

**SUBJECT: HTW – BCT Meeting**  
**February 19, 2010**  
**1:00 p.m. BRAC Conference Room**

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Check (✓)	Name	Organization	Phone	E-mail address
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**HTW BCT Meeting**

February 19, 2010 at 1:00 pm

<b>Item</b>	<b>Action</b>	<b>Comment</b>
<b>OU1 Off-Site</b>	<b>Status Update</b>	
<b>OU2 and 2/12 Treatment Systems</b>	<b>Status Update</b>	
<b>Other Groundwater Issues</b>	<b>Status Update</b>	
<b>OUCTP</b>	<b>Status Update</b>	
<b>OU2 Landfill</b>	<b>Status Update</b>	
<b>Site 39 Remediation</b>	<b>Status Update</b>	
<b>OU1 Groundwater Remediation</b>	<b>Status Update</b>	<b>HGL</b>
<b>FFA Schedule</b>	<b>Status Update</b>	
<b>FOST/FOSET Issues</b>	<b>Status Update</b>	
<b>Calendar Update</b>	<b>Update</b>	

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*\*Please advise us if you will be participating by phone.*

## HGL AGENDA & NOTES

Fort Ord HTW BCT Meeting  
1:00 PM, 19 February 2010  
Monterey, California

### 1. Groundwater Remediation System Update

The Northwest Treatment System (NWTS) operated without interruption from 25 July 2009 until the afternoon of 20 January 2010 (Wednesday). The severe storms in the area knocked out the electric power and the plant was off-line until the morning of 22 January (Friday), approximately 41.5 hours later. Poor road conditions from the heavy rains during the week preceding the power outage forced postponement of the carbon change-out scheduled on 18 January. On 08 February, the system was taken off-line for approximately 6 hours to perform the carbon change. In total, the NWTS was offline for nearly 48 hours between 13 January and 15 February (when this agenda was prepared). Except for the power failure and the carbon change, the injection pump has operated normally since 24 August 2009.

As discussed last month, pumping from boundary extraction wells EW-OU1-63-A and EW-OU1-62-A was suspended on 18 January 2010. Extraction well EW-OU1-60-A has been pumping at approximately 1.1 gallons per minute (gpm) since that time. Pumping from EW-OU1-60-A will continue so long as the well is able to do so and plume capture at the boundary is needed. Nearby monitoring well MW-OU1-57-A will replace EW-OU1-63-A during the scheduled performance sampling in March and monitoring well MW-OU1-58-A will replace EW-OU1-62-A.

Under the current operating conditions, nearly all of the treated water is returned to the injection well and the FONR infiltration trenches. We will continue to periodically review groundwater elevations, system performance samples and LTM results and adjust operating characteristics as needed. Pumping may be resumed at EW-OU1-62-A if / when significant volumes of treated water are again routed to the NWTS trenches.

The treatment system flow rate averaged approximately 50.9 gpm from 09 November 2009 through 04 January 2010. For 2010 through 28 February, the treatment system has averaged 51.8 gpm. The total volume pumped from startup in 2006 through 08 February 2010 is over 119,688,000 gallons. During that time the NWTS has removed approximately 4.1 pounds (0.34 gallons) of TCE and 0.37 pounds (0.03 gallons) of cis-1,2-dichloroethene. The next round of performance samples will be collected in March 2010. Thus far in 2010, approximately 0.05 pounds of TCE (0.004 gallons) and 0.002 pounds (0.0002 gallons) of cis-1,2-dichloroethene have been removed.

Validated laboratory analytical results from the December 2009 performance sampling effort have been received. All reported values were accepted without qualification so there were no changes to the preliminary data previously described. The validated analytical results are included in Table 1. The information in Table 1 was provided during the January BCT meeting and is repeated below (*italicized*) for convenient reference:

- *TCE exceeded the aquifer cleanup level (ACL) only at the two extraction wells nearest to the original source area (EW-OU1-71-A and MW-OU1-87-A).*
- *TCE concentrations declined by approximately 20% at EW-OU1-71-A, EW-OU1-66-A and MW-OU1-85-A and were stable at MW-OU1-87-A (6.9 µg/L versus 6.8 µg/L).*
- *EW-OU1-60-A was not pumping and thus not sampled.*
- *The influent TCE to the treatment plant was stable at 2.3 µg/L and the effluent concentration remained non-detect.*

- *The mid-point sample showed that TCE increased to 0.65 µg/L. This value exceeds the 0.5 µg/L threshold and a carbon change-out was performed on 08 February 2010.*

## **2. Long-term Monitoring Update**

The next long-term monitoring (LTM) sample event will occur during the week of 22 – 26 March 2010. The most recent LTM samples taken in September 2009 have been validated and the results are very similar to those obtained from the March 2009 LTM. The following information (italicized) was provided during the October BCT meeting and was not significantly affected by the validation results. The October BCT information is repeated herein for convenient reference:

*The maximum TCE concentration reported in both the first quarter 2009 LTM event and the recent September LTM sampling was 10 µg/L at well EW-OUI-53-A. A comparison of the recent data to the March 2009 data showed:*

- *TCE concentrations changed by more than 1.0 µg/L at only two wells:*
  - *An increase of 2.9 µg/L (to 9.9 µg/L) at MW-OUI-61-A. This well is screened only in the Channel Fill interval of the A-Aquifer (i.e., the deepest interval; approximately 7 feet thick at this location)*
  - *A decrease of 5.6 µg/L (to 1.0 µg/L) at MW-OUI-50-A. This well is screened throughout the saturated thickness of the A-Aquifer.*
- *TCE concentrations increased at only five wells. In addition to the increase at EW-OUI-61-A described above, TCE concentration rose at wells EW-OUI-52-A, MW-OUI-22-A, IW-OUI-10-A, and EW-OUI-65-A. The magnitude of change ranged from 0.25 µg/L to 0.8 µg/L.*

*The TCE concentration contours based on the un-validated third quarter (September) 2009 LTM analytical results are shown in the attached preliminary draft Figure 7 (from the report currently in preparation).*

The replacement sample collection from well MW-OUI-19-A (to replace the failed September sample) was collected in December with the fourth quarter NWTs performance monitoring. The validated laboratory result showed TCE was present at a concentration of 1.7 µg/L (unchanged from the preliminary value reported last month). TCE concentrations at this well have ranged between 2.4 µg/L and 1.5 µg/L since 2005.

A sample was also collected from well MW-OUI-61-A during the fourth quarter NWTs performance monitoring. The validated laboratory result confirmed TCE was present at a concentration of 12 µg/L. Consequently, pumping continued from the boundary extraction wells. TCE concentrations at MW-OUI-61-A well have ranged between 5 µg/L and 13 µg/L since January 2007.

## **3. Report Submittals**

Table 2 summarizes the status of scheduled reports through 2010. The Final 2008 Annual and Fourth Quarter Groundwater Monitoring Report was submitted in December. The Draft 2009 Annual and Third Quarter Groundwater Monitoring Report was submitted during the second week in February.

## **4. Other**

### **A) Boundary Well Operation**

At the October BCT meeting it was agreed that continued operation of the four extraction wells on the northwest FONR boundary would be based on observed groundwater quality in those wells and in the nearby monitoring wells in accordance with the criteria below:

- A. Pumping from the four OU-1 extraction wells on the former Fort Ord northwest boundary will be suspended
- B. MW-OU1-61-A and the four other wells listed above will be added to the quarterly performance monitoring sample collection schedule.
- C. Pumping from the OU-1 extraction wells on the former Fort Ord northwest boundary will be resumed if the results from the quarterly performance sample(s) from any of the wells of Item B above do not meet the ACLs.

As requested, HGL recently sent an email (04 November 2009) to the Army and regulatory agencies describing the above operational strategy in order to document this decision. Please acknowledge via return email or letter that the individual agencies concur with the strategy described above. Alternatively, acceptance of these BCT meeting minutes will serve as documentation of that decision.

HGL also discussed the possibility of modifying the existing pump and treat system to include pumping from current monitor well IW-OU1-10-A. Please confirm that submittal of a brief letter or Technical Memorandum describing such modifications will provide sufficient documentation for regulatory concurrence if this change is implemented.

#### **B) EW-OU1-60-A Sampling**

This well was not operating during the scheduled September 2009 sampling event nor during the re-scheduled sample collection in December 2009. In the event that extraction from this well is not possible in March 2010, HGL proposes to implement the following action:

- A sample will be collected from EW-OU1-60-A during the next weekly inspection that the pump is operating.
- The sample collected will be submitted for laboratory analysis as a "stand-alone" sample without the normal associated QA/QC samples (i.e., duplicate, MS/DS, and trip blank).
- If the analytical results show a significant departure from previous results, the well will be re-sampled at the next opportunity and submitted with the normal complement of QA/QC samples.

HGL requests that the above action sequence be approved for implementation.

