

SUBJECT: HTW – BCT Meeting
November 17, 2010

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HydroGeoLogic, Inc.
Agenda & Notes

Fort Ord Hazardous and Toxic Waste Base Closure Team (BCT) Meeting
17 November 2010, 10:00 AM
Former Fort Ord, Monterey, California

1. Groundwater Remediation System Update

The Northwest Treatment System (NWTS) was taken off-line for much of the period between 12 October 2010 and 03 November 2010. This step was taken to provide safe working conditions during construction to install the new pipeline and power lines to IW-OU1-10-A and to install the pump and modify the control system at the NWTS. The construction was completed and the system restarted at 4:00 p.m. Pacific Coast Time on 03 November 2010 with IW-OU1-10-A on-line and pumping approximately 30 gallons per minute (gpm). Total system pumping was approximately 80 gpm when the NWTS was restarted.

As of late September 2010, the NWTS had removed approximately 0.39 pound of TCE. Since system startup in 2006, the NWTS has removed approximately 4.8 pounds of total volatile organic compounds. Only minimal change in mass removal occurred in October because of the construction interruptions. Mass removal summaries will be updated for the next BCT meeting.

Replacement of all couplings on the top of the granular activated carbon tanks was completed during the IW-OU1-10-A construction period. Replacement materials have been obtained for the couplings on the tank bottoms, but installation will be postponed until the next carbon change-out is needed to avoid draining the units early or flooding the containment.

Extraction well EW-OU1-60-A operated nearly continuously from the last BCT meeting (22 September) through 18 October, except for deliberate shutdowns as noted above. The average pumping rate was approximately 1.1 gpm.

2. Long-Term Monitoring Update

The September sample results were validated with no change to the preliminary results reported at the Base Closure Team (BCT) meeting three weeks ago. For ease of reference, excerpts from the summary presented at the BCT meeting are presented below (*italicized text*).

As illustrated in Table 1, TCE concentrations remained below 1 microgram per liter ($\mu\text{g/L}$) at all extraction wells except MW-OU1-87-A and EW-OU1-71-A. The reported concentrations were very similar to the June 2010 sampling results—the maximum difference was 0.3 $\mu\text{g/L}$.

The principal changes observed since the March 2010 sampling were:

- *The TCE concentration at well EW-OU1-53-A decreased by 1.1 $\mu\text{g/L}$ and increased by 0.8 $\mu\text{g/L}$ at well EW-OU1-52-A. The magnitude of these changes is not particularly significant in relation to the trend observed at each individual well. However, well EW-OU1-53-A is closer to the trailing edge of the TCE plume by approximately 200 feet. The September 2010 results mark the first time that the TCE concentration at that location has been less than that observed further downgradient at well EW-OU1-52-A. This observed shift in relative concentrations may indicate that the maximum concentrations in the trailing edge of the plume have passed well EW-OU1-53-A.*

- *TCE concentrations at well MW-OU1-61-A had been increasing since December 2008 and reached 15 µg/L in the March 2010 sample. The September 2010 sample result for well MW-OU1-61-A, however, showed TCE at 8.8 µg/L. Well MW-OU1-50-A is upgradient of MW-OU1-61-A by approximately 150 feet. TCE concentrations at MW-OU1-50-A have been trending lower since September 2007 (16 µg/L) and have been ≤ 1 µg/L since September 2009. The September 2010 TCE concentration at MW-OU1-50-A was the lowest observed at that well (0.31 J µg/L) since sampling began in 2006. Together, these results suggest that the TCE concentration at MW-OU1-61-A may be in a final downward trend.*

The preliminary draft figure showing TCE concentration contours for the September 2010 groundwater sampling is also attached for reference (Figure 6 from the upcoming 2010 Annual and Third Quarter Groundwater Monitoring Report).

The laboratory results from the resample of 2-inch well PZ-OU1-10-A1 have not yet been received.

The next scheduled long-term monitoring sampling event will occur in March 2011. Performance monitoring samples from the active extraction wells, the NWTS, and wells MW-OU1-61-A and PZ-OU1-10-A1 will be collected in December.

3. Report Submittals

The Draft 2007 Annual Groundwater Monitoring Report will be submitted in November. The 2010 First Quarter Groundwater Monitoring Report was delivered during the 02 – 03 August period. Comments are due in early November. Comments received on this report will be addressed in the 2010 Annual and Third Quarter Groundwater Monitoring Report (in preparation). The last stamped design drawing was received late Friday 05 November and the Final Design Technical Memorandum was submitted on 09 November.

Table 2 summarizes the status of outstanding and scheduled reports for 2009 – 2010.

4. Other

4a) *Well Abandonment*

HGL will prepare a list of wells to be considered for abandonment and present that list to the Army and the regulators at the January BCT meeting. HGL will consult with University of California at Santa Cruz staff in developing the list of wells.

4b) *Previous Meeting Minutes*

Draft meeting minutes for August through October will be submitted within the next 2 weeks.

There are no other planned agenda items.

Table 1
TCE and cis-1,2-DCE in OU-1 FONR Groundwater Remediation System - Performance Monitoring
BCT Meeting for Former Fort Ord, at Monterey CA - November 2010

Began: Date	FONR Extraction Well (listed from south to north)					Boundary Extraction Well (from west to east)				NWTS		
	Nov-10	Oct-07				Jul-06				INFLUENT	MIDPOINT	EFFLUENT
	IW-10	MW-87	EW-71	MW-85	MW-46AD	EW-63	EW-60	EW-66	EW-62			
TCE (µg/L)												
11/9/07	offline	16	13	19	14	ND	ND	1.7	ND	11	ND	ND
1/18/08	offline	11	11	8.9	8.2	ND	ND	1.2	ND	6.0	ND	ND
3/18/08	offline	11	14	6.7	5.8	ND	0.29	1.5	ND	5.6	ND	ND
5/27/08	offline	9.7	18	2.5	6.1	ND	ND	1.8	ND	3.9	ND	ND
7/21/08	offline	9.1	14	4.4	3.4	ND	0.78	1.4	ND	3.6	ND	ND
9/29/08	offline	9.3	J 15	J 4.3	J 2.9	J ND	0.90	J 1.7	J ND	3.8	J 0.19	J ND
12/1/08	offline	5.8	11	2.6	1.6	ND	0.82	0.91	ND	2.7	0.35	J ND
1/26/09	offline	5.9	10	2.2	1.2	ND	0.48	J 0.78	ND	2.4	ND	ND
3/9/09	offline	5.8	9.9	2.1	1.2	ND	0.95	0.86	ND	2.7	ND	ND
6/11/09	offline	6.9	11	2.4	1.5	ND	0.88	1.7	ND	2.6	0.14	J ND
9/15/09	offline	6.8	9.4	1.7	0.78	ND	inactive	1.1	0.036	J 2.3	0.35	J ND
12/14/09	offline	6.9	7.5	0.84	not sampled	not sampled	inactive	0.94	not sampled	2.3	0.65	J ND
3/22/10	offline	7.2	8.5	0.62	0.55	inactive	ND	0.90	inactive	2.3	ND	ND
6/21/10	offline	7.4	6.5	0.90	0.40	J inactive	0.86	0.58	inactive	2.1	ND	ND
9/20/10	offline	7.7	6.6	0.83	0.35	J discontinued	0.63	0.49	J inactive	2.3	not sampled	ND
cis-1,2-DCE (µg/L)												
11/09/07	offline	1.9	1.6	2.3	1.70	ND	ND	ND	ND	1.3	ND	ND
01/18/08	offline	1.20	1.40	1.00	1.20	ND	ND	0.11	ND	0.66	ND	ND
03/18/08	offline	1.20	1.50	0.74	0.63	ND	ND	ND	ND	0.59	0.11	ND
05/27/08	offline	0.88	2.10	0.26	0.74	ND	ND	ND	ND	0.36	0.21	ND
07/21/08	offline	0.80	1.50	0.52	0.37	ND	ND	ND	ND	0.41	0.34	ND
09/29/08	offline	0.99	1.60	0.54	0.30	ND	ND	0.13	ND	0.42	0.42	0.12
12/01/08	offline	0.67	1.30	0.33	0.21	J ND	ND	ND	ND	0.27	J 0.37	J 0.19
01/26/09	offline	0.63	1.20	0.29	J 0.12	J ND	ND	ND	ND	0.26	J 0.24	J ND
03/09/09	offline	0.62	1.20	0.29	J 0.13	J ND	ND	ND	ND	0.23	J 0.26	J ND
06/11/09	offline	0.71	1.10	0.30	J 0.13	J ND	ND	0.14	J ND	0.24	J 0.28	J ND
09/15/09	offline	0.80	1.00	0.22	J 0.08	J ND	inactive	0.03	J ND	0.22	J 0.37	J 0.03
12/14/09	offline	0.67	0.65	0.10	J not sampled	not sampled	inactive	ND	J not sampled	0.21	J 0.30	J 0.11
03/22/10	offline	0.67	0.79	ND	ND	inactive	ND	ND	inactive	0.20	J 0.11	J 0.13
06/21/10	offline	0.67	0.53	0.14	J ND	inactive	ND	ND	inactive	0.20	J 0.23	J ND
9/20/10	offline	0.66	0.46	J ND	ND	discontinued	ND	ND	inactive	0.23	J not sampled	ND

Italics (if used) indicate data not yet validated

Bold font indicates concentration > ACL

Table 2
Current Deliverable Schedule
BCT Meeting for Former Fort Ord, Santa Rosa CA –October 2010

Deliverable	Scheduled Submittal	Status / Remarks (Bold font indicates submittal)
<i>Primary Deliverables</i>		
None Scheduled for 2010		
<i>Secondary Deliverables</i>		
Draft 2007 Annual and Fourth Quarter Groundwater Monitoring Report	December 2010	In progress.
Agency Comments	February 2011	
Final 2007 Annual and Fourth Quarter Groundwater Monitoring Report	March 2011	
Agency Comments	NA	
First Quarter 2009 Groundwater Monitoring Report	June 2009	Submitted 22 June 2009.
Agency Comments	August 2009	No Comment.
Draft 2009 Annual and Third Quarter Groundwater Monitoring Report	February 2010	Submitted 08 February 2009.
Agency Comments	April 2010	Agencies approved changes to 2010 sample frequency—no other comments.
Final 2009 Annual and Third Quarter Groundwater Monitoring Report	August 2010	Submitted 05 August 2010.
Agency Comments	NA	FOCAG comments addressed.
2010 First Quarter Groundwater Monitoring Report	July 2010	Submitted 30 July 2010.
Agency Comments	September 2010	Awaiting comments (to be addressed in Draft 2010 Annual Groundwater Monitoring Report).
Draft 2010 Annual and Third Quarter Groundwater Monitoring Report	December 2010	Sampling complete. Preliminary analytical data received 20 October.
Agency Comments	February 2011	
Final 2010 Annual and Third Quarter Groundwater Monitoring Report	March 2011	
Agency Comments	NA	
Final Rebound Evaluation Report	December-2010	In progress.
Agency Comments	NA	
Draft Fort Ord Natural Reserve (FONR) Remediation System Expansion Design Technical Memorandum	September 2010	Submitted 17 September without construction drawings (submitted 24 September)
Agency Comments	01 – 08 October	Accepted without comment
Final Fort Ord Natural Reserve (FONR) Remediation System Expansion Design Technical Memorandum	November 2010	Submitted 09 November 2010.

Bold denotes completed submittals.

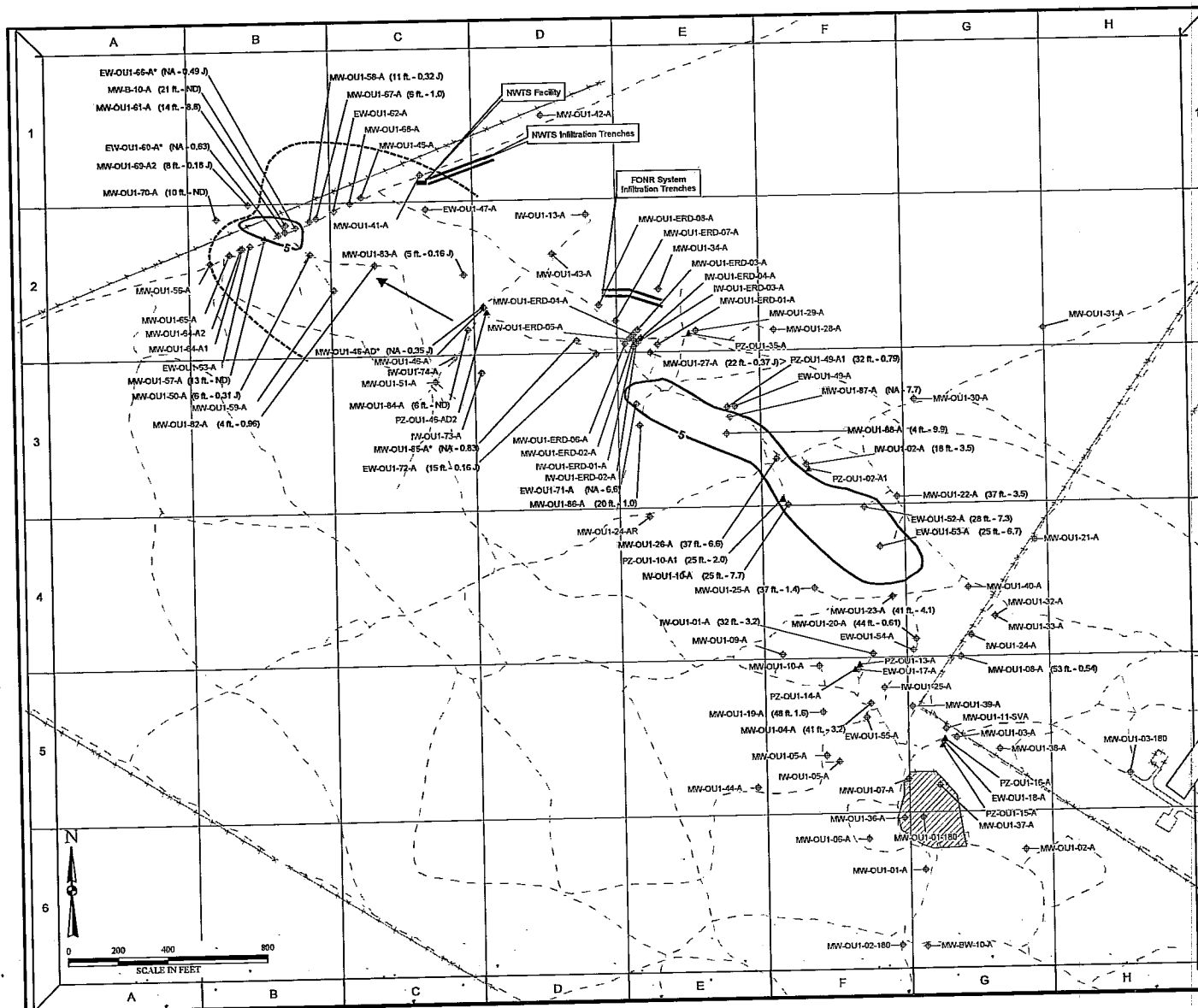
Preliminary Draft
 Figure 6
 OU-1 FONR
 TCE Concentrations in Groundwater
 September 2010

