

**SUBJECT: HTW – BCT Meeting****July 14, 2010****1:30 p.m. BRAC Conference Room**

✓	Name	Organization	Phone	E-mail address
<i>FM</i>	Franklin Mark	DTSC	916/255-3584	FMark@dtsc.ca.gov
<i>Phw</i>	Steve Sterling	DTSC	916/255-3739	SSterlin@dtsc.ca.gov
<i>MH!</i>	Martin Hausladen	U.S. EPA	415/972-3007	Hausladen.martin@epamail.epa.gov
<i>LEM</i>	Lewis Mitani	U.S. EPA	415/972-3032	Mitani.lewis@epa.gov
✓	Grant Himebaugh	RWQCB	805/542-4636	Ghimebaugh@waterboards.ca.gov
	Bill Mabey	TechLaw Inc	415/281-8730	bmabey@techlawinc.com
✓	Gail Youngblood	Fort Ord BRAC	831/242-7918	gail.youngblood@us.army.mil
<i>Phw</i>	Derek Lieberman	Ahtna	831/242-4873	dlieberman@ahtnaes.com
<i>WKC</i>	Bill Collins	Fort Ord BRAC	831/242-7920	William.K.Collins@us.army.mil
✓	Rob Robinson	Fort Ord BRAC	831/242-7900	clinton.w.robinson@us.army.mil
<i>DE</i>	David Eisen	COE	831/393-9692	David.Eisen@usace.army.mil
	Mark Eldridge	AEC	410/436-6325	Mark.h.eldridge@us.army.mil
	Peter Kelsall	Shaw E&I	831/883-5810 ext. 810	Peter.Kelsall@shawgrp.com
✓	David Kelly	Shaw E&I	925/288-2321	David.kelly@shawgrp.com
	Jen Moser	GEM/Shaw E&I	831/883-5812	Jen.moser@shawgrp.com
	Eric Schmidt	Shaw E&I	831/883-5809	Eric.Schmidt@shawgrp.com
<i>ET</i>	Ed Ticken	MACTEC E&C	707/793-3882	ejticken@mactec.com
<i>ME</i>	Marc Edwards	COE	831/242-4828	Marc.A.Edwards@usace.army.mil
	Michael Taraszki	MACTEC E&C	510/628-3222	mdtaraski@mactec.com

**SUBJECT: HTW – BCT Meeting**

**July 14, 2010**

**1:30 p.m. BRAC Conference Room**

✓	Name	Organization	Phone	E-mail address
	Chuck Holman	Ahtna	916/372-2000	cholman@ahтнаes.com
	Kelly O'Meara	Ahtna	916/372-2000	komeara@ahтнаes.com
	Christopher Prescott	USACE	916/557-7227	Christopher.E.Prescott@usace.army.mil
mb	Melissa Broadston	Fort Ord BRAC	831/393-1284	Melissa.broadston@us.army.mil
Plus	Roy Evans	HGL	303/984-1167 xt. 5	revans@hgl.com
Plus	ROMAN RACCA	DTSC		
Plus	JEFF FENTON	MACTEC		

**HTW BCT Meeting Agenda**

July 14, 2010 at 1:30 PM

<b>Item</b>	<b>Action</b>	<b>Comment</b>
<b>Site 39 Remediation</b> Update on soil excavation only no MR	<b>Status Update</b>	
<b>OU1 Groundwater Remediation</b>	<b>Status Update</b>	<b>HGL</b>
<b>OU1 Off-Site</b>	<b>Status Update</b>	
<b>OU2 and 2/12 Treatment Systems</b>	<b>Status Update</b>	
<b>Other Groundwater Issues</b> Storm water disposal	<b>Status Update</b>	
<b>OUCTP</b>	<b>Status Update</b>	
<b>OU2 Landfill</b>	<b>Status Update</b>	
<b>Community Relations</b>	<b>Status Update</b>	
<b>FFA Schedule</b>	<b>Status Update</b>	
<b>Calendar Update</b>	<b>Update</b>	

