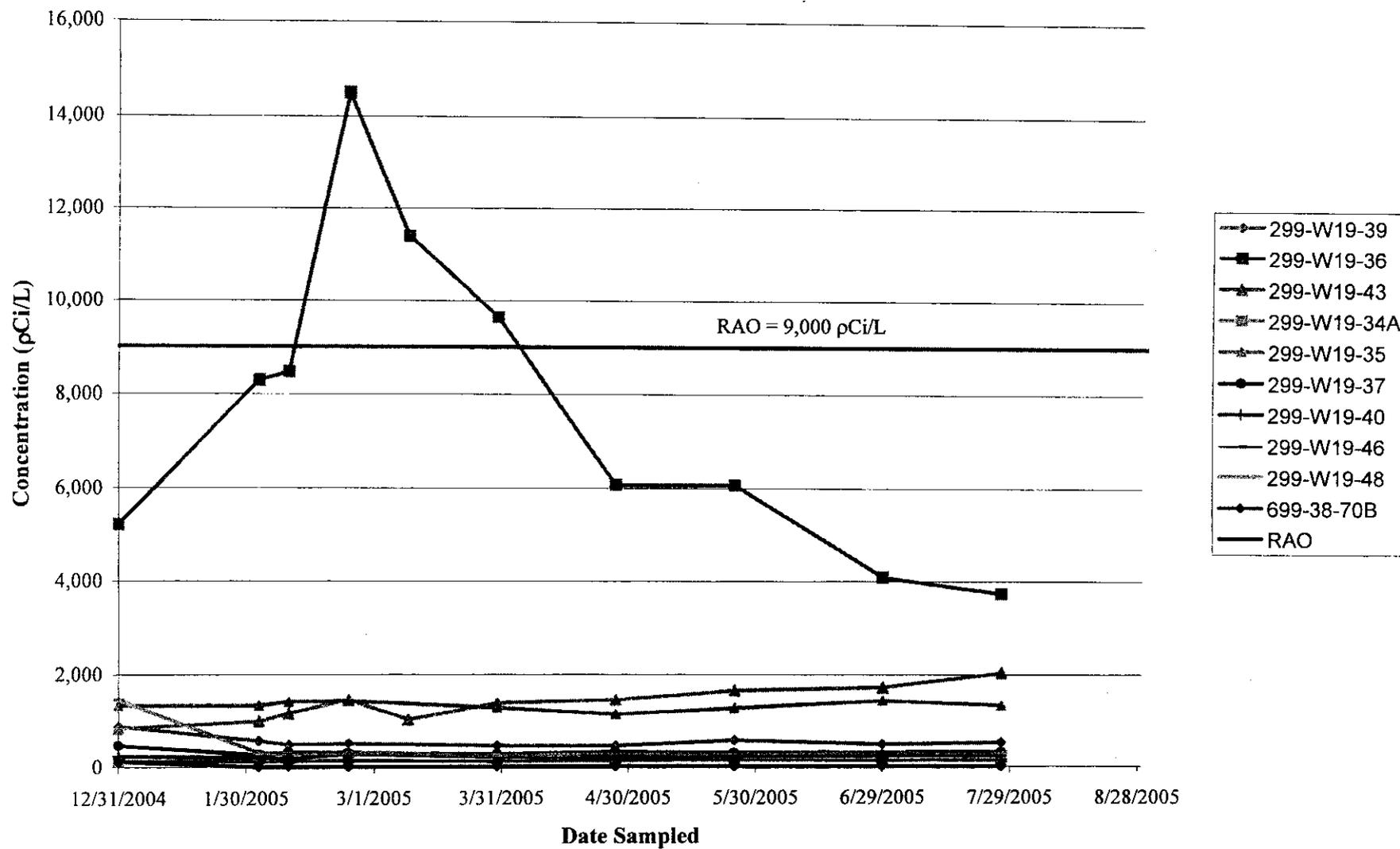
### **200-BP-5 OU**

- Drilling began on well 699-50-59 in September.
- The draft DQO report is planned to be completed for review by 9/30/05, later than planned. Interviews extended later than expected, and the effort is greater than initially thought.
- Well 699-50-59 reached a total depth of 173.2 ft below ground surface on September 13. The top of basalt was confirmed at 167.2 ft bgs. The unconfined aquifer at this location is approximately 2 ft thick with the depth to water at 165.2 ft bgs.
- Began working on the CERCLA 5 year review draft for 200-BP-5.

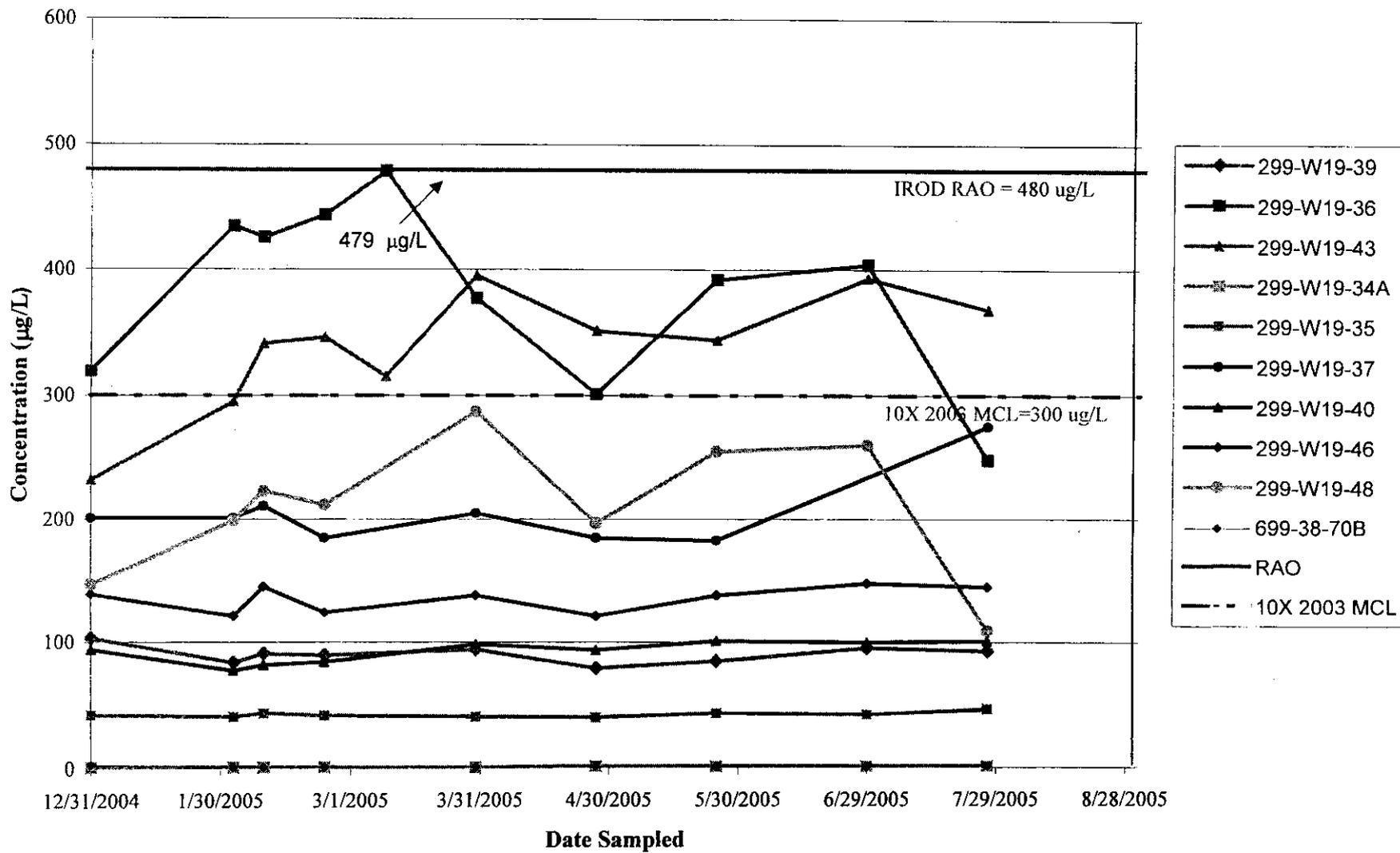
### **200-PW-1 (200-ZP-2) OU**

- Soil Vapor Extraction System (SVE) Status:
  - The system is currently pumping at a rate of approximately 309 cfm (Attachment 4, Figure 6).
- The passive system remains operational.
- Monthly monitoring
  - A Comparison of Maximum Carbon Tetrachloride Rebound Concentrations was provided (Attachment 4, Figure 7) and discussed.
  - Monthly Carbon Tetrachloride Concentrations for monitoring wells were provided (Attachment 4, Figure 8) and discussed.
  - Soil Gas Vapor Concentrations at passive wells were provided (Attachment 4, Figure 9) and discussed.