Legend

- ◆ Monitoring Well
- ◆ Extraction Well
 Bold green font indicates active well
- ◆ Injection Well
 Bold green font indicates active well
- ▲ Piezometer
- Locations With September 2010
 TCE Concentration At Or Above
 ACL (5 µg/L)
- 5— TCE Contour (µg/L)
 Based on September 2010 Data
- MW-OUI-58-A Well ID
 (4 R. - 7.0) September 2010 TCE Result (µg/L)
- Sample Elevation
 (feet above mean sea level)
- - - Trail/Unimproved Road
- Fence
- Treated Water Infiltration Trench
- - - - - Estimated Northwest Treatment
 System Capture Zone
- ▨ Former Fire Drill Area
- ← General Direction of
 Groundwater Flow

Notes:
 Units of TCE concentrations are in ppb
 ND = Non-detect
 NA = Depth is not applicable - sample is from pumping well
 J = Estimated Value
 µg/L = Micrograms per liter
 Wells shown with an asterisk were not used to develop contour boundaries.
 Active extraction wells were typically not included because the data is not
 location-specific. Data from extraction wells EW-OUI-71-A and
 MW-OUI-87-A were used to infer the 5 µg/L TCE contour because the
 results at those wells suggest higher TCE concentrations nearby.
 PZ-OUI-10-A1 was not used in the TCE contouring because
 nearby MW-OUI-10-A values were higher.
 Well names appearing in gray were not included in OUI-
 Groundwater Monitoring Program.
 Wells for which no data are posted were not sampled.

Y:\P1_Ord\DM\BTO_2010\GHF_Monitoring_2010_03/
 (6)TCE in GHF September 2010.mxd
 10/21/10 RB
 Source: HGL



U.S. Army Community Outreach Update

Actions Underway:

1. Marina in Motion (MIM).updates
 - a. Monthly updates from the Army for "big picture" issues and progress reports based on document schedules, field work and regulatory issues
 - b. Regular meetings with BCT prior to CIWs (need to confirm BCT participation)
2. Coordinate well drilling activities and create fact sheet for distribution to CSUMB housing and others
3. Coordinate well abandonment activities and create fact sheet for distribution to residents
4. Updating all fact sheets – on-going
5. Complete draft report: 2009 Community Survey Analysis and review of 2009-2010 outreach activities
6. Complete 2011 schedule of outreach-oriented activities to include:
 - Risk communication class
 - Off-post BCT meeting: April 25-27, 2010 in San Francisco. BCT meetings to be held at USEPA.

Recent Activities:

1. Participate in 16NOV SuperJTI meeting with Presidio of Monterey Public Works and RCI/housing
2. Participate in 17 NOV Super JTI BBQ
3. 24 NOV Provide cleanup bus tour for Naval Postgraduate School class – international students
4. 10 DEC Provide cleanup bus tour for CSUMB Environmental Club/Associated Students

Upcoming Activities

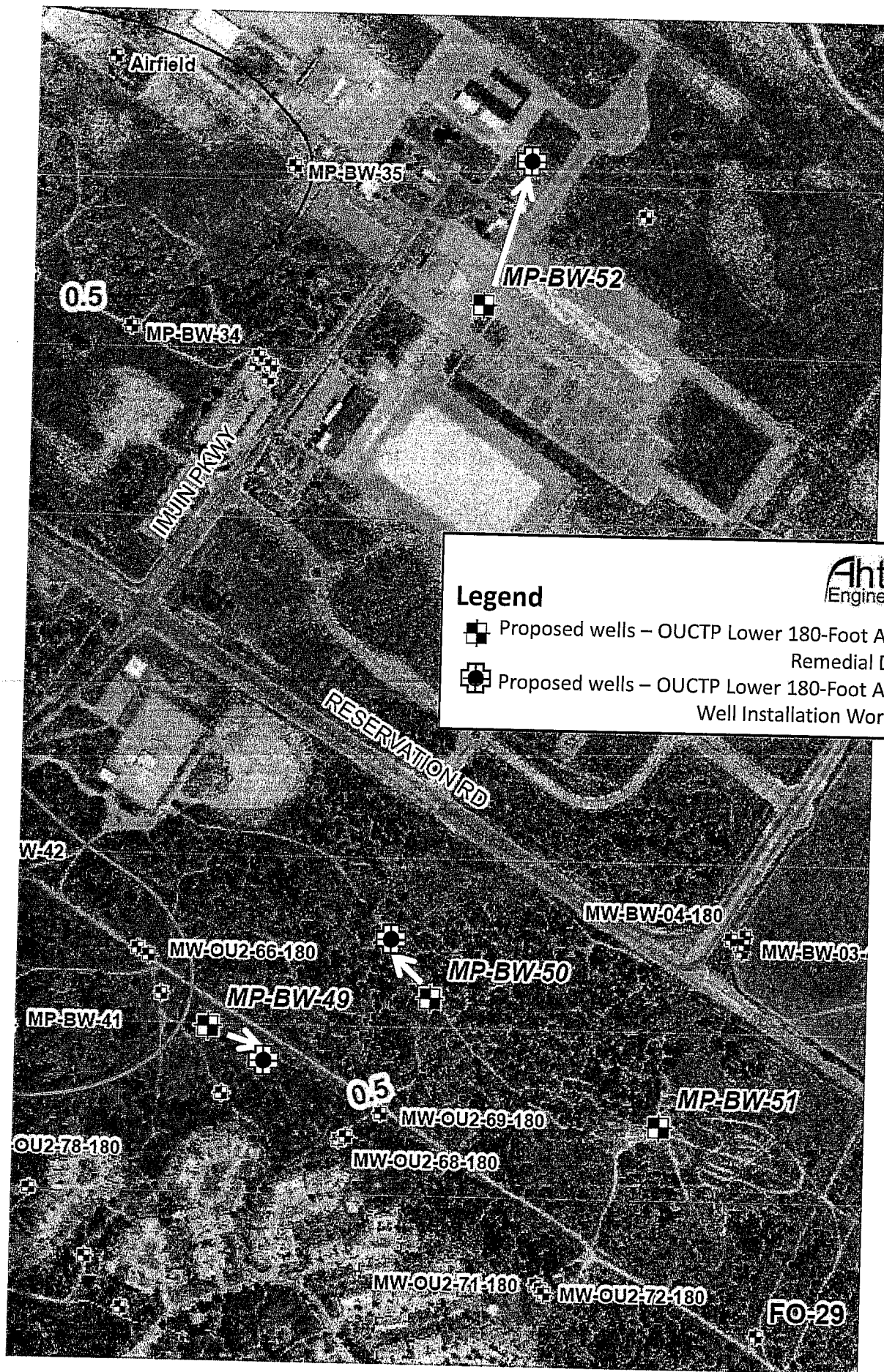
1. Conduct Fort Ord Cleanup tour for staff at Monterey County Health Department (TBD)
2. Schedule for Super JTI – training to be completed in December
3. Provide munitions safety awareness class to Super JTI (schedule to be provide by SuperJTI)

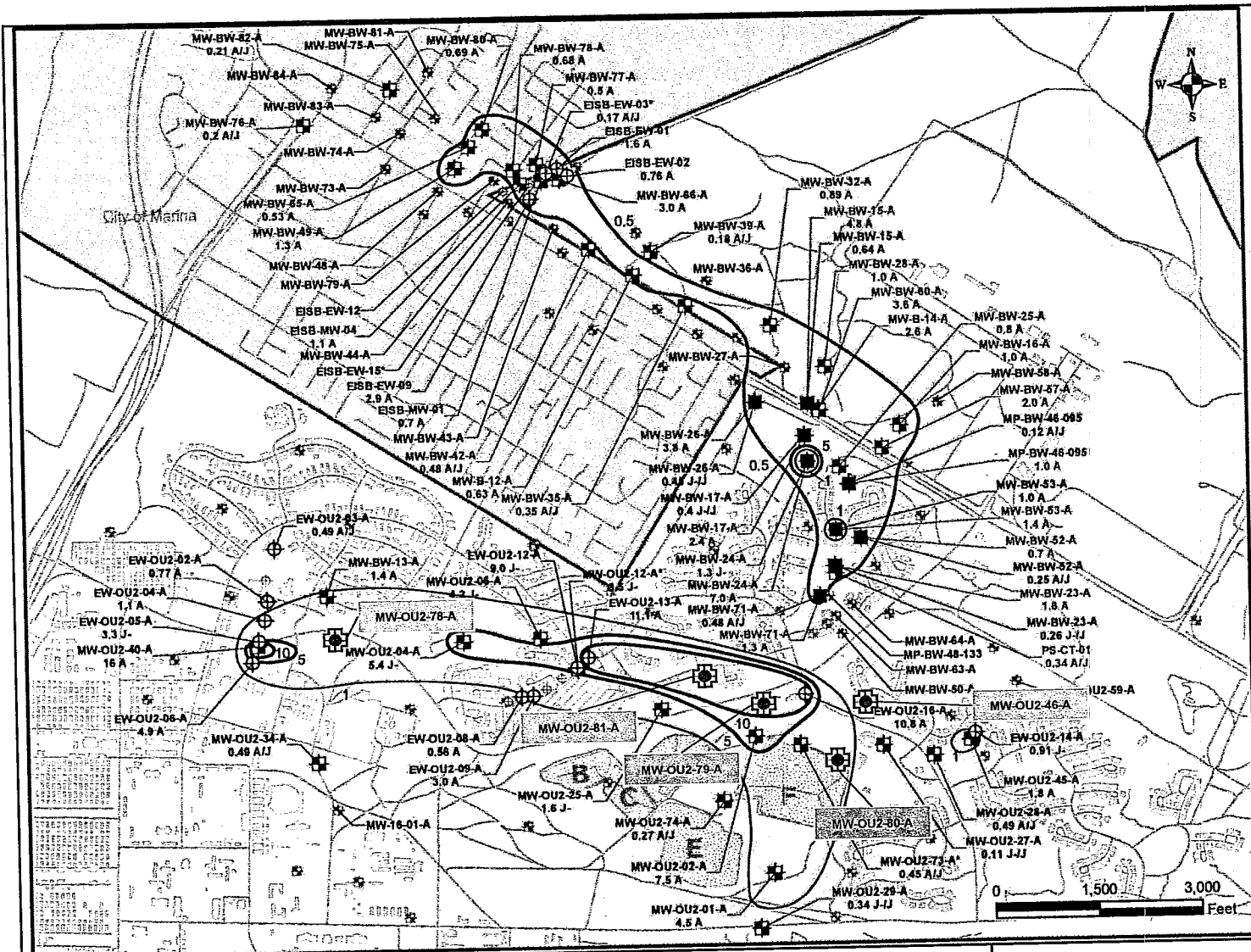
Topic(s) of Interest
USEPA TAG

STATUS: RESPONSE to COMMUNITY COMMENTS (RTC)

AR Number	Title/Subject	Status
ESCA-0249.5, 6/10/10	Comments submitted by Mike Weaver of FOCAG on the Draft Group 3 RI/FS Report, Del Rey Oaks / Monterey, Laguna Seca Parking, and Military Operations in Urban Terrain Site MRAs, FORA ESCA Remediation Program	RTC is in progress—ESCA Program.
OE-0723.4, 9/29/2010	Comments submitted by community group member, Dan Amadeo - Marina In Motion - on the Draft MRS-BLM Units 14 and 19, Technical Memorandum, Former Fort Ord, California (2009 Burns)	RTC is in progress.
IAFS-235E.3, 1/15/10	Comments from Mike Weaver [Fort Ord Community Advisory Group] on the Draft Final Work Plan, Historical Area 161 Excavation, Inter-Garrison Training Area, Former Fort Ord, California	<p>RTC is complete.</p> <p>Part 1: Initial response complete: a letter to CAG noting that we are preparing report/documents that will response to these comments/questions (IAFS-235E.4, 5/4/10).</p> <p>Part 2: Issued draft CWM report November 3, 2010. This report is in the Administrative Record (OE-0726).</p>

