10:00 a.m. BRAC Conference Room **SUBJECT: HTW - BCT Meeting** August 19, 2009

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George.L.Siller@usace.army.mil Hausladen.martin@epamail.epa.gov clinton.w.robinson@us.army.mil William.K.Collins@us.army.mil Ghimebaugh@waterboards.ca.gov gail.youngblood@us.army.mil dlieberman@ahtnaes.com bmabey@techlawinc.com Mitani.lewis@epa.gov SSterlin@dtsc.ca.gov kburger@dtsc.ca.gov FMark@dtsc.ca.gov E-mail address 831/242-7900 916/557-7418 831/242-7920 831/242-7918 831/242-4873 415/281-8730 805/542-4636 415/972-3032 415/972-3007 916/255-3739 916/255-3584 916/255-6537 Phone Fort Ord BRAC Fort Ord BRAC Fort Ord BRAC TechLaw Inc Organization U.S. EPA U.S. EPA RWQCB Ahtna COE DTSC DTSC DTSC **Derek Lieberman** Grant Himebaugh Gail Youngblood **Martin Hausladen Rob Robinson** George Siller **Franklin Mark Steve Sterling** Lewis Mitani **Bill Collins Bill Mabey** Kate Burger Name DeH Nº C かつ  $\leq$ 22 X え E <u>}</u>

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Christopher.E.Prescott@usace.army.mil Marc.A.Edwards@usace.army.mil <u>Melissa.broadston@us.army.mil</u> <u>Mark.h.eldridge@us.army.mil</u> Eric.Schmidt@shawgrp.com David.Eisen@usace.army.mil Peter.Kelsall@shawgrp.com David.kelly@shawgrp.com Jen.moser@shawgrp.com mdtaraski@mactec.com komeara@ahtnaes.com cholman@ahtnaes.com ejticken@mactec.com E-mail address 831/883-5810 ext. 810 916/372-2000 916/372-2000 916/557-7227 831/393-1284 831/242-4828 510/628-3222 707/793-3882 831/883-5812 831/883-5809 831/393-9692 410/436-6325 925/288-2321 Phone Fort Ord BRAC MACTEC E&C GEM/Shaw E&I MACTEC E&C Organization Shaw E&I Shaw E&I Shaw E&I USACE Ahtna Ahtna COE COE AEC **Christopher Prescott Melissa Broadston Michael Taraszki** Kelly O'Meara Chuck Holman Marc Edwards **Mark Eldridge** Eric Schmidt Peter Kelsall **David Kelly Ed Ticken David Eisen** Jen Moser Name EN. 1 June t P MA S

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E-mail address	revans@hgl.com						
Phone	303/984-1167 xt. 5						
Organization	TDH	MACIEC					
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SUBJECT: <u>HTW - BCT Meeting</u> <u>August 19, 2009</u> 10:00 a.m. <u>BRAC Conference Room</u>

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# OPERABLE UNIT CARBON TETRACHLORIDE PLUME A-AQUIFER REMEDIAL ACTION

# STATUS - August 19, 2009

# **FIELD WORK**

- Installation and development of wells at Areas 1A and 1B complete January 16
- Installation of process equipment at Area 1A complete July 10.

# SCHEDULE

- Subsequent quarterly monitoring for EISB pilot study conducted under Groundwater Monitoring Program.
- Draft Final EISB Pilot Study Report (for Agency Review) July 6. Comments due August 7, 2009. Comments received from DTSC. Final – August 21.
- Draft Final RA Work Plan/RD (Appendix A A-Aquifer) Comments received from DTSC. RWQCB and EPA indicated that they had no comments. Preparing response to DTSC comments with document revisions – to USACE August 26.
- Start-up testing and baseline sampling ongoing at Area 1A.
- Installation of process equipment at Area 1B ongoing.
- Installation of extraction and injection wells at Area 1C ongoing 11 of 17 wells completed as of August 18.

# DATA (Preliminary)

• None

### PROBLEMS/CHANGES

- Drill casing locked up while installing injection well IW-BW-90-A (Deployment Area 1A). Approximately 60 feet of drill casing was lost in the boring. Boring (with steel casing) was grouted to ground surface. New well was installed adjacent to proposed location.
- Minimal drawdown at high extraction rates as part of pump testing during startup at Area 1A. May allow for higher production rates and faster injection of substrate.

# OPERABLE UNIT 1 OFF-SITE GROUNDWATER EXTRACTION PILOT STUDY

# STATUS – August 19, 2009

### 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
- Quarterly sampling of monitoring and extraction wells June 9, 2009
- Second rebound study initiated July 13, 2009

### SCHEDULE

- January to March 2009, Quarterly Report being prepared August 24.
- Conduct second rebound testing starting July 13 GWETS shut off July 13 to August 10, sampled every other week. System restarted on August 10.

### DATA (Preliminary)

• Preliminary data through July 27.

### 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. Well number and location is based on the decision criteria in the Draft Work Plan.
- 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 offsite wells are below Aquifer Cleanup Levels.