August HTW BCT conflict for Martin

## OPERABLE UNIT CARBON TETRACHLORIDE PLUME A-AQUIFER REMEDIAL ACTION

STATUS – July 14, 2010

### FIELD WORK

- Final RA Work Plan/RD (Appendix A – A-Aquifer) complete – August 28.
- Installation and development of wells at Areas 1A and 1B complete – January 16
- Installation of process equipment at Area 1A complete – July 10.
- Baseline sampling at Area 1A complete – August 12.
- Start-up testing at Area 1A complete – September 4.
- Installation and development of wells at Area 1C complete – September 4.
- Substrate injection at Area 1A initiated – September 14.
- Substrate injection at Area 1A completed – October 8.
- Groundwater recirculation at Area 1A completed – November 12.
- Installation of process equipment at Area 1B complete – January 6.
- Installation and development of new well at Area 1C complete – January 29.
- Start-up testing at Area 1B complete – February 26.
- Substrate injection at Area 1B initiated – March 2.
- Installation and development of wells at Areas 2A and 2B complete – March 23.
- Substrate injection at Area 1B completed – May 6.
- Groundwater recirculation at Area 1B completed – June 16.
- Issued technical memorandum for post-treatment and long-term monitoring at Deployment Area 1A – June 3.
- Baseline biological survey in FONR South Reserve – April-June 2010.

### SCHEDULE

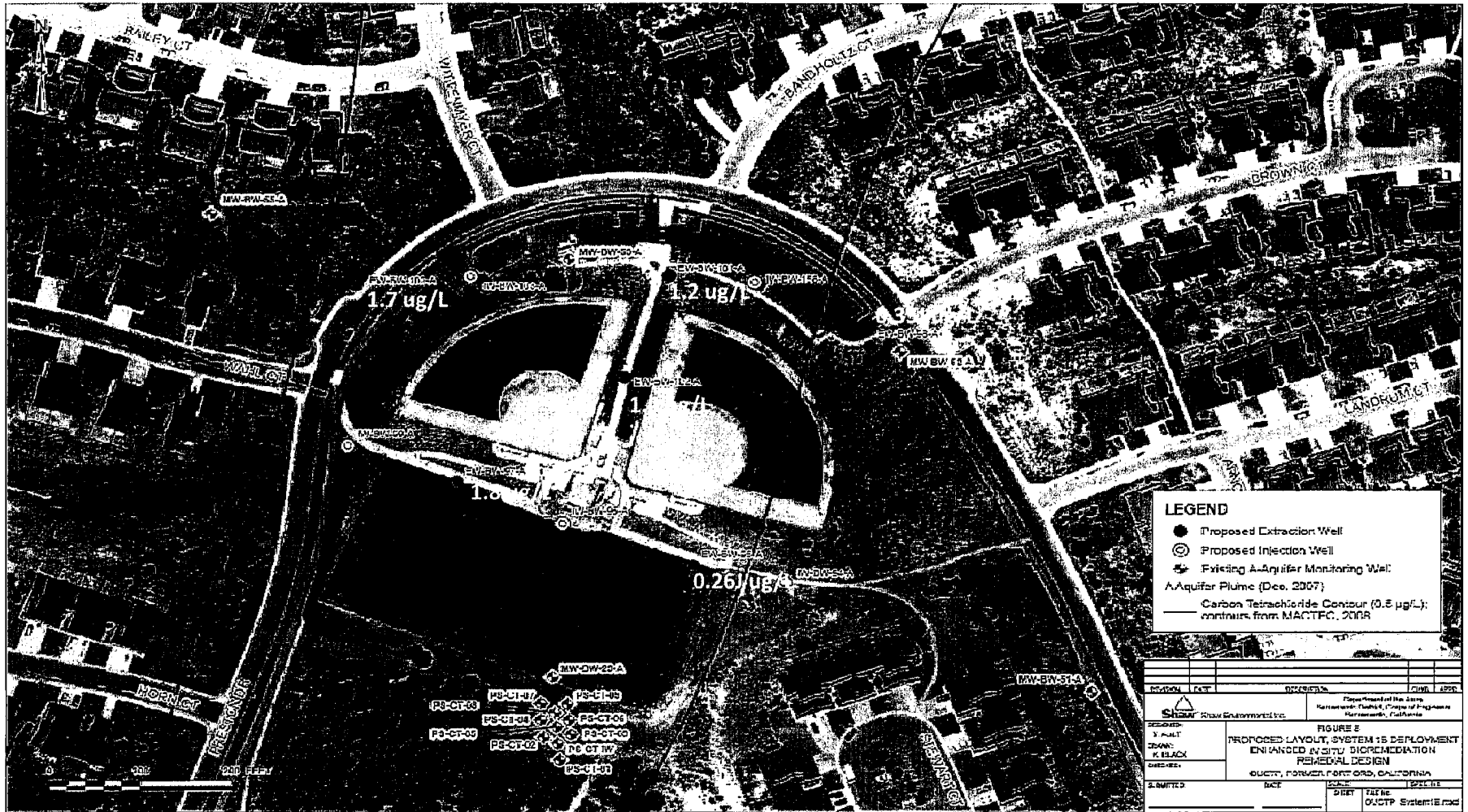
- Subsequent quarterly monitoring for EISB pilot study conducted under Groundwater Monitoring Program.
- Groundwater monitoring ongoing at Area 1B. (Extended 1 month for preliminary guidance)
- Installation of process equipment at Area 1C – July 2010. Process container moved June 21.
- Installation of process equipment at Area 2A ongoing.
- Final RAWP Appendix B – Upper 180-Foot Aquifer – July 16, 2010.
- Draft Final RAWP Appendix C – Lower 180-Foot Aquifer – July 2010. Comments from DTSC.
- Installation of extraction well in Upper 180-Foot Aquifer – July 19, 2010.