Well ID	Location	Rationale
MP-BW-49	Southern Plume. This well is proposed to be relocated approximately 250 feet to the southeast along Old County Road so it will be more centrally located between MW-OU2-66-180 and MW-OU2-69-180 within the Fort Ord Natural Reserve (FONR).	Provide additional data on 1) the area of vertical migration, and 2) migration of carbon tetrachloride into the Lower 180-Foot Aquifer (confirm capture by the Upper 180-Foot Aquifer remedial action).
MP-BW-50	Southern Plume: This well is proposed to be relocated approximately 350 feet to the northwest along an existing unpaved road so it will be outside of the FONR. The modified location is also accessible from the west, so equipment and materials will not have to be mobilized through the FONR to the well location. This will remove the requirement for three years of habitat monitoring after the well is installed.	Monitor for potential plume migration midway between the area of vertical communication and wells MW-BW-03-180/MW-BW-04-180 (see Attachment 2 to the Remedial Design).
MP-BW-51	Southern Plume: The location of this well is not proposed for modification and is within the FONR.	Monitor for potential plume migration downgradient of the known plume and upgradient of production wells FO-29, FO-30 and FO-31.
MP-BW-52	Northern Plume: This well is proposed to be relocated approximately 650 feet to the north to account for historic groundwater gradients in the Northern Plume area and anticipated future operation of the downgradient production wells. This well is not located within the FONR.	Monitor the downgradient edge of the northern plume for potential migration toward the production wells.
MW-OU2-46-A	Bunker Hill Road at Trenton Court and north of Landfill Cell F; co-located with MW-OU2-46-180.	Fill existing data gap along northern plume perimeter; provide additional data for evaluation of VOC detections in MW-OU2-73-A.
MW-OU2-78-A	South of Imjin Parkway between 4 th Avenue and 5 th Avenue and east of MW-OU2-40-A.	Fill existing data gap between MW-OU2-40-A and MW-OU2-04-A; provide additional data to better define plume contours, groundwater elevations, and plume capture by the Western Extraction Well Network.
MW-OU2-79-A	South of Imjin Road and north of MW-OU2-02-A.	Better define central portion of the plume as plume size continues to decrease; provide additional data for evaluation of VOC detections in MW-OU2-73-A.
MW-OU2-80-A	Northeastern corner of Landfill Cell F and adjacent to MW-OU2-62-180.	Better define plume to the east; provide additional data for evaluation of VOC detections in MW-OU2-73-A.
MW-OU2-81-A	Parking lot at intersection of Brostrom Drive and Ingman Court; co-located with MW-OU2-81-180.	Better define central portion of the plume as plume size continues to decrease.
MW-OU2-81-180	Parking lot at intersection of Brostrom Drive and Ingman Court; co-located with MW-OU2-81-A.	Fill existing data gap in the central portion of the plume.
MW-OU2-79-180	Schoonover Road between White Court and Combs Court.	Fill existing data gap in central portion of plume.
MW-OU2-80-180	On bicycle path west of intersection of Imjin Road and Abrams Drive.	Fill existing data gap to the west and upgradient of plume.





Explanation

TCE Detections	Carbon Tetrachloride Detections	Carbon Tetrachloride & TCE Detections

- Monitoring Well - TCE or Carbon Tetrachloride not detected
- Remediation Extraction Well - TCE or Carbon Tetrachloride not detected
- Monitoring Well not sampled this quarter
- Piezometer not sampled this quarter
- Extraction Well not sampled this quarter

Carbon Tetrachloride Concentration Contour in µg/L:
 0.5 Above ACL
 1.0 Below ACL 5.0 Above ACL

7 Queried where uncertain

Former Fort Ord Boundary

Approximate outline of former Fort Ord Landfill Cell A (clean closed)

Approximate extent of Fort Ord Landfill Cells

Roads

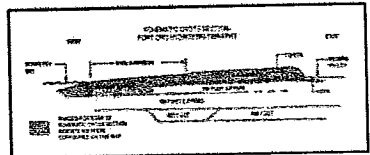
Former Fort Ord Boundary

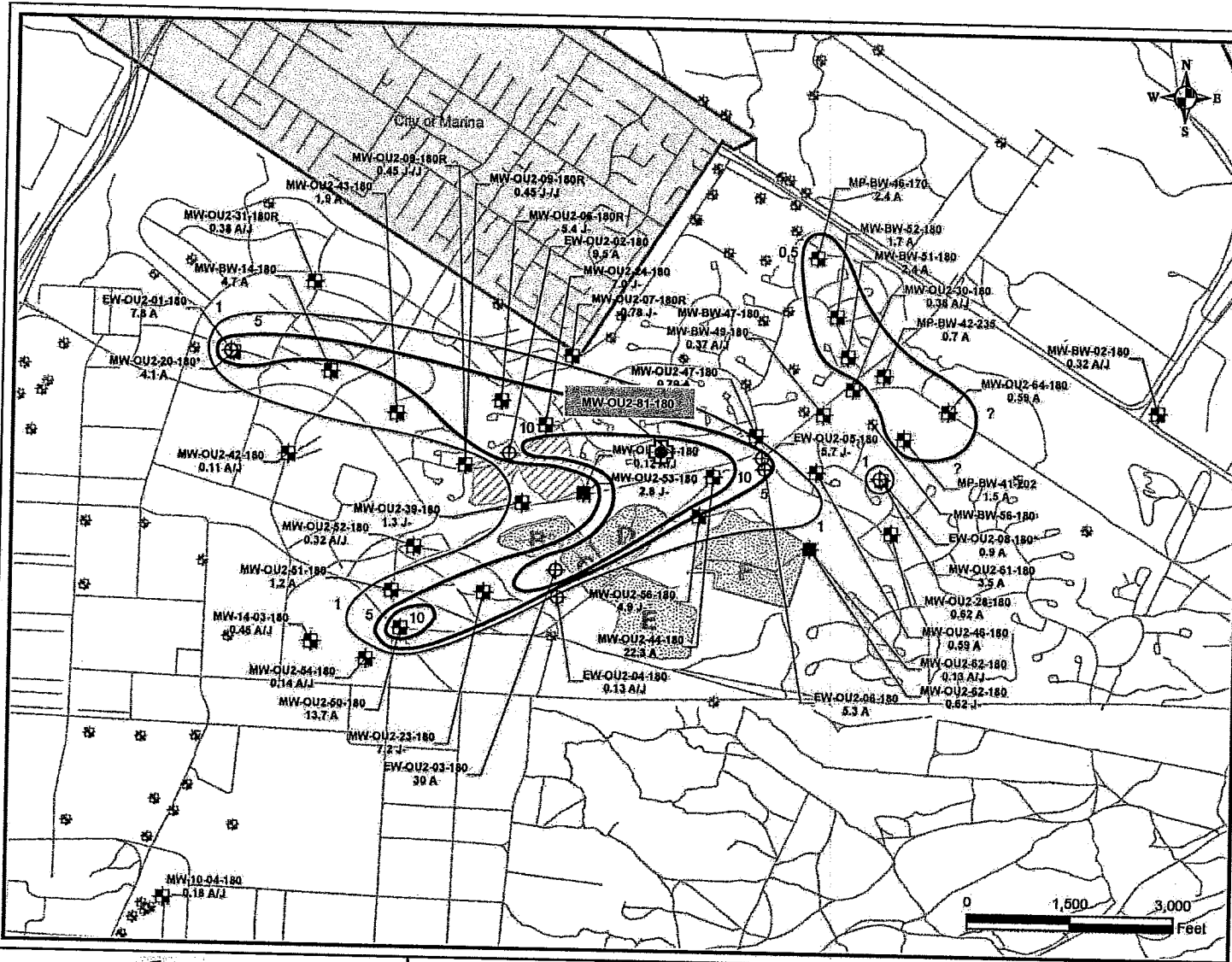
WELL ID
 (*) Indicates Sample result not used for contouring

EW-OU2-04-A
 1.1 A
 1.4 A
 1.4 A
 0.7 A
 0.25 A/J
 1.8 A
 0.26 J/J
 PS-CT-01
 0.34 A/J

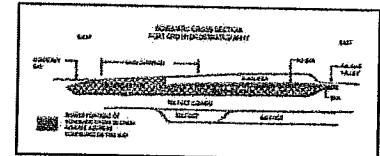
CONCENTRATION IN µg/L WITH VALIDATION/LAB QUALIFIER

New OU2 single-screen well location





Explanation		
TCE Detections	Carbon Tetrachloride Detections	Tribromo Tetrachloride & TCE Detections
Monitoring Well	Monitoring Well	Remediation Extraction Well
Remediation Extraction Well		
<ul style="list-style-type: none"> Monitoring Well - TCE or Carbon Tetrachloride not detected Extraction Well - TCE or Carbon Tetrachloride not detected Monitoring Well not sampled this quarter Extraction Well not Sampled this Quarter Injection Well not Sampled this Quarter 		
Carbon Tetrachloride Concentration Contour in µg/L		
0.25	Above ACL	
TCE Concentration Contour in µg/L		
1	Below ACL	5
?	Quarant where uncertain	
Facilities		
[Symbol]	Approximate outline of former Fort Ord Landfill Cell A (clean close)	
[Symbol]	Approximate extent of Fort Ord Landfill Cells	
[Symbol]	Roads	
[Symbol]	Fort Ord Base Boundary	
WELL ID		
[Symbol]	(*) Indicates: Sample result not used for contouring	
CONCENTRATION IN µg/L WITH VALIDATION/LAB QUALIFIER		
[Symbol]	New OU2 single-screen well location	



Operable Unit 2
Well Installation Work Plan
Former Fort Ord, California

Proposed Upper 180-Footer Aquifer Well Locations

**OU2 Landfills
Status Update
11/17/2010**

Ongoing Documents

- FWV for hook up of 5 vents to the Area D and F headers

Recently Completed Activities

- Application of straw and barley seeds at Area E and clean soil stockpile for erosion control
- Annual TTU Source Testing – November 16

Planned and Ongoing Activities

- Implement additional erosion control measures, as needed
- Haul and place soil from Site 39 Range Remediation at Area E vertical expansion
- Gopher trapping
- Conduct 4th Quarterly Monitoring
- Conduct 4th Quarter TTU Maintenance Inspection

**Operation Summary
2007 - 2010**

TREATMENT SYSTEM OPERATION SUMMARY	
Treatment System Start Date:	6/4/2001
TTU Start Date:	4/4/2006
Last Reading Date/Time:	10/29/2010 14:45
Historical through 2009 (TTU only):	
Total TTU Hours:	32,808
Total TTU Hours Operated:	14,292
% TTU Operation:	43.6%
Total Pounds of Methane Removed:	1,802,161
Total Pounds of VOCs Removed:	202
Current Year 2010	
Total Hours:	7,464
Total Hours Operated:	2167
% TTU Operation:	29.0%
Total Pounds of Methane Removed:	188,616
Cumulative:	
% TTU Operation:	40.9%
Total Pounds of Methane Removed:	1,990,778

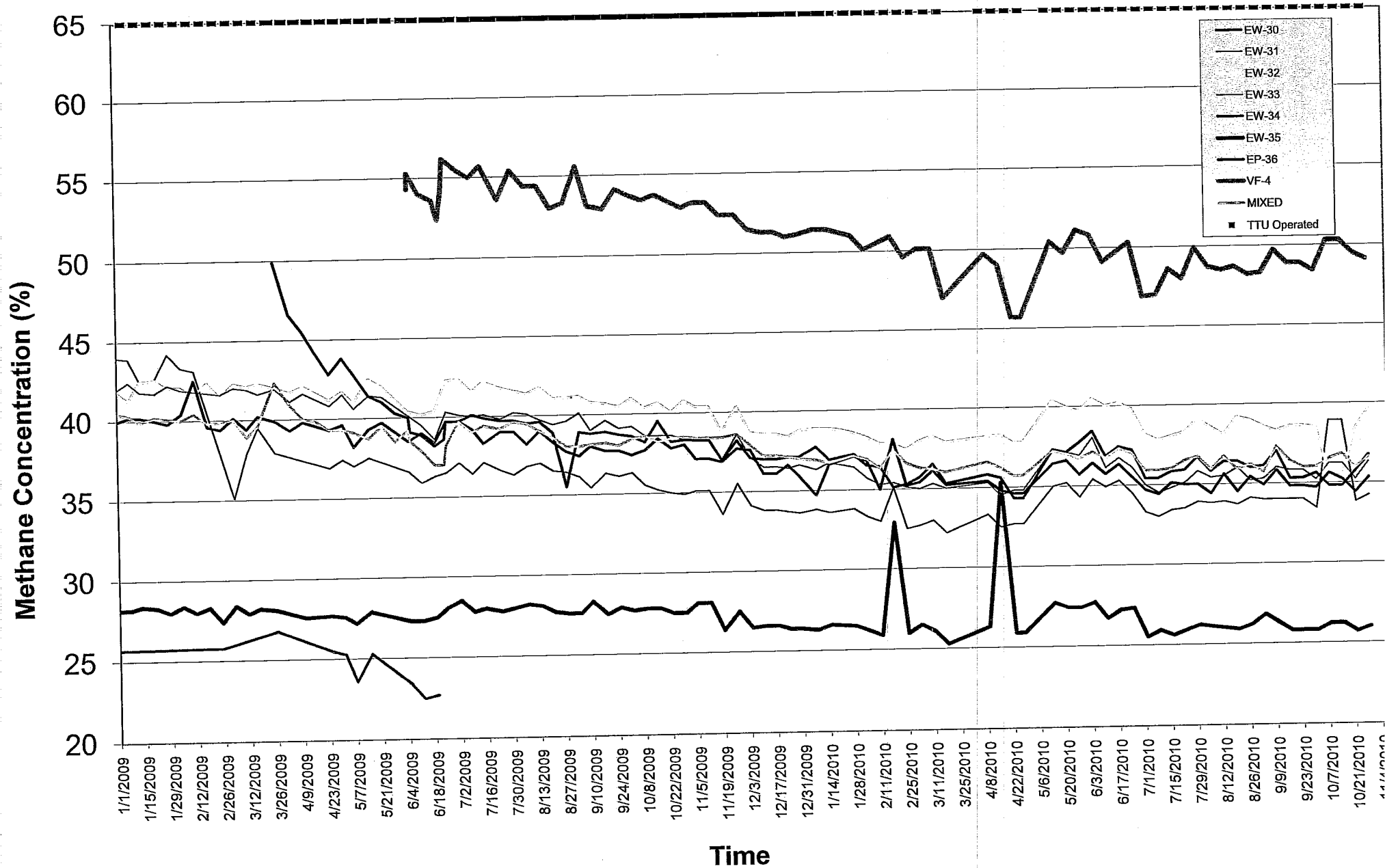
			Total Pounds Removed	Pounds/week
Pounds of Methane Removed (2007)			540,920	10,374
Pounds of Methane Removed (2008)			293,169	5,622
Pounds of Methane Removed (2009)			455,507	8,736
Pounds of Methane Removed (2010)			188,616	4,245

EXTRACTION SYSTEM (2010)					
Location	Last Instantaneous Methane Reading (%)	Last Instantaneous Flow Rate Reading (scfm)	Current Methane Removal Rate (lbs/day)	2010 % Operation	2010 Methane Removed (Lbs)
Area E					
EP-36	35.3	24	499.7	28.0	39488
Area F					
EW-31	34.2	9	181.6	28.0	11221
EW-32	39.6	18	420.4	27.3	28798
EW-33	36.3	21	449.6	28.0	32766
EW-34	36.7	33	714.4	28.0	49404
VF-4	49.1	10	289.6	28.0	12334
Area D					
EW-35	26	11	168.7	28.0	8003

Notes:

1. TTU shut down from 3/19 thru 4/6 to allow LFG rebound.
2. TTU O&M performed from on 4/20-21
3. TTU shut down from 4/30 thru 5/11 to allow LFG rebound.