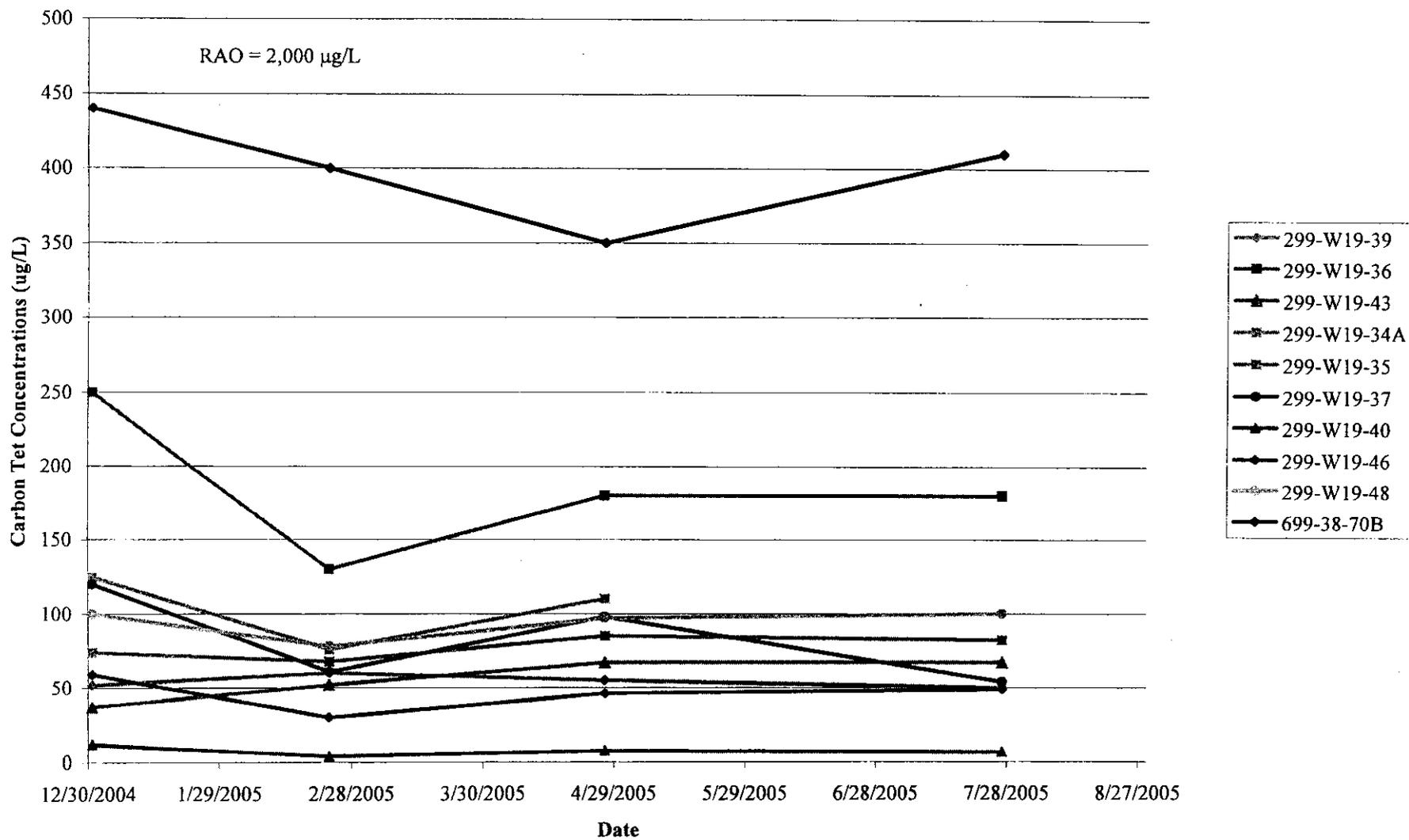
### 200-UP-1 Rebound Study, Technetium-99 (pCi/L)



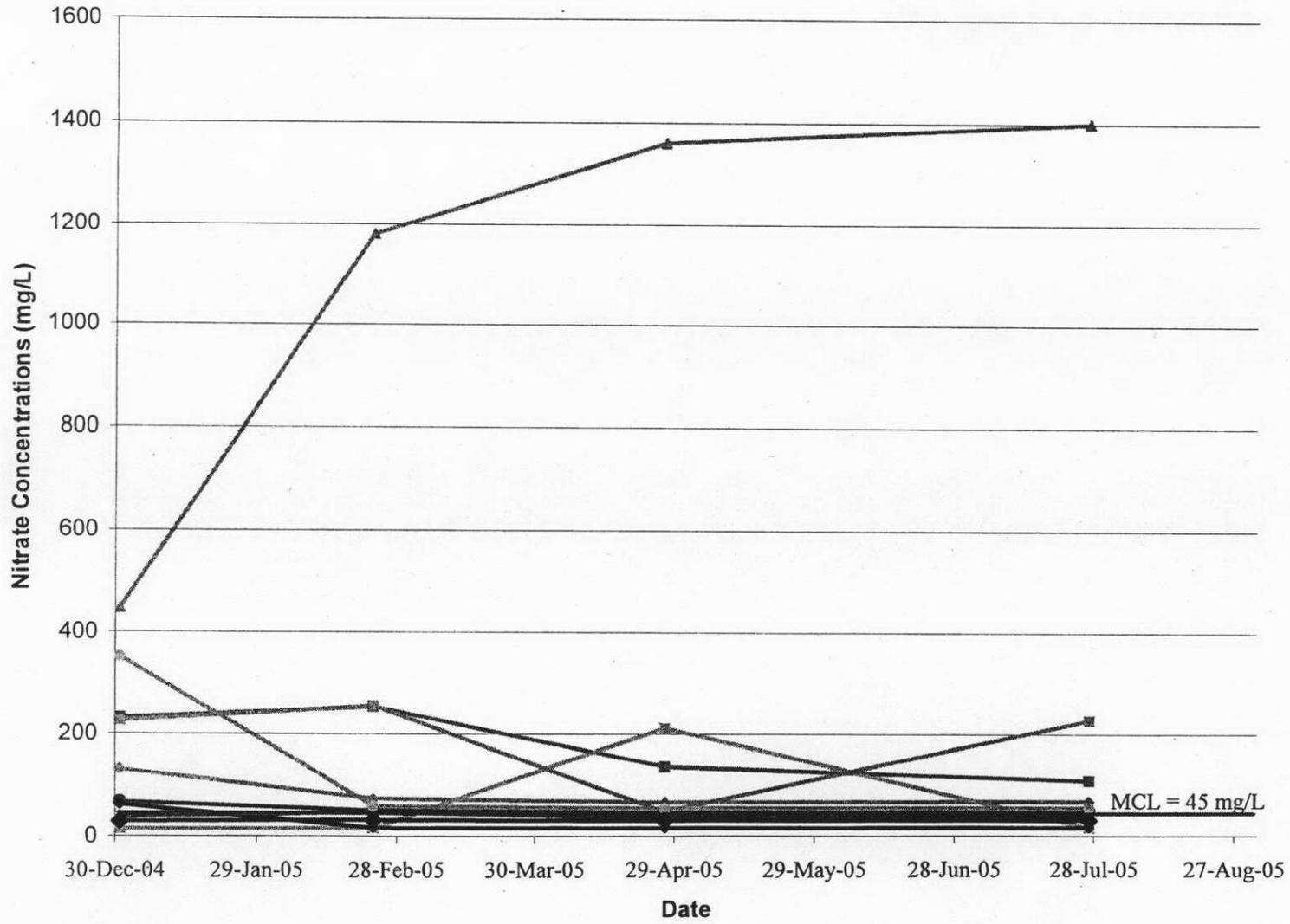
### 200-UP-1 Rebound Study, Uranium Concentrations