#### **C) Proposed 2010 Sample Collection Frequency Modification**

The Draft 2009 Annual and Third Quarter Groundwater Monitoring Report submitted earlier this month proposed changes to the sampling frequency at three wells. In each case, the change is from semi-annual to annual sampling. These wells (from south to north along the axis of plume migration) are:

MW-OU1-04-A      MW-OU1-20-A      MW-OU1-27-A

The first two wells listed above are located up-gradient from the trailing edge of the TCE plume and sample results have met the ACLs in recent years. Historic TCE concentrations at these wells are included on the attached Figures 5.5a and 5.5b from the draft report. Agency comments on the Draft Report are not due until after the next scheduled LTM sampling event in the latter part of March. HGL requests that the proposed sample change be approved before 10 March to allow incorporation into the next sampling round.

There are no other planned agenda items.

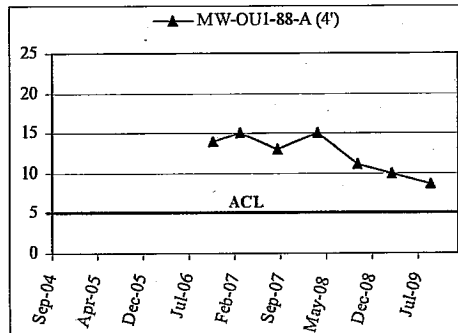
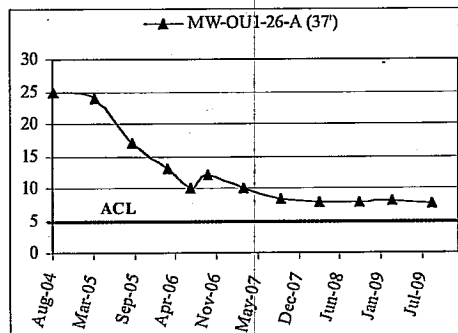
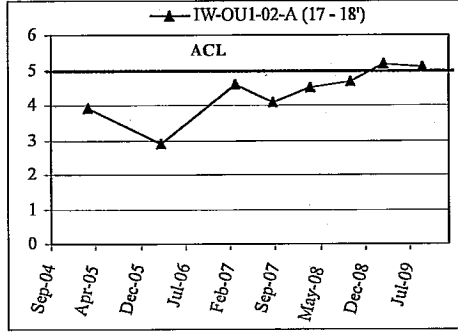
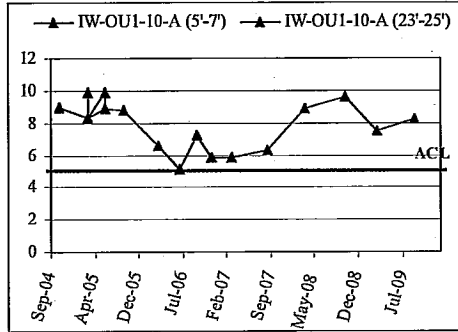
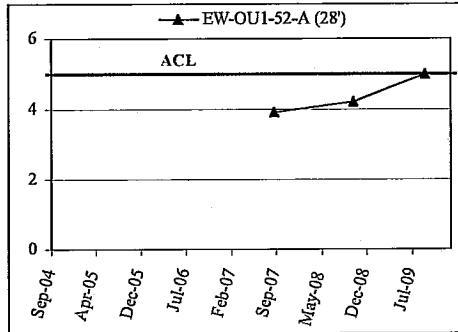
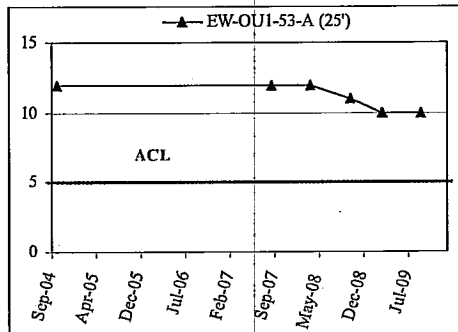
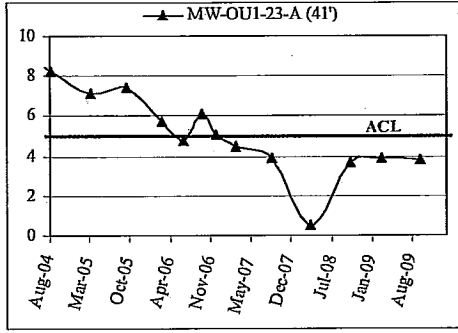
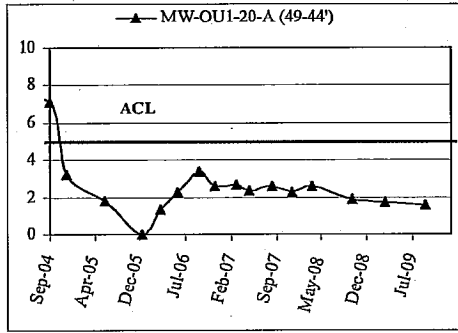
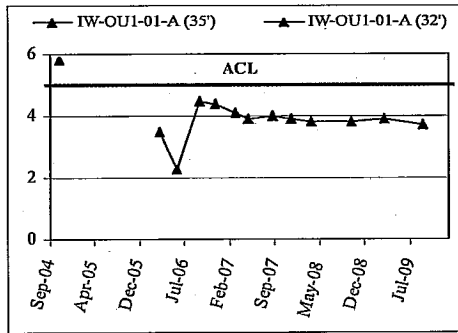
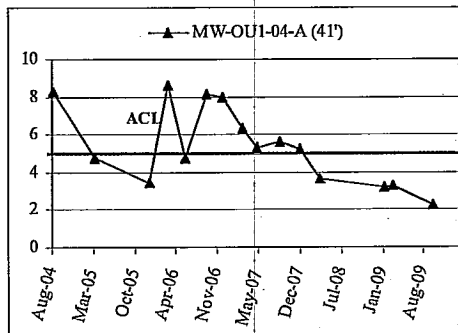
**Table 1**  
**TCE and Cis-1,2-DCE in OU-1 FONR Groundwater Remediation System - Performance Monitoring**  
**BCT Meeting for Former Fort Ord, at Monterey CA - February 2010**

Sample Date	FONR Extraction Well (listed from south to north) Began Operation October 2007				Boundary Extraction Well (listed from west to east) Began Operation July 2006				NWTS			
	MW-87	EW-71	MW-85	MW-46AD	EW-63	EW-60	EW-66	EW-62	INFLUENT	MIDPOINT	EFFLUENT	
<b>TCE (µg/L)</b>												
11/9/2007	<b>16</b>	<b>13</b>	<b>19</b>	<b>14</b>	ND	ND	1.7	ND	<b>11</b>	ND	ND	
1/18/2008	<b>11</b>	<b>11</b>	<b>8.9</b>	<b>8.2</b>	ND	ND	1.2	ND	<b>6.0</b>	ND	ND	
3/18/2008	<b>11</b>	<b>14</b>	<b>6.7</b>	<b>5.8</b>	ND	0.29	1.5	ND	<b>5.6</b>	ND	ND	
5/27/2008	<b>9.7</b>	<b>18</b>	<b>2.5</b>	<b>6.1</b>	ND	ND	1.8	ND	<b>3.9</b>	ND	ND	
7/21/2008	<b>9.1</b>	<b>14</b>	<b>4.4</b>	<b>3.4</b>	ND	0.78	1.4	ND	<b>3.6</b>	ND	ND	
9/29/2008	<b>9.3</b> J	<b>15</b> J	<b>4.3</b> J	<b>2.9</b> J	ND	0.90	1.7	ND	<b>3.8</b> J	<b>0.19</b> J	ND	
12/1/2008	<b>5.8</b>	<b>11</b>	<b>2.6</b>	<b>1.6</b>	ND	0.82	0.91	ND	<b>2.7</b>	<b>0.35</b> J	ND	
1/26/2009	<b>5.9</b>	<b>10</b>	<b>2.2</b>	<b>1.2</b>	ND	0.48	0.78	ND	<b>2.4</b>	ND	ND	
3/9/2009	<b>5.8</b>	<b>9.9</b>	<b>2.1</b>	<b>1.2</b>	ND	0.95	0.86	ND	<b>2.7</b>	ND	ND	
6/11/2009	<b>6.9</b>	<b>11</b>	<b>2.4</b>	<b>1.5</b>	ND	0.88	1.7	ND	<b>2.6</b>	<b>0.14</b> J	ND	
9/15/2009	<b>6.8</b>	<b>9.4</b>	<b>1.7</b>	<b>0.78</b>	ND	inactive	1.1	0.036	<b>2.3</b> J	<b>0.35</b> J	ND	
12/14/2009	<b>6.9</b>	<b>7.5</b>	<b>0.84</b>	not sampled	not sampled	inactive	0.94	not sampled	<b>2.3</b>	<b>0.65</b> J	ND	
<b>cis-1,2-DCE (µg/L)</b>												
11/9/2007	1.9	1.6	2.3	1.70	ND	ND	ND	ND	1.3	ND	ND	
1/18/2008	1.20	1.40	1.00	1.20	ND	ND	0.11	ND	0.66	ND	ND	
3/18/2008	1.20	1.50	0.74	0.63	ND	ND	ND	ND	0.59	0.11	ND	
5/27/2008	0.88	2.10	0.26	0.74	ND	ND	ND	ND	0.36	0.21	ND	
7/21/2008	0.80	1.50	0.52	0.37	ND	ND	ND	ND	0.41	0.34	ND	
9/29/2008	0.99	1.60	0.54	0.30	ND	ND	0.13	ND	0.42	0.42	0.12	
12/1/2008	0.67	1.30	0.33	0.21	J ND	ND	ND	ND	0.27	J 0.37	J 0.19	
1/26/2009	0.63	1.20	0.29	0.12	J ND	ND	ND	ND	0.26	J 0.24	J ND	
3/9/2009	0.62	1.20	0.29	0.13	J ND	ND	ND	ND	0.23	J 0.26	J ND	
6/11/2009	0.71	1.10	0.30	0.13	J ND	ND	0.14	J ND	0.24	J 0.28	J ND	
9/15/2009	0.80	1.00	0.22	0.08	J ND	inactive	0.03	J ND	0.22	J 0.37	J 0.03	
12/14/2009	0.67	0.65	0.10	J not sampled	not sampled	inactive	ND	J not sampled	0.21	J 0.30	J 0.11	
<b>Italics (if used) indicate data not yet validated</b> <b>Bold font indicates concentration &gt; ACL</b>												