Methane Concentration vs. Time (after 01-01-2009) Interior Extraction System





Former Fort Ord Groundwater Treatment Systems Operational Data and Status

BRAC Cleanup Team Meeting, November 17, 2010

Table 1: OU2 and Sites 2/12 GWTP Treatment Statistics, as of October 31, 2010.

Monthly Statistics	Volume Treated (gallons)	Average Flow (gallons per minute)	Percent of Time Online	COC Mass Removed (lbs.)
OU2				
October 2010	31,976,880	716	100	2.27
Total since October 1995	5.034 billion			669.40
Sites 2/12				
October 2010	10,055,500	225	100	0.99
Total since June 1999	1.381 billion			429.14

Table 2: OU2 and Sites 2/12 GWTP Calendar of Events, as of October 31, 2010.

Key Events for OU2 and Sites 2/12 for October 2010						
There were 19 USAN Notices transmitted to Ahtna October 1-31, 2010. None of these alerts required the personal attention of the Senior GWTP Operator.						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4 Shoppette and Bunker Hill wells offline for 1 hour due to planned PG&E outage	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		
31						

Table 3: October 2010 - OU2 Analytical Results at TS-OU2-INJ

COC	Discharge Limit (µg/L)	Sample Date / Analytical Results	
		10/11/10	10/25/10
1,1-DCA	5.0*	0.72	0.98
1,2-DCA	0.50	0.27	0.38
1,2-DCP	0.50	ND	ND
Benzene	0.50	ND	ND
Carbon Tetrachloride	0.50	ND	ND
Chloroform	2.0*	0.40	0.57
cis-1,2-DCE	6.0*	0.43	0.70
Methylene Chloride	0.50	ND	ND
PCE	0.50	ND	ND
TCE	0.50	ND	ND
Vinyl Chloride	0.10	ND	ND

Table 4: October - Sites 2/12 Analytical Results at TS-212-INJ

COC	Discharge Limit (µg/L)†	Sample Date / Analytical Results
1,1-DCE	6.0	In accordance with the sampling schedule in the SAP, no GWTP sampling was performed in October. Scheduled process sampling will be performed in November
1,2-DCA	0.50	
1,3-DCP †	0.50	
Chloroform	2.0	
cis-1,2 DCE	6.0	
PCE	3.0	
TCE	5.0	
Vinyl Chloride	0.10	

NOTES:

- ND The analyte was not detected above the limit of quantitation.
- * Discharge limits for low carbon affinity compounds were increased to the Aquifer Cleanup Level (ACL).
- ‡ Discharge limits are the ACLs for injection over the plume.
- † The reported value is the sum of both cis- and trans-isomers.

Table 5: AES Document Submittals - Status Summary

Document
No documents were submitted in October.

Figure 1: OU2 GWTP Treatment Events October 2010.

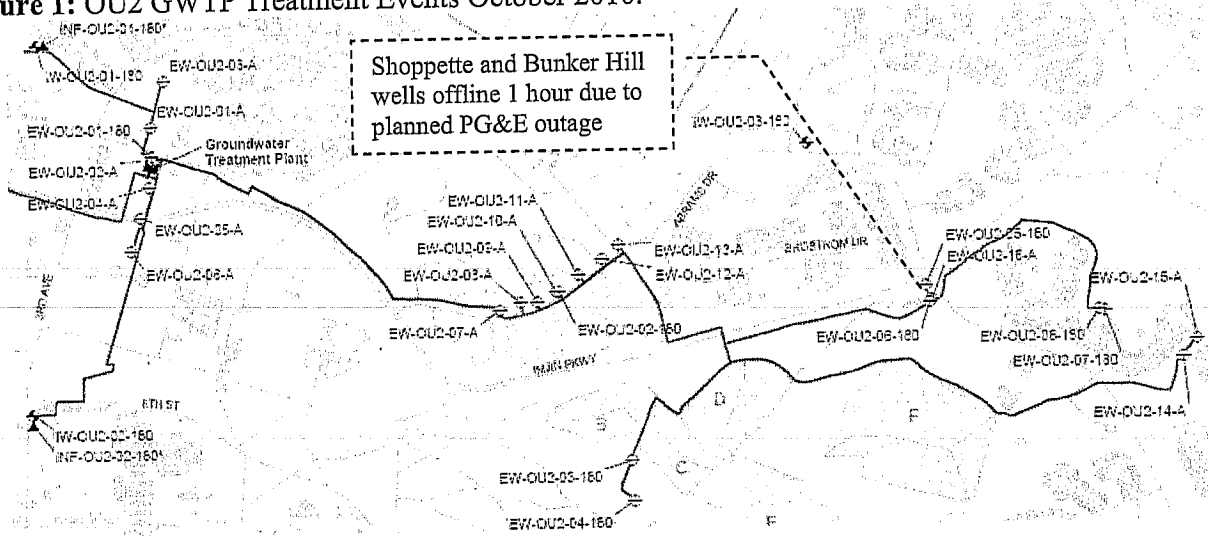


Figure 2: Sites 2/12 GWTP Treatment Events October 2010.

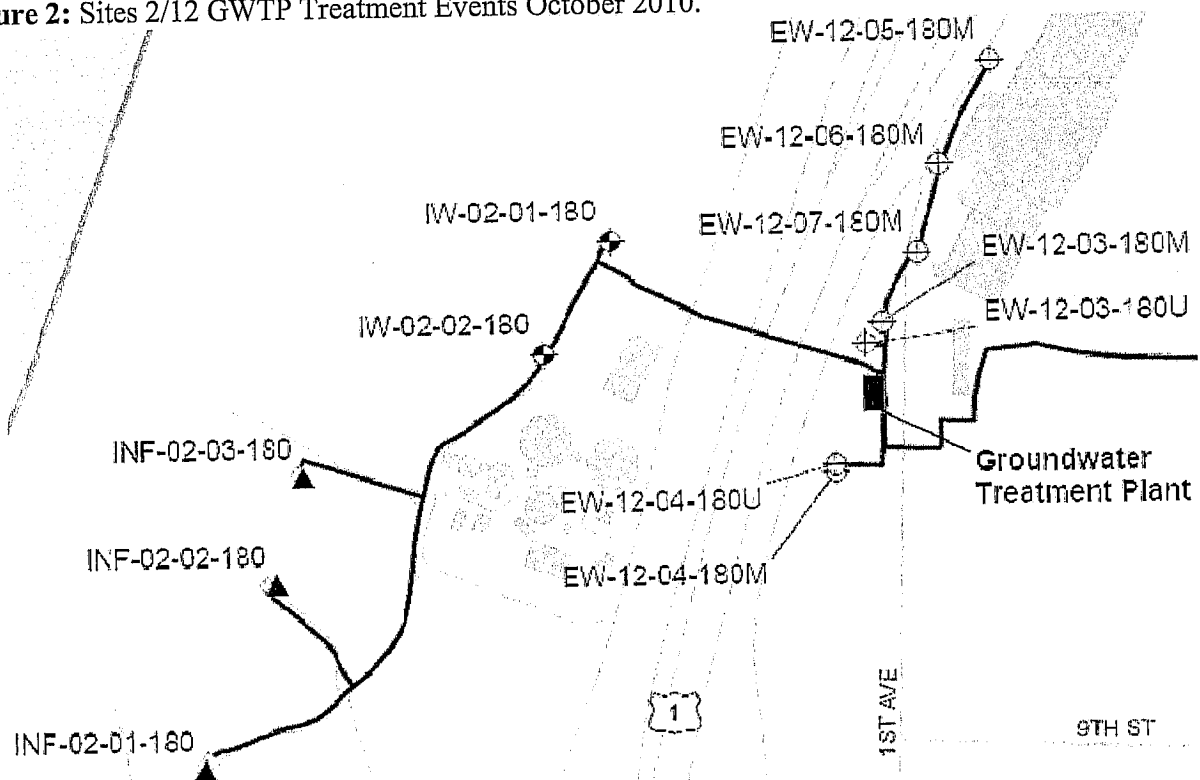




Table 6: October 2010 OU2 and Sites 2/12 Extraction Well Status (as of October 31)

Well Identification	% On	Avg. gpm	Total Gallons	% of Total	Comments	TCE (µg/L) 3Q 2010
Site 12 Extraction Wells						
EW-12-05-180M	99.9	74	3,281,900	33		6.8
EW-12-06-180M	99.8	79	3,517,500	35		7.3
EW-12-07-180M	100	14	610,800	6	COCs previously below ACLs, will restart pump	Not Sampled
EW-12-03-180U	0	0	0	0	Well offline due to low concentrations	0.16
EW-12-03-180M	99.9	59	2,645,300	26		1.3
EW-12-04-180U	0	0	0	0	Well offline due to low concentrations	0.38
EW-12-04-180M	0	0	0	0	Pump removed, sampled with PDBs	0.53
Total 2/12 gallons treated:			10,055,500	100		
OU2 Extraction Wells						
Western Network						
EW-OU2-01-A	0	0	0	0	Well offline due to low concentrations	Not Sampled
EW-OU2-02-A	2.2	1	52,340	0	Well offline due to low concentrations	0.88
EW-OU2-03-A	0	0	0	0	Well offline due to low concentrations, sampled with PDBs	0.46
EW-OU2-04-A	96.6	46	2,070,570	6		1.1
EW-OU2-05-A	98.1	49	2,183,230	7		3.0
EW-OU2-06-A	98.2	36	1,613,240	5		5.0
EW-OU2-01-180	0	0	0	0	No pump in well, sampled with PDBs	5.5
Total gallons extracted:			5,919,380	19		
Eastern Network						
EW-OU2-07-A	0	0	0	0	Well offline due to low concentrations	ND
EW-OU2-08-A	61.1	13	572,840	2	Cycling due to low water level	0.60
EW-OU2-09-A	100	25	1,129,350	4		2.6
EW-OU2-10-A	91.8	16	730,880	2	Pump motor failure, pump replaced	2.9
EW-OU2-11-A	0	0	0	0	Pump removed due to biofouling, screen damaged	1.2
EW-OU2-12-A	93.1	10	455,550	1	Low yield; running at reduced capacity	5.9
EW-OU2-13-A	100	28	1,236,480	4		10.2
EW-OU2-02-180	99.9	41	1,832,000	6		9.5
Total gallons extracted:			5,957,100	19		
Shoppette						
EW-OU2-05-180	99.9	135	6,036,300	19		6.2
EW-OU2-06-180	100	129	5,763,300	18		4.6
EW-OU2-16-A	99.9	18	805,100	3	High drawdown, operating with new level settings	9.2
Total gallons extracted:			12,604,700	39		
CSUMB						
EW-OU2-14-A	100	22	1,001,700	3		1.0
EW-OU2-15-A	0	0	0	0	Well offline due to low concentrations	Not Sampled
Total gallons extracted:			1,001,700	3		
Landfill						
EW-OU2-03-180	100	93	4,161,000	13		14.5
EW-OU2-04-180	0	0	0	0	Well offline due to low concentrations	ND
Total gallons extracted:			4,161,000	13		
Bunker Hill						
EW-OU2-07-180	0	0	0	0	No pump in well, sampled with PDB	3.7
EW-OU2-08-180	100	52	2,333,000	7		1.1
Total gallons extracted:			2,333,000	7		
Total OU2 gallons treated:			31,976,880	100		

OPERABLE UNIT CARBON TETRACHLORIDE PLUME A-AQUIFER REMEDIAL ACTION

STATUS – November 17, 2010

FIELD WORK

- Final RA Work Plan/RD (Appendix A – A-Aquifer) complete – August 28.
- Installation and development of wells at Areas 1A and 1B complete – January 16
- Installation of process equipment at Area 1A complete – July 10.
- Baseline sampling at Area 1A complete – August 12.
- Start-up testing at Area 1A complete – September 4.
- Installation and development of wells at Area 1C complete – September 4.
- Substrate injection at Area 1A initiated – September 14.
- Substrate injection at Area 1A completed – October 8. Groundwater recirculation completed – November 12.
- Installation of process equipment at Area 1B complete – January 6.
- Installation and development of new well at Area 1C complete – January 29.
- Start-up testing at Area 1B complete – February 26.
- Substrate injection at Area 1B initiated – March 2.
- Installation and development of wells at Areas 2A and 2B complete – March 23.
- Substrate injection at Area 1B completed – May 6. Groundwater recirculation completed – June 16.
- Issued technical memorandum for post-treatment and long-term monitoring at Deployment Area 1A – June 3.
- Baseline biological survey in FONR South Reserve – April-June 2010.
- Installation of process equipment at Area 1C complete – July 28.
- Final RAWP Appendix B – Upper 180-Foot Aquifer – July 16.
- Final RAWP Appendix C – Lower 180-Foot Aquifer – October 6.
- Substrate injection at Area 1C initiated – August 5.
- Substrate injection at Area 1C completed – September 22. Groundwater recirculation completed – November 11.