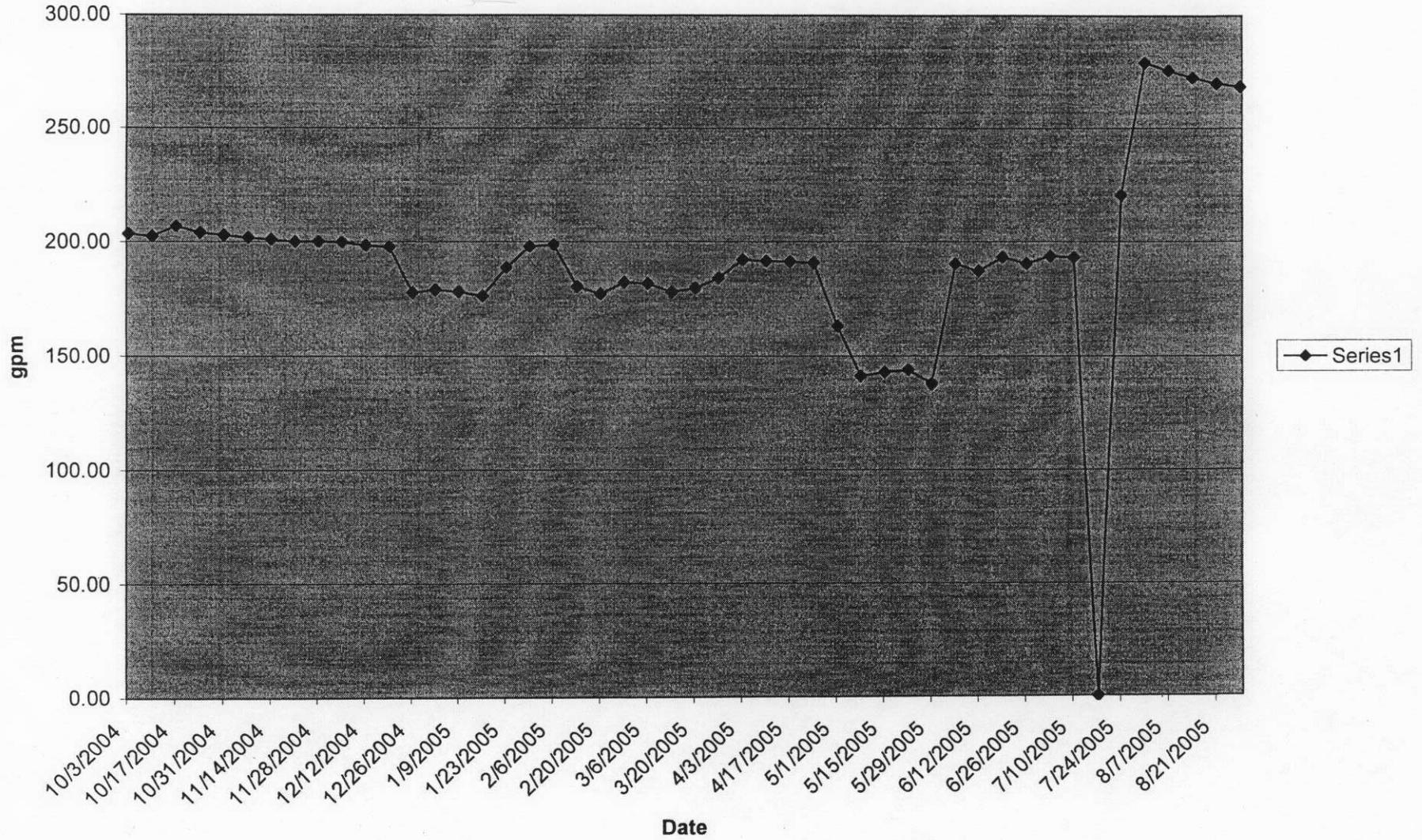
### Carbon Tetrachloride Rebound Study, 200-UP-1



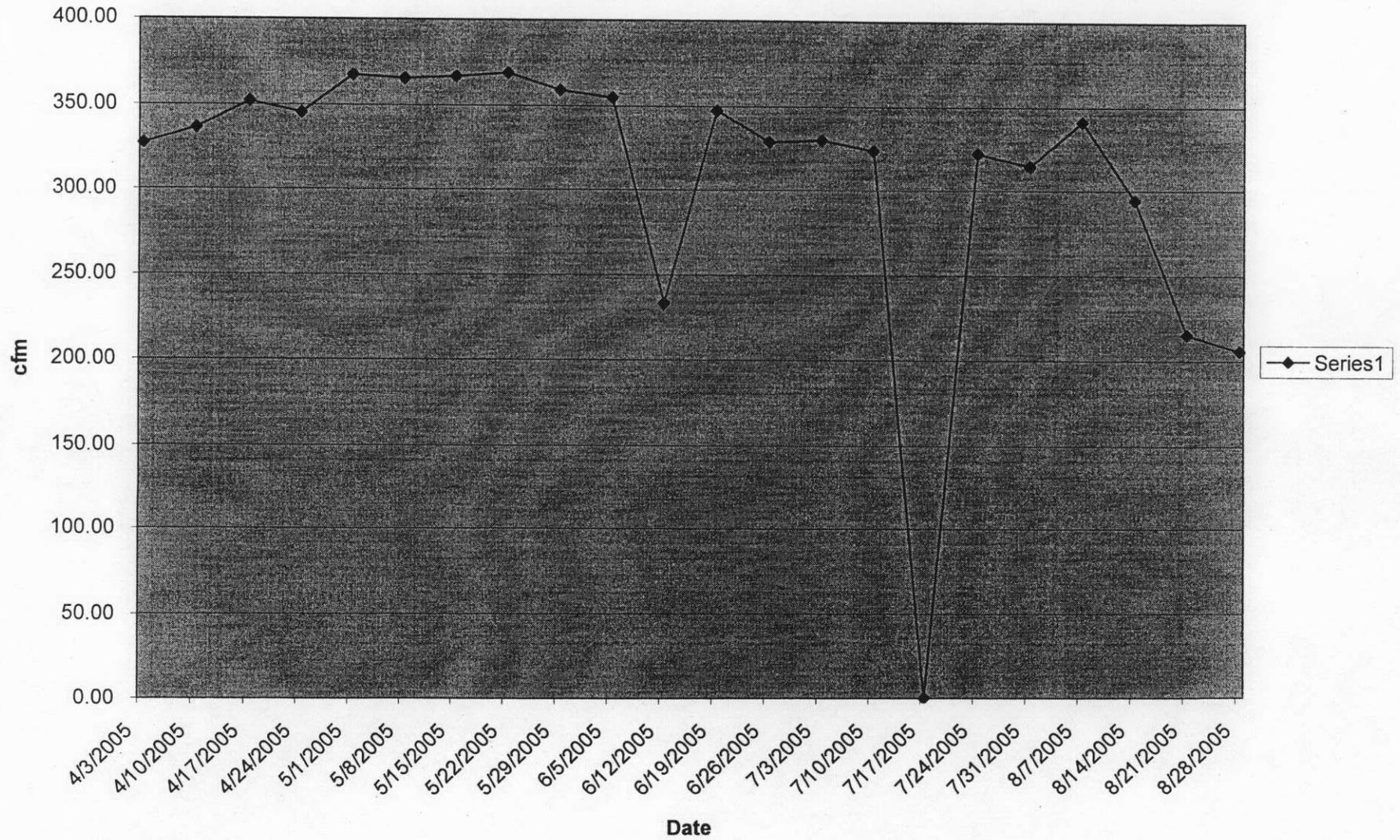
### Nitrate - Rebound Study 200-UP-1



200-ZP-1 Pumping Rates for FY2005



200-ZP-2 SVE Extraction Rate



Comparison of Maximum Carbon Tetrachloride Rebound Concentrations  
 Monitored at 200-PW-1 Soil Vapor Extractor  
 FY 2001 - FY 2005