**Table 2**  
**Outstanding Deliverables Schedule (2010)**  
**BCT Meeting for Former Fort Ord, Marina CA – January 2010**

Deliverable	Scheduled Submittal	Status / Remarks (Bold font indicates submittal)
<b><i>Primary Deliverables</i></b>		
None scheduled		
<b><i>Secondary Deliverables</i></b>		
Draft 2007 Annual and Fourth Quarter Groundwater Monitoring Report	March-2010	In progress.
Agency Comments	May-2010	
Final 2007 Annual and Fourth Quarter Groundwater Monitoring Report	June-2010	Task not started.
Agency Comments	NA	
<b>Draft 2008 Annual and Fourth Quarter Groundwater Monitoring Report</b>	<b>May-2009</b>	<b>Comments received on 2<sup>nd</sup> through 4<sup>th</sup> Quarter reports</b>
Agency Comments	<b>Sept-2009</b>	<b>Received</b>
<b>Final 2008 Annual and Fourth Quarter Groundwater Monitoring Report</b>	<b>December-2009</b>	<b>Submitted 18 December 2009</b>
Agency Comments	NA	
<b>Draft 2009 Annual and Third Quarter Groundwater Monitoring Report</b>	<b>January-2010</b>	<b>Submitted 05 February 2010</b>
Agency Comments	April-2010	
Final 2009 Annual and Third Quarter Groundwater Monitoring Report	April-2010	Task not started – Agency review of Draft is underway.
Agency Comments	NA	
Final Rebound Evaluation Report	March-2010	Task not started.
Agency Comments	NA	
2010 First Quarter Groundwater Monitoring Report	May-2010	Task not started - Samples to be collected in March.
Agency Comments	July-2010	
Draft 2010 Annual and Third Quarter Groundwater Monitoring Report	October-2010	Task not started - Samples to be collected in September.
Agency Comments	December-2010	
Final 2010 Annual and Third Quarter Groundwater Monitoring Report	January-2011	Task not started.
Agency Comments	NA	



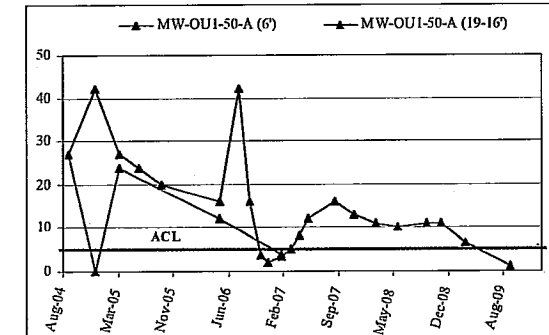
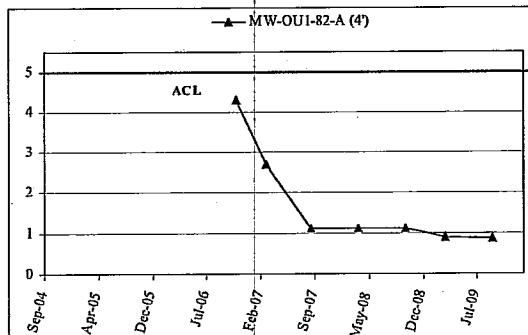
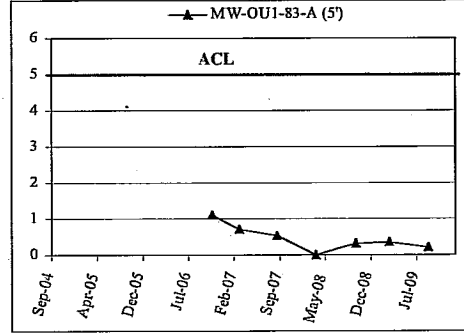
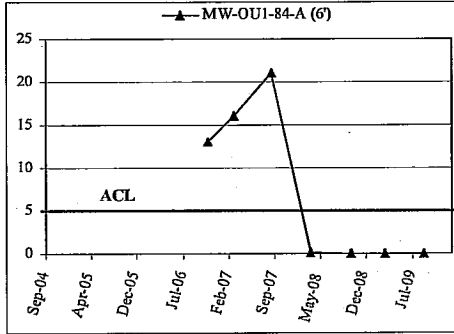
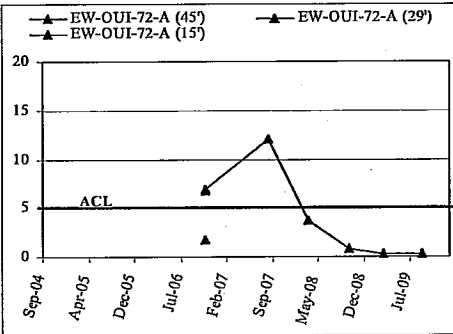
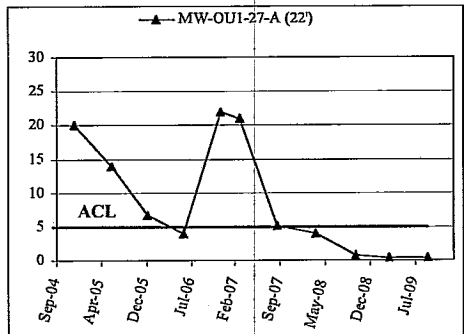
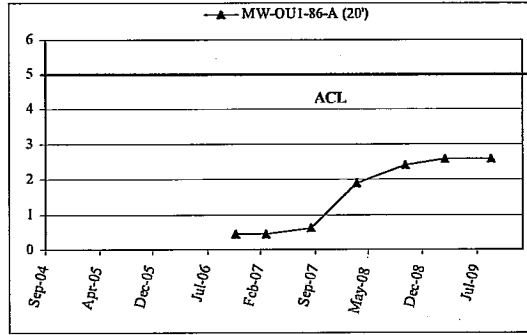
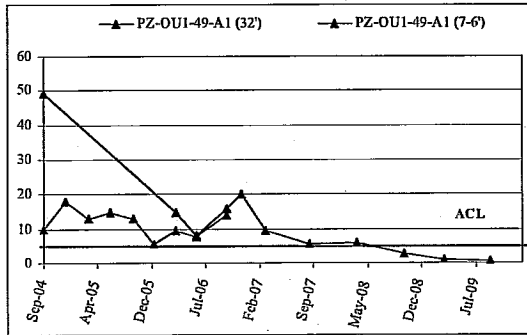
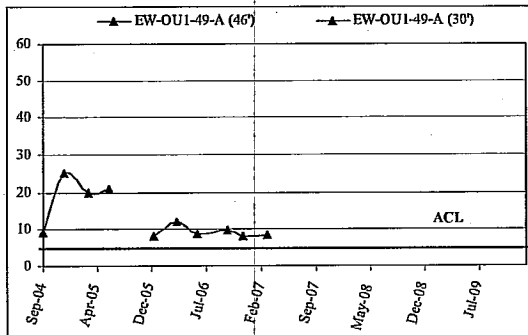


Notes:  
 Sample elevations are denoted as feet above mean sea level.  
 The number in parenthesis is the sample elevation.  
 TCE concentrations reported in µg/L.  
 ACL = Aquifer Cleanup Level (5.0 µg/L).

**Figure 5.5a**  
**OU-1 FONR TCE Concentrations Over**  
**Time for Wells Along Axis**  
**of Plume Migration**  
**Former Fort Ord, CA**

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 Source: HydroGeoLogic, Inc.  
 12/30/09 TB





**Notes:**  
 Sample elevations are denoted as feet above mean sea level.  
 The number in parenthesis is the sample elevation.  
 TCE concentrations reported in µg/L.  
 ACL = Aquifer Cleanup Level (5.0 µg/L).