### DATA (Preliminary)

- Preliminary EISB data for Area 1B.

### PROBLEMS/CHANGES

- FWV TII-142 issued to provide analytical requirements for methods not included in the CDQMP (metabolic acids [EPA 300.0M], dissolved gases [RSK-175], and total heterotrophic anaerobic bacteria [SM9215B]).
- Analytical data from grab samples at Area 1B indicate that extraction wells EW-BW-95-A and EW-BW-98-A and injection well IW-BW-94-A do not have detectable concentrations of carbon tetrachloride. Plans are to operate both extraction wells, but not inject substrate into the injection well.
- During installation of extraction well EW-BW-143-A, the auger ceased and broke below ground surface. Auger was above the bentonite seal and approximately 20 feet below ground surface. Auger was grouted in place and is not expected to impact EISB or monitoring activities.
- Following installation of extraction well EW-BW-142-A the well was driven over. The well was video logged and a failure in the well casing was observed at approximately 8 feet bgs. Well repair completed March 4.
- For Area 1C, a new formulation of substrate will be used that includes a mixture of fatty acids (lactate, propionate, acetate, etc.) and carbohydrates proven to enhance reductive dechlorination better than plain sodium lactate.



Baseline Sample  
Carbon Tetrachloride Concentrations









## Method\*

Sample ID	Method*	EW-BW-97-A	EW-BW-97-A	EW-BW-97-A	EW-BW-97-A	EW-BW-97-A	EW-BW-97-A	EW-BW-97-A	EW-BW-97-A
Well Type		extraction	extraction	extraction	extraction	extraction	extraction	extraction	extraction
Date		Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 17
		5/5/2010	5/12/2010	5/19/2010	5/26/2010	6/2/2010	6/9/2010	6/16/2010	6/30/2010
well flowrate (operating)		5.7	4.6	5.9	2.6	2.2	5.3	3.3	0.0
alkalinity (CaCO <sub>3</sub> total)	HACH <sup>b</sup>	65 mg/L	67 mg/L	83 mg/L	95 mg/L	110 mg/L	123 mg/L	129 mg/L	141 mg/L
pH	meter <sup>c</sup>	6.54	6.60	6.64	6.73	6.67	6.73	6.50	6.50
dissolved oxygen	meter <sup>c</sup>	10.27 ppm	6.89 ppm	5.55 ppm	3.67 ppm	3.43 ppm	2.92 ppm	6.3 ppm	2.15 ppm
oxidation reduction potential	meter <sup>c</sup>	128 mV	56 mV	71 mV	3 mV	-45 mV	-32 mV	-71 mV	-110 mV
conductivity	meter <sup>c</sup>	53.5 mS/cm	65.5 mS/cm	64 mS/cm	69.7 mS/cm	71.3 mS/cm	74.5 mS/cm	78 mS/cm	97.1 mS/cm
turbidity	meter <sup>c</sup>	25 NTU	28 NTU	12 NTU	11 NTU	5 NTU	45 NTU	253 NTU	16 NTU
temperature	meter <sup>c</sup>	17.5 °C	17.6 °C	17.9 °C	19 °C	18.8 °C	18.7 °C	19.1 °C	17.9 °C
nitrate	300.0					6570 µg/L			µg/L
nitrite	300.0					<100 µg/L			µg/L
sulfate	300.0					29500 µg/L			µg/L
ortho-phosphate	300.0								
dissolved iron	6010B					110J µg/L			µg/L
manganese	6010B					512 µg/L			µg/L
arsenic	6010B					<10 µg/L			µg/L
methane	RSK 175 <sup>d</sup>								
ethane	RSK 175 <sup>d</sup>								
lactate	300.0M								
propionate	300.0M								
acetate	300.0M								
carbon tetrachloride	8260B					1.5 µg/L			µg/L
chloroform	8260B					0.32J µg/L			µg/L
dichloromethane	8260B					<5.0 µg/L			µg/L
chloromethane	8260B					<1.0 µg/L			µg/L
trichloroethene	8260B					0.46J µg/L			µg/L
methyl tert-butyl ether	8260B					1.6 µg/L			
acetone	8260B					10 µg/L			
2-butanone	8260B					10J µg/L			