Attachment 4, Figure 7

200-PW-1 (200-ZP-2)	Location (Well or Probe) /feet bgs	Site	July 2001 - June 2002		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 - August 2005	
			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	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	3.2	6	6.6	15	9.0	21	9.9	27	11.4	5	2.5	2
	CPT-18/ 15 ft	Z-9	1.4	6	2.4	15	2.4	21	2.5	27	3.1	5	0	2
	CPT-4A/ 25 ft	Z-1A	3.4	10										
	CPT-4E/ 25 ft	Z-1A	2.6	12	1.3	0			2.4	0	2.4	9	1.5	0
	CPT-16/ 25 ft	Z-9	1.1	6	2	15	2.6	21	3.6	27	4.4	5	1.2	2
	CPT-31/ 25 ft	Z-12												
	CPT-32/ 25 ft	Z-1A	13.0	12	8.3	6	6	6			8.6	9		
	CPT-30/ 28 ft	Z-18	0	12	0	6	0	6			1.6	9		
	CPT-13A/ 30 ft	Z-1A	2.6	12	1.6	6	2	6	1.9	0	8.3	9	3.9	0
	CPT-7A/ 32 ft	Z-1A	5.6	12	3.9	6	9.5	6	1.9	0	4.4	9	2.3	0
	CPT-27/ 33 ft	Z-9	1.5	6	1.7	15	2.7	21	2.7	27	8.4	5	1.2	2
	CPT-1A/ 35 ft	Z-12	11.3	12	22.0	15	18.3	6	18.0	0	14.0	9	6.6	0
	CPT-28/ 40 ft	Z-9									5.4	0		
	CPT-33/ 40 ft	Z-18	2.3	12							3.9	9		
	CPT-34/ 40 ft	Z-18	2.2	12	1.6	0			1.8	0	3.0	9	2.0	0
	CPT-21A/ 45 ft	Z-9									7.9	0	167	2
	W15-220ST/ 52 ft	Z-9			1.5	1								
	CPT-8A/ 60 ft	Z-9	45.3	6	35.9	15	35.9	21	35.9	27	32.4	5	18.3	2
	CPT-28/ 60 ft	Z-9	56.5	6							68.3	0		
	CPT-C3872 / 61 ft	Z-1A									15.5	9		
	CPT-18/ 65 ft	Z-9	not measured		4.2	15			4.2	27	6.7	5	4.7	2
	CPT-21A/ 65 ft	Z-9	133	6	90.0	15	150	21	150	27	170	0		
	CPT-1A/ 68 ft	Z-12	5.5	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			3.9	2
	CPT-32/ 70 ft	Z-1A	7.7	12							5	9		
	W15-219SST/ 70 ft	Z-9			1.9	1			5.7	22				
	CPT-4A/ 75 ft	Z-1A	7.1	3										
	CPT-18/ 75 ft	Z-9			4.5	15			8.3	27			0	2
	CPT-31/ 76 ft	Z-12												
	CPT-33/ 80 ft	Z-18												
	W15-82/ 83 ft	Z-9	68.7	6	85.8	15	85.8	21	85.8	27	95.8	5	4.9	2
	CPT-21A/ 86 ft	Z-9	186	6	206	15	244	21	244	27	209	5	223	2
	CPT-34/ 86 ft	Z-18												
	W15-95U/ 86 ft	Z-9												
	W15-218SST/ 86 ft	Z-9			1.6	2								
	CPT-2B/ 87 ft	Z-9	229	6	235	15	258	21	258	27	246	5	245	2
	CPT-4B/ 90 ft	Z-1A	3.2	10										
	CPT-1A/ 91 ft	Z-12	10.7	10										
	CPT-4A/ 91 ft	Z-1A	7.5	2										
	CPT-9A/ 91 ft	Z-9	74.3	6										
	W15-85/ 91 ft	Z-9												
	W18-252SST/ 100	Z-1A												
	W18-152/ 101 ft	Z-12	25.7	12	20.7	6	12.4	6			16.0	9		
	W15-6U/ 103 ft	Z-9											1.3	2
	CPT-4E/ 103 ft	Z-1A	16.1	12										
	W18-167/ 106 ft	Z-1A	297	12	243	6	266	6			196.0	9		
	CPT-4F/ 109 ft	Z-1A									11.9	9		
	W18-165/ 109 ft	Z-1A	278	12	328	6	205	6			35.2	9		
	W15-217/ 114 ft	Z-9	93.6	6	444	15	458	21	467	27	374	5	11.2	2
	CPT-24/ 118 ft	Z-9			27.8	15			15.3	27			20.4	2
	W15-220SST/ 118	Z-9			27.5	3			26.0	27			23.1	2
	W18-158L/ 120 ft	Z-1A	163	3										
	W15-219SST/ 130	Z-9			23.1	1			0	22				
	W18-249/ 130 ft	Z-18	196	12	46.3	6	41.0	6			64.9	9		
	W18-248/ 131 ft	Z-1A	306	12	162	6	180	6			249	9		
	W15-95L/ 144 ft	Z-9	31.8	6	25.1	15	40.3	21	40.3	27	26.7	5	15.9	2
	W15-219SST/ 155	Z-9			6.8	1			9.5	22				
	W15-220L/ 163 ft	Z-9			---	15			8	27			13.2	2
	W15-219L/ 175 ft	Z-9			---	15			23	27			0	2
	W15-9L/ 176 ft	Z-9			13.1	15	13.1	21	13.1	27	2.1	5	0	2
	W15-84L/ 180 ft	Z-9	not measured		25.9	15	25.9	21	25.9	27	23.0	5	0	2
	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											0	2