**Figure 5.5b**  
**OU-1 TCE Concentrations Over Time**  
**for Wells Along Axis of Plume Migration**  
**Former Fort Ord, CA**  
**(continued)**

# OPERABLE UNIT 1 OFF-SITE GROUNDWATER EXTRACTION PILOT STUDY

STATUS – February 19, 2010

## FIELD WORK

- Well construction complete – December 21, 2007
- Draft Final OU1 Pilot Study Work Plan distributed – April 22, 2008
- Baseline sampling and analysis – June 14, 2008
- System construction completed – July 16, 2008
- Monitoring well (City of Marina) installation – July 28, 2008
- System start-up – August 5, 2008
- Extraction Well EW-OU1-92-A shut off – December 11, 2008
- Field Work Variance (FWV) issued to document system shut-off – February 16, 2009
- Groundwater extraction system shut off and rebound testing initiated – February 17, 2009
- Sampled GAC for waste profiling – March 24, 2009
- System restarted (EW-OU1-93-A operating) – April 7, 2009
- Second rebound study initiated – July 13, 2009
- Quarterly sampling of monitoring and extraction wells – December 8, 2009

## SCHEDULE

- Conduct second rebound testing starting July 13 – GWETS shut off July 13, sampled EW-OU1-93-A every other week. System restarted on August 10. System shut off again on September 11, sampling EW-OU1-93-A monthly. System restarted on November 10. System shut off on December 8, sampling EW-OU-94-A monthly for 3 months.
- Conduct quarterly monitoring through June 2010.

## DATA (Preliminary)

- Preliminary data through January 13.

## PROBLEMS/CHANGES

- Treated groundwater is being discharged to a discharge basin within the MCWD property. An injection well was not installed.
- One monitoring well has been installed in the City of Marina to determine the downgradient extent of the plume.
- Extraction Well EW-OU1-92-A shut off due to concerns of potential impact to OU1 On-Site GWETS plume capture.
- GWETS was shut off and rebound testing initiated because concentrations of TCE in all off-site wells are below Aquifer Cleanup Levels.
- GWETS restarted because TCE concentration in EW-OU1-93-A rebounded to 7.4 µg/L. TCE concentration in all other monitoring wells below detection limit.
- A second round of rebound testing was initiated because concentrations of TCE in all off-site wells are below Aquifer Cleanup Levels.

Summary of Operable Unit 1 Off-Site Monitoring Well Analytical Results

Well Identification	Elevation (ft amsl)	TCE* March 28-30, 2006 (µg/L)	TCE May 4, 2006 (µg/L)	TCE May 23, 2006 (µg/L)	TCE September 25, 2006 (µg/L)	TCE Feb 2 & 6, 2007 (µg/L)	TCE April 3, 2007 (µg/L)	TCE May 22, 2007 (µg/L)	TCE September 25, 2007 (µg/L)	TCE December 26, 2007 (µg/L)	TCE February 27, 2008 (µg/L)	TCE July 14, 2008 (µg/L)	
MW-OU1-75A	35.87	18.6	2.1	1.7	0.28J	<0.5	<0.5	<0.5J	<0.5	<0.5	NS	NS	
MW-OU1-75A	30.87		14	9.8	2.4	0.64	1.6	0.82	0.69	0.45J	NS	NS	
MW-OU1-75A	25.87		15	9.5	2.5	0.58	1.7	0.9	0.75	0.46J	NS	NS	
MW-OU1-75A	20.87		17	9.5	2.6	1.5	1.6	0.69	0.76	0.47J	NS	NS	
MW-OU1-75A	15.87		20	25(26)	18(18)	0.75	11	12	3.1	2	1.9	1.4	
MW-OU1-76A	32.33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	
MW-OU1-76A	27.33		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	
MW-OU1-76A	22.33		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	
MW-OU1-76A	17.33		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	
MW-OU1-76A	12.33		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-OU1-77A	29.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-OU1-77A	24.1		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5J	<0.5	<0.5	NS	NS	
MW-OU1-77A	19.1		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-OU1-78A	29.91		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5J	0.34	0.36J	NS	NS
MW-OU1-78A	24.91		3.2	2.1J <sup>b</sup>	1.4	1.5	0.85	0.6J	0.56	0.46J	NS	NS	
MW-OU1-78A	19.91	2.7	2.3(2.1)	1.1(1.2)	1.7	0.94	0.81J	0.91	0.47J	0.37J	0.67		
MW-OU1-79A	29.72	<0.5	<0.5	<0.5 <sup>c</sup>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-OU1-79A	24.72		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5J	<0.5	<0.5	NS	NS	
MW-OU1-79A	19.72		<0.5	<0.5	0.59	0.67(0.85)	3.5(3.6)	3.8J(4.0J)	2.9(4.5)	1.3(1.9)	3.0(4.1) <sup>d</sup>	10(2.0) <sup>e</sup>	
MW-OU1-80A	25.32		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	
MW-OU1-80A	20.32		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	
MW-OU1-80A	15.32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS		
MW-OU1-80A	10.32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
MW-OU1-81A	21.39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-OU1-81A	16.39		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	
MW-OU1-81A	11.39		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	
MW-OU1-81A	6.39		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	
MW-OU1-81A	1.39		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5(-0.5)	<0.5	<0.5	<0.5	<0.5	
MW-OU1-89A	31.18	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5 <sup>f</sup>	<0.5	
MW-OU1-89A	24.68	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-OU1-89A	18.18	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-OU1-80A	27.31	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-OU1-80A	22.31	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-OU1-80A	17.31	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-OU1-80A	12.31	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-OU1-80A	7.27	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-OU1-81A	26.72	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-OU1-81A	21.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-OU1-81A	16.89	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-OU1-81A	11.87	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-OU1-81A	7.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-OU1-94A	18.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-OU1-94A	13.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-OU1-94A	8.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-OU1-94A	3.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-OU1-94A	-2.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-OU1-94A	-7.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

\* There is no associated discrete depth with the well development samples. These are composites.

<sup>b</sup> Data qualified as "J" is estimated with low bias.

<sup>c</sup> Data qualified as "UJ" is estimated non-detect due to quality control officers.

<sup>d</sup> An estimated concentration of carbon disulfide detected in this sample (0.75%).

<sup>e</sup> cis-1,2-dichloroethylene also detected at 0.28J µg/L.

<sup>f</sup> cis-1,2-dichloroethylene also detected at 0.35J µg/L.

<sup>g</sup> tetrachloroethylene also detected at 0.27J µg/L.

Detections are shown in bold.

ft amsl denotes feet above mean sea level

µg/L denotes micrograms per liter.

TCE denotes trichloroethylene.

Summary of Operable Unit 1 Off-Site Monitoring Well Analytical Results

Well Identification	Elevation (ft amsl)	TCE September 15, 2008 (µg/L)	TCE December 8, 2008 (µg/L)	TCE March 16, 2009 (µg/L)	TCE April 14, 2009 (µg/L)	TCE May 11, 2009 (µg/L)	TCE June 9, 2009 (µg/L)	TCE June 13, 2009 (µg/L)	TCE September 10, 2009 (µg/L)	TCE October 8, 2009 (µg/L)	TCE October 19, 2009 (µg/L)	TCE December 1, 2009 (µg/L)	TCE January 13, 2010 (µg/L)
MW-OU1-75A	35.87	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-75A	30.87	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-75A	25.87	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-75A	20.87	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-75A	15.87	1/1.3	0.21J(0.22J)	<0.5	NS	NS	0.46J(0.49J)	NS	0.53	NS	NS	0.47J	NS
MW-OU1-76A	32.33	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-76A	27.33	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-76A	22.33	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-76A	17.33	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-76A	12.33	<0.5	<0.5	<0.5	NS	NS	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-77A	29.1	<0.5	<0.5	<0.5	NS	NS	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-77A	24.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-77A	19.1	<0.5	<0.5	<0.5	NS	NS	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-78A	29.91	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-78A	24.91	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-78A	19.91	0.56	0.21J	<0.5	0.21J	<0.5	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-79A	29.72	<0.5	<0.5	<0.5	<0.5 (<0.5)	<0.5	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-79A	24.72	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-79A	19.72	0.22J	<0.5	<0.5	<0.5	<0.5 (<0.5)	<0.5 (<0.5)	NS	<0.5 (<0.5)	NS	NS	<0.5 (<0.5)	NS
MW-OU1-80A	25.32	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-80A	20.32	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-80A	15.32	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-80A	10.32	<0.5	<0.5	<0.5	NS	NS	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-81A	21.39	<0.5	<0.5	<0.5	NS	NS	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-81A	16.39	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-81A	11.39	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-81A	6.39	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-81A	1.39	<0.5	<0.5	<0.5	NS	NS	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-89A	31.18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-89A	24.88	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-89A	18.18	<0.5	<0.5	<0.5	NS	NS	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-90A	27.31	<0.5	<0.5	<0.5	NS	NS	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-90A	22.31	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	17.31	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	12.31	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	7.27	<0.5	<0.5	<0.5	NS	NS	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-91A	26.72	<0.5	<0.5	<0.5	NS	NS	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-91A	21.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-91A	16.89	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-91A	11.97	NS	NS	NS	NS	NS	<0.5	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-91A	7.01	<0.5	<0.5	<0.5	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	18.6	0.33J	0.21J	<0.5	0.21J	<0.5	<0.5	NS	<0.5	<0.5	<0.5	0.26J	<0.5
MW-OU1-94A	13.5	0.36J	NS	NS	NS	NS	NS	<0.5	NS	NS	NS	NS	NS
MW-OU1-94A	8.3	0.36J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	3.1	0.36J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	-2.1	0.36J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	-7.3	0.47J	<0.5	<0.5	0.21J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.24J	<0.5



