

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

Fort Ord HTW BCT Meeting  
1:00 PM, 15 January 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 05 January 2009 is 79,689,730 gallons. The average treatment rate over the last eight weeks has been 78.5 gallons per minute. To date, the NWTs has removed approximately 3.2 pounds (0.26 gallons) of trichloroethene (TCE) and 0.3 pounds of cis-1,2-dichloroethene (DCE).

The routine bi-monthly performance samples from the treatment system and extraction wells were collected on 01 December 2008. Validated results are not yet available. The preliminary analytical results are summarized below:

- System influent TCE concentration decreased to 2.7 micrograms per liter ( $\mu\text{g/L}$ ) down from 3.8  $\mu\text{g/L}$  in September 2008.
- The system influent cis-1,2-DCE concentration decreased to 0.27  $\mu\text{g/L}$ , from 0.42  $\mu\text{g/L}$  in September 2008.
- In the system effluent, cis-1,2-DCE was reported below the method detection limit at 0.19  $\mu\text{g/L}$ . The other compounds of concern were not detected in the system effluent
- TCE was estimated in the mid-point sample in September at 0.19  $\mu\text{g/L}$  and detected again in the December mid-point sample at 0.35  $\mu\text{g/L}$ . Based on these data the carbon in the lead granular activated carbon vessels will be changed out in January or February of 2009, depending on vendor availability.
- TCE concentrations at individual extraction wells are summarized as follows:
  - TCE concentrations decreased at all extraction wells (except EW-OU1-60-A) by approximately 25% to 45%
  - TCE at EW-OU1-60-A dropped by approximately 10% from 0.90  $\mu\text{g/L}$  to 0.82  $\mu\text{g/L}$
  - Similar declines were observed in cis-1,2-DCE concentrations (20% to 30%)
- All extraction wells showed TCE concentrations  $\leq 2.6$   $\mu\text{g/L}$  except the two wells located in the central portion of the plume: MW-OU1-87-A (5.8  $\mu\text{g/L}$  versus 9.1  $\mu\text{g/L}$  in September 2008) and EW-OU1-71-A (11  $\mu\text{g/L}$  versus 14  $\mu\text{g/L}$  in previous sample). TCE concentrations reported in 2008 for all extraction wells are summarized in Table 1.

The system has operated continuously except for short-term shutdowns to replace filters and recalibrate the flow meters (less than 8 hours). The injection pump was off-line for an uncertain duration between four and eleven days and 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 pending repair. The pumping rate from this well has been approximately 1 gallon per minute in recent months. TCE has not been detected in this extraction well since September 2007.

The late September 2008 groundwater elevations collected during the 3<sup>rd</sup> 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). Consequently, HGL discussed with the Army possible revisions to the off-Post pumping rates to minimize adverse hydraulic impacts to the ongoing NWTS operation. Pumping was subsequently suspended at the off-Post extraction well nearest to the NWTS.

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

The 4<sup>th</sup> Quarter LTM samples were collected during the week of 15 December 2008. 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 only 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 aquifer cleanup level. The most recent data showed stability or continued decline in TCE concentrations at these locations. In the previous sample (September), 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 postponed third quarter sample from MW-OU1-04-A was attempted but was again not successful. HGL discovered that a previously installed sample line holding a passive diffusion bag (PDB) sampler had broken and the bag and line had blocked the well at approximately the water table. The PDB installed to collect the fourth quarter sample after the LLNL pumping equipment was removed was not fully submerged. HGL was able to clear the well, remove the blockage and re-install the PDB for sample collection in January 2009.

### **3. Report Submittals**

The 2008 Second Quarter (April – June) Groundwater Long-term Monitoring Report was submitted on 24 November 2008. HGL submitted the 2008 FONR Impact Assessment and Rare Plant Survey Report on 07 January 2009.

The lagging 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 January 2009
2. 2008 Annual and Fourth Quarter Report to be submitted in February 2009
3. 2008 First Quarter Report (January – March) to be submitted in March 2009
4. 2007 Annual and Fourth Quarter Report to be submitted in March 2009

A letter indicating that the Department of Toxic Substance Control (DTSC) comments on the Final Hydraulic Control Pilot Project Construction 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.

Table 1																					
TCE and Cis-1,2-DCE in OU-1 FONR Groundwater Remediation System - 2008 Performance Monitoring																					
Sample Date	Extraction Well								NWTS												
	MW-87	EW-71		MW-85	MW-46AD	EW-60	EW-62	EW-63	EW-66	INFLUENT	MIDPOINT	EFFLUENT									
<b>TCE (µg/L)</b>																					
1/18/2008	11		11		8.9		8.2		ND		ND		ND		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	J	1.7	J	3.8	J	0.19	J	ND
12/1/2008	5.8		<i>11</i>		2.6		<i>1.6</i>		<i>0.82</i>		<i>ND</i>		<i>ND</i>		<i>0.91</i>		2.7		<i>0.35</i>		<i>ND</i>
<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	<i>0.67</i>		<i>1.30</i>		<i>0.33</i>		<i>0.21</i>		<i>ND</i>		<i>ND</i>		<i>ND</i>		<i>ND</i>		<i>0.27</i>		<i>0.37</i>		<i>0.19</i>
<b>italics indicate data not yet validated</b>																					

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

**SUBJECT: HTW – BCT Meeting**  
**January 15, 2009**  
**1:00 p.m Fort Ord BRAC office**

Check (✓)	Name	Organization	Phone	E-mail address
	Kate Burger	DTSC	916/255-6537	<a href="mailto:kburger@dtsc.ca.gov">kburger@dtsc.ca.gov</a>
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	Derek Lieberman	Ahtna	831/242-4873	<a href="mailto:dlieberman@ahtnaes.com">dlieberman@ahtnaes.com</a>
	Bill Collins	Fort Ord BRAC	831/242-7920	<a href="mailto:William.K.Collins@us.army.mil">William.K.Collins@us.army.mil</a>
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