

Final Meeting Minutes
(Prepared by HydroGeoLogic, Inc.)
Fort Ord Operable Unit (OU) – 1 On-Post Groundwater Remediation
Marina, California
10:00 a.m., 9 April 2013

1. Groundwater Remediation System Update

The Northwest Treatment System (NWTS) operated continuously from 20 February through 02 April 2013. Extraction wells EW-OU1-60-A, EW-OU1-66-A, and MW-OU1-87-A are operating and total pumping averaged 20.3 gallons per minute (gpm). Since system startup in 2006, the NWTS has pumped approximately 197 million gallons of groundwater and removed approximately 5.9 pounds (0.49 gallon) of total volatile organic compounds, primarily trichloroethene (TCE). An estimated 0.07 pound of TCE has been removed since the NWTS last sampling event on 25 September 2012.

The previously repaired pinhole leak in the pipe fitting at the treatment plant was inspected on 14 March 2013. The exterior sealant applied to the leaking pipe section was effective and carbon tanks F301-B and F302-B were returned to service. The tanks and pipes were inspected again during the sampling event on 27 March 2013 and no leaks were observed.

2. Long Term Monitoring (LTM) Update

Validated sampling results from the January 2013 sampling event are presented in attached Tables 1A and 1B for extraction wells MW-OU1-87-A, MW-OU1-66-A, and EW-OU1-60-A. These wells were sampled again on 27 March 2013, as were monitoring wells MW-OU1-61-A, MW-OU1-69-A2, MW-OU1-70-A, and MW-OU1-88-A.

Figure 1 shows groundwater TCE concentrations based on the January and February 2013 samples. Figure 1 will be updated after the March analytical results are received and reviewed.

3. Report Submittals

The status of previously submitted reports and outstanding and scheduled reports for 2011, 2012, and 2013 is summarized in Table 2. EPA and RWQCB stated that the Draft 2012 Annual and 3rd Quarter Groundwater Monitoring Report is accepted as final with no change. DTSC approved the draft submittal with no comment in a letter dated 22 February 2013. Replacement pages to change the title page and cover from draft to final were mailed on 22 March 2013.

The 2012 OU-1 rare plant survey and habitat impact report for the Fort Ord Natural Reserve (FONR) was submitted by the Army to the U.S. Fish and Wildlife Service (USFWS) in early March. Representatives from the Army, University of California at Santa Cruz (UCSC), HGL, and the USFWS participated in a conference call on 27 March 2013 to discuss the recommendations for future rare plant monitoring presented in the impact report. The USFWS expressed a willingness to consider reducing the number of sites to be included in the rare plant monitoring but withheld final approval pending review of additional data from the 2011 and 2012 rare plant surveys. HGL assisted the Army in assembling the requested data and the associated transmittal letter. UCSC and Army personnel inspected the potential monitoring sites during the week of 25 March 2013 to finalize the recommended list of wells sites to be included in the 2013 FONR rare plant monitoring. The Army submitted the data and final recommendations to the USFWS on 08 April 2013.

4. Discussion Agenda

(A) Weed Control

HGL is working with the UCSC to renew the agreement to perform weed control in selected portions of the FONR in 2013. The number of sites to be addressed will be based on the results of previous monitoring and the habitat types observed during the Army/UCSC field inspection last week.

(B) Rare Plant Monitoring

HGL will coordinate with Denis Duffy and Associates and UCSC to schedule the monitoring at the agreed upon well sites. The monitoring for the sites included in the recommendations sent to the USFWS will be performed as soon as possible to coincide with the peak blooming period for sand gilia.

Action Items:

Ongoing:

- Submit draft minutes for previous Base Closure Team (BCT) meeting(s)—draft February meeting minutes were submitted on 14 March 2013 and draft March minutes on 19 March 2013. EPA and RWQCB have approved both without comment. DTSC had one comment on the March minutes. The final March meeting minutes will be submitted this week.
- Submit final minutes for previous BCT meeting(s) (January 2013)—submitted on 27 February 2013.
- Submit draft minutes for current BCT meeting.