#### Summary of Operable Unit 1 Process System Trichlorethene Analytical Results

					Sample Location Granular Activated Carbon Beds					
	Extraction Wells OU1PS-EW-92 OU1PS-EW-93		0140				vated Carbon Beds 1PS-BTW OU1PS-E			
Date	OU1PS				0018	S-INF	00110			
August 5, 2008ª	1.2		14 <sup>b</sup>				<0.5		<0.5	unß
August 11, 2008"	3.4		8.7°		5.4				<0.5	
August 18, 2008	3.7		6.1 <sup>d</sup>		4.7		<0.5		<0.5	
August 25, 2008ª		µg/L	not ope			<u>µg/L</u>	l		<0.5	
Seplember 2, 2008ª	3.3	<u>µд/L</u>	6.8°	µg/L		µg/L	<0.5		<0.5	
September 8, 2008 <sup>e</sup>			ļ			µg/L	<0.5		<0.5	7-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2
September 15, 2008ª	2	<u>µg/L</u>	4.91			µg/L		,µg/L	<0.5	
September 22, 2008	1.4	µg/L		µg/L		µg/L		µg/L		ug/L
September 29, 2008	1.4	hð\r		µg/L		µg/L		µg/L		µg/L
October 6, 2008	1.4	μg/L		µg/L		<u>µg/L</u>	- <u>-</u>	hð\r		р <u>алт</u> Прауг
October 13, 2008ª	0.98	µg/L	<u> </u>	hð\r		µg/L		µg/L		
October 20, 2008ª	0.90	µg/L		µg/L	<u> </u>	µg/L		pg/L		ից/Լ ից/Լ
October 27, 2008	0.68	µg/L		µg/L		µg/L		µg/L		р <u>а/с</u> µg/L
November 3, 2008	0.74	µg/L	1.9	µg/L		µg/L		µg/L		148/r -
November 10, 2008						µg/L		µg/L		
November 17, 2008						µg/L		i µg/L		µg/L
November 24, 2008						µg/L		i µg/L		µg/L
December 1, 2008						µg/ <u>}</u>		i µg/L		µg/L
December 8, 2008	0.62	µg/L	2,1	hð\r		µg/L		i μg/L		iµg/L
December 16, 2008						µg/L		i µg/L		i µg/L
December 22, 2008						µg/1_		5 µg/L		i µg/L
December 29, 2008					2.2	µg/L		5 µg/L		i µg/L
January 5, 2009						μ <u>ρ/L</u>		5 µg/L		i µg/L
January 12, 2009					2.2	µg/L		5 μg/L		sμg/L
January 19, 2009					2.1	րը(լ		5 µg/L		σμg/L
January 27, 2009				i	2.2	μg/ <u>L</u>		5 µg/L		5 µg/L
February 3, 2009					2.2	2µg/L		5 µg/L	_	5 µg/L
February 10, 2009	1				2.0	ug/L		5 µg/L		5 µg/L
February 17, 2009	1.3	ug/L	2,1	µg/L	2.2	2 µg/L	<0.:	5 µg/L	<0.	5 µg/L
March 16, 2009	.1.4	ljµg/L	7.4	'µg/L	· .		1		_	
April 14, 2009		1			4.2	2 µg/L	<0.	5 µg/L		5 µg/L
April 21, 2009		1			3.0	) µg/L	<0.	5 µg/L _		5 µg/L
April 27, 2009		1			2.4	t µg/L	<0.	5 µg/L		5 µg/L
May 5, 2009					2.	5 µg/L	<0,	5 µg/L		5 µg/L_
May 11, 2009	-				1.	9 µg/1.	<0,	5 µg/L		5 µg/L
May 20, 2009		1			1.	9 µg/L	<0.	5 µg/L		5 µg/L
May 26, 2009	1				1.	7 µg/L	<0.	.5 µg/L		5 <u>µg/L</u>
June 2, 2009	1	1			1.	6 µg/L	<0	5 µg/L		5 µg/L
June 9, 2009	1.5	2 µg/L	1.	7 µg/L	1.	4 µg/L	<0	5 µg/l.		.5 µg/L
June 17, 2009		1			1,	5 µg/L	<0	.5 µg/L		.5 µg/L
June 23, 2009	1				1.	5 µg/L	<0	.5 µg/L		.5 µg/L
June 30, 2009		1 -			1.	5 µg/L	<0	.5 µg/L		.5 µg/L
July 7, 2009	-	1	_		1.	5 µg/L	<0	.5 µg/L		.5 µg/L
July 13, 2009		- <u> </u>	1.	5 µg/L	1.	4 µg/L	<0	.5 µg/L	<0	.5 µg/L
July 27, 2009	-	-		1 µg/L						

\* Low level detections of benzene, bromotorm, chloromethane, disbromochloromethane, isopropylbenzane and/or ecetone in several samples.

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 $^{b}$  additional compound detected: cis-1,2-dichloroethylene - 0.43J  $~\mu$  g/L

 $^{\circ}$  additional compound detected: cts-1,2-dichloroethylene - 0.31J  $~\mu$  g/L

<sup>4</sup> additional compound detected; cis-1,2-dichloroethylene - 0.21J μgA.

