

## Fort Ord HTW BCT Meeting – Operable Unit 1 (OU-1) On-Post

Fort Ord HTW BCT Meeting  
1:00 PM, 18 February 2009  
Monterey, California

### MEETING MINUTES (prepared by HydroGeoLogic, Inc.)

#### 1. Groundwater Remediation System Update

The Northwest Treatment System (NWTs) has operated nearly continuously since the last update on 12 November 2008. The total volume pumped through 09 February 2009 is 83,888,860 gallons. The average treatment rate over the last six weeks has been very stable and ranged between 83.0 gallons per minute and 83.5 gallons per minute. To date, the NWTs has removed approximately 3.3 pounds (0.27 gallons) of trichloroethene (TCE) and 0.3 pounds of cis-1,2-dichloroethene (DCE).

The carbon in the lead granular activated carbon (GAC) units was changed on 26 January 2009. The flow routing was reversed after the carbon change so that the former lagging GAC units are now in the lead and the vessels containing the newly placed carbon are now lagging (effluent).

The routine bi-monthly performance samples from the treatment system and extraction wells were collected on 26 January 2009. Validated results are not yet available. The preliminary analytical results are summarized below:

- The system influent TCE concentration decreased to 2.4 µg/L down from 2.7 micrograms per liter (µg/L) in December.
- The system influent cis-1,2-DCE concentration was essentially unchanged at 0.26 µg/L versus 0.27 µg/L in December.
- Cis-1,2-DCE was not detected in the system effluent nor was the other compounds of concern.
- TCE was not detected in the mid-point sample; however, cis-1,2-DCE was reported as 0.24 µg/L.
- TCE concentrations at individual extraction wells are summarized as follows:
  - TCE concentrations decreased at all extraction wells (except MW-OU1-87-A) by approximately 10% to 45%
  - TCE at MW-OU1-87-A was stable, increasing by 0.1 µg/L to 5.9 µg/L
  - Cis-1,2-DCE concentrations were essentially unchanged. It declined at all wells but the maximum change from the previous sample was 0.10 µg/L.
- All extraction wells showed TCE concentrations ≤2.2 µg/L except the two wells located in the central portion of the plume: MW-87 (5.9 µg/L versus 5.8 µg/L in December) and EW-71 (10 µg/L versus 11 µg/L in previous sample). TCE concentrations reported in 2008 – 2009 for all extraction wells are summarized in Table 1.

The system has operated continuously since the previous BCT meeting on 09 January 2009 except for one automatic short-term shutdown (33 hours) from early Sunday morning (15 February 2009) to Monday afternoon (16 February 2009) because of high pressure in the bag

filters. The injection pump was again off-line for an uncertain duration between 02 February and 09 February 2009. All treated water was discharged to the NWTs infiltration trenches during that period.

A leak was discovered on 13 January 2009 at the flow measurement meter on EW-OU1-63-A (the westernmost extraction well on the northwest boundary). This well was shut down on 14 January 2009 and returned to service after repair on 02 February 2009. TCE has not been detected in this extraction well since September 2007.

It was reported in November that the late September groundwater elevations collected during the third quarter long-term monitoring (LTM) showed a dramatic drop in water levels in some of the monitoring wells located on the northwest boundary of Former Fort Ord. Groundwater elevations have declined throughout the OU-1 area in a relatively consistent manner over the last four years – typically 0.2 to 0.4 feet per quarter. However, those wells closest to the recently initiated off-Post groundwater extraction treatment system expansion (approximately six weeks before the groundwater measurements) showed water elevation declines of 1 to 2 feet during the third quarter. The wells showing the greatest declines were located on the Armstrong Ranch (MW-OU1-69-A2 and MW-OU1-70-A). After discussions with the Army pumping was subsequently suspended at the off-Post extraction well nearest to the NWTs.

The December groundwater elevations showed that water levels in the affected NWTs wells along the northwest boundary and on the Armstrong Ranch (MW-OU1-69-A2 and MW-OU1-70-A) have begun to recover since the nearby off-Post extraction well was taken off-line. Although groundwater elevations continued their long-term decline across the OU-1 portion of the FONR, groundwater actually rose since the September measurement in each of the affected NWTs wells. It is expected that the off-Post extraction well will remain off-line and the groundwater flow paths in the region of the NWTs boundary wells will trend towards the pre-off-Post pumping regime.