## Former Fort Ord Groundwater Treatment Systems Operational Data and Status

BCT Meeting, February 19, 2010

**Table 1:** OU2 and Sites 2/12 GWTP Treatment Statistics.

Monthly Statistics	Volume Treated (gallons)	Average Flow (gallons per minute)	Percent of Time Online	COC Mass Removed (lbs.)
<b>OU2</b>				
January 2010	32,165,630	721	98.9%	2.34
Total since October 1995	4.772 billion			645.49
<b>Sites 2/12</b>				
January 2010	8,328,700	187	73.3%	0.97
Total since June 1999	1.270 billion			423.29

**Table 2:** OU2 and Sites 2/12 GWTP Calendar of Events.

Key Events for OU2 and Sites 2/12 for January 2010						
There were 34 USAN Notices transmitted to Ahtna January 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	5	6	7	8	9
10	11 OU2 GAC change out, offline 4.5 hours	12 2/12 offline for 17 hours	13 2/12 offline for 6 hours	14	15	16
17	18 2/12 offline 66 hours due to stormwater infiltration into leak detector vault	19	20 2/12 & OU2 offline due to power outage; 2/12 for 12 hours, OU2 for 4 hours	21	22	23
24	25 2/12 offline 64 hours due to PLC program issue	26	27 2/12 offline 21 hours due to high air stripper level alarm	28 2/12 offline 10 hours due to high air stripper level alarm	29	30
31						

**Table 3: January 2010 - OU2 Analytical Results at TS-OU2-INJ**

COC	Discharge Limit (µg/L)	Sample Date / Analytical Results	
		1/6/2010	1/11/2010
1,1-DCA	5.0*	0.30	ND
1,2-DCA	0.50	0.19	ND
1,2-DCP	0.50	ND	ND
Benzene	0.50	ND	ND
Carbon Tetrachloride	0.50	ND	ND
Chloroform	2.0*	0.43	ND
cis-1,2-DCE	6.0*	0.96	ND
Methylene Chloride	0.50	ND	ND
PCE	0.50	ND	ND
TCE	0.50	ND	ND
Vinyl Chloride	0.10	ND	ND

**Table 4: January 2010 - Sites 2/12 Analytical Results at TS-212-INJ**

COC	Discharge Limit (µg/L)	Sample Date / Analytical Results
		1/28/2010
1,1-DCE	6.0	ND
1,2-DCA	0.50	ND
1,3-DCP †	0.50	ND
Chloroform	2.0	ND
cis-1,2 DCE	6.0	0.37
PCE	3.0	ND
TCE	5.0	ND
Vinyl Chloride	0.10	ND

**NOTES:**

ND The analyte was not detected above MDL.

\* 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	Submitted	Comments Due
No documents were submitted in January.		



**Table 6: January 2010 OU2 and Sites 2/12 Extraction Well Status.**

Well Identification	% On	Avg. gpm	Total Gallons	% of Total	Comments	TCE (µg/L) 4Q 2009
<b>Site 12 Extraction Wells</b>						
EW-12-05-180M	70.7	79.1	3,533,000	42.4		10.7
EW-12-06-180M	70.5	58.1	2,593,400	31.1		8.6
EW-12-07-180M	43.4	11.7	523,500	6.3		3.4
EW-12-03-180U	0.0	0.0	0	0.0	Well offline due to low concentrations	0.18
EW-12-03-180M	58.8	37.6	1,678,800	20.2		6.8
EW-12-04-180U	0.0	0.0	0	0.0	Well offline due to low concentrations	0.47
EW-12-04-180M	0.0	0.0	0	0.0	Pump removed, PDBs installed	0.75
<b>Total 2/12 gallons treated:</b>			<b>8,328,700</b>	<b>100.0%</b>		
<b>OU2 Extraction Wells</b>						
<b>Western Network</b>						
EW-OU2-01-A	0.0	0.0	0	0.0	Well offline due to low concentrations	Not Sampled
EW-OU2-02-A	38.1	21.1	943,820	2.9		1.3
EW-OU2-03-A	0.0	0.0	0	0.0	Well offline due to low concentrations	0.75
EW-OU2-04-A	94.0	48.6	2,170,550	6.7		1.4
EW-OU2-05-A	90.6	45.7	2,041,530	6.3		3.4
EW-OU2-06-A	92.9	33.8	1,506,960	4.7		6.2
EW-OU2-01-180	0.0	0.0	0	0.0	No pump in well	10
<b>Total gallons extracted:</b>			<b>6,662,860</b>	<b>20.7</b>		
<b>Eastern Network</b>						
EW-OU2-07-A	0.0	0.0	0	0.0	Well offline due to low concentrations	0.36
EW-OU2-08-A	49.2	14.8	660,890	2.1		0.81
EW-OU2-09-A	99.0	20.0	891,980	2.8		3.4
EW-OU2-10-A	99.2	17.7	789,840	2.5		4.4
EW-OU2-11-A	0.0	0.0	0	0.0	Low yield	1.7
EW-OU2-12-A	77.5	14.4	642,100	2.0	Low yield; running at reduced capacity	6.3
EW-OU2-13-A	99.4	29.3	1,308,160	4.1		10.5
EW-OU2-02-180	96.5	40.9	1,825,000	5.7		13.5
<b>Total gallons extracted:</b>			<b>6,117,970</b>	<b>19.0</b>		
<b>Shoppette</b>						
EW-OU2-05-180	80.9	75.7	3,377,400	10.5	Operating at low flow	8.7
EW-OU2-06-180	76.3	76.1	3,397,700	10.6	Pump shutting off on high pressure alarm	6
EW-OU2-16-A	0.0	0.0	0	0.0	Runs in manual only, high drawdown	15.3
<b>Total gallons extracted:</b>			<b>6,775,100</b>	<b>21.1</b>		
<b>CSUMB</b>						
EW-OU2-14-A	91.4	22.4	999,700	3.1	Adjusted low water level shutoff	1.6
EW-OU2-15-A	0.0	0.0	0	0.0	Well offline due to low concentrations	Not Sampled
<b>Total gallons extracted:</b>			<b>999,700</b>	<b>3.1</b>		
<b>Vanafill</b>						
EW-OU2-03-180	98.8	212.4	9,481,000	29.5		20.2
EW-OU2-04-180	0.0	0.0	0	0.0	Well offline due to low concentrations	0.82
<b>Total gallons extracted:</b>						
<b>Bunker Hill</b>						
EW-OU2-07-180	0.0	0.0	0	0.0	No pump in well	4.9
EW-OU2-08-180	91.2	47.7	2,129,000	6.6		1
<b>Total gallons extracted:</b>			<b>2,129,000</b>	<b>6.6</b>		
<b>Total OU2 gallons treated:</b>			<b>32,165,630</b>	<b>100.0%</b>		



# OPERABLE UNIT CARBON TETRACHLORIDE PLUME A-AQUIFER REMEDIAL ACTION

STATUS – February 19, 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 at Area 1A 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.

## SCHEDULE

- Subsequent quarterly monitoring for EISB pilot study conducted under Groundwater Monitoring Program.
- Preliminary RAWP Appendix B – Upper 180-Foot Aquifer – February 2010.
- Preliminary RAWP Appendix C – Lower 180-Foot Aquifer – February 2010.
- Start-up at Area 1B ongoing – conducting baseline sampling and resolving electrical issue.
- Installation of process equipment at Area 1C – February 2010.
- Installation of wells at Area 2A and 2B – January to March 2010.

## DATA (Preliminary)

- Preliminary EISB data Area 1A.