\* 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 2004 - August 2005

200-PW-1 (200-ZP-2)		11/17/2004	12/28/2004	01/19/2005	02/24/2005	03/10/2005	03/18/2005	05/05/2005	05/26/2005	06/23/2005	08/04/2005	08/19/2005
Location (Well or Probe) feet bgs	Site	CCl <sub>4</sub> (ppmv)	CCl <sub>4</sub> (ppmv)	CCl <sub>4</sub> (ppmv)	CCl <sub>4</sub> (ppmv)	CCl <sub>4</sub> (ppmv)	CCl <sub>4</sub> (ppmv)	CCl <sub>4</sub> (ppmv)	CCl <sub>4</sub> (ppmv)	CCl <sub>4</sub> (ppmv)	CCl <sub>4</sub> (ppmv)	CCl <sub>4</sub> (ppmv)
CPT-17/ 10 ft	Z-9	5.5	5.3	6.4	7.1		11.4				2.5	2.1
CPT-18/ 15 ft	Z-9	0	1.5	3.1	0		0				0	0
CPT-4E/ 25 ft	Z-1A							2.4	1.9	1.8	1.5	1.3
CPT-16/ 25 ft	Z-9	1.1	4.4	2.3	2.0		2.0				1.2	1.0
CPT-32/ 25 ft	Z-1A	0	1.7	2.7	5.5		8.0	8.6	6.6	6.8		
CPT-30/ 28 ft	Z-1A	0	1.3	1.5	1.6		0	0	0	0		
CPT-13A/ 30 ft	Z-1A	3.0	0	7.1	2.5		8.3	6.6	1.5	3.6	3.9	3.3
CPT-7A/ 32 ft	Z-1A	1.5	2.2	3.9	2.9		4.4	3.2	2.6	2.4	2.3	2.2
CPT-27/ 33 ft	Z-9	1.3	8.4	2.2	3.2		2.2				1.2	1.0
CPT-1A/ 35 ft	Z-12	4.7	14.0	13.2	11.3		4.3	6.0	11.1	9.2	6.6	6.6
CPT-28/ 40 ft	Z-9									5.4		
CPT-33/ 40 ft	Z-18							3.9	1.1	1.9		
CPT-34/ 40 ft	Z-18							3.0	1.1	1.9	2.0	1.7
CPT-21A/ 45 ft	Z-9								7.4	7.9	167	153
CPT-9A/ 50 ft	Z-9	39.4	48.4	48.4	46.4		50.8	50.3	53.9	49.7	50.6	44.0
CPT-9A/ 60 ft	Z-9	32.4	27.5	29.2	30.6		30.7	11.6	31.8	30.5	18.3	18.0
CPT-28/ 60 ft	Z-9							68.3	68.0	60.0		
CPT-C3872 / 61 ft	Z-1A	1.1	4.4	5.9	7.6		9.9	11.8	14.6	15.5		
CPT-9A/ 64 ft	Z-9	20.1	2.8	26.1	19.8		35.4	31.5	39.1	36.8	38.3	36.6
CPT-16/ 65 ft	Z-9	3.5	6.7	4.9	5.1		5.2				4.7	4.3
CPT-21A/ 65 ft	Z-9	79.9	146	143	161		166	170	153	147		
CPT-1A/ 68 ft	Z-12							6.2	13.7	2.0		
CPT-24/ 70 ft	Z-9										3.9	3.6
CPT-32/ 70 ft	Z-1A							5.5	3.4	4.5		
W15-219SST/ 70 ft	Z-9											
CPT-18/ 75 ft	Z-9										0	0
W15-82/ 83 ft	Z-9	-- (i)	-- (i)	-- (i)	95.8	30.6	-- (k)				1.7	4.9
CPT-21A/ 86 ft	Z-9	179	184	191	209		208	205	204	196	223	187
CPT-28/ 87 ft	Z-9	231	223	227	245		246	244	238	232	245	216
W18-152/ 101 ft	Z-12	10.4	12.3	14.6	13.3		16.0	14.8	13.2	13.4		
W15-8U/ 103 ft	Z-9										0	1.3
W18-167/ 106 ft	Z-1A	-- (i)	-- (i)	-- (i)	37.4		20.4	26.7	20.2	196.0		
CPT-4F/ 109 ft	Z-1A							7.8	7.7	11.9		
W18-165/ 109 ft	Z-1A	-- (i)	-- (i)	-- (i)	35.2		15.0	22.2	30.6	10.4		
W15-217/ 114 ft	Z-9	-- (i)	-- (i)	-- (i)	39.6		374				11.2	0
CPT-24/ 118 ft	Z-9										20.4	14.7
W15-220SST/ 118 ft	Z-9										23.1	21.3
W18-249/ 130 ft	Z-18	-- (i)	51.5	52.2	33.7		64.9	55.3	36.5	36.8		
W15-219SST/ 130 ft	Z-9											
W18-248/ 131 ft	Z-1A	-- (i)	-- (i)	-- (i)	70.5		249	173	169	155		
W15-95L/ 144 ft	Z-9	-- (i)	-- (i)	-- (i)	26.7		24.8				2.4	15.9
W15-219SST/ 155 ft	Z-9											
W15-220L/ 163 ft	Z-9										13.2	12.9
W15-219L/ 175 ft	Z-9										0	0
W15-9L/ 176 ft	Z-9	-- (i)	-- (i)	-- (i)	2.1		-- (j)				0	0
W15-84L/ 180 ft	Z-9	22.0	18.0	22.0	16.1	23.0	-- (k)				-- (m)	-- (m)
W15-46/ 217 ft	Z-9										0	0
		(h) Depths to probes measured through existing tubing. 60 ft deep probe confirmed and sampled. The other two depths measured (50 ft and 64 ft) could not be correlated to original depths (70 and 91 ft); these two probes were sampled also.										
		(i) Unable to sample; tubing will be installed										
		(j) Unable to sample before removal of tubing to support cross-well seismic investigation.										
		(k) Sampled on 3/10/05 prior to removal of tubing to support Vista Engineering cross-well seismic investigation.										
		(m) Unable to sample; well in use by Vista Engineering										

Carbon Tetrachloride Concentrations  
 Monitored at 200-PW-1 Passive Soil Vapor Extraction Wells  
 October 2004 - August 2005

200-PW-1 (200-ZP-2) Location (Well or Probe) /feet bgs	10/11/2004	11/15/2004	12/29/2004	1/21/2005	2/28/2005	3/18/2005	5/5/2005	5/31/2005	6/22/2005	8/17/2005
	CCl4 (ppmv)									
W18-6L/ 208 ft	8.6	20.3	21.2	21.1	18.4	22.9	23.2	17.0	13.4	15.0
W18-7/ 197 ft	18.6	21.6	20.8	6.8	24.6	23.1	21.9	5.0	19.0	0
W18-10L/ 183 ft	4.3	4.0	10.0	5.9	11.6	12.2	7.6	2.8	2.3	0
W18-11L/ 199 ft	0	4.8	6.9	2.5	2.8	7.3	6.7	1.6	2.0	1.2
W18-12/ 198 ft	1.4	1.7	8.1	0	5.2	9.9	5.6	0	0	1.9
W18-246L/ 170 ft	14.7	21.1	20.7	16.8	19.7	22.0	21.1	8.1	9.8	25.3
W18-247L/ 167 ft	0	0	4.6	0	4.4	6.4	6.4	0	9.3	7.8
W18-252L/ 175 ft	0	13.3	16.8	1.4	14.4	18.0	11.3	0	14.8	0

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

1200 Jadwin/Rm 1-C1

September 15, 2005

Lanny Dusek (FH) provided copies of Central Plateau D&D Facility and Waste Site Cleanup Decisions dated 9/15/05 (Attachment 6, Figure 1). John Price stated that a float number needs to be reported and suggested placing the number on the decision schedule that was handed out. John agreed that if that is done then the separate float table provided by Mike Hickey could be retired.

### **SOURCE OPERABLE UNITS STATUS**

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

- Sampling at all 17 vent risers in the 218-W-3A Burial Ground was initiated on 8/25 and completed on 9/8.
- The Step II investigation of the deep vadose zone using the EAPS (Enhanced Access Penetration System) technology was initiated on 6/27/05. Sampling was completed at 6 of the 9 initial sites on 8/19. Planning is continuing for sampling the last 3 initial sites and 6 additional sites.
- Sampling for carbon tetrachloride in existing wells was initiated on 6/22. Ten of the approximately 30 planned wells have been sampled for soil vapor and groundwater. Groundwater pumps have been pulled from 8 additional wells in preparation for sampling in approximately one week, after the wells have had time to re-equilibrate.
- Vista Engineering Technologies (VET) completed soil vapor sampling using a cone penetrometer in the vicinity of the 216-Z-1A site on 8/17. Additional investigations ("push-pull testing") was initiated using existing soil vapor probes on 9/12.

#### **200-TW-2 & 200-PW-5 (no change)**

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

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

#### **200-CS-1**

- FS is on 120 day hold

#### **200-CW-5, CW-2, CW-4, & SC-1**

- Received EPA's response to comments.
- Continue to work with EPA to resolve Mr. Riggsby's comment.

### **Ecological Risk Assessment**

- Phase I SAP approved 7/08/05. Phase II SAP approved 7/21/05.
- Phase I soil and biota sampling was completed on 8/24/05. All soil samples have been processed and sent to the lab. The Phase I biota samples are being processed and will be delivered to the lab by 9/23/05.
- Phase II soil sampling began on 9/13/05 in the reference site. The Phase II biota samples will begin processing on 9/19/05. All Phase II soil and biota samples will be processed and delivered to the labs by 9/28/05.
- Some of the lizard samples from the Phase I sites were too small (insufficient mass) for the full analyte list. The analyte list is being reduced for those samples according to the SAP Table 2-6 analyte priority list. The GEA and PCB analyses will be retained in all cases.
- John Price noted that the Hanford Natural Resource Council was close to passing a resolution for criteria on reference sites and indicated it might result in a request for different reference sites.

### **200-IS-1 & 200-ST-1**

- Initiated collaborative DQO development with Ecology.
- Kevin Leary (DOE) commended Ecology on initiating the regulatory analysis effort. John Price noted that Ecology is happy with the progress.

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

### **200-MW-1**

- Path forward letter submitted to RL. Planning for High Resolution Resistivity (HRR) around A-4 to provide additional data to support more definitive path forward.

### **200-UR-1**

- The cost estimating changes requested by Ecology for the work plan are being finalized.

### **200-SW-1/2**

- Contract for non-intrusive geophysical characterization services for multiple burial grounds was awarded 8/8/05. Geophysical investigation began 8/17/05. Electromagnetics (EM), magnetometry (MAG), and ground penetrating radar (GPR) surveys have been completed in the 200 West Area burial grounds. EM, MAG, and GPR surveys have been initiated in the 200 East Area burial grounds.
- John Price noted that there is public interest in the status of 200-SW-1/2 project activities. Ecology asked DOE to put together a report on the results of the non-intrusive investigation methods being conducted.