**Fort Ord HTW BCT Meeting
Marina, California
9 April 2013**

ATTACHMENT 1

Reference Tables and Figures

Table 1A
TCE in OU-1 FONR Groundwater Remediation System – Performance Monitoring
BCT Meeting for Former Fort Ord – 09 April 2013

Began:	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	
	Date	IW-10	MW-87	EW-71	MW-85	MW-46AD	EW-63	EW-60	EW-66				EW-62
TCE (µg/L)													
11/9/07	Used as monitoring well until pump installed in October 2010. Pumping began 03 November 2010.	16	13	19	14	ND	ND	1.7	ND	11	ND	ND	
1/18/08		11	11	8.9	8.2	ND	ND	1.2	ND	6.0	ND	ND	
3/18/08		11	14	6.7	5.8	ND	0.29	1.5	ND	5.6	ND	ND	
5/27/08		9.7	18	2.5	6.1	ND	ND	1.8	ND	3.9	ND	ND	
7/21/08		9.1	14	4.4	3.4	ND	0.78	1.4	ND	3.6	ND	ND	
9/29/08		9.3	15	4.3	2.9	ND	0.90	1.7	ND	3.8	0.19	ND	
12/1/08		5.8	11	2.6	1.6	ND	0.82	0.91	ND	2.7	0.35	ND	
1/26/09		5.9	10	2.2	1.2	ND	0.48	0.78	ND	2.4	ND	ND	
3/9/09		5.8	9.9	2.1	1.2	ND	0.95	0.86	ND	2.7	ND	ND	
6/11/09		6.9	11	2.4	1.5	ND	0.88	1.7	ND	2.6	0.14	ND	
9/15/09		6.8	9.4	1.7	0.78	ND	inactive	1.1	0.036	2.3	0.35	ND	
12/14/09		6.9	7.5	0.84	not sampled	not sampled	inactive	0.94	not sampled	2.3	0.65	ND	
3/22/10		7.2	8.5	0.62	0.55	inactive	ND	0.90	inactive	2.3	ND	ND	
6/21/10		7.4	6.5	0.90	0.40	J inactive	0.86	0.58	inactive	2.1	ND	ND	
9/20/10		7.7	6.6	0.83	0.35	J discontinued	0.63	0.49	J inactive	2.3	not sampled	ND	
12/16/10		5.2	6.9	5.2	0.58	0.28	J discontinued	0.72	0.42	J inactive	2.6	0.18	ND
3/7/11		5.1	6.0	4.6	0.55	0.60	discontinued	0.87	0.42	J inactive	2.5	0.59	ND
6/7/11		4.2	6.1	4.0	0.78	0.63	discontinued	0.76	0.36	J inactive	2.6	1.0	ND
9/20/11		4.5	6.2	4.2	1.10	0.38	J discontinued	0.57	0.36	J inactive	2.5	1.7	ND
12/7/11		3.8	5.1	3.7	not sampled		discontinued	inactive	0.27	J inactive	1.8	2.1	0.13
3/15/12	3.7	5.5	3.8	0.70	0.23	J discontinued	inactive	0.38	J inactive	0.81	0.32	ND	
9/25/12	--	5.3	4.4	--	--	discontinued	inactive	0.19	J inactive	1.8	0.72	ND	
1/8/13	--	5.4	--	--	--	discontinued	ND	0.19	J inactive	--	--	ND	
3/27/13	Awaiting laboratory results												
		Italics (if used) indicate data not yet validated					Bold font indicates concentration > ACL						
Notes:													
ACL - aquifer cleanup level	-- - Not sampled												
µg/L - micrograms per liter													
J - Data qualified as estimated													
ND - nondetect													
TCE - trichloroethene													
FONR - Fort Ord Natural Reserve													
NWTS - Northwest Treatment System													

Table 1B
cis-1,2-DCE in OU-1 FONR Groundwater Remediation System – Performance Monitoring
BCT Meeting for Former Fort Ord – 09 April 2013