SCHEDULE

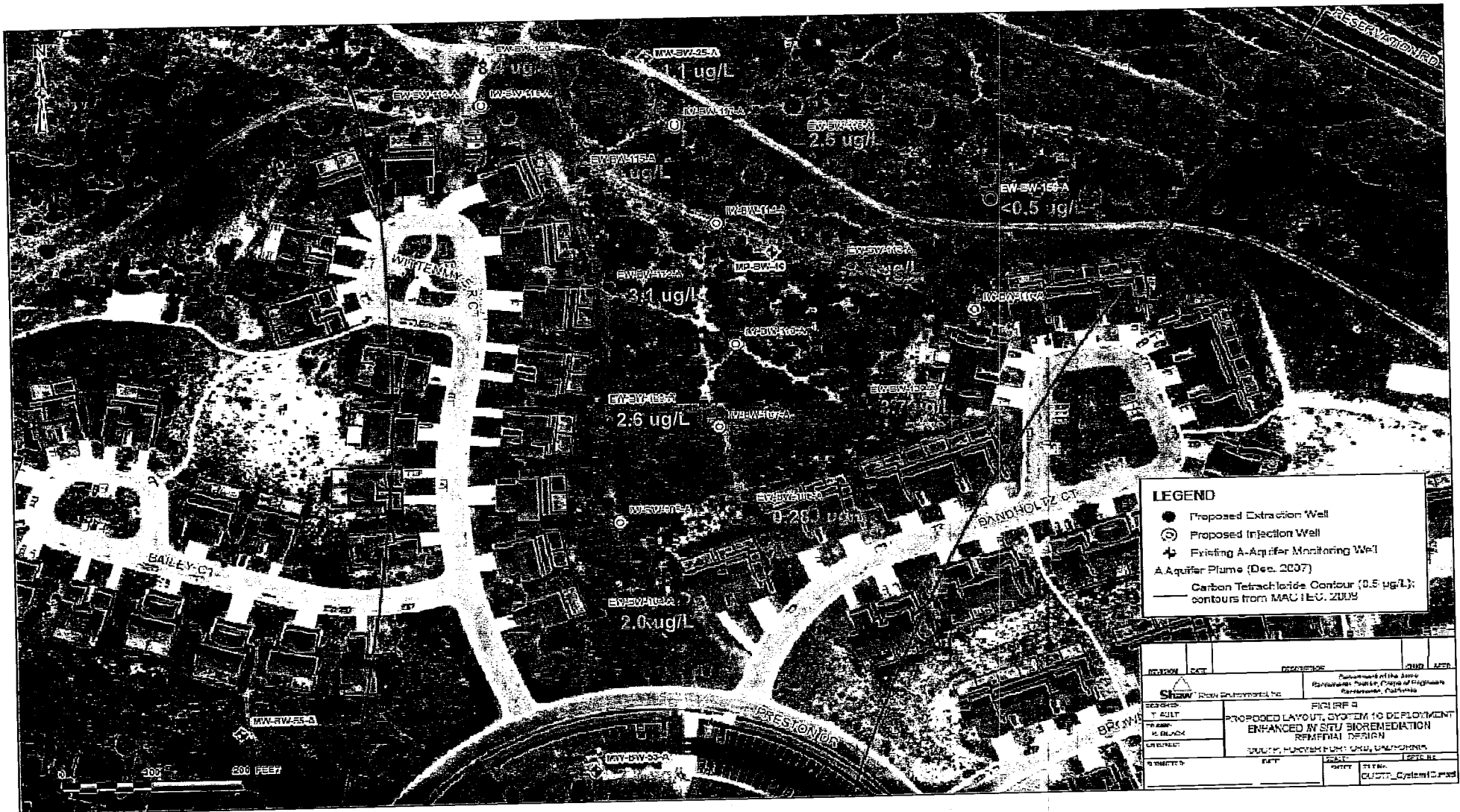
- Post-treatment monitoring for EISB pilot study, Area 1A, and Area 1B concurrent with Basewide Quarterly.
- Performance monitoring completed at Area 1B. Preparing tech memo for post-treatment monitoring.
- Conducting performance monitoring at Area 1C – February 2011.
- Installation of process equipment at Area 2A ongoing.
- Installation of extraction well in Upper 180-Foot Aquifer complete. Planning well production enhancement. Technical information paper submitted November 15. Performance enhancement activities – November 29.

DATA (Preliminary)

- Preliminary EISB data for Area 1C.

PROBLEMS/CHANGES

- During installation of extraction well EW-BW-143-A, the auger ceased and broke below ground surface. Auger was above the bentonite seal and approximately 20 feet below ground surface. Auger was grouted in place and is not expected to impact EISB or monitoring activities.
- Following installation of extraction well EW-BW-142-A the well was driven over. The well was video logged and a failure in the well casing was observed at approximately 8 feet bgs. Well repair completed March 4.
- For Area 1C, a new formulation of substrate was used that includes a mixture of fatty acids and carbohydrates proven to enhance reductive dechlorination better than sodium lactate. The formulation increased bacterial growth in the injection wells and caused biofouling. The old substrate formulation will be used for Area 2A.
- During well development for the Upper 180-Foot extraction well EW-OU2-09-180, low production rates were observed. A video log of the well showed clean and open well screen for the top 5 feet of water column. Groundwater in the remainder of the well screen was too cloudy to observe the entire well screen. Proposing to redevelop the well with jetting and air lifting using NuWell 220 and sodium hypochlorate.



Baseline Sample Results
Carbon Tetrachloride Detections

Area 1C OUCTP EISB
System Operation
Preliminary Data Summary

System Start Date: 8/12/2010

Date:

8/12/2010
0 day

8/18/2010
6 day

Extraction Well	Model Flowrate (gallons per minute)
EW-BW-104-A	8.1
EW-BW-106-A	16
EW-BW-108-A	21.6
EW-BW-109-A	16
EW-BW-112-A	13.9
EW-BW-113-A	11.3
EW-BW-115-A	16.3
EW-BW-116-A	9.1
EW-BW-119-A	10.5
EW-BW-120-A	17.5
EW-BW-159-A	8.6
Total	148.9

Total Flow

Injection Well	Model Flowrate (gallons per minute)
IW-BW-105-A	21.4
P-301	
IW-BW-107-A	18.3
P-302	
IW-BW-110-A	24.2
P-303	
IW-BW-111-A	21
P-305	
IW-BW-114-A	22.7
P-304	
IW-BW-117-A	21.2
P-306	
IW-BW-118-A	21.4
P-307	
Total	150.2

Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)
0	9.6
0	15.7
0	20.6
0	13.7
0	13.4
0	10.2
0	16.0
0	8.8
0	9.3
0	18.0
0	8.4
0	143.7

Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Estimated Substrate Injected Day 0 (gallons)	Substrate Injection Rate on 8/12 (gallons per hour)
0	25.3	0	14.37
0	23.8	0	12.40
0	15.1	0	15.82
0	17.8	0	13.95
0	13.5	0	15.04
0	16.2	0	14.07
0	15.4	0	12.45
0	127.1	0	

Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)
74,593	7.5
133,508	15.9
176,121	20.7
177,387	14.0
115,246	13.5
84,775	8.8
140,480	16.3
76,702	8.8
79,567	8.9
154,914	17.9
71,683	8.3
1,284,976	140.6
1,157,544	134

Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Estimated Substrate Injected Day 6 (gallons)	Substrate Injection Rate 8/12 through 8/18 (gallons per hour)
202,477	18.5	265	14.37
186,943	20.8	230	12.40
183,099	19.4	293	15.82
152,317	17.8	258	13.95
135,780	18.8	278	15.04
134,842	16.6	261	14.07
132,726	16.1	231	12.45
1,128,184	128.0	1815	

**Area 1C OUCTP EISB
System Operation
Preliminary Data Summary**

System Start Date:

Date: 8/25/2010
13 day

9/1/2010
20 day

9/8/2010
27 day

Extraction Well	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)
EW-BW-104-A	150,551	7.4
EW-BW-106-A	293,889	15.9
EW-BW-108-A	383,882	20.4
EW-BW-109-A	260,136	14.1
EW-BW-112-A	250,624	13.5
EW-BW-113-A	175,412	9.1
EW-BW-115-A	303,540	16.0
EW-BW-116-A	164,302	8.9
EW-BW-119-A	161,678	8.0
EW-BW-120-A	335,539	17.8
EW-BW-158-A	152,070	7.9
Total	2,631,623	139.0
Total Flow	2,505,012	134

Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)
219,462	7.5
441,822	12.9
573,165	20.0
389,255	13.8
375,215	13.2
258,861	9.2
450,829	15.7
245,437	8.6
234,996	7.9
498,760	17.5
225,392	7.8
3,913,194	134.1
3,729,100	128

Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)
282,338	7.2
736,599	13.0
553,001	18.9
510,683	14.3
486,371	13.0
335,649	8.8
583,000	15.4
318,383	8.6
300,332	6.9
646,672	17.1
291,962	7.9
5,044,990	131.1
4,776,472	111

Injection Well	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Estimated Substrate Injected Day 13 (gallons)	Substrate Injection Rate 3/17 (gallons per hour)
IW-BW-105-A	393,440	19.8		
P-301			578	14.22
IW-BW-107-A	386,307	18.0		
P-302			502	12.39
IW-BW-110-A	382,555	20.1		
P-303			641	15.82
IW-BW-111-A	335,741	18.4		
P-305			591	15.12
IW-BW-114-A	327,567	19.1		
P-304			590	14.20
IW-BW-117-A	296,130	15.2		
P-306			571	14.09
IW-BW-118-A	297,716	16.2		
P-307			504	12.45
Total	2,419,456	126.8	3977	

Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Estimated Substrate Injected Day 20 (gallons)	Substrate Injection Rate 9/1 (gallons per hour)
593,426	18.3		
		901	14.43
540,036	22.6		
		781	12.39
567,026	22.8		
		998	15.90
516,725	17.3		
		923	15.04
508,719	16.6		
		917	14.30
415,364	10.3		
		888	14.09
438,593	15.2		
		785	12.45
3,579,889	123.1	6192	

Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Estimated Substrate Injected Day 27 (gallons)	Substrate Injection Rate 9/8 (gallons per hour)
763,273	23		
		1160	14.14
685,407	17.7		
		1023	12.39
755,423	16.6		
		1279	15.80
692,956	20.8		
		1193	15.12
686,711	20.8		
		1179	14.20
478,499	5.2		
		1151	14.07
535,816	10.2		
		1024	12.45
4,597,885	114.3	8008	

**Area 1C OUCTP EISB
System Operation
Preliminary Data Summary**

System Start Date:

Date: 9/15/2010
34 day

Extraction Well	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)
EW-BW-104-A	348,679	8.0
EW-BW-106-A	644,136	12.8
EW-BW-108-A	872,424	17.2
EW-BW-109-A	628,624	13.8
EW-BW-112-A	592,006	12.4
EW-BW-113-A	407,997	8.1
EW-BW-115-A	708,147	14.7
EW-BW-116-A	390,906	9.0
EW-BW-119-A	350,121	8.9
EW-BW-120-A	781,454	15.5
EW-BW-159-A	357,583	7.6
Total	6,082,077	128.0
Total Flow	5,594,405	120

Injection Well	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Estimated Substrate Injected Day 34 (gallons)	Substrate Injection Rate 9/15 (gallons per hour)
IW-BW-105-A	902,623	19.2	1518	14.20
P-301				
IW-BW-107-A	759,386	8	1334	12.37
P-302				
IW-BW-110-A	867,555	14.9	1677	15.80
P-303				
IW-BW-111-A	856,511	9.9	1574	15.12
P-305				
IW-BW-114-A	847,175	14.2	1534	14.08
P-304				
IW-BW-117-A	537,037	13.1	1505	14.07
P-306				
IW-BW-118-A	605,648	10.2	1337	12.45
P-307				
Total	5,375,935	89.5	10480	

9/22/2010
41 day

Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)
420,996	8.1
740,355	11.3
1,017,799	17.1
747,048	12.7
682,934	9.1
476,039	7.5
819,737	13.6
431,572	12.7
394,548	5.1
894,550	11.5
426,247	8.2
7,061,825	116.9
6,408,578	89.7

Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Estimated Substrate Injected Total (gallons)	Substrate Injection Rate 9/22 (gallons per hour)
1,003,999	8.4	1698	15.00
813,211	5.9	1508	14.47
949,862	9.3	1867	15.77
935,055	12.8	1756	15.14
980,387	21.6	1714	15.00
638,039	8.3	1685	15.00
677,826	4.8	1517	15.00
5,998,379	71.1	11744	

9/29/2010
48 day

Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)
459,261	7.4
788,606	7.0
1,134,750	13.8
831,812	14.7
752,633	8.8
507,948	3.1
910,370	14.9
510,544	12.8
422,536	4.9
952,952	8.9
480,165	8.7
7,751,577	105.0
6,858,582	63.7

Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)
1,062,193	9.2
871,555	9.2
1,000,847	9.1
1,008,928	10.2
1,106,809	19.3
676,948	5.4
721,277	6.3
6,448,557	68.7

**Area 1C OUCTP EISB
System Operation
Preliminary Data Summary**

System Start Date:

Date: 10/6/2010
55 day

10/13/2010
62 day

10/20/2010
69 day

10/27/2010
76 day

11/3/2010
83 day

11/10/2010
90 day

Extraction Well	10/6/2010 55 day		10/13/2010 62 day		10/20/2010 69 day		10/27/2010 76 day		11/3/2010 83 day		11/10/2010 90 day	
	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)
EW-BW-104-A	496,384	6.9	576,863	7.0	590,296	7.6	669,715	7.4	739,036	7.5	814,713	6.8
EW-BW-106-A	821,776	5.5	840,750	6.0	885,551	3.3	916,165	4.8	943,253	1.6	959,060	1.4
EW-BW-108-A	1,187,526	12.0	1,223,657	11.0	1,309,611	9.4	1,413,257	14.7	1,549,096	13.3	1,658,817	9.8
EW-BW-109-A	906,728	14.3	951,803	14.3	1,092,280	14.3	1,231,281	13.0	1,344,607	10.6	1,452,339	11.3
EW-BW-112-A	805,177	9.7	832,764	7.8	873,852	2.0	886,910	1.5	894,721	0.7	909,303	4.4
EW-BW-113-A	527,216	3.2	536,527	1.9	544,081	2.3	565,825	0.6	571,588	1.1	579,745	1.1
EW-BW-115-A	984,302	13.7	1,031,687	12.6	1,132,018	8.4	1,186,296	2.4	1,232,791	7.2	1,280,464	9.6
EW-BW-116-A	571,886	10.8	602,787	7.7	641,595	2.8	664,760	2.0	680,435	1.0	683,914	0.8
EW-BW-119-A	447,117	4.8	465,473	8.7	532,802	4.6	555,717	1.5	563,667	0.8	572,822	1.8
EW-BW-120-A	996,147	8.6	1,023,351	8.2	1,066,523	2.4	1,091,381	1.7	1,107,919	2.3	1,122,480	1.9
EW-BW-159-A	526,337	8.6	554,087	8.5	635,989	7.8	705,284	5.6	752,369	5.5	796,254	4.4
Total	8,270,596	98.1	8,639,559	93.7	9,304,598	64.9	9,886,591	55.2	10,379,482	51.6	10,829,911	53.3
Total Flow	7,155,583	48	7,445,156	88.1	7,970,830	34.8	8,281,009	30	8,561,046	25	8,780,292	21.7

Injection Well	10/6/2010 55 day		10/13/2010 62 day		10/20/2010 69 day		10/27/2010 76 day		11/3/2010 83 day		11/10/2010 90 day	
	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)	Total Flow (gallons)	Instantaneous Flowrate (gallons per minute)
IW-BW-105-A P-301	1,104,444	10.1	1,136,392	9.1	1,189,007	2.7	1,228,066	3.5	1,252,208	2.1	1,267,619	1.1
IW-BW-107-A P-302	920,627	2.7	938,941	7.9	984,375	2.8	1,035,002	4.1	1,061,846	1.7	1,073,830	5.9
IW-BW-110-A P-303	1,045,129	9.6	1,081,006	9.6	1,122,426	2.2	1,163,617	3.7	1,195,237	2.3	1,212,642	1.5
IW-BW-111-A P-305	1,060,745	7.4	1,081,314	5.1	1,113,963	2.6	1,136,400	1.4	1,145,188	0.8	1,150,889	0.6
IW-BW-114-A P-304	1,207,710	20.4	1,270,913	17.4	1,389,411	8.9	1,509,471	7.5	1,566,473	3.7	1,592,187	1.9
IW-BW-117-A P-306	707,653	6.3	726,142	4.5	752,759	2.1	821,776	6.2	861,844	2.3	877,806	1.7
IW-BW-118-A P-307	753,685	3.7	789,380	11.7	864,359	5.4	947,977	5.9	991,561	3.1	1,015,482	1.9
Total	3,070,200	60.2	3,156,339	65.3	3,295,808	26.7	3,426,685	32.3	3,509,291	16.0	3,554,091	14.6

Sample ID	Method ^a	EW-BW-104-A extraction baseline 8/5/2010	EW-BW-104-A extraction Week 0 8/12/2010	EW-BW-104-A extraction Week 1 8/18/2010	EW-BW-104-A extraction Week 2 8/25/2010	EW-BW-104-A extraction Week 3 9/1/2010	EW-BW-104-A extraction Week 4 9/8/2010	EW-BW-104-A extraction Week 5 9/15/2010	EW-BW-104-A extraction Week 6 9/22/2010	EW-BW-104-A extraction Week 7 9/29/2010	EW-BW-104-A extraction Week 8 10/6/2010	EW-BW-104-A extraction Week 9 10/13/2010
Well Type		NA	9.6	7.5	7.4	7.5	7.2	8.0	8.1	7.4	6.9	7.0
Date												
well flowrate (operating)		NA	9.6	7.5	7.4	7.5	7.2	8.0	8.1	7.4	6.9	7.0
alkalinity (CaCO ₃ total)	HACH ^b	108 mg/L	104 mg/L	103 mg/L	98 mg/L	75 mg/L	88 mg/L	81 mg/L	89 mg/L	92 mg/L	80 mg/L	92 mg/L
pH	meter ^c	6.18	6.40	6.40	6.40	6.40	6.40	6.50	6.40	6.56	6.51	6.42
dissolved oxygen	meter ^c	7.46 ppm	8.42 ppm	9.02 ppm	9.04 ppm	9.47 ppm	9.26 ppm	9.97 ppm	9.8 ppm	7.83 ppm	8.99 ppm	9.27 ppm
oxidation reduction potential	meter ^c	135 mV	156 mV	174 mV	165 mV	149 mV	162 mV	147 mV	181 mV	151 mV	124 mV	191 mV
conductivity	meter ^c	80.8 mS/cm	86 mS/cm	89.3 mS/cm	88.4 mS/cm	85.2 mS/cm	86.9 mS/cm	88 mS/cm	88.6 mS/cm	87.9 mS/cm	91.8 mS/cm	88.4 mS/cm
turbidity	meter ^c	301 NTU	47 NTU	137 NTU	180 NTU	60 NTU	169 NTU	35 NTU	20 NTU	196 NTU	12.6 NTU	109 NTU
temperature	meter ^c	15.6 °C	17.7 °C	17.9 °C	18 °C	18 °C	17.8 °C	17.8 °C	17.9 °C	18.6 °C	17.8 °C	17.8 °C
nitrate	300.0	6300 µg/L						6190 µg/L		6100 µg/L		
nitrite	300.0	<100 µg/L						<100 µg/L		<100 µg/L		
sulfate	300.0	38600 µg/L						35300 µg/L		34500 µg/L		
ortho-phosphate	300.0							<200 µg/L		<200 µg/L		
dissolved iron	6010B	113J µg/L						<10 µg/L		<10 µg/L		
manganese	6010B	46.2 µg/L						<10 µg/L		<10 µg/L		
arsenic	6010B	<10 µg/L										
methane	RSK 175 ^d											
ethane	RSK 175 ^d											
lactate	300.0M	<100 µg/L										
propionate	300.0M	<100 µg/L										
acetate	300.0M	<100 µg/L										
carbon tetrachloride	8260B	2 µg/L						1.7 µg/L		2.0 µg/L		
chloroform	8260B	0.35J µg/L						0.30J µg/L		0.32J µg/L		
dichloromethane	8260B	<5.0 µg/L						<5.0 µg/L		<5.0 µg/L		
chloromethane	8260B	<1.0 µg/L						<1.0 µg/L		0.41J µg/L		
trichloroethene	8260B	1.1 µg/L						0.81 µg/L		0.81 µg/L		
acetone	8260B									5.7J µg/L		

Sample ID	Method ^a	EW-BW-104-A	EW-BW-104-A	EW-BW-104-A	EW-BW-104-A
Well Type		extraction	extraction	extraction	extraction
Date		Week 10	Week 11	Week 12	Week 13
		10/20/2010	10/27/2010	11/3/2010	11/10/2010
well flowrate (operating)		7.6	7.4	7.5	6.8
alkalinity (CaCO ₃ total)	HACH ^b	95 mg/L	88 mg/L	86 mg/L	73 mg/L
pH	meter ^c	6.42	6.52	6.37	6.48
dissolved oxygen	meter ^c	10.08 ppm	9.66 ppm	9.02 ppm	10.07 ppm
oxidation reduction potential	meter ^c	174 mV	134 mV	198 mV	119 mV
conductivity	meter ^c	89.1 mS/cm	87.4 mS/cm	89.1 mS/cm	86 mS/cm
turbidity	meter ^c	22.3 NTU	25 NTU	6 NTU	45.6 NTU
temperature	meter ^c	17.8 °C	17.9 °C	17.7 °C	17.8 °C
nitrate	300.0				µg/l
nitrite	300.0				µg/l
sulfate	300.0				µg/l
ortho-phosphate	300.0				µg/l
dissolved iron	6010B				µg/l
manganese	6010B				µg/l
arsenic	6010B				µg/l
methane	RSK 175 ^d				
ethane	RSK 175 ^d				
lactate	300.0M				
propionate	300.0M				
acetate	300.0M				
carbon tetrachloride	8260B		µg/l		
chloroform	8260B		µg/l		
dichloromethane	8260B		µg/l		
chloromethane	8260B		µg/l		
trichloroethene	8260B		µg/l		
acetone	8260B		µg/l		

Sample ID Well Type	Method ^a	EW-BW-109-A	EW-BW-109-A	EW-BW-109-A	EW-BW-109-A	EW-BW-109-A	EW-BW-109-A	EW-BW-109-A	EW-BW-109-A	EW-BW-109-A	EW-BW-109-A	EW-BW-109-A
		extraction baseline 8/4/2010	extraction Week 0 8/12/2010	extraction Week 1 8/18/2010	extraction Week 2 8/25/2010	extraction Week 3 9/1/2010	extraction Week 4 9/8/2010	extraction Week 5 9/15/2010	extraction Week 6 9/22/2010	extraction Week 7 9/29/2010	extraction Week 8 4/28/2010	extraction Week 9 10/13/2010
Date												
well flowrate (operating)		NA	13.7	14.0	14.1	13.8	14.3	13.8	12.7	14.7	14.3	14.3
alkalinity (CaCO ₃ total)	HACH ^b	114 mg/L	99 mg/L	94 mg/L	96 mg/L	104 mg/L	93 mg/L	101 mg/L	95 mg/L	94 mg/L	90 mg/L	95 mg/L
pH	meter ^c	6.56	6.30	5.90	6.40	6.30	6.30	6.40	6.40	6.48	6.41	6.38
dissolved oxygen	meter ^c	9.38 ppm	9.01 ppm	10.27 ppm	9.72 ppm	9.04 ppm	9.7 ppm	9.7 ppm	9.34 ppm	8.51 ppm	9.24 ppm	9.58 ppm
oxidation reduction potential	meter ^c	136 mV	157 mV	183 mV	170 mV	165 mV	171 mV	140 mV	142 mV	125 mV	123 mV	114 mV
conductivity	meter ^c	83 mS/cm	91.1 mS/cm	95 mS/cm	91.4 mS/cm	91.1 mS/cm	95.1 mS/cm	93.3 mS/cm	93 mS/cm	93.9 mS/cm	96 mS/cm	91.7 mS/cm
turbidity	meter ^c	90 NTU	17 NTU	0 NTU	0 NTU	4.6 NTU	1 NTU	14.2 NTU	17.2 NTU	25.1 NTU	5.2 NTU	1 NTU
temperature	meter ^c	16.5 °C	17.7 °C	17.8 °C	17.8 °C	17.8 °C	17.7 °C	17.7 °C	17.8 °C	17.7 °C	17.7 °C	17.8 °C
nitrate	300.0	8250 µg/L						8420 µg/L		7820 µg/L		
nitrite	300.0	<100 µg/L						<100 µg/L		<100 µg/L		
sulfate	300.0	18400 µg/L						26500 µg/L		27300 µg/L		
ortho-phosphate	300.0							<200 µg/L		<200 µg/L		
dissolved iron	6010B	64.1J µg/L						<10 µg/L		<10 µg/L		
manganese	6010B	69 µg/L						<10 µg/L		<10 µg/L		
arsenic	6010B	<10 µg/L						<10 µg/L		<10 µg/L		
methane	RSK 175 ^d	<2.0 µg/L										
ethane	RSK 175 ^d	<2.0 µg/L										
lactate	300.0M	<100 µg/L										
propionate	300.0M	<100 µg/L										
acetate	300.0M	<100 µg/L										
carbon tetrachloride	8260B	3.7 µg/L						2.4 µg/L		2.8 µg/L		
chloroform	8260B	0.61 µg/L						0.43J µg/L		0.41J µg/L		
dichloromethane	8260B	<5.0 µg/L						<5.0 µg/L		<5.0 µg/L		
chloromethane	8260B	<1.0 µg/L						<1.0 µg/L		0.42J µg/L		
trichloroethene	8260B	0.98 µg/L						0.69 µg/L		0.70 µg/L		
acetone	8260B									6.8J µg/L		

Sample ID	Method ^a	EW-BW-109-A	EW-BW-109-A	EW-BW-109-A	EW-BW-109-A
Well Type		extraction	extraction	extraction	extraction
Date		Week 10	Week 11	Week 12	Week 13
		10/20/2010	10/27/2010	11/3/2010	11/10/2010
well flowrate (operating)		14.3	13.0	10.6	11.3
alkalinity (CaCO ₃ total)	HACH ^b	93 mg/L	98 mg/L	102 mg/L	97 mg/L
	meter ^c	6.39	6.46	6.40	6.42
pH	meter ^c	9.56 ppm	8.91 ppm	8.8 ppm	8.93 ppm
dissolved oxygen	meter ^c	122 mV	105 mV	12 mV	13 mV
oxidation reduction potential	meter ^c	92.2 mS/cm	91 mS/cm	90.9 mS/cm	92.1 mS/cm
conductivity	meter ^c	0 NTU	0 NTU	1.3 NTU	7 NTU
turbidity	meter ^c	17.6 °C	17.8 °C	17.8 °C	17.7 °C
temperature	meter ^c				
nitrate	300.0				µg/l
nitrite	300.0				µg/l
sulfate	300.0				µg/l
ortho-phosphate	300.0				µg/l
dissolved iron	6010B				µg/l
manganese	6010B				µg/l
arsenic	6010B				µg/l
methane	RSK 175 ^d				
ethane	RSK 175 ^d				
lactate	300.0M				
propionate	300.0M				
acetate	300.0M				
carbon tetrachloride	8260B		µg/l		
chloroform	8260B		µg/l		
dichloromethane	8260B		µg/l		
chloromethane	8260B		µg/l		
trichloroethene	8260B		µg/l		
acetone	8260B		µg/l		