 $^{*}$  additional compound detected: cis-1,2-dichloroethylene - 0.21J  $~\mu$  g/L

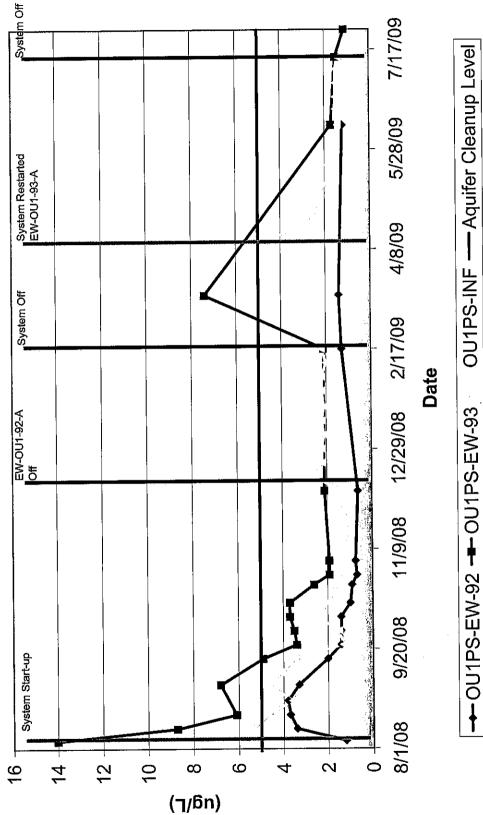
 $^{\prime}$  additional compound detected: cis-1,2-dichloroethylene - 0.26J  $~\mu$  g/L

 $^{g}$  additional compound detected: chloromethane - 0.39J  $\,\mu$  g/L

 $^{\rm h}$  additional compound detected: cis-1,2-dichloroethylene - 0.34J  $\,\mu g$  /L

Low level detections of chloromethane and/or acetone in all samples.

Delections are shown in bold. µ g/L denotes micrograms per liter, Data qualified as \*J\* is estimated. **Change in Concentration of Trichloroethene Over Time System Monitoring** 



Trichloroethene Concentration

# Property Transfer Update 08-19-09 HTW BCT

# FOST 10 deeds:

- 1. July 10 eight of ten deeds and three CRUPs recorded, 594 acres transferred.
- 2. Deed for Parcel L3.2 (14.52 acres) is on hold pending agreement between York School (recipient), FORA and Monterey County.
- 3. USACE is working on assignment letter to Department of Education for Parcel L23.5.2 for public benefit conveyance to Monterey Peninsula College (FORA not involved in transaction).

# FOST 11:

- 1. Draft in progress (Parcels L2.3, L2.4.1), scheduled for September 30.
- 2. Parcels L2.3, L2.4.1 within Parker Flats MRA MEC-related CRUP

# FOSET 2 deed amendments:

- 1. Five deed amendments were issued to FOSET 2 property recipients for signature:
  - a. Monterey-Salinas Transit signed and returned to USACE.
  - b. City of Marina reviewed by Kutak Rock, comments submitted to USACE.
  - c. City of Seaside reviewed by Kutak Rock, comments submitted to USACE.
  - d. University of California (UC) comments submitted to USACE.
  - e. CSUMB tabled pending completion of FOSET 5 deed.
- 2. Sixth deed amendment for Parcel L37 is pending.
- 3. June 30 USACE submitted revised deed amendment to Kutak Rock with "hold harmless" provision deleted. All deed amendments may be reissued for signature with this change.

# 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:

- 1. ROD for Parker Flats MRA complete and signed, Final LUCI and O&M Plan complete.
- 2. June 11 three deed amendments issuing the CERCLA Warranty for Parker Flats Munitions Response Area drafted and submitted to USACE and FORA for review.
- 3. June 24 USACE HQ legal review complete, forwarded deed amendments to Sacramento District.
- 4. July 8 USACE forwarded deed amendments to Kutak Rock.
- 5. July 31 Kutak Rock completed review and returned one revised deed amendment (Seaside) to USACE.
- 6. August 4 USACE accepted Kutak Rock's changes to be used as basis for the other two deed amendments (MoCo and MPC).
- 7. August 12 Joey Fuller of Kutak Rock referred deed amendments to George Schlossberg of Kutak Rock.
- 8. FORA's Parker Flats Phase I schedule indicates deed amendments to be complete by October 15, 2009.

# Thermal Treatment Unit Operation Summary

TREATMENT SYSTEM	
Treatment System Start Date:	6/4/2001
TTU Start Date:	4/4/2006
Last Reading Date/Time:	7/31/2009
Historical through 2008:	
Total TTU Hours:	24,048
Total TTU Hours Operated:	9,743
% TTU Operation:	40.5%
Total Pounds of Methane Removed	1,331,230
Total Pounds of VOCs Removed	154
Current Year 2009:	
Total Hours:	5,081
Total Hours Operated:	2,297
% Operation:	45.2%
Pounds of Methane Removed	89,411
Cumulative:	
% TTU Operation (since 4/4/2006):	41.3%
Total Pounds of Methane Removed (since 6/4/2001):	1,420,641