## **2. Long Term Monitoring Update**

Fourth quarter LTM samples were collected during the week of 15 December. Only those wells located along the northwest boundary are sampled during the fourth quarter. Preliminary data results have been reported and are described below.

### *Boundary Wells Extraction Region (Between MW-OU1-46-AD and boundary road extraction wells)*

- TCE was detected at concentrations greater than the detection limit only at the two wells screened in the Channel Fill (MW-OU1-61-A and MW-OU1-67-A) and well MW-OU1-50-A.
- Only MW-OU1-50 (11 µg/L) and MW-OU1-61-A (5.6 µg/L) exceeded the ACL. The most recent data showed stability or continued decline in TCE concentrations at these locations. In the previous sample (September 2008), TCE was also 11 µg/L at MW-OU1-50-A and was 7.1 µg/L at MW-OU1-61-A.
- The other wells sampled in this quarter were:

- MW-OU1-57-A; MW-OU1058-A; MW-OU1-64-A1; MW-OU1-64-A2, and MW-OU1-B-10A located along the northwest boundary road.
- MW-OU1-69-A2 and MW-OU1-70-A on the Armstrong Ranch.

The twice-postponed third quarter sample from MW-OU1-04-A was collected as part of the bi-monthly performance monitoring sampling on 26 January 2009. TCE was detected at 3.2 µg/L. This value indicates a continuation of the long-term decreasing TCE concentration trend at this well and is less than the 3.7 µg/L value reported in the March 2008 sample.

### **3. Report Submittals**

The 2008 quarterly (1<sup>st</sup> and 3<sup>rd</sup>) and 2007 Annual LTM reports are in preparation. These reports are secondary deliverables. To provide the most current validated data to the BCT in a timely manner, HGL proposes to submit the LTM reports in the following sequence:

1. 2008 Third Quarter Report (July – September) to be submitted in March 2009
2. 2008 Annual and Fourth Quarter Report to be submitted in March 2009
3. 2008 First Quarter Report (January – March) to be submitted in April 2009
4. 2007 Annual and Fourth Quarter Report to be submitted in April 2009

A letter indicating that the DTSC comments on the Final Interim Hydraulic Control Pilot Project Evaluation Report have been resolved will be submitted upon confirmation that no further edits are needed to the water level contour map showing the concurrent on- and off-Post OU-1 plume. This water level contour map was provided to the DTSC by the Army.

### **4. Other**

Attendees are shown in Attachment A.

<b>Table 1</b>																						
<b>TCE and Cis-1,2-DCE in OU-1 FONR Groundwater Remediation System - 2008 Performance Monitoring</b>																						
<b>Sample Date</b>	<b>Extraction Well</b>								<b>NWTS</b>													
	<b>MW-87</b>	<b>EW-71</b>		<b>MW-85</b>	<b>MW-46AD</b>	<b>EW-60</b>		<b>EW-62</b>	<b>EW-63</b>	<b>EW-66</b>	<b>INFLUENT</b>	<b>MIDPOINT</b>		<b>EFFLUENT</b>								
<b>TCE (µg/L)</b>																						
1/18/2008	11		11		8.9		8.2		ND		ND		ND		1.2		6.0		ND		ND	
3/18/2008	11		14		6.7		5.8		0.29		ND		ND		1.5		5.6		ND		ND	
5/27/2008	9.7		18		2.5		6.1		ND		ND		ND		1.8		3.9		ND		ND	
7/21/2008	9.1		14		4.4		3.4		0.78		ND		ND		1.4		3.6		ND		ND	
9/29/2008	9.3	J	15	J	4.3	J	2.9	J	0.90	J	ND		ND		1.7	J	3.8	J	0.19	J	ND	
12/1/2008	5.8		11		2.6		1.6		0.82		ND		ND		0.91		2.7		0.35	J	ND	
1/26/2009	5.9		10		2.2		1.2		0.48		ND		ND		0.78		2.4		ND		ND	
<b>cis-1,2-DCE (µg/L)</b>																						
1/18/2008	1.20		1.40		1.00		1.20		ND		ND		ND		0.11		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		ND		0.13		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	J
1/26/2009	0.63		1.20		0.29		0.12		ND		ND		ND		ND		0.26		0.24		ND	

**ATTACHMENT A**  
**ATTENDANCE LIST**

**SUBJECT: HTW – BCT Meeting**  
**February 18, 2009**  
**1:00 p.m Fort Ord BRAC office**

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**1:00 p.m Fort Ord BRAC office**

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