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									
cis-1,2-DCE (µg/L)																		
11/09/07	Used as monitoring well until pump installed in October 2010. Pumping began 03 November 2010.	1.9	1.6	2.3	1.70	ND	ND	ND	ND	1.3	ND	ND						
01/18/08		1.20	1.40	1.00	1.20	ND	ND	0.11	ND	0.66	ND	ND						
03/18/08		1.20	1.50	0.74	0.63	ND	ND	ND	ND	0.59	0.11	ND						
05/27/08		0.88	2.10	0.26	0.74	ND	ND	ND	ND	0.36	0.21	ND						
07/21/08		0.80	1.50	0.52	0.37	ND	ND	ND	ND	0.41	0.34	ND						
09/29/08		0.99	1.60	0.54	0.30	ND	ND	0.13	ND	0.42	0.42	0.12						
12/01/08		0.67	1.30	0.33	0.21	J	ND	ND	ND	ND	0.27	J	0.37	J	0.19	J		
01/26/09		0.63	1.20	0.29	J	0.12	J	ND	ND	ND	ND	0.26	J	0.24	J	ND		
03/09/09		0.62	1.20	0.29	J	0.13	J	ND	ND	ND	ND	0.23	J	0.26	J	ND		
06/11/09		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		0.80	1.00	0.22	J	0.08	J	ND	inactive	0.03	J	ND	0.22	J	0.37	J	0.03	J
12/14/09		0.67	0.65	0.10	J	not sampled	not sampled	inactive	ND	J	not sampled	0.21	J	0.30	J	0.11	J	
03/22/10		0.67	0.79	ND	ND	inactive	ND	ND	inactive	0.20	J	0.11	J	0.13	J			
06/21/10		0.67	0.53	0.14	J	ND	inactive	ND	ND	inactive	0.20	J	0.23	J	ND			
9/20/10		0.66	0.46	J	ND	ND	discontinued	ND	ND	inactive	0.23	J	not sampled	ND				
12/16/10	0.55	0.66	0.35	J	ND	J	ND	discontinued	ND	ND	inactive	0.27	J	0.28	J	ND		
3/7/11	0.37	J	0.52	0.28	J	0.11	J	ND	discontinued	ND	ND	inactive	0.23	J	0.30	J	ND	
6/7/11	0.35	J	0.55	0.29	J	ND	ND	discontinued	ND	ND	inactive	0.18	J	0.31	J	0.15	J	
9/20/11	0.25	J	0.46	J	0.21	J	ND	ND	discontinued	ND	ND	inactive	0.17	J	0.19	J	0.30	J
12/7/11	0.27	J	0.48	J	0.19	J	not sampled	discontinued	inactive	ND	inactive	0.16	J	0.17	J	0.23	J	
3/15/12	0.15	J	0.40	J	0.22	J	0.15	J	ND	discontinued	inactive	ND	inactive	ND	0.24	J	ND	
9/25/12	--	J	0.39	J	0.23	J	--	--	discontinued	inactive	ND	inactive	ND	0.24	J	ND		
1/8/13	--	J	0.35	J	--	--	--	--	discontinued	ND	--	inactive	--	--	--			
3/27/13	Awaiting laboratory results																	
<div style="display: flex; justify-content: space-between;"> Italics (if used) indicate data not yet validated Bold font indicates concentration > ACL </div>																		
Notes:																		
ACL - aquifer cleanup level	-- - Not sampled																	
µg/L - micrograms per liter																		
J - Data qualified as estimated																		
ND - nondetect																		
DCE - dichloroethene																		
FONR - Fort Ord Natural Reserve																		
NWTS - Northwest Treatment System																		

Table 2
Current Deliverable Schedule
BCT Meeting for Former Fort Ord, Marina, California – 9 April 2013

Deliverable Title	Submittal Due	Review Comments Due	Status/Remarks
<i>Primary Deliverables</i>			
None scheduled			
<i>Secondary Deliverables</i>			
2013 First Quarter Groundwater Monitoring Report	May 2013	July 2013	In progress
<i>Completed Recent Submittals</i>			
Final Memorandum for Record for Optimizing Remediation Pumping	March 2012	February 2012	Accepted as final during July 2012 BCT meeting.
Final IW-OU1-10-A Construction Report	March 2012	NA	Submitted 30 March 2012.
Final Operable Unit 1 Well Destruction Report	March 2012	NA	Submitted 30 March 2012.
Draft Five Year Review Report	March 2012	May 2012	Army submitted 30 March 2012.
Draft 2011 Annual and Third Quarter Groundwater Monitoring Report	May 2012	July 2012	Submitted 17 May 2012.
2012 First Quarter Groundwater Monitoring Report	May 2012	August 2012	Submitted 29 May 2012.
Draft 2007 Annual & Fourth Quarter Groundwater Monitoring Report	June 2012	August 2012	Submitted 13 June 2012.
Draft Final Five Year Review Report	July 2012	September 2012	Submitted to Army 26 June 2012.
Final 2011 Annual and Third Quarter Groundwater Monitoring Report	July 2012	NA	Submitted 25 July 2012. No agency comments.
IW-OU1-74-A Vandalism Report	July 2012	NA	Submitted 25 July 2012.
Final 2007 Annual and 4th Quarter Groundwater Monitoring Report	September 2012	NA	Submitted 26 September 2012. No comments.
Final Five Year Review Report	September 2012	NA	Text for final version sent to Army on 08 August 2012
Draft 2012 Annual and 3rd Quarter Groundwater Monitoring Report	December 2012	March 2013	Submitted 31 December 2012.
Final 2012 Annual and 3rd Quarter Groundwater Monitoring Report	March 2013	NA	Submitted 21 March 2013.