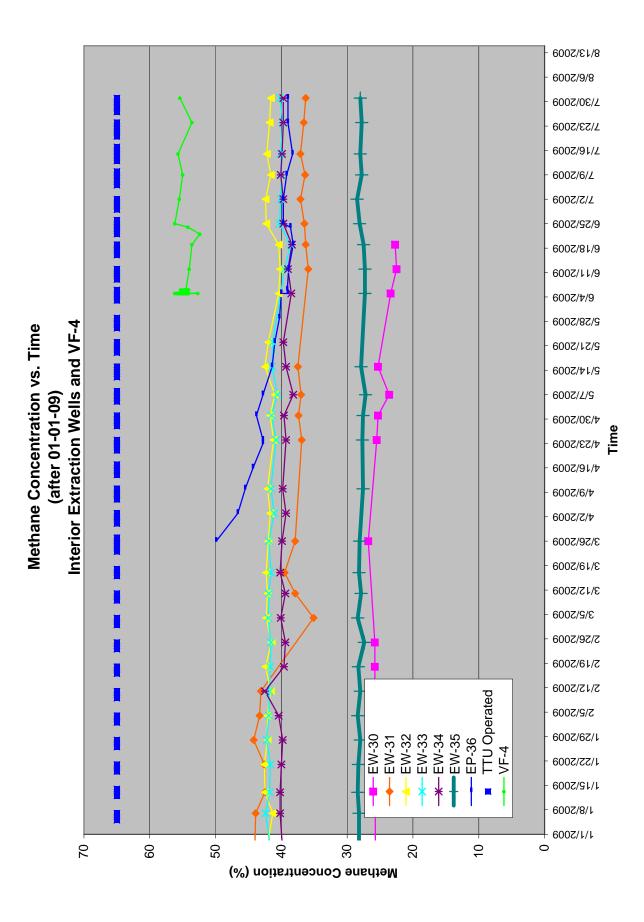
		Pounds/week
Pounds of Methane Removed (2007)	450120	8632
Pounds of Methane Removed (2008)	118155	2266
Pounds of Methane Removed (2009)	89411	2956

EXTRACTION SYSTEM (2009)			
Location	Methane (%)	Flow Rate (scfm)	% Operational
	(last instantaneous		(total for 2009)
MIXED-TTU	39.6	110	45.2%
Area F			
EW-30	21	0	24.0%
EW-31	36	13	33.6%
EW-32	42	21	45.2%
EW-33	40	20	43.7%
EW-34	40	30	45.2%
VF-4	55	14	16.5%
Area D			
EW-35	28	13	40.4%
Area E			
EP-36	39	32	32.8%

Notes:

1. EW-33 was disconnected for vent testing from 6/3 thru 6/9

2. EW-30 off since 6/22 due to higher oxygen





# Former Fort Ord Groundwater Treatment Systems Operational Data and Status

# BCT Meeting, August 19, 2009

 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.)					
OU2									
July 2009	21,740,400	487	96	1.59					
Total since October 1995	4.569 billion			630.72					
Sites 2/12									
July 2009	6,756,800	151	98	0.70					
Total since June 1999	1.227 billion			417.74					

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

	Ke	y Events for	OU2 and Sites	2/12 for Jul	y 2009					
	*There were 10 USAN Notices transmitted to Ahtna during July 2009. None of these alerts required the personal attention of the Senior GWTP Operator.									
Sunday	Monday	Tuesday	Tuesday Wednesday Thursday Friday							
			1	2	3	4				
5	<b>6</b> OU2 plant shutdown to install a new influent meter	7 OU2 restarted after installation of new meter, down 23.75 hrs	8	9	<b>10</b> Power surge shut down 2/12 plant & OU2 180 EW, wells restarted same day	11 2/12 restarted after power surge, down 12.5 hrs				
12	<b>13</b> New antenna raised at OU2 over EFF tank	14	15	16	17	18				
19	<b>20</b> OU2 plant shutdown due to leak from LLNL office, restarted same day, down 6 hrs	21	22 Communication lost to all sites except western network	23	24	25				
26	27	28	29	30	31					



### Table 3: July 2009 - OU2 Analytical Results at TS-OU2-INJ

СОС	Discharge Limit	Sample Date / Analytical Results				
000	(µg/L)‡					
1,1-DCA	5.0*					
1,2-DCA	0.50					
1,2-DCP	0.50					
Benzene	0.50					
Carbon Tetrachloride	0.50	In accordance with the sampling schedule in				
Chloroform	2.0*	the SAP, no GWTP sampling was performed				
cis-1,2-DCE	6.0*	at the injection point during July. Next sampling is scheduled for August 5, 2009.				
Methylene Chloride	0.50	sampling is scheduled for August 5, 2009.				
PCE	0.50					
TCE	0.50					
Vinyl Chloride	0.10					

### Table 4: July 2009 - Sites 2/12 Analytical Results at TS-212-INJ

COC	Discharge Limit (µg/L)‡	Sample Date / Analytical Results
1,1-DCE	6.0	
1,2-DCA	0.50	
1,3-DCP †	0.50	In accordance with the sampling schedule in
Chloroform	2.0	the SAP, no GWTP sampling was performed
cis-1,2 DCE	6.0	at the injection point during July. Next
PCE	3.0	sampling is scheduled for August 5, 2009.
TCE	5.0	]
Vinyl Chloride	0.10	

### 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.

<sup>†</sup> 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 J	uly.	