### **BC Cribs and Trenches**

- FFS and PP, Draft A, formal comments were transmitted by EPA on 8/4/05.
- Responses to EPA comments were transmitted 9/8/05.
  - Rod Lobos (EPA) stated that he was reviewing the responses and will schedule a meeting with DOE to discuss.
- Preparation of SAP to ground-truth HRR characterization neared completion.

### **200-UW-1**

- Timed-Critical-Response Action (TCRA) documentation to accelerate removal of piping and interferences associated with installing the proposed barriers for 216-U-8 and 216-U-12 is being updated to incorporate Ecology comments. Discussions on the associated specific SAP were held on 9/13/05.
- Lanny Dusek presented a draft 200-UW-1 Critical Path Summary (Attachment 6, Figure 2).
- The 200-UW-1 Record of Decision (ROD) draft was received by RL from Ecology on 9/6/05 for initial review. John Price indicated that once Ecology receives and incorporates RL's initial feedback then the draft ROD will be redistributed to the Tri-Parties for review. Craig Cameron of EPA confirmed agreement with this plan for review.
  - John Price stated that he will be checking the documentation against a punch list he has circulated and the EPA checklist.

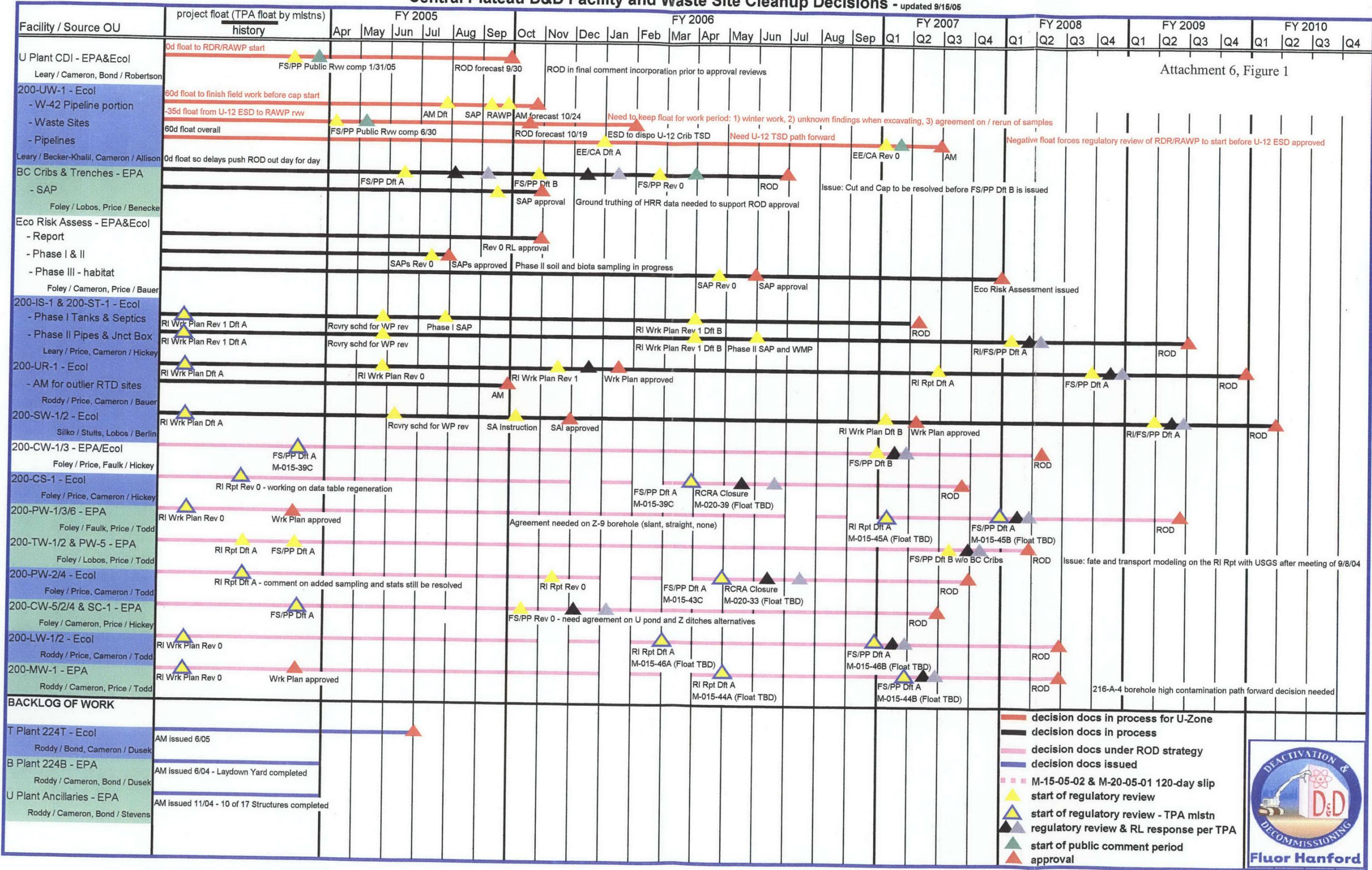
### **FACILITIES STATUS**

- **U Plant CDI** – The draft ROD is in final comment incorporation by EPA and requires EPA headquarters review prior to entering final signoff by Tri-Parties.
  - Kevin Leary (DOE) asked about the status of the EPA effort. Craig Cameron stated that he was nearing completion of his review and would be sending the draft ROD to EPA headquarters within the next two weeks.
- **U Ancillaries** – Since last UMM, three remaining structures were demolished and disposed. Have completed the project with D&D of 11 of 17 structures (10 were originally planned for the project).
- **Facility Binning** - The Central Plateau Facility Binning Report (DOE/RL-2005054) was prepared and is under continuing review by the Tri-Parties.
- **B-Plant Stack** – Downgrade of this stack to a minor emission unit was approved by EPA and WDOH, and lastly requires a significant modification to the Air Operating Permit (AOP) prior to full implementation. The AOP mod request was transmitted by RL on 8/23/2005. A public comment period has been set for October 10 - November 9.
- **PUREX Stack** – Downgrade of this stack to a minor emission unit is under review by EPA and WDOH. A deep bed filter/aerosol test was performed the week of 8/29/05 to provide a current basis for the request. The test results support the downgrade request and are being documented in a report to be transmitted to the regulatory agencies.

- **209E, B-Plant, U-Plant, PUREX and REDOX Ventilation** – Transition from continuous ventilation to intermittent ventilation first discussed with WDOH on 5/19/05. A Notice of Construction (NOC) for 209E is being prepared for submittal to WDOH and EPA in September.

# Central Plateau D&D Facility and Waste Site Cleanup Decisions - updated 9/15/05

Attachment 6, Figure 1

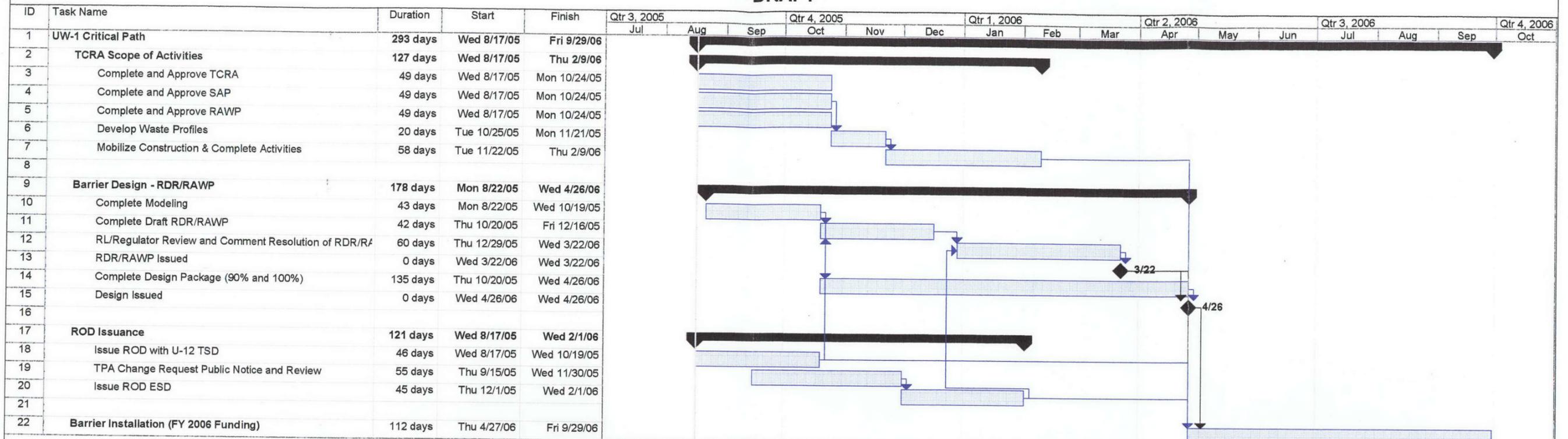


- decision docs in process for U-Zone
- decision docs in process
- decision docs under ROD strategy
- decision docs issued
- M-15-05-02 & M-20-05-01 120-day slip
- ▲ start of regulatory review
- ▲ start of regulatory review - TPA mstn
- ▲ regulatory review & RL response per TPA
- ▲ start of public comment period
- ▲ approval