Sample ID	Method ^a	EW-BW-112-A extraction baseline 8/4/2010	EW-BW-112-A extraction Week 0 8/12/2010	EW-BW-112-A extraction Week 1 8/18/2010	EW-BW-112-A extraction Week 2 8/25/2010	EW-BW-112-A extraction Week 3 9/1/2010	EW-BW-112-A extraction Week 4 9/8/2010	EW-BW-112-A extraction Week 5 9/15/2010	EW-BW-112-A extraction Week 6 9/22/2010	EW-BW-112-A extraction Week 7 9/29/2010	EW-BW-112-A extraction Week 8 10/6/2010	EW-BW-112-A extraction Week 9 10/13/2010
Date		NA	13.4	13.5	13.5	13.2	13.0	12.4	9.1	8.8	9.7	7.8
well flowrate (operating)		NA	13.4	13.5	13.5	13.2	13.0	12.4	9.1	8.8	9.7	7.8
alkalinity (CaCO ₃ total)	HACH ^b	138 mg/L	123 mg/L	106 mg/L	105 mg/L	120 mg/L	103 mg/L	114 mg/L	102 mg/L	110 mg/L	119 mg/L	135 mg/L
pH	meter ^c	6.82	6.50	6.10	6.40	6.50	6.40	6.50	6.40	6.60	6.51	6.55
dissolved oxygen	meter ^c	8.65 ppm	9.04 ppm	10.12 ppm	9.13 ppm	8.9 ppm	9.64 ppm	10.4 ppm	9.32 ppm	7.71 ppm	6.31 ppm	5.8 ppm
oxidation reduction potential	meter ^c	111 mV	150 mV	177 mV	169 mV	157 mV	158 mV	117 mV	68 mV	-9 mV	82 mV	10 mV
conductivity	meter ^c	72.6 mS/cm	78.3 mS/cm	81.5 mS/cm	77.5 mS/cm	77.3 mS/cm	79.8 mS/cm	80.2 mS/cm	84.5 mS/cm	88 mS/cm	94.1 mS/cm	93 mS/cm
turbidity	meter ^c	300 NTU	192 NTU	93.4 NTU	134 NTU	62 NTU	36 NTU	142 NTU	25 NTU	16.4 NTU	20.6 NTU	31 NTU
temperature	meter ^c	15.6 °C	17 °C	17.4 °C	18 °C	17.8 °C	17.2 °C	17.1 °C	17.3 °C	17.5 °C	17.2 °C	18.1 °C
nitrate	300.0	2750 µg/L						5520 µg/L		5520 µg/L		
nitrite	300.0	<100 µg/L						<100 µg/L		<100 µg/L		
sulfate	300.0	13200 µg/L						28200 µg/L		27600 µg/L		
ortho-phosphate	300.0							<200 µg/L		<200 µg/L		
dissolved iron	6010B	75.1J µg/L						5.25J µg/L		170 µg/L		
manganese	6010B	101 µg/L						<10 µg/L		<10 µg/L		
arsenic	6010B	<10 µg/L										
methane	RSK 175 ^d	<2.0 µg/L										
ethane	RSK 175 ^d	<2.0 µg/L										
lactate	300.0M	<100 µg/L										
propionate	300.0M	<100 µg/L										
acetate	300.0M	<100 µg/L										
carbon tetrachloride	8260B	3.1 µg/L						1.7 µg/L		2.1 µg/L		
chloroform	8260B	0.7 µg/L						0.36J µg/L		0.36J µg/L		
dichloromethane	8260B	<5.0 µg/L						<5.0 µg/L		<5.0 µg/L		
chloromethane	8260B	<1.0 µg/L						<1.0 µg/L		0.39J µg/L		
trichloroethene	8260B	1.3 µg/L						0.75 µg/L		0.84 µg/L		
acetone	8260B									13 µg/L		

Sample ID	Method ^a	EW-BW-112-A	EW-BW-112-A	EW-BW-112-A	EW-BW-112-A
Well Type		extraction	extraction	extraction	extraction
		Week 10	Week 11	Week 12	Week 13
Date		10/20/2010	10/27/2010	11/3/2010	11/10/2010
well flowrate (operating)		2.0	1.5	0.7	4.4
alkalinity (CaCO ₃ total)	HACH ^b	160 mg/L	179 mg/L	197 mg/L	194 mg/L
pH	meter ^c	6.53	6.69	6.53	6.47
dissolved oxygen	meter ^c	2.73 ppm	0.15 ppm	0.14 ppm	2.87 ppm
oxidation reduction potential	meter ^c	-20 mV	-15 mV	-56 mV	14 mV
conductivity	meter ^c	98.5 mS/cm	99.9 mS/cm	99.9 mS/cm	99.9 mS/cm
turbidity	meter ^c	6 NTU	5.6 NTU	12 NTU	51.3 NTU
temperature	meter ^c	17.9 °C	19.4 °C	22.1 °C	17.9 °C
nitrate	300.0				µg/l
nitrite	300.0				µg/l
sulfate	300.0				µg/l
ortho-phosphate	300.0				µg/l
dissolved iron	6010B				µg/l
manganese	6010B				µg/l
arsenic	6010B				µg/l
methane	RSK 175 ^d				
ethane	RSK 175 ^d				
lactate	300.0M				
propionate	300.0M				
acetate	300.0M				
carbon tetrachloride	8260B		µg/l		
chloroform	8260B		µg/l		
dichloromethane	8260B		µg/l		
chloromethane	8260B		µg/l		
trichloroethene	8260B		µg/l		
acetone	8260B		µg/l		

Sample ID	Method ^a	EW-BW-119-A extraction baseline 8/3/2010	EW-BW-119-A extraction Week 0 8/12/2010	EW-BW-119-A extraction Week 1 8/19/2010	EW-BW-119-A extraction Week 2 8/26/2010	EW-BW-119-A extraction Week 3 9/2/2010	EW-BW-119-A extraction Week 4 9/8/2010	EW-BW-119-A extraction Week 5 9/16/2010	EW-BW-119-A extraction Week 6 9/23/2010	EW-BW-119-A extraction Week 7 9/30/2010	EW-BW-119-A extraction Week 8 10/7/2010	EW-BW-119-A extraction Week 9 10/14/2010
Date									4.0	3.5	5.1	8.6
well flowrate (operating)		NA	9.3	8.8	8.0	7.7	6.4	8.9				
alkalinity (CaCO ₃ total)	HACH ^b	54 mg/L	52 mg/L	59 mg/L	51 mg/L	54 mg/L	67 mg/L	58 mg/L	100 mg/L	109 mg/L	112 mg/L	134 mg/L
pH	meter ^c	6.07	6.30	6.30	6.30	6.40	6.40	6.30	6.41	6.48	6.41	6.39
dissolved oxygen	meter ^c	10.59 ppm	8.7 ppm	9.33 ppm	9.16 ppm	9.6 ppm	7.69 ppm	5.73 ppm	5.63 ppm	4.15 ppm	5.03 ppm	4.41 ppm
oxidation reduction potential	meter ^c	203 mV	179 mV	183 mV	166 mV	169 mV	159 mV	33 mV	-47 mV	-44 mV	-54 mV	-34 mV
conductivity	meter ^c	64.9 mS/cm	76.3 mS/cm	80.4 mS/cm	80.9 mS/cm	76.6 mS/cm	81.8 mS/cm	88 mS/cm	93.2 mS/cm	97.9 mS/cm	98.2 mS/cm	99.9 mS/cm
turbidity	meter ^c	440 NTU	4 NTU	6.5 NTU	0 NTU	0 NTU	6.2 NTU	2 NTU	2.8 NTU	2.9 NTU	0 NTU	4.2 NTU
temperature	meter ^c	16.9 °C	19.5 °C	18.2 °C	17.9 °C	18.4 °C	18.2 °C	18.1 °C	18.2 °C	18.1 °C	17.9 °C	18 °C
nitrate	300.0	6170 µg/L						6060(6060) µg/L		4690 µg/L		
nitrite	300.0	<100 µg/L						<100(<100) µg/L		<100 µg/L		
sulfate	300.0	12900 µg/L						25200(25200) µg/L		22400 µg/L		
ortho-phosphate	300.0							<200 µg/L		278 µg/L		
dissolved iron	6010B	<200 µg/L						340 µg/L		921 µg/L		
manganese	6010B	5.18J µg/L						<10 µg/L		<10 µg/L		
arsenic	6010B	<10 µg/L										
methane	RSK 175 ^d											
ethane	RSK 175 ^d											
lactate	300.0M	<100 µg/L										
propionate	300.0M	<100 µg/L										
acetate	300.0M	<100 µg/L										
carbon tetrachloride	8260B	5.5 µg/L						3.8 µg/L		5.7 µg/L		
chloroform	8260B	0.49J µg/L						0.51 µg/L		0.62 µg/L		
dichloromethane	8260B	<5.0 µg/L						<5.0 µg/L		<5.0 µg/L		
chloromethane	8260B	<1.0 µg/L						<1.0 µg/L		<1.0 µg/L		
dibromochloromethane	8260B	0.33J µg/L						0.20J µg/L		0.22J µg/L		
trichloroethene	8260B	0.75 µg/L						0.92 µg/L		1.4 µg/L		
acetone	8260B							15 µg/L		35 µg/L		
2-butanone	8260B									7.7J µg/L		
carbon disulfide	8260B									0.31J µg/L		

Sample ID	Method ^a	EW-BW-119-A	EW-BW-119-A	EW-BW-119-A	EW-BW-119-A
Well Type		extraction	extraction	extraction	extraction
Date		Week 10	Week 11	Week 12	Week 13
		10/21/2010	10/28/2010	11/4/2010	11/10/2010
well flowrate (operating)		3.4	1.2	1.0	2.2
alkalinity (CaCO ₃ total)	HACH ^b	175 mg/L	229 mg/L	240 mg/L	222 mg/L
pH	meter ^c	6.36	6.51	6.49	6.44
dissolved oxygen	meter ^c	0.42 ppm	0 ppm	0.11 ppm	0.08 ppm
oxidation reduction potential	meter ^c	-39 mV	-78 mV	-93 mV	-68 mV
conductivity	meter ^c	99.9 mS/cm	93 mS/cm	96 mS/cm	97 mS/cm
turbidity	meter ^c	6 NTU	8.7 NTU	13 NTU	13.7 NTU
temperature	meter ^c	18.6 °C	19.1 °C	19.4 °C	18.6 °C
nitrate	300.0				µg/L
nitrite	300.0				µg/L
sulfate	300.0				µg/L
ortho-phosphate	300.0				µg/L
dissolved iron	6010B				µg/L
manganese	6010B				µg/L
arsenic	6010B				µg/L
methane	RSK 175 ^d				
ethane	RSK 175 ^d				
lactate	300.0M				
propionate	300.0M				
acetate	300.0M				
carbon tetrachloride	8260B				µg/L
chloroform	8260B				µg/L
dichloromethane	8260B				µg/L
chloromethane	8260B				µg/L
tribromochloromethane	8260B				µg/L
tetrachloroethene	8260B				µg/L
acetone	8260B				
2-butanone	8260B				
carbon disulfide	8260B				

Sample ID	Method ^a	MW-BW-25-A monitoring baseline 8/6/2010	MW-BW-25-A monitoring Week 0 8/12/2010	MW-BW-25-A monitoring Week 1 8/19/2010	MW-BW-25-A monitoring Week 2 8/26/2010	MW-BW-25-A monitoring Week 3 9/2/2010	MW-BW-25-A monitoring Week 4 9/9/2010	MW-BW-25-A monitoring Week 5 9/16/2010	MW-BW-25-A monitoring Week 6 9/23/2010	MW-BW-25-A monitoring Week 7 9/30/2010	MW-BW-25-A monitoring Week 8 10/7/2010	MW-BW-25-A monitoring Week 9 10/14/2010
Well Type												
Date												
well flowrate (operating)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
alkalinity (CaCO ₃ total)	HACH ^b	65 mg/L	48 mg/L	46 mg/L	42 mg/L	42 mg/L	43 mg/L	44 mg/L	42 mg/L	45 mg/L	79 mg/L	110 mg/L
pH	meter ^c	6.52	6.20	6.30	6.20	6.30	6.30	6.20	6.26	6.31	6.30	6.24
dissolved oxygen	meter ^c	11.10 ppm	9.10 ppm	9.06 ppm	9.06 ppm	9.29 ppm	8.88 ppm	9.00 ppm	9.08 ppm	9.01 ppm	1.77 ppm	0.44 ppm
oxidation reduction potential	meter ^c	258 mV	181 mV	178 mV	194 mV	175 mV	175 mV	178 mV	130 mV	155 mV	52 mV	3 mV
conductivity	meter ^c	62 mS/cm	77.8 mS/cm	68.4 mS/cm	68.9 mS/cm	65.6 mS/cm	68.1 mS/cm	67.5 mS/cm	69 mS/cm	69.3 mS/cm	72.8 mS/cm	96.3 mS/cm
turbidity	meter ^c	143 NTU	3 NTU	5 NTU	4 NTU	11.8 NTU	4.9 NTU	10 NTU	6.4 NTU	5.3 NTU	0 NTU	6.3 NTU
temperature	meter ^c	15.3 °C	17.9 °C	18.6 °C	18.4 °C	18.5 °C	18.5 °C	18.5 °C	18.7 °C	18 °C	18.6 °C	18.2 °C
nitrate	300.0	4840(4860) µg/L		4640(4660) µg/L		4580(4580) µg/L	4570 µg/L	4530 µg/L	4770 µg/L	4250 µg/L	572 µg/L	
nitrite	300.0	<100(<100) µg/L		<100(<100) µg/L		<100(<100) µg/L	<100 µg/L	<100 µg/L	<100 µg/L	<100 µg/L	291 µg/L	
sulfate	300.0	24300(24300) µg/L		23900(23800) µg/L		24100(24000) µg/L	24000 µg/L	22800 µg/L	22200 µg/L	22200 µg/L	20700 µg/L	
ortho-phosphate	300.0			<200 µg/L		<200 µg/L	<200 µg/L	<200 µg/L	<200 µg/L	<200 µg/L	<200 µg/L	
dissolved iron	6010B	<20 µg/L		<10 µg/L		<10 µg/L	<10 µg/L	<10 µg/L	<10 µg/L	<10 µg/L	65.2 µg/L	
manganese	6010B	<10 µg/L		<10 µg/L		<10 µg/L	<10 µg/L	<10 µg/L	<10 µg/L	<10 µg/L	<10 µg/L	
arsenic	6010B	<10 µg/L		<10 µg/L		<10 µg/L	<10 µg/L	<10 µg/L	<10 µg/L	<10 µg/L	<10 µg/L	
methane	RSK 175 ^d											
ethane	RSK 175 ^d											
lactate	300.0M	<100(<100) µg/L						<100 µg/L			<100 µg/L	
propionate	300.0M	<100(<100) µg/L						<100 µg/L			<100 µg/L	
acetate	300.0M	<100(<100) µg/L						<100 µg/L			<100 µg/L	
carbon tetrachloride	8260B	1.1 µg/L		0.67 µg/L		0.72(0.73) µg/L	0.68 µg/L	0.69 µg/L	0.8 µg/L	1.3 µg/L	1.4 µg/L	
chloroform	8260B	<0.5 µg/L		<0.5 µg/L		<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	
dichloromethane	8260B	<5.0 µg/L		<5.0 µg/L		<5.0 µg/L	<5.0 µg/L	<5.0 µg/L	<5.0 µg/L	<5.0 µg/L	<5.0 µg/L	
chloromethane	8260B	<1.0 µg/L		<1.0 µg/L		<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	<1.0 µg/L	
trichloroethene	8260B									5.1J µg/L		
acetone	8260B										70 µg/L	
2-butanone	8260B										23 µg/L	