# **Table 6:** July 2009 OU2 and Sites 2/12 Extraction Well Status.

Table 0. July 2009 002 and Sites 2/12 Extraction went Status.						
Well	%	Avg.	Total	% of	Comments	TCE ( $\mu$ g/L)
Identification	On	gpm	Gallons	Total		2Q 2009
			Site 12 Extra	ction Wel	lls	
EW-12-05-180M	98.2	45.1	2,012,700	29.8		9.2
EW-12-06-180M	98.2	54.9	2,450,100	36.3		8.7
EW-12-07-180M	81.9	7.9	353,800	5.2		3.2
EW-12-03-180U	0	0	0	0	Well offline due to low concentrations	0.14
EW-12-03-180M	98.0	43.5	1,940,200	28.7		2.2
EW-12-04-180U	0	0	0	0	Well offline due to low concentrations	0.99
EW-12-04-180M	0	0	0	0	Ceased operating on 11/21/2005	not sampled
Total 2/1	2 gallon	s treated:	6,756,800	100.0		
	0		OU2 Extrac		s	
Western Network			002 LAG			
EW-OU2-01-A	0.0	0	0	0	Wall office due to low concentrations	n of commission
	0.0 90.9	0	0	0	Well offline due to low concentrations	not sampled
EW-OU2-02-A		50.6	2,260,480	10.4	W/ 11 - COline days to 1	0.87
EW-OU2-03-A	0	0	0	0	Well offline due to low concentrations	1.0
EW-OU2-04-A	91.7	48.0	2,144,680	9.9 9.8		1.1
EW-OU2-05-A EW-OU2-06-A	93.4	47.9	2,136,870	9.8 7.3		2.9
	95.5 0	35.4	1,580,810		No muno in mall	
EW-OU2-01-180	v	0	0	0	No pump in well	10
	gallons	extracted:	8,122,840	37.4		
Eastern Network						
EW-OU2-07-A	0	0	0	0	Well offline due to low concentrations	ND
EW-OU2-08-A	61.3	16.8	749,850	3.4		1.2
EW-OU2-09-A	92.8	13.0	582,290	2.7		3.7
EW-OU2-10-A	0	0	0	0		4.4
EW-OU2-11-A	0.2	0.1	3,560	0	Low yield due to biofouling	3.4
EW-OU2-12-A	0.2	0.1	3,050	0	Low yield; running at reduced capacity	8.8
EW-OU2-13-A	92.8	19.6	874,810	4.0		9.7
EW-OU2-02-180	95.5	30.2	1,348,000	6.2		12.6
Total	gallons	extracted:	3,561,560	16.4		
Shoppette						
EW-OU2-05-180	0	0	0	0	Pump failed	not sampled
EW-OU2-06-180	94.4	73.1	3,262,000	15.0		6.8
EW-OU2-16-A	0	0	0	0	Runs in manual only, high drawdown	14.1
Total	gallons	extracted:	3,262,000	15.0		
CSUMB						
EW-OU2-14-A	0	0	0	0	Runs in manual, testing level transmitters	3.9
EW-OU2-15-A	0	0	0	0	Well offline due to low concentrations	not sampled
	0	extracted:	0	0		not sumpiou
Landfill	Sunons	can acteu.	0	0		
EW-OU2-03-180	87.2	121 /	5,420,000	24.0		10.2
	87.2	121.4	<i>, ,</i>	24.9	Well offline due to low concentrations	18.3
EW-OU2-04-180	Ŷ	÷	0	0	wen online due to low concentrations	0.32
	gations	extracted:	5,420,000	24.9		
Bunker Hill						
EW-OU2-07-180	0	0	0	0	No pump in well	5.4
EW-OU2-08-180	59.4	30.8	1,374,000	6.3		0.98
Total	gallons	extracted:	1,374,000	6.3		
Total OU	2 gallon	s treated:	21,740,400	100.0		

# Former Fort Ord Deliverables Schedule Sorted by Document Type To Be Issued Aug - Oct 2009

<u>Grouping</u>	<u>Site</u>	<u>Activity</u>	<u>Deliverable</u>	<u>Proposed</u> Issue Date	<u>Issue</u> Date Status	<u>Agency</u> <u>Comments</u> <u>Due</u>	<u>Company</u>
Secondary Documents	OU Carbon Tet Plume	Remedial Investigation	Draft Final Close Out Report, Pilot Soil Vapor Extraction and Treatment, OUCTP, Rev 0	May-30-09	(overdue)		Shaw E&I
Primary FFA Documents	OU 1	Treatment System Activities	Final Interim Hydraulic Control Pilot Project Evaluation Report, OU1 (revised)	Jun-30-09	In Progress		HydroGeoLogic, Inc.
Primary FFA Documents	OU Carbon Tet Plume	Remedial Action/Remedial Design	Final Remedial Action Work Plan, OUCTP, Rev 1	Jul-30-09	(overdue)		Shaw E&I
Primary FFA Documents	RI Sites	Soil Activities	Final ROD Amendment RI Site 39 (signature process)	Jul-30-09	In Progress		MACTEC/BRAC
Secondary Documents	OU 1	Groundwater Activities	Draft 2007 Annual and Fourth Quarter Groundwater Monitoring Report, OU1	Jul-30-09	In Progress	Sep-30-09	HydroGeoLogic, Inc.
Primary FFA Documents	OU 1	Treatment System Activities	Final FONR System Construction Report, OU1	Aug-30-09			HydroGeoLogic, Inc.
Secondary Documents	OU 1	Groundwater Activities	First Quarter 2008 Groundwater Monitoring Report, OU1 FAAF Fire Drill Area	Aug-30-09		Oct-30-09	HydroGeoLogic, Inc.
Secondary Documents	OU 1	Groundwater Activities	Draft Report of Off-Site GW Extraction Pilot Study and Qtrly Monitoring, OU1, Jan-Mar 09	Oct-30-09			Shaw E&I
Secondary Documents	OU 1	Groundwater Activities	Final 2007 Annual and Fourth Quarter Groundwater Monitoring Report, OU1	Oct-30-09			HydroGeoLogic, Inc.
Primary FFA Documents	OU 2	Landfill Activities	Draft Landfill Closure Report		TBD		Not Indicated
Primary FFA Documents	OU 2	Landfill Activities	Draft Final Landfill Closure Report		TBD		Not Indicated
Primary FFA Documents	OU Carbon Tet Plume	Remedial Action/Remedial Design	Final OUCTP In Situ Bioremediation Pilot Study Completion Report		TBD		Shaw E&I