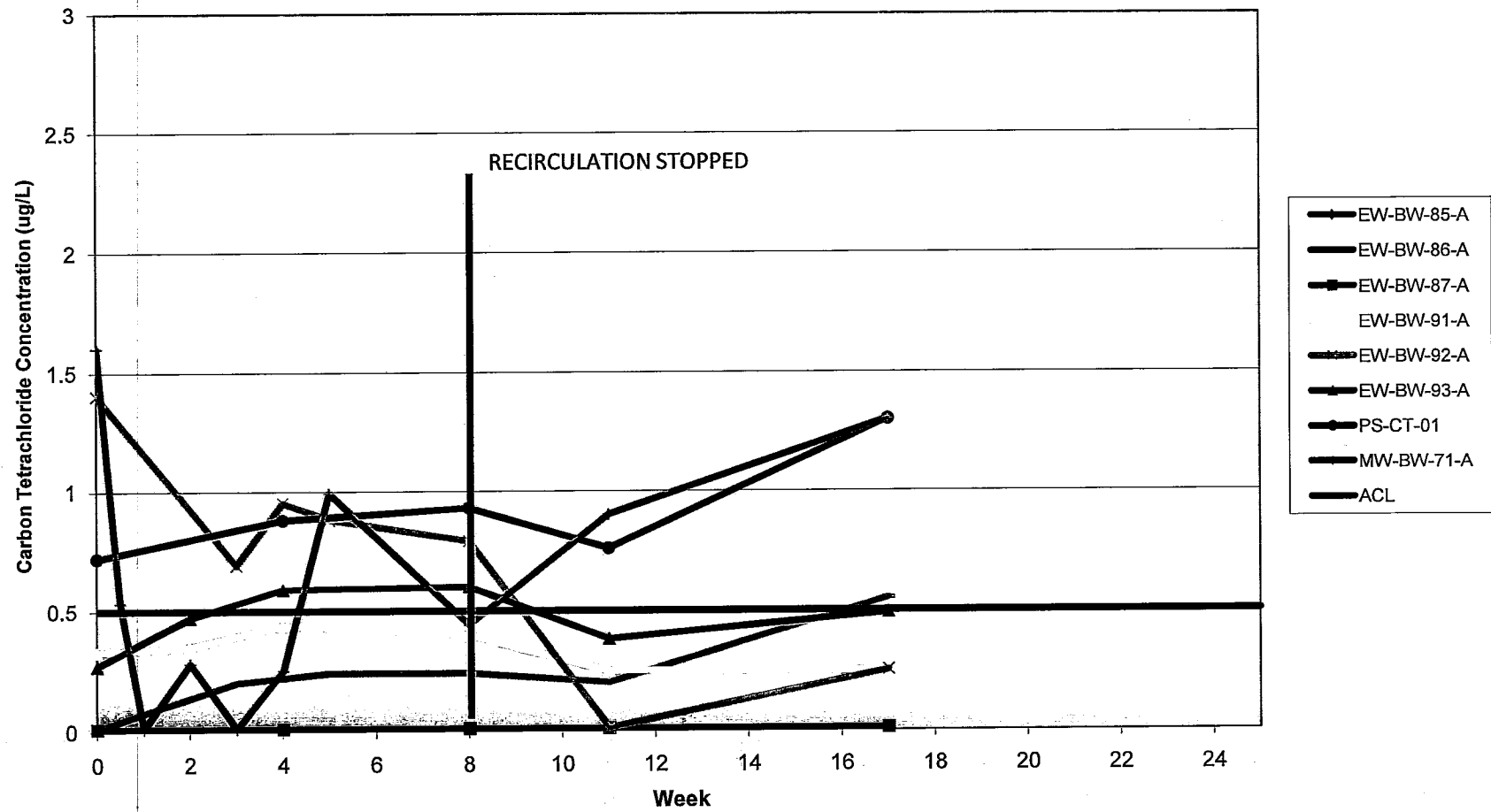
## PROBLEMS/CHANGES

- FWV TII-142 issued to provide analytical requirements for specific methods not included in the CDQMP (metabolic acids [EPA 300.0M], dissolved gases [RSK-175], and total heterotrophic anaerobic bacteria [SM9215B]).
- Analytical data from grab samples at Area 1B indicate that extraction wells EW-BW-95-A and EW-BW-98-A and injection well IW-BW-94-A do not have detectable concentrations of carbon tetrachloride. Plans are to operate both extraction wells, but not inject substrate into the injection well. If monitoring data indicates that the concentrations in the extraction wells increase over time, then substrate may be injected into IW-BW-94-A.
- One additional extraction well was installed at Area 1C to address carbon tetrachloride migration at the northwest corner of the treatment area.
- 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. Driller is considering methods to repair the well.



Baseline Sample  
Carbon Tetrachloride Detections

# Change in Carbon Tetrachloride Concentration Over Time



Method<sup>a</sup>

Sample ID Well Type		MW-BW-71-A monitoring baseline	MW-BW-71-A monitoring week 0	MW-BW-71-A monitoring week 1	MW-BW-71-A monitoring week 2	MW-BW-71-A monitoring week 3	MW-BW-71-A monitoring week 4	MW-BW-71-A monitoring week 5	MW-BW-71-A monitoring week 7	MW-BW-71-A monitoring week 8
Date		8/12/2009	9/15/2009	9/22/2009	9/29/2009	10/6/2009	10/13/2009	10/20/2009	11/3/2009	11/10/2009
well flowrate (operating)		NA	NA	NA	NA	NA	NA	NA	NA	NA
alkalinity (CaCO <sub>3</sub> total)	HACH <sup>b</sup>	44 mg/L	56 mg/L	51 mg/L	58 mg/L	62 mg/L	63 mg/L	58 mg/L	61 mg/L	68 mg/L
pH	meter <sup>c</sup>	6.40	6.72	6.54	6.69	6.45	6.73	6.63	6.54	6.24
dissolved oxygen	meter <sup>c</sup>	8.59 ppm	9.51 ppm	10.15 ppm	10.42 ppm	10.4 ppm	10.01 ppm	10.25 ppm	10.28 ppm	10.54 ppm
oxidation reduction potential	meter <sup>c</sup>	271 mV	156 mV	195 mV	198 mV	245 mV	256 mV	203 mV	236 mV	204 mV
conductivity	meter <sup>c</sup>	40.0 mS/cm	50 mS/cm	42.9 mS/cm	47.2 mS/cm	45.9 mS/cm	51.1 mS/cm	53.3 mS/cm	48.8 mS/cm	49.8 mS/cm
turbidity	meter <sup>c</sup>	21.1 NTU	12 NTU	210 NTU	32 NTU	67 NTU	39 NTU	52 NTU	0 NTU	0 NTU
temperature	meter <sup>c</sup>	18.2 °C	18.4 °C	18 °C	18 °C	17.5 °C	17.4 °C	17.8 °C	17.5 °C	17.6 °C
nitrate	300.0	2670 µg/L		4280 µg/L	4840 µg/L	5910(5890) µg/L	5640 µg/L	4150 µg/L		4870(4880) µg/L
nitrite	300.0	<100 µg/L		<50 µg/L	<100 µg/L	<100(<100) µg/L	<100 µg/L	<100 µg/L		<100(<100) µg/L
sulfate	300.0	51700 µg/L		25600 µg/L	35800 µg/L	32700(33500) µg/L	35600 µg/L	48400 µg/L		30600(30700) µg/L
ortho-phosphate	300.0	<500 µg/L		<500 µg/L						
dissolved iron	6010B	<200 µg/L		<200 µg/L	<200 µg/L	<200(<200) µg/L	<200 µg/L	<200 µg/L		<200 µg/L
manganese	6010B	<10 µg/L		<10 µg/L	<10 µg/L	<10(<10) µg/L	<10 µg/L	<10 µg/L		<10 µg/L
arsenic	6010B	<10 µg/L		<10 µg/L	<10 µg/L	<10(<10) µg/L	<10 µg/L	<10 µg/L		<10 µg/L
methane	RSK 175 <sup>d</sup>						<2.0 µg/L			<2.0 µg/L
ethane	RSK 175 <sup>d</sup>						<2.0 µg/L			<2.0 µg/L
lactate	300.0M	<100 µg/L			<100 µg/L		<100 µg/L			<100(<100) µg/L
propionate	300.0M	<100 µg/L			<100 µg/L		<100 µg/L			<100(<100) µg/L
acetate	300.0M	<100 µg/L			<100 µg/L		<100 µg/L			<100(<100) µg/L
carbon tetrachloride	8260B	1.6 µg/L	0.52 µg/L	<0.5 µg/L	0.28J µg/L	<0.5(<0.5) µg/L	0.25J µg/L	0.99 µg/L		0.44J µg/L
chloroform	8260B	0.52 µg/L	0.27J µg/L	<0.5 µg/L	0.26J µg/L	0.23J(0.20J) µg/L	0.25J µg/L	0.41J µg/L		0.29J µg/L
dichloromethane	8260B	<5.0 µg/L	<5.0 µg/L	<5.0 µg/L	<5.0 µg/L	<0.5(<0.5) 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	<0.5(<0.5) µg/L	<1.0 µg/L	<1.0 µg/L		<1.0 µg/L
trichloroethene	8260B	0.46J µg/L	0.21J µg/L		0.27J		0.24J µg/L	0.45J µg/L		
acetone	8260B		6.1J µg/L							





