Fort Ord HTW BCT Meeting – Operable Unit 1 (OU-1) On-Post
10:00 AM, 19 May 2009
Monterey, California

MEETING MINUTES
(prepared by HydroGeoLogic, Inc.)

Meeting minutes for the on-Post portion of the OU-1 groundwater remediation are presented below. Roy Evans of HGL participated by phone. The list of attendees is included as Attachment A.

1. Groundwater Remediation System Update

The Northwest Treatment System (NWTS) has operated continuously since the last update at the BCT meeting on 22 April 2009. However, the flow controller for the injection pump stopped operating on 19 April 2009 and all treated water has been discharged to the NW infiltration trench since that time. On 20 April 2009, extraction wells EW-OU1-63-A (typically pumping <1 gpm) and MW-OU1-46-AD (typically pumping ~ 22 gpm) were shut down to reduce flow volume pending replacement of the flow controller for the injection pump. The replacement flow controller arrived but was damaged in shipment and was returned. Replacement is underway and expected to be complete later today (19 May 2009). A portion of the treated water will be pumped "uphill" to the injection well and grasslands infiltration trench when repairs are complete.

Total volume pumped through 13 May 2009 is 94,071,620 gallons. The average weekly treatment rate was approximately 82 gpm up to 20 April 2009 and has been approximately 60 gpm since then. The flow meter at extraction well EW-OU1-62-A stopped working but the well is still pumping. Through 13 May 2009, the NWTS has removed approximately 3.4 pounds (0.28 gallons) of TCE and 0.3 pounds (0.03 gallons) of cis-1,2-DCE.

The routine bimonthly performance samples from the treatment system and extraction wells were collected on 09 March 2009. Validated results are summarized in Table 1. TCE concentrations in the extraction wells exceeded the Aquifer Cleanup Level (ACL) only at MW-OU1-87-A and EW-OU1-71-A. With the exception of EW-OU1-60-A, TCE concentrations at the extraction wells were either unchanged from the January results or declined by 0.1 µg/L. This variation is well within the accuracy of the sampling and analytical methods. At EW-OU1-60-A, TCE increased to 0.95 µg/L from 0.48 µg/L, however, because of the low pumping rates at this well (typically around 1.25 gpm) the TCE mass removal rate is insignificant (approximately 0.005 pounds annually).

The cis-1,2-DCE concentrations in March were virtually identical to those measured in January (Table 1). The TCE concentration reported in the NWTS influent sample increased slightly (approximately 10%) but this is believed to be associated with normal variability and precision in the laboratory analytical methods. None of the contaminants of concern were detected in the NWTS effluent.

2. Long-term Monitoring Update

The First Quarter 2009 long-term monitoring (LTM) samples were collected during the week of 09 – 13 March 2009. The first quarter sampling includes those monitoring wells sampled on semi-annual and quarterly frequencies. Data validation results showed no qualifiers for TCE data. MEK was detected in the field blank at 0.73 µg/L; consequently, three samples initially reported at less than 2.0 µg/L were qualified as "non-detect" for MEK. Peak TCE concentrations continued to decline. The maximum TCE concentration reported in the first quarter was 10 µg/L at well EW-OU1-53-A. Preliminary analytical results are shown in the attached Figure 1.

3. Report Submittals

The Draft 2008 Annual and Fourth Quarter Groundwater Monitoring Report was submitted on 06 May 2009. The 2008 First Quarter and 2007 Annual and Fourth Quarter Groundwater Monitoring Reports are in preparation and planned for submittal within the next three weeks. These reports are secondary deliverables. The Final FONR System Construction Report (primary deliverable) will be submitted this month. The First Quarter 2009 Groundwater Monitoring Report is in preparation and will be submitted in June.

The DTSC comments on the Final Hydraulic Control Pilot Project Construction Report have been resolved. A letter indicating that that no further edits are needed and corrected cover pages will be submitted.

EPA directed the contractors to send secondary deliverables or those without significant time constraints by US mail, multi-day Fed-Ex, or other methods to reduce cost. The other participants agreed.

4. 2009 Long-term Monitoring Program

At the April BCT meeting the agencies agreed to modify system performance sampling to quarterly and LTM program to semiannual. The next sampling events will be in June for system performance and in September for both system performance and LTM. Subsequent to the April BCT meeting, DTSC accepted the proposed sample frequency modifications submitted at that meeting with one exception: MW-OU1-09-A will be sampled at a 5-year interval rather than suspended.