# Former Fort Ord Deliverables Schedule Sorted by Document Type To Be Issued Aug - Oct 2009

Grouping	<u>Site</u>	Activity	Deliverable	Proposed Issue Date	<u>Issue</u> Date Status	<u>Agency</u> <u>Comments</u> <u>Due</u>	<u>Company</u>
Primary FFA Documents	RI Sites	Soil Activities	Draft Final RD/RA Work Plan, Site 39 Remediation and OU2 Landfills Area E Construction, Rev 0		TBD		Shaw E&I
Primary FFA Documents	RI Sites	Soil Activities	Draft Confirmation Report, Site 39		TBD		MACTEC E&C
Primary FFA Documents	RI Sites	Soil Activities	Draft Final Confirmation Report, Site 39		TBD		MACTEC E&C
Secondary Documents	Basewide	Groundwater Activities	Report of Quarterly Monitoring, Apr-Jun 2009, Basewide Groundwater Monitoring		TBD		MACTEC E&C
Secondary Documents	Basewide	Groundwater Activities	Draft Annual Report of Quarterly Monitoring, Oct 08 - Sept 09, Basewide Groundwater Monitoring		TBD		MACTEC E&C
Secondary Documents	Basewide	Groundwater Activities	Final Annual Report of Quarterly Monitoring, Oct 08 - Sept 09, Basewide Groundwater Monitoring		TBD		MACTEC E&C
Secondary Documents	Basewide	Groundwater Activities	Report of Quarterly Monitoring, Oct-Dec 09, Basewide Groundwater Monitoring		TBD		MACTEC E&C
Secondary Documents	Basewide	Plans and Specifications	Draft Final Quality Assurance Project Plan CDQMP, GW Monitoring, Sites 2/12, OU2, OUCTP		TBD		MACTEC E&C
Secondary Documents	Basewide	Plans and Specifications	Draft Final Field Sampling Plan, CDQMP, GW Monitoring, Sites 2/12, OU2 and OUCTP		TBD		MACTEC
Secondary Documents	Basewide	Plans and Specifications	Draft Final Sampling and Analysis Plan, Sites 2/12, OU2 and OUCTP		TBD		MACTEC E&C
Secondary Documents	OU 1, OU 2, Sites 2/12	Treatment System Activities	Final Annual GTS Operation Data Summary Rpt, Jan- Dec 2008, OU2 and 2/12		TBD		Ahtna

### HGL AGENDA & NOTES

### Fort Ord HTW BCT Meeting 10:00 AM, 19 August 2009 Monterey, California

### 1. Groundwater Remediation System Update

The Northwest Treatment System (NWTS) was shut down for approximately 89 hours during the period from 13 July - 17 July because of leak in the piping between the lead and lag Granulated Activated Carbon (GAC) units. The shutdown was triggered automatically by the high water sensor in the containment pit. The sump pump functioned as designed and the leaked water stayed within the system containment pit until it was transferred by the sump pump to the influent holding tank.

Total volume pumped through 10 August 2009 is 103,171,460 gallons with an average weekly treatment rate of approximately 69 gallons per minute (gpm) between 08 July and 10 August. For the period from 29 December 2008 through 10 August 2009 the plant has averaged 75.4 gpm.

The injection pump was not operating for an undetermined period between 17 July (restored operation after leak repair) and 28 July (it was re-started during the O&M inspection). During this period, all treated water was discharged through the NW infiltration trench.

Extraction well EW-OU1-60-A has been shut down since 17 July. The maximum yield from this well has been < 3 gpm and has trended lower since startup. Pumping has ranged between 0.5 gpm and 1.25 gpm since March 2009 and the well has been unable to consistently function at these rates. TCE mass removal from EW-OU1-60-A would be less than 0.004 lbs per year based on performance data to date. Nearby well EW-OU1-66-A consistently pumps approximately 15 gpm and provides adequate hydraulic control at the plume boundary. HGL will operate EW-OU1-60-A intermittently going forward.

Validated TCE concentrations at individual extraction wells are presented in Table 1 for the June 2009 performance monitoring samples. TCE concentrations increased slightly in most wells but the magnitude (ranging from 0.1  $\mu$ g/L to 1.1  $\mu$ g/L) is within the expected range of variation for laboratory results and natural spatial variation within the plume. The ACL was exceeded only at extraction wells EW-OU1-71-A (11  $\mu$ g/L) and MW-OU1-87-A (6.9  $\mu$ g/L) – this has been the case since July of 2008. TCE was less than 2.4  $\mu$ g/L at the other six extraction wells and the overall influent concentration was 2.6  $\mu$ g/L.

Through 10 August 2009, the NWTS has removed approximately 3.8 pounds (0.3 gallons) of TCE and 0.3 pounds (0.03 gallons) of cis-1,2-DCE. The next round of performance samples will be collected in September.