		Method <sup>a</sup>			
Sample ID		EW-BW-86-A	EW-BW-86-A	EW-BW-86-A	EW-BW-86-A
Well Type		extraction	extraction	extraction	extraction
		week 8	week 9	week 13	week 17
Date		11/10/2009	11/17/2009	12/15/2009	1/12/2010
well flowrate (operating)		9.6 gpm	NA	NA	NA
alkalinity (CaCO <sub>3</sub> total)	HACH <sup>b</sup>	75 mg/L	78 mg/L	59 mg/L	51 mg/L
pH	meter <sup>c</sup>	6.69	6.64	6.43	6.79
dissolved oxygen	meter <sup>c</sup>	5.65 ppm	6.57 ppm	6.18 ppm	3.88 ppm
oxidation reduction potential	meter <sup>c</sup>	100 mV	48 mV	-8 mV	-26 mV
conductivity	meter <sup>c</sup>	52.5 mS/cm	53 mS/cm	48.1 mS/cm	46.4 mS/cm
turbidity	meter <sup>c</sup>	41 NTU	0 NTU	35 NTU	8 NTU
temperature	meter <sup>c</sup>	17.3 °C	17.2 °C	17.4 °C	16.5 °C
nitrate	300.0	3680 µg/L		4020(3980) µg/L	1960(1960) µg/L
nitrite	300.0	<100 µg/L		<100(<100) µg/L	<100(<100) µg/L
sulfate	300.0	29200 µg/L		30100(31300) µg/L	39900(40000) µg/L
ortho-phosphate	300.0				
dissolved iron	6010B	<200 µg/L		619(650J) µg/L	62.8J µg/L
manganese	6010B	125 µg/L		181(190) µg/L	18.3 µg/L
arsenic	6010B	<10 µg/L		<10(<10) µg/L	<10 µg/L
methane	RSK 175 <sup>d</sup>				
ethane	RSK 175 <sup>d</sup>				
lactate	300.0M				
propionate	300.0M				
acetate	300.0M				
carbon tetrachloride	8260B	0.24J µg/L		0.20J µg/L	0.55 µg/L
chloroform	8260B	<0.5 µg/L		<0.5 µg/L	0.24J µg/L
dichloromethane	8260B	<0.5 µg/L		<0.5 µg/L	<0.5 µg/L
chloromethane	8260B	<1.0 µg/L		<1.0 µg/L	<1.0 µg/L
tetrachloroethene	8260B	0.28J µg/L			
trichloroethene	8260B				0.22J µg/L
acetone	8260B			8.2J µg/L	
2-butanone	8260B			14J µg/L	





Method\*

Sample ID Well Type		EW-BW-92-A extraction week 8	EW-BW-92-A extraction week 9	EW-BW-92-A extraction week 13	EW-BW-92-A extraction week 17
Date		11/10/2009	11/17/2009	12/15/2009	1/12/2010
well flowrate (operating)		10.2 gpm	NA	NA	NA
alkalinity (CaCO <sub>3</sub> total)	HACH <sup>b</sup>	94 mg/L	158 mg/L	260 mg/L	285 mg/L
pH	meter <sup>c</sup>	6.71	6.62	6.53	6.61
dissolved oxygen	meter <sup>c</sup>	5.45 ppm	2.11 ppm	0.81 ppm	0.89 ppm
oxidation reduction potential	meter <sup>c</sup>	-2 mV	-33 mV	-111 mV	-81 mV
conductivity	meter <sup>c</sup>	64.8 mS/cm	85.3 mS/cm	114 mS/cm	111 mS/cm
turbidity	meter <sup>c</sup>	0 NTU	0 NTU	93 NTU	19 NTU
temperature	meter <sup>c</sup>	17.3 °C	17.2 °C	17.7 °C	17.8 °C
nitrate	300.0	1020 µg/L		300 µg/L	345 µg/L
nitrite	300.0	<100 µg/L		<100 µg/L	<100 µg/L
sulfate	300.0	30700 µg/L		11000 µg/L	15400 µg/L
ortho-phosphate	300.0				
dissolved iron	6010B	61.2J µg/L		3310 µg/L	4220 µg/L
manganese	6010B	839 µg/L		4270 µg/L	4250 µg/L
arsenic	6010B	<10 µg/L		7.78J µg/L	11.4 µg/L
methane	RSK 175 <sup>d</sup>				
ethane	RSK 175 <sup>d</sup>				
lactate	300.0M	<100 µg/L			<100 µg/L
propionate	300.0M	17800 µg/L			86900 µg/L
acetate	300.0M	18300 µg/L			105000 µg/L
carbon tetrachloride	8260B	0.79 µg/L		<0.5 µg/L	0.25J(0.26J) µg/L
chloroform	8260B	0.26J µg/L		<0.5 µg/L	<0.5(<0.5) µg/L
dichloromethane	8260B	<0.5 µg/L		<0.5 µg/L	<0.5(<0.5) µg/L
chloromethane	8260B	<1.0 µg/L		<1.0 µg/L	<1.0(<1.0) µg/L
tetrachloroethene	8260B	0.33J µg/L		0.40J(0.41J) µg/L	0.39J(0.37J) µg/L
trichloroethene	8260B				
methyl tert butyl ether	8260B	0.51J µg/L		0.34J(0.32J) µg/L	0.43J(0.42J) µg/L
acetone	8260B	18 µg/L		42(39) µg/L	31(30) µg/L
2-butanone	8260B	14J µg/L		39(35) µg/L	37(35) µg/L
carbon disulfide	8260B			0.69J(0.93J) µg/L	1.5(1.6) µg/L



Method\*

Sample ID Well Type		EW-BW-93-A extraction week 9	EW-BW-93-A extraction week 13	EW-BW-93-A extraction week 17
Date		11/17/2009	12/15/2009	1/12/2010
well flowrate (operating)		NA	NA	NA
alkalinity (CaCO <sub>3</sub> total)	HACH <sup>b</sup>	85 mg/L	120 mg/L	181 mg/L
pH	meter <sup>c</sup>	6.69	6.56	6.69
dissolved oxygen	meter <sup>c</sup>	4.74 ppm	3.41 ppm	2.03 ppm
oxidation reduction potential	meter <sup>c</sup>	4 mV	-67 mV	-86 mV
conductivity	meter <sup>c</sup>	56 mS/cm	52.1 mS/cm	75.4 mS/cm
turbidity	meter <sup>c</sup>	0 NTU	27 NTU	12 NTU
temperature	meter <sup>c</sup>	17.1 °C	17 °C	19 °C
nitrate	300.0		2250 µg/L	1250 µg/L
nitrite	300.0		<100 µg/L	<100 µg/L
sulfate	300.0		32000 µg/L	26900 µg/L
ortho-phosphate	300.0			
dissolved iron	6010B		1270 µg/L	1800 µg/L
manganese	6010B		762 µg/L	1430 µg/L
arsenic	6010B		<10 µg/L	7.13J µg/L
methane	RSK 175 <sup>d</sup>			
ethane	RSK 175 <sup>d</sup>			
lactate	300.0M			
propionate	300.0M			
acetate	300.0M			
carbon tetrachloride	8260B		0.38J µg/L	0.49J µg/L
chloroform	8260B		0.25J µg/L	0.21J µg/L
dichloromethane	8260B		<0.5 µg/L	<0.5 µg/L
chloromethane	8260B		<1.0 µg/L	<1.0 µg/L
trichloroethene	8260B			
acetone	8260B			7.6J µg/L
2-butanone	8260B			5.5J µg/L
carbon disulfide	8260B			0.26J µg/L

## **Property Transfer Update 02-19-10 BCT.docx**

### **FOST 10 deeds:**

1. July 2009 – eight of ten deeds and three CRUPs recorded, 594 acres transferred.
2. Transfer of Parcel L3.2 (101.19 acres) on hold pending agreement between York School (recipient) and Monterey County (license to cross South Boundary Road). Draft deed reviewed and sent back to USACE.
3. Parcel L23.5.2 (and adjacent FOST 9 Parcel L23.5.1) was designated for public benefit conveyance (PBC) to Monterey Peninsula College (MPC); however, Department of Education withdrew request for assignment to MPC and is working on a new assignment for Chartwell School. Property vandalized and used by Seaside police for unauthorized training activities.

### **FOST 11:**

1. Parcels L2.3 and L2.4.1 in Parker Flats MRA.
2. January 2010 – Army Environmental Law Division (ELD) and Army BRAC review of Draft FOST complete. FOST to be issued for regulatory agency review in February 2010. Comments requested by March 22, 2010.
3. Draft MEC-related CRUP scheduled to be issued to Army ELD and BRAC for review after receipt of comments on FOST.

### **FOSET 2 deed amendments:**

1. October 2008 – Five deed amendments were issued to FOSET 2 property recipients for signature: Monterey-Salinas Transit, City of Marina, City of Seaside, UC, and CSUMB.
  - a. Sixth deed amendment for Parcel L37 not drafted.
  - b. Some recipients expressed concern about deed amendment language, including the “hold harmless” provision.
2. December 2009 – USACE revised/drafted all six deed amendments using FOSET 5 deed amendments as template. Fort Ord BRAC Office reviewed and commented.
3. February 2010 – USACE revising deed amendments, expected to resubmit deed amendments to property recipients for signature in March 2010.

### **FOSET 4 deed amendments:**

1. ROD for Del Rey Oaks MRA complete and signed.
2. One deed amendment issuing the CERCLA Warranty drafted, but finalization pending completion of RD/RAWP (LUCIP).

### **FOSET 5 deed amendments, Parker Flats MRA:**

1. June 2009 – three draft deed amendments issuing the CERCLA Warranty for Parker Flats Munitions Response Area drafted and submitted to USACE and FORA to start review cycle.
2. November 2009 – review/revisions complete, FORA signed deed amendments.
3. December 2009 – USACE began compiling signature packages for Scott Whiteford, Director of Real Estate, USACE HQ.
4. February 2010 – signature packages submitted to USACE HQ through San Francisco District. Have not been received in Washington, DC yet.