**Fluor Hanford**

### UW-1 Critical Path Summary (8-17-05) DRAFT



Project: DRAFT UW-1 Critical Path Su  
Date: Wed 8/17/05

Task		Progress		Summary		External Tasks		Deadline	
Split		Milestone		Project Summary		External Milestone			

**Issue Resolution Meeting  
Agreements and Issues List  
September 15, 2005  
200 Area Unit Managers' Meeting**

**Issue: Assigning New WIDS Entries (e.g., Pipelines) to OUs – (Ecology)**

Issue Statement: Ecology noted that ORP/CH2M Hill are having pipelines added to WIDS; Ecology feels a strategy is needed for pipelines that are not assigned to soil site OUs.

Issue Actions: Ecology will also discuss the concern with Tank Farms. Parties need to work on a strategy. Specific actions were captured in the Action Item List to support reaching resolution at or shortly following the next UMM.

Issue Status: Issue initially raised at the June 16, 2005 UMM Source OU Status Meeting. DOE, Ecology, and EPA need to discuss actions and responsibilities. Specific preliminary actions were assigned during the August 18, 2005 UMM. The associated action items (64, 64a, 64b, and 64c) were reviewed and discussed. A meeting with Tank Farms needs to be scheduled to discuss possible TPA change package strategy.

Issue Resolution: TBD

**Issue: Substantial and Continuous Remediation**

Issue Statement: CERCLA requirement to commence remedial action within 15 months of decision could require DOE to implement actions on each document that would not align with TPA priorities, including holding off on completing Records of Decision.

Issue Actions: RL/FH will provide a white paper to EPA and Ecology for their consideration in formulating a policy. Tri-parties reach agreement and document in appropriate location.

Issue Status: Added to issues list in August 18, 2005 UMM. White paper (Attachment 8, Figure 5) drafted by FH and in RL review was distributed by Lanny Dusek and discussed briefly in the August 18 UMM with the intention that it be reviewed and then discussed at the next meeting.

Issue Resolution: Completed per submittal of the white paper *Analysis of Requirements for Substantial Continuous Physical Onsite Remedial Actions* (Attachment 8).

**Agreement:** The parties reached agreement on the policy provided in the white paper (Attachment 8).

**Analysis of Requirements for  
Substantial Continuous Physical Onsite Remedial Action**

**Introduction**

Multiple CERCLA RODs are anticipated for the Hanford Site 200 Area in the near future. In some cases, Tri-Party Project Managers may want to sequence or prioritize remedy initiation/performance. CERCLA 120(e)(2) and the TPA establishes time-frame requirements for remedy initiation/performance.

This white paper, prepared by Fluor Hanford (FH) Environmental Protection, analyzes the applicability of the subject requirements at Hanford to foster Tri-Party discussion in pursuing agreement on this subject.

**Analysis**

CERCLA Section 120(e)(2) specifies:

*The Administrator shall review the results of each investigation and study conducted as provided in paragraph (1). Within 180 days thereafter, the head of the department, agency, or instrumentality concerned shall enter into an interagency agreement with the Administrator for the expeditious completion by such department, agency, or instrumentality of all necessary remedial action at such facility. Substantial continuous physical onsite remedial action shall be commenced at each facility not later than 15 months after completion of the investigation and study. All such interagency agreements, including review of alternative remedial action plans and selection of remedial action, shall comply with the public participation requirements of section 9617 of this title.*

In accordance with the above provisions, DOE entered into an interagency agreement May 15, 1989 (i.e., TPA). The TPA addresses the **substantial continuous physical onsite remedial action** requirement:

*DOE shall commence remedial action within fifteen (15) months after completion of the RI/FS (including EPA selection of the remedy) for the first priority operable unit, in accordance with Section 120(e)(2) of CERCLA and the schedule in the Action Plan. DOE shall complete the remedial action as expeditiously as possible, as required by CERCLA Section 120(e)(3). In accordance with the schedule(s) in the Action Plan, subsequent remedial action at other operable units shall follow and be completed as expeditiously as possible as subsequent RI/FSs are completed and approved. The Parties agree that this phased schedule satisfies Section 120(e)(2) and (3) of CERCLA."*

The TPA requirement, shown above [i.e., .... commence remedial action within fifteen (15) months after completion of the RI/FS (including EPA selection of the remedy) for the

first priority operable unit.... ]<sup>1</sup> has been met. Specifically, remedial action was initiated within 15 months of 1100 Area ROD issuance.

Pursuant to CERCLA 120(e)(2), the 15-month remedy initiation requirement applies to each facility/site that is scored and listed on the NPL. Since Hanford Site Areas (i.e., 100, 200, 300, and 1100 Areas) were independently scored and listed on the NPL, the 15-month remedy initiation requirement applies independently to each Hanford Site Area.

Because the 15-month remedy initiation requirement applies independently to each Hanford Site Area, the Tri-Party project managers, in some instances, cited the 15-month remedy initiation requirement in the initial Area RODs. The table below lists the Hanford Site RODs that have been issued to date and indicates if the 15-month remedy initiation requirement was specifically cited in the ROD.

Unlike the initial 100 and 300 Area RODs, the initial 200 Area ROD (200-ZP-1 groundwater pump-and-treat) did not cite the 15-month remedy initiation requirement. Nevertheless, the remedy was initiated within 15 months of ROD issuance.

ROD	Does the ROD cite the 15-month remedy initiation requirement?	Type of OU? (groundwater or waste site)	NPL Area
1100 Area EPA/ROD/R10-93/063 1993	No	Waste Site	1100
100 Area OU 01 EPA/ROD/R10-95/126 09/28/1995	Yes	Waste Site	100
100 Area OU 21 EPA/ROD/R10-96/151 02/02/1996	No	Waste Site	100
100 Area OU 02 EPA/ROD/R10-96/134 03/26/1996	No	Groundwater	100
100 Area OU 15 & 27 EPA/ROD/R10-99/039 07/15/1999	No	Waste Site	100/200
100 Area OU 29 EPA/ROD/R10-99/059 09/17/1999	No	Waste Site	100
100 Area OU 08 & 09 EPA/ROD/R10-99/112 09/29/1999	No	Waste Site and Groundwater	100
100 Area OU 30 EPA/ROD/R10-00/120 01/18/2000	No	Waste Site	100
100 Area OU 28 EPA/ROD/R10-00/121 09/25/2000	No	Waste Site	100

<sup>1</sup> The first priority OU identified in the TPA Action Plan, Appendix C, *Prioritized Listing Operable Units* (Fourth Amendment, January 1994), was 1100-EM-1. The 1100 Area ROD (EPA/ROD/R10-93/063 -- issued 9/24/93) specified the remedy for the 1100-EM-1 OU. Remedial action was initiated within 15 months of ROD issuance.