#### 2. <u>Long-term Monitoring Update</u>

The next long-term monitoring (LTM) sample event is scheduled for the week starting 14 September 2009. The most recent LTM samples (March 2009) showed that peak TCE concentrations have continued to decline. The maximum TCE concentration reported in the first quarter 2009 LTM event was 10  $\mu$ g/L at well EW-OU1-53-A. The first quarter 2009 LTM analytical results are shown in the attached Figure 7 from the First Quarter 2009 Groundwater Monitoring Report.

### 3. <u>Report Submittals</u>

The 2008 First Quarter and 2007 Annual and Fourth Quarter Groundwater Monitoring Reports are in preparation and will be submitted in August. These reports are secondary deliverables.

Table 2 summarizes the status of near-term deliverables. Recent submittals include:

• Draft 2008 Annual and Fourth Quarter Groundwater Monitoring Report (06 May 2009)

- DTSC comments were received on 05 August 2009. The review period on this document is open until 60 days after submittal of 2008 First Quarter report.
- Draft Final FONR System Construction Report (primary deliverable; 28 May 2009)
  - DTSC indicated (21 July 2009 letter) that the comments on the Draft version were addressed and there were no additional comments. EPA and RWQCB did not comment within the standard review period thereby indicating acceptance as submitted. This report will be finalized this month.
- First Quarter 2009 Groundwater Monitoring Report (22 June 2009)
  - Comments due in August

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 this month.

### 4. <u>Other</u>

No other discussion topics are planned.

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 August 2009											
	Extraction Well								NWTS		
Sample Date				Began Operation July 2006				NW15			
	MW-87	EW-71	MW-85	MW-46AD	EW-60	EW-62	EW-63	EW-66	INFLUEN	MIDPOINT	EFFLUENT
				1 1 1		TCE (µg/L)		1 1		1 1	
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 4.3	J 2.9 J	0.90	J ND	ND	1.,	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
6/11/2009	6.9	11	2.4	1.5	0.88	ND	ND	1.7	2.6	0.14	J ND
			1		1	cis-1,2-DCE (µ		1 1	1	1 1	
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
6/11/2009	0.71	1.10	0.30	J 0.13 J	ND	ND	ND	0.14	J 0.24	J 0.28	J ND
		<b>1</b>									
Bold font indicates concentration > ACL											

# Table 2Outstanding Deliverables Schedule (2009)BCT Meeting for Former Fort Ord, Marina CA - August 2009

Deliverable	Scheduled Submittal	Status / Remarks
Primary Deliverables		
Final Interim Hydraulic Control Pilot Project Evaluation Report	June-2009	Comments resolved. Edits to previous version will affect only Title page and submittal date.
Agency Comments	NA	
Draft Final FONR Groundwater Remediation System Construction Report	May-2009	Submitted 28 May 2009
Agency Comments	July-2009	DTSC comments received.
Final FONR Groundwater Remediation System Construction Report	August-2009	
Agency Comments	NA	
Secondary Deliverables Draft 2007 Annual and Fourth Quarter Groundwater Monitoring Report	July-2009	
Agency Comments	Sept-2009	
Final 2007 Annual and Fourth Quarter Groundwater Monitoring Report	October-2009	
Agency Comments	NA	
First Quarter 2008 Groundwater Monitoring Report	August-2009	
Agency Comments	October-2009	
Third Quarter 2008 Groundwater Monitoring Report	March-2009	Submitted 19 March 2009
Agency Comments	May-2009	No comments received.
Draft 2008 Annual and Fourth Quarter	May-2009	Submitted 06 May 2009. DTSC
Groundwater Monitoring Report	2	comments received on 05 August 2009.
Agency Comments	Sept-2009	Review period tied to 2008 Q1 Report
Final 2008 Annual and Fourth Quarter Groundwater Monitoring Report	October-2009	
Agency Comments	NA	
First Quarter 2009 Groundwater Monitoring Report	June-2009	Submitted 22 June 2009
Agency Comments	August-2009	Comment period underway
Draft 2009 Annual and Fourth Quarter Groundwater Monitoring Report	December-2009	
Agency Comments	February-2010	
Final 2009 Annual and Fourth Quarter Groundwater Monitoring Report	March-2010	
Agency Comments	NA	
Final Rebound Evaluation Report	Sept-2010	
Agency Comments	NA	
Annual FONR Impact Report Agency (USFWS) Comments	Dec-2009 February-2010	