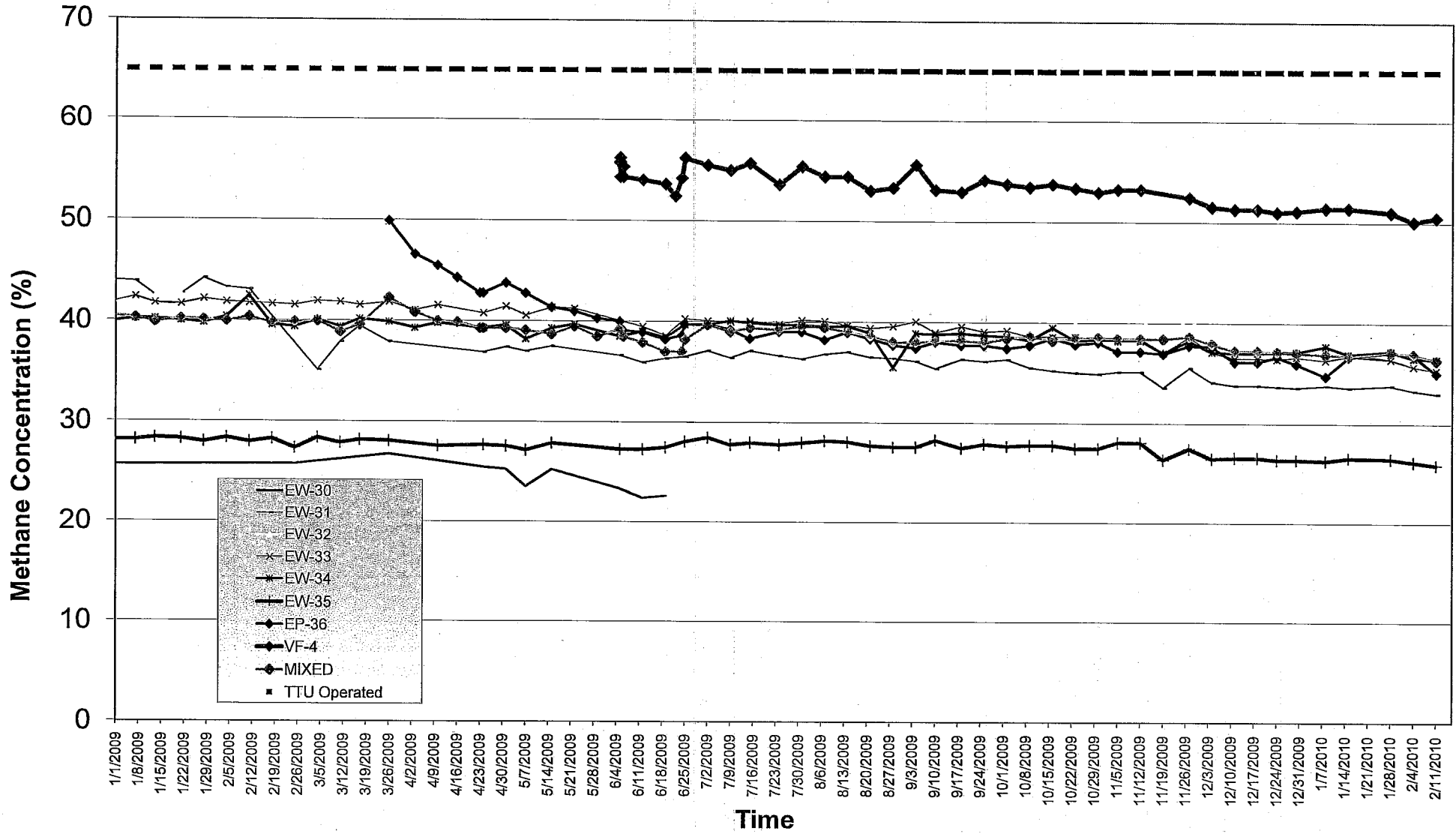
**Thermal Treatment Unit  
Operation Summary  
2007 - 2010**

<b>TREATMENT SYSTEM OPERATION SUMMARY</b>	
Treatment System Start Date:	6/4/2001
TTU Start Date:	4/4/2006
Last Reading Date/Time:	2/11/2010 11:30
<b>Historical through 2009 (TTU only):</b>	
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
<b>Current Year 2010</b>	
Total Hours:	1,176
Total Hours Operated:	426
% TTU Operation:	36.2%
Total Pounds of Methane Removed:	38,136
<b>Cumulative:</b>	
% TTU Operation:	43.3%
Total Pounds of Methane Removed:	1,840,297

		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)		38,136	5,448

<b>EXTRACTION SYSTEM (2010)</b>					
Location	Last Methane (%)	Last Flow Rate (scfm)	Current Methane Removal Rate (lbs/day)	2010 % Operation	2010 Methane Removed (Lbs)
<b>Area E</b>					
EP-36	35	23	474.8	37.0	8081.0
<b>Area F</b>					
EW-31	33	3	58.4	37.0	3357.8
EW-32	37.9	16	357.7	37.0	8123.9
EW-33	35.3	15	312.3	37.0	8330.6
EW-34	36.4	30	644.1	37.0	12231.0
VF-4	50.5	4	119.1	37.0	3650.7
<b>Area D</b>					
EW-35	25.9	5	76.4	37.0	1402.8

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



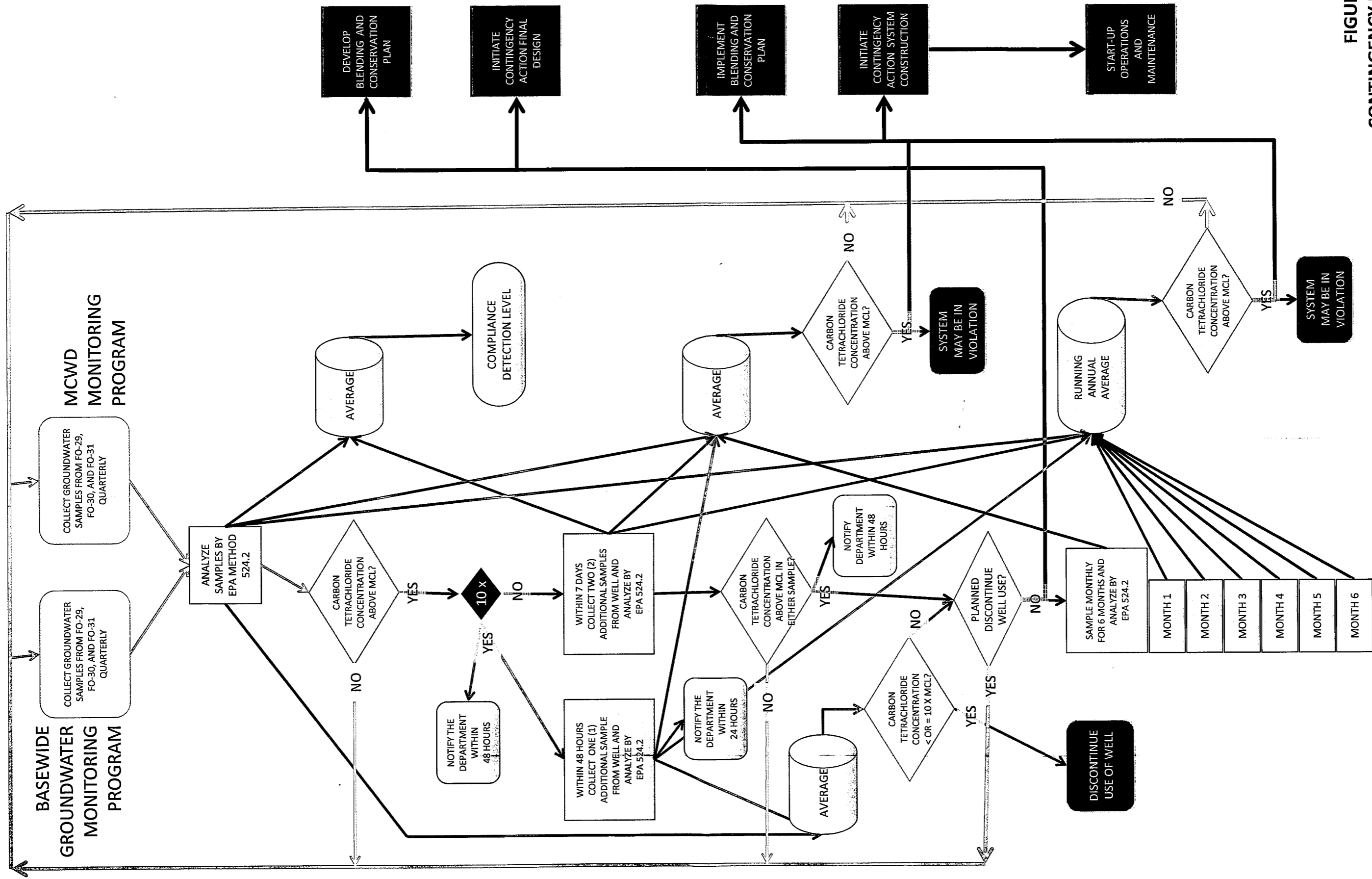


FIGURE 10  
CONTINGENCY PLAN  
ANALYTICAL CONFIRMATION  
AND CONTINGENCY ACTION  
FLOW CHART