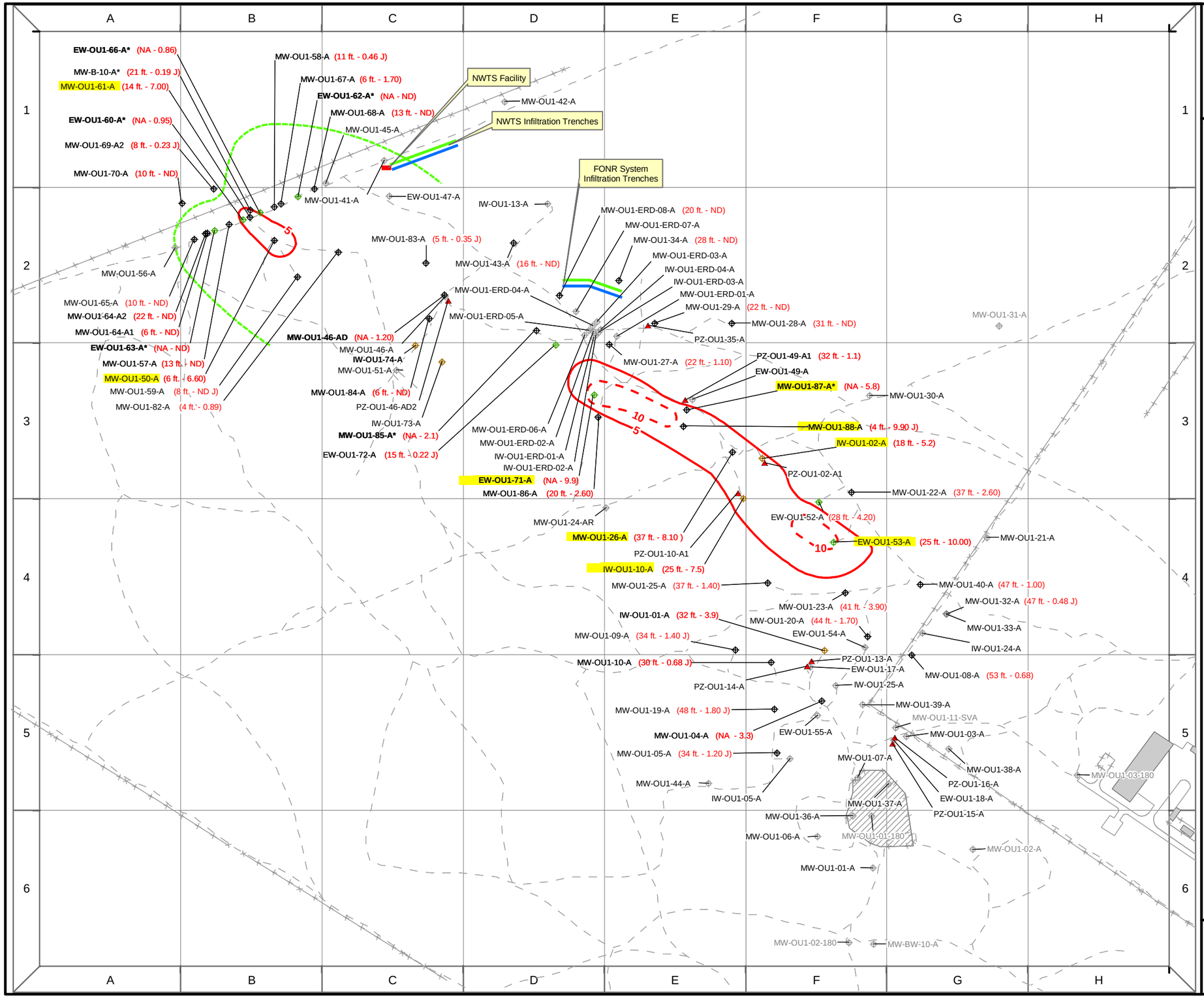
Table 1

TCE and Cis-1,2-DCE in OU-1 FONR Groundwater Remediation System - Performance Monitoring

BCT Meeting for Former Fort Ord, Marina CA - 19 May 2009

Sample Date	Extraction Well								NWTS		
	Began Operation October 2007				Began Operation July 2006						
	MW-87	EW-71	MW-85	MW-46AD	EW-60	EW-62	EW-63	EW-66	INFLUENT	MIDPOINT	EFFLUENT
TCE (µg/L)											
11/9/2007	**16**	**13**	**19**	**14**	ND	ND	ND	1.7	**11**	ND	ND
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 J	ND	ND	0.78	2.4	ND	ND
3/9/2009	**5.8**	**9.9**	2.1	1.2	0.95	ND	ND	0.86	2.7	ND	ND
cis-1,2-DCE (µg/L)											
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	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 J	0.12 J	ND	ND	ND	ND	0.26 J	0.24 J	ND
3/9/2009	0.62	1.20	0.29 J	0.13 J	ND	ND	ND	ND	0.23 J	0.26 J	ND
	Bold font indicates concentration > ACL										

Figure 1
OU-1 FONR
TCE Concentrations in Groundwater
First Quarter 2009



Legend

- Monitoring Well
- Extraction Well
  Bold font indicates active well.
- Injection Well
  Bold font indicates active well.
- Well Not Sampled
- Piezometer
- MW-OU1-87-A — Locations With March 2009 TCE Concentration At Or Above ACL (5 µg/L)
- 5 — TCE Contour (µg/L) Based on March 2009 Data
- Inferred Extent – See Notes Below
- MW-OU1-87-A (42 ft. - 9.30) — Well ID; March 2009 TCE Result (µg/L); Sample Elevation (feet above mean sea level)
- Trail/Unimproved Road
- Fence
- Estimated Northwest Treatment System Capture Zone
- Former Fire Drill Area

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 well EW-OU1-71-A was used to infer the 10 µg/L TCE contour (shown as dashed line) because the results at that well (9.9 µg/L) and at MW-OU1-88-A (also 9.9 µg/L) suggest higher TCE concentrations in that vicinity. The TCE concentration at EW-OU1-53-A was 10 µg/L and nearby well data was less than 10 µg/L. Consequently, the 10 µg/L contour enclosing well EW-OU1-53-A was also dashed because the extent is inferred from recent results. Data from MW-B-10-A was excluded because the well does not fully penetrate the A-Aquifer.
Well names appearing in gray were not included in OU1-Groundwater Monitoring Program.
Wells for which no data are posted were not sampled.

0 200 400 800
SCALE IN FEET

N

Y:/Ft_Ord/TO_201/OM9/GW_monitoring_Y6Q1/TCE_in_GW_Mar_2009.mxd
Source: HGL
04/17/09 CLimoges

HGL HydroGeoLogic, Inc

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MEETING MINUTES

ATTACHMENT A

ATTENDANCE LIST

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