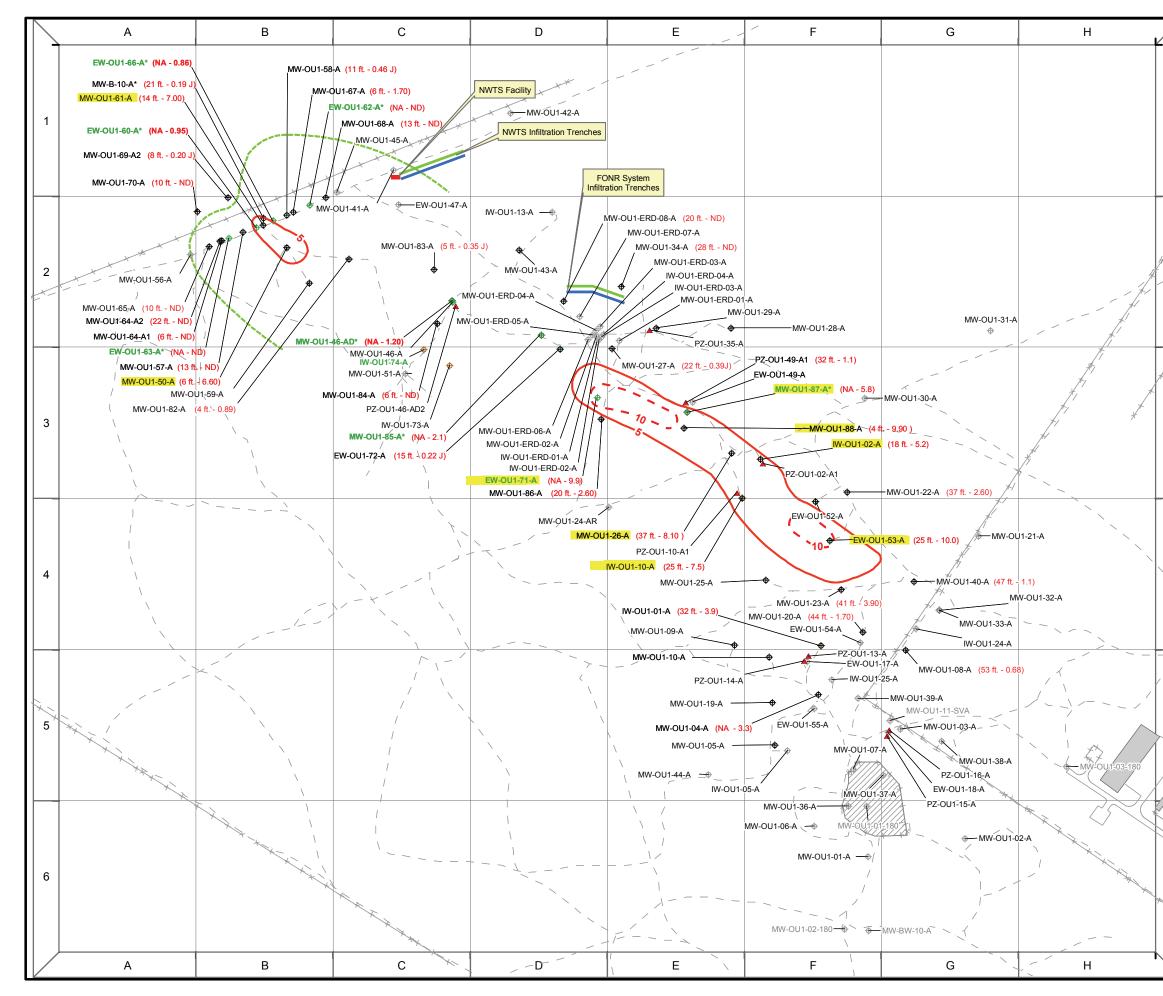


	Figure 7						
	<b>OU-1 FONR</b>						
	TCE Concentrations in Groundwater						
		March 2009					
1							
		Legend					
	<del>\$</del>	Monitoring Well					
	0	Extraction Well					
	φ	Bold green font indicates active well.					
1	<b></b>	Injection Well					
14	Ψ	Bold green font indicates active well.					
2	\$	Well Not Sampled					
	<b>A</b>	Piezometer					
		Locations With March 2009					
	MW-OU1-87-A	TCE Concentration At Or Above					
7		ACL (5 µg/L)					
	-5-	TCE Contour (µg/L) Based on March 2009 Data					
	·	Inferred Extent – See Notes Below					
3	MW-OU1-87-A	-Well ID					
	(42 ft 9.30) —	- March 2009 TCE Result (µg/L)					
		- Sample Elevation (feet above mean sea level)					
_		Trail/Unimproved Road					
	×-×-×-	Fence					
		Estimated Northwest Treatment					
		System Capture Zone					
4		Former Fire Drill Area					
	Notes:						
	Units of TCE con ND = Non-detect	centrations are in ppb					
	NA = Depth is not applicable - sample is from pumping well						
/1	J = Estimated Value μg/L = Micrograms per liter						
		h an asterisk were not used to develop contour ctive extraction wells were typically not included					
	because the da	ta is not location-specific. Data from extraction -71-A was used to infer the 10 $\mu$ g/L TCE contour					
5	(shown as dasl	hed line) because the results at that well (9.9 $\mu$ g/L)					
	and at MW-OU1-88-A (also 9.9 $\mu$ g/L) suggest higher TCE concentrations in that vicinity. The TCE concentration at						
$\mathbb{C}$	EW-OU1-53-A was 10 $\mu$ g/L and nearby well data was less than 10 $\mu$ g/L. Consequently, the 10 $\mu$ g/L contour enclosing well						
Д	EW-OU1-53-A was also dashed because the extent is inferred N						
	because the well does not fully penetrate the A-Aquifer.						
J	Well names appearing in gray were not included in OU1- Groundwater Monitoring Program.						
		no data are posted were not sampled.					
6	0 200 400 800						
1	Y./Et Ord/TO 201/0	SCALE IN FEET					
	(7)TCE_in_GW_Mar_						
	Source: HGL 04/17/09 CLimoges	THE THEL					
$\leq$	Revised 06/12/09 JP	HydroGeoLogic, Inc					