Sample ID	Method ^a	MW-BW-25-A	MW-BW-25-A	MW-BW-25-A	MW-BW-25-A
Well Type		monitoring	monitoring	monitoring	monitoring
		Week 10	Week 11	Week 12	Week 13
Date		10/21/2010	10/27/2010	11/4/2010	11/10/2010
well flowrate (operating)		NA	NA	NA	NA
alkalinity (CaCO ₃ total)	HACH ^b	128 mg/L	221 mg/L	255 mg/L	314 mg/L
pH	meter ^c	6.16	6.32	6.25	6.21
dissolved oxygen	meter ^c	0.61 ppm	0.00 ppm	0.00 ppm	0.04 ppm
oxidation reduction potential	meter ^c	-152 mV	-182 mV	-157 mV	-119 mV
conductivity	meter ^c	99.9 mS/cm	107 mS/cm	111 mS/cm	125 mS/cm
turbidity	meter ^c	5 NTU	9.6 NTU	23.2 NTU	17.2 NTU
temperature	meter ^c	18.3 °C	18.2 °C	18.9 °C	18 °C
nitrate	300.0				µg/L
nitrite	300.0				µg/L
sulfate	300.0				µg/L
ortho-phosphate	300.0				µg/L
dissolved iron	6010B				µg/L
manganese	6010B				µg/L
arsenic	6010B				µg/L
methane	RSK 175 ^d				
ethane	RSK 175 ^d				
lactate	300.0M				µg/L
propionate	300.0M	µg/L			
acetate	300.0M	µg/L			
carbon tetrachloride	8260B	µg/L			
chloroform	8260B	µg/L			
dichloromethane	8260B	µg/L			
chloromethane	8260B	µg/L			
trichloroethene	8260B	µg/L			
acetone	8260B	µg/L			
2-butanone	8260B	µg/L			

Site 39 Remedial Action Status Update 11/17/2010

Ongoing Documents

- None

Ongoing Engineering Activities

- None

Construction Activities

Site 39

- Excavation
 - Completed HA 48
 - Continue HAs 39/40 – use war wagon with 2-inch diameter screen when required
 - Completed HA 28 – 11/16
 - Over-excavated one each where lead >225 mg/kg at HAs 28 and 39/40
- Sampling
 - Continue sampling at HA 39/40
 - Completed sampling at HA 28 – waiting for results
 - Waiting for results for lead sample at HA 48
- QC Seeding
 - Recovered all 18 seeds placed at completed HAs
- Pre-remediation DGM Survey of New Surface
 - Completed field work at HA 34
 - Continue QC/processing of data
- Regrading
 - Planning for HAs 19 and 26
- Post-remediation DGM Survey of New Surface
 - Completed HAs 19 and 44
 - Start HA 26 on 11/22
 - Planning for HAs 48, 28, and 39/40
- Post-remediation Subsurface Removal of New Surface
 - Completed HA 33
 - Completed reacq at HA 44
 - Started excavating targets at HA 44
 - Approximately 0.2 acres of “mag and dig” required at HA 44
 - Continue reacq at HA 19
 - Start excavating targets at HA 19
- Erosion Control after Subsurface Removal
 - Complete HA 27A, 27, 29, 22
 - Continue application of straw and barley seeds

OU2 Landfills

- Erosion control, as required
- Receive soils from Site 39 remediation

Technical Memorandum

Tech Memos (TM) will present analytical results with the objective of receiving preliminary concurrence from Agencies that remediation is complete and acceptable and re-contouring/ restoration can occur. (see attached table).

- HA 26 – TM issued for Agency approval (via e-mail)
- HA 44 – waiting on validated data
- HA 48 – waiting on analytical result for lead excavation

Technical Memorandum Status Update

HA	Issued to Army for review	Issued to Agencies for review	Comments		
			EPA	DTSC	RWQCB
27	3/12	3/18, 4/12	5/5, add BU	3/22, 5/5	5/4, No Comment
22	4/12	4/12	5/5, No Comment	Ok at BCT	No Comment
43	4/20	4/20	5/5, No Comment	Ok at BCT	4/21, No Comment
36	4/23	4/26, 5/21	5/6, terminology	5/17, 5/26, No Comment	4/26, No Comment
23	5/17	6/4	Ok at BCT	7/13, typo, no comment	6/7, No Comment
33	6/4	6/22	7/6, no comment	7/13, no comment	No Comment
27A	7/1	7/6	ok at BCT, 7/14	7/21, no comment	No Comment
29	7/7	7/12	7/22, no comment	8/6, calc comment, ok	No Comment
18	7/9	7/12	7/22, no comment	7/22, typo, 7/27 no add comment	No Comment
19	8/20	8/23	8/26, no comment	9/8, 9/15 No comments	No Comment
26	11/2	11/8			
48					
44					
39/40					
28					

**Site 39 Remediation
Excavated Volume
(as of 11/15/2010)**

Summary						
Historical Area	FS Total Plan (bank cy)	Actual Plan To Date (bank cy)	OX/SP To Date (bank cy)	Total To Date (bank cy)	% FS Total Plan To Date	Remediation Status
18	2,730	2,730		2,730	100%	complete
18 OVEREX			20	20		complete
22	80	100		100	100%	complete
23	440	440		440	100%	complete
27	120	120		120	100%	complete
27A	1,030	1,030		1,030	100%	complete
27A OVEREX			470	470		complete
27A STOCKPILE			240	240		complete
29	2,580	2,580		2,580	100%	complete
29 OVEREX			330	330		complete
29 STOCKPILE			280	280		complete
33	20	20		20	100%	complete
36	2,750	2,580		2,580	100%	complete
36 OVEREX			40	40		complete
43	150	150		150	100%	complete
19	26,510	26,510		26,510	100%	complete
19 OVEREX		40	40	40		complete
26	24,760	24,760		24,760	100%	complete
26 OVEREX			70	70		complete
48	140	140		140	100%	complete
44	3,340	3,340		3,340	100%	complete
44 OVEREX			230	230		complete
44 STOCKPILE			500	500		complete
AUSTIN STOCKPILE						
39/40	6,520	6,520		3,700	57%	
39/40 OVEREX			130	130		
28	6,920	6,920		6,920	100%	
28 OVEREX			15	15		
34	26,270	26,270			-	
37	19,430	19,430			-	
Total	123,790	123,680	2,365	77,435	63%	

Note:

$$\% \text{ FS Total Plan To Date} = \frac{\text{Total To Date (including OX/SP)}}{\text{FS Total Plan}}$$

**Working Schedule for Site 39 Field Work
(as of 11/17/2010)**

TASK	HA	Pre-Remediation					Remediation									Post-Remediation			
		Veg Clearance	Target Box/Surface MEC Removal	DGM	Target Reacquisition	Subsurface MEC Removal	Surveying	Bio Clearance	Mowing/ Limbing	Site Prep	Excavation	Over-excavation	Transport to OU2 Landfill	Sampling	Tech Memo	Regrading	DGM	Subsurface MEC Removal	Erosion Control
1	27	NA	NA	NA	NA	NA	10/19	10/28	10/28	11/2	11/2 11/4	NA	1/6	11/18	11/19, 3/18, 4/12	7/14	7/14 7/15	9/16, 10/5	11/9
2	27A	NA	NA	NA	NA	NA	10/19 10/20	10/29	10/28 10/29	11/4	11/4 11/13	1/4, 1/5, 2/2, 3/31	1/6 1/7, 2/2, 2/3, 4/8	11/19, 1/11	7/6	8/2	8/2 8/4	9/16	11/8, 11/12
3	29	NA	NA	NA	NA	NA	10/21	10/29	11/5, 11/9	11/9 11/12, 11/16	11/17 12/1	1/6	12/28- 12/31, 1/6, SP on 2/2	12/2, 1/12, SP on 2/9, 4/13	7/12	8/11 8/12	8/17 8/19	9/16, 10/5-6	11/9
4	OU2 Landfill Phase 1	NA	NA	NA	NA	NA	10/27	NA	11/9 11/12	12/1	12/2, 12/31, 1/11	NA	NA	NA	NA	NA	NA	NA	NA
5	36 (Explosives)	NA	NA	NA	NA	NA	10/22	12/10	12/24	1/11	1/12 2/1	3/22	1/12 2/1, 3/22	2/9, 3/22	4/26, 5/21	7/19	6/7, 7/29- 7/30	9/13 9/16	11/23
6	43	NA	NA	NA	NA	NA	10/20	10/26	NA	2/2	2/8 2/9	NA	3/16	2/9, 2/23	4/20	7/26	7/26	10/13 - 14	11/17
7	33 (Explosives)	NA	NA	NA	NA	NA	10/20	12/10	12/24	1/27	1/27	NA	1/27	2/9	6/22	7/21	7/26	11/15	NA
8	OU2 Landfill Phase 1	NA	NA	NA	NA	NA	NA	NA	NA	NA	2/16 3/4	NA	NA	NA	NA	NA	NA	NA	NA
9	Austin Stockpile	NA	NA	NA	NA	NA	NA	12/10	12/21	2/1	11/23		11/23	11/23	NA	11/23			
10	22	NA	NA	NA	NA	NA	10/20	10/26	12/22	2/4	2/9 2/10	NA	3/16	2/23	4/12	7/14	7/15 7/20	10/14 - 15, 11/4	11/10
11	23	NA	NA	NA	NA	NA	10/22 & 10/26	12/10	12/22	2/4	2/10, 2/16-17	NA	3/16	2/23	6/4	7/14	7/15 7/20, 7/26	11/3	11/10, 11/18
12	18	NA	NA	NA	NA	NA	10/26-27, 12/3, 12/8-9, 12/15	12/21, 2/4	1/8, 1/11, 2/4, 2/9	2/16	2/17 3/4	3/4	3/16 3/23	3/4, 3/9, 3/31, 4/20	7/12	8/3 8/10	8/3 8/12	10/12 - 13	11/18- 11/23
13	19	NA	NA	NA	NA	NA	12/16 2/3	2/8, 3/4	2/16 3/11	3/8 3/16	3/17 5/13	6/24, 6/28, 7/22	3/24 5/24	4/13 - 5/26, 6/28	8/23	12/1 12/2	9/20 10/26	11/17 - 12/2	12/6 - 9
14	OU2 Landfill Phase 2	NA	NA	NA	NA	NA	10/27	NA	NA	NA	5/17 7/26	NA	NA	NA	NA	NA	NA	NA	NA
15	26	3/3 3/30	4/8 4/23	4/12 4/30	5/3 7/2	5/10 7/23	6/14 8/3	3/3, 5/17	NA	5/4 6/28	6/28 9/2	9/1	7/12 9/15	8/9 9/14	11/8	11/17	11/22 - 12/10		
16	39/40	NA	NA	NA	NA	9/16 12/16	5/17 (ex)	7/14	7/21 7/22	9/7 9/15	9/16 12/14		10/26 12/16	9/22 12/16					
17	44	7/8, 7/9	7/30	NA	NA	8/2 9/13	5/17 (ex)	5/25, 6/15, 7/7	7/8, 7/9	7/26 8/2	8/2 9/8	9/8, 10/13	9/8 9/14	8/3 - 9/2, 9/13	11/29	10/13	10/13, 10/20	11/1 - 23, 12/15-16	
18	48	7/26	7/26 7/30	NA	NA	7/26 7/30	5/17	6/3 6/10	NA	7/26	7/26 7/30	NA	7/26 7/30	8/3, 8/25					
19	28	7/21	8/11 8/27	8/30 8/31	NA	9/23 9/30	6/14 (ex)	7/21	7/21	10/6 10/18	10/19 11/16		10/25 11/18	10/21 11/18					
20	34	7/23 7/28	8/6	10/25 11/15	NA	NA	5/18 (ex)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
11/17 date completed
11/18 tentative scheduled start and end dates
11/23