ROD	Does the ROD cite the 15-month remedy initiation requirement?	Type of OU? (groundwater or waste site)	NPL Area
200 Area OU 14 EPA/ROD/R10-95/100 01/20/1995	No	Waste Site	200
200 Area OU 13 EPA/ROD/R10-95/114 05/24/1995	No	Groundwater	200
200 Area EPA/541/R-97/048 02/11/1997	No	Groundwater	200
200 Area OU 15 and 27 EPA/541/R-99/039 07/15/1999	No	Waste Site	100/200
300 Area OU 01 and 02 EPA/ROD/R10-96/143 07/17/1996	Yes	Waste Site and Groundwater	300
300 Area OU 03 EPA/ROD/R10-01/119 04/04/2001	Yes	Waste Site	300

U-Plant is a Key Facility and is subject to TPA Section 8 provisions. Accordingly, the 15-month remedy initiation requirement should not be cited in the forthcoming U-Plant ROD. Note, since there is overlap between the remedial actions for the 200-UW-1 OU and U-Plant/CDI, TPA Section 8.7.6 provisions need to be considered.

In situations where multiple RI/FSs are performed for an NPL site (i.e., Hanford Site Area), the 15-month remedy initiation requirement applies to the initial ROD. Initiation of the subsequent remedies may be delayed beyond 15 months, per project manager's discretion, so long as remedies are completed expeditiously and in accordance with TPA schedule commitments.

CERCLA 120(e)(2) requires commencement of *substantial, continuous, and physical* activities within 15 months of remedy selection. The terms *substantial, continuous, and physical* are undefined in CERCLA regulations. Hence, determining compliance with the *substantial, continuous, and physical* criteria involves perspective/discretion. The following factors may influence compliance determinations.

- For some remedies, it may be inappropriate to perform remedial actions 24 hours a day, 7 days a week. Hence, the literal definition of *continuous* may not be appropriate in some instances.
- Remedial activities may vary as dictated by site hazards and the associated remedy. For example, an institutional controls remedy is different than a remove/treat/dispose remedy. For this reason, compliance determinations regarding the *substantial, continuous, and physical* criteria are remedy dependent and need to be made on a case-by-case basis.

- There are multiple OUs and RODs associated with the Hanford Site Areas. Also, the 100 Area Remaining Sites ROD includes OUs from the 100 and 200 Areas. Hence, determining compliance with the *substantial*, *continuous*, and *physical* criteria may involve examining multiple remedial activities.

Sections 7.3.9 and 7.3.10 of the TPA include provisions that allow TPA project managers to exercise discretion and interagency coordination regarding remedy initiation, prioritization, and performance. Additionally, these TPA provisions provide a mechanism for establishing *substantial*, *continuous*, and *physical* criteria. The subject TPA sections specify:

*(7.3.9) Following issuance of the ROD, The remedial design (RD) phase will be initiated in accordance with a schedule agreed to by the project managers. Milestone change requests will be processed in accordance with Section 12.0.*

*(7.3.10) The remedial action (RA) phase will be initiated in accordance with a schedule agreed to by the project managers. Milestone change requests will be processed in accordance with Section 12.0.*

### **Conclusions**

- The TPA requirement to commence remedial action within 15 months of remedy selection for the first priority operable unit (i.e., 1100-EM-1 OU) has been met.
- The 15-month remedy initiation requirement applies independently to each Hanford Site Area.
- The 15-month remedy initiation requirement should not be cited in the U-Plant/CDI ROD.
- Remedies have been initiated for the each of the Hanford Site Areas. Therefore, initiation of forthcoming remedies may be delayed beyond 15 months, per project manager's discretion, so long as remedies are completed expeditiously and in accordance with TPA schedule commitments.
- Determining compliance with the *substantial*, *continuous*, and *physical* criteria necessitates discretion, case-by-case determinations, and coordination/communication between the Lead Agency and Lead Regulatory Agencies.
- TPA sections 7.3.9 and 7.3.10 allow/enable TPA project managers to establish schedules and criteria for remedy initiation and on-going performance.

### **Recommendations**

For the forthcoming 200 Area RODs, FH recommends that the sequencing or prioritization of remedy initiation/performance be addressed through TPA 7.3.9/7.3.10

provisions. These TPA provisions require remedy initiation in accordance with schedule(s) agreed to by the TPA project managers (i.e., milestones). Note, since remedial activities for the 200 Area have already been initiated, initiation of subsequent 200 Area remedies may be delayed beyond 15 months, per project manager's discretion, so long as remedies are completed expeditiously and in accordance with TPA schedule commitments.

Determining if remedial activities are *substantial*, *continuous*, and *physical* involves discretion and coordination between the Lead Agency and Lead Regulatory Agencies. Since discretion varies from person to person, communication is important to normalize expectations. Moreover, determining compliance may involve multiple OUs, prime contractors, remedies, and regulatory agencies. FH recommends routine communication and planning between the Lead Agency and Lead Regulatory Agencies to ensure continued compliance. With regard to the 200 Area, the 200 Area Unit Manager Meetings may be an appropriate communications forum. These meetings typically address remedial activities for the various OUs in the 200 Area. Also, FH recommends use of TPA Sections 7.3.9 and 7.3.10 provisions to support establishment of *substantial*, *continuous*, and *physical* criteria.

**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
41	Reconstruct Agreements for ZP-1 Expansion.	FH - Byrnes	DOE-RL	01/20/05	02/17/05	09/30/05		Revise RDRA Document
53	Review original TPA and early change packages for better understanding on requirements for 2008 M-015 milestone; mock up change package to provide clarification of requirements to meet 2008 milestone to be included in next modification to M-015-00C.	All - Williams	All	02/17/05	TBD	11/17/05		Clarification waiting for next M-015 change pkg. Hold for 120 day evaluation of characterization needs
53a	Provide clarification wording for M-015 completion criteria at next meeting. Discuss TPA Milestone wording for M-15-00C Draft A of RI/FS.	All - Williams	All	04/21/05	07/30/05	11/17/05		FH - Williams will set up meeting to discuss
56	Discuss Region 10 comments on 200-UW-1 Proposed Plan to resolve path forward on RCRA/CERCLA integration.	EPA/Ecology - Faulk	RL/FH	02/17/05	03/17/05	08/30/05	09/15/05	Closed - Ecology workshop held 8/15/05
56a	Prepare white paper explaining TPA RCRA/CERCLA integration process for UMM.	Ecology - Price	All	04/21/05	6/16/05	08/30/05	09/15/05	Closed - Ecology workshop held 8/15/05 - Instead of white paper, John will send out a memo.
56b	Provide path and schedule for remediation decision for U Waste Sites Crib 216-U-12 crib, a RCRA TSD unit.	Ecology - Price	RL/FH	08/18/05	09/15/05		09/15/05	Closed - Ecology workshop held 8/15/05
58	To provide a response to Ecology's comment requesting revision of 200-CS-1 data tables to be in line with 200-PW-2/4, review costs, methods, and impacts to the RI Report.	RL/FH - Todd	Ecology	02/17/05	ASAP	09/30/05	09/15/05	Completed per revision.
60	Finalize Central Plateau Binning Report, DOE/RL-2005-54	RL/FH - Dusek	EPA/Ecology	04/21/05	05/19/05	10/20/05		Resolved Ecology comments.
62	Request extension on BP-5/PO-1 waste storage area.	RL/FH - Winterhalder	EPA/Ecology	04/21/05	05/19/05	09/30/05		Will review area storage against 12 month clock.
64	Determine solution to adding pipelines not associated with an OU into WIDS with only a TBD in the OU field versus needing to link them to Waste Management Areas (WMAs).	All - Stults	All	08/18/05	09/15/05	10/20/05		Ecology reviewed TPA for links - suggested a TPA change package be written to include link information in Appendix B as part of close out of TPA MP-14 discussions.
64a	Discuss with ORP (Janet Badden of CH2M) drafting necessary TPA changes.	Ecology - Stults	All	08/18/05	09/15/05	10/20/05		See action 64 status
64b	Provide briefing (from Jeff Shearer) at next UMM on considerations/recommendation for updating WIDS to recognize WMA links for pipelines.	RL/FH - Dusek	All	08/18/05	09/15/05		09/15/05	Closed - See action 64 status
64c	Review TPA-MP-14, "Maintenance of the Waste Information Data System," prior to the next UMM to be familiar with background for discussion.	All - Dusek	All	08/18/05	09/15/05		09/15/05	Closed - See action 64 status
65	Schedule 200-PO-1 Regulatory Path forward meeting with Ecology	DOE - Tortoso	Ecology	9/15/2005	10/20/2005			
65a	Present SAP validation at next UMM	PNNL-Luttrell	EPA/Ecology	09/15/05	10/20/05			