Method\*

Sample ID Well Type		EW-BW-100-A extraction baseline	EW-BW-100-A extraction Week 0	EW-BW-100-A extraction Week 1	EW-BW-100-A extraction Week 2	EW-BW-100-A extraction Week 3	EW-BW-100-A extraction Week 4	EW-BW-100-A extraction Week 5	EW-BW-100-A extraction Week 6	EW-BW-100-A extraction Week 7	EW-BW-100-A extraction Week 8
Date		1/28/2010	3/3/2010	3/10/2010	3/17/2010	3/24/2010	3/31/2010	4/7/2010	4/14/2010	4/21/2010	4/28/2010
well flowrate (operating)		NA	7.0	7.2	7.3	7.4	7.2	6.3	6.3	6.2	2.8
alkalinity (CaCO <sub>3</sub> total)	HACH <sup>b</sup>	75 mg/L	64 mg/L	70 mg/L	68 mg/L	67 mg/L	75 mg/L	85 mg/L	97 mg/L	107 mg/L	120 mg/L
pH	meter <sup>c</sup>	6.46	6.52	6.53	6.51	6.64	6.56	6.64	6.70	6.75	6.80
dissolved oxygen	meter <sup>c</sup>	9.09 ppm	9.05 ppm	9.46 ppm	9.51 ppm	7.56 ppm	8.43 ppm	9.05 ppm	7.36 ppm	5.84 ppm	7.07 ppm
oxidation reduction potential	meter <sup>c</sup>	189 mV	176 mV	179 mV	137 mV	140 mV	67 mV	-26 mV	-42 mV	-41 mV	-47 mV
conductivity	meter <sup>c</sup>	93.5 mS/cm	73.1 mS/cm	71.6 mS/cm	70.5 mS/cm	72 mS/cm	71.4 mS/cm	74.8 mS/cm	81.1 mS/cm	84.3 mS/cm	89.3 mS/cm
turbidity	meter <sup>c</sup>	48 NTU	4 NTU	31 NTU	12 NTU	23 NTU	15 NTU	12 NTU	13 NTU	18 NTU	11 NTU
temperture	meter <sup>c</sup>	17.7 °C	17.6 °C	17.9 °C	17.9 °C	17.9 °C	17.6 °C	18.0 °C	18.2 °C	17.5 °C	18.6 °C
nitrate	300.0	18400(18400) µg/L				12300 µg/L		11400 µg/L			7810 µg/L
nitrite	300.0	<100(<100) µg/L				<100 µg/L		<100 µg/L			<100 µg/L
sulfate	300.0	44400(44300) µg/L				33700 µg/L		32600 µg/L			31100 µg/L
ortho-phosphate	300.0	<500(<500) µg/L									
dissolved iron	6010B	<200 µg/L				<200 µg/L		<200 µg/L			118J µg/L
manganese	6010B	6.25J µg/L				<10 µg/L		261 µg/L			1310 µg/L
arsenic	6010B	<10 µg/L				<10 µg/L		<10 µg/L			<10 µg/L
methane	RSK 175 <sup>d</sup>	<2.0 µg/L									
ethane	RSK 175 <sup>d</sup>	<2.0 µg/L									
lactate	300.0M	<100 µg/L									
propionate	300.0M	<100 µg/L									
acetate	300.0M	<100 µg/L									
carbon tetrachloride	8260B	1.7 µg/L				1.4 µg/L		1.6 µg/L			1.5 µg/L
chloroform	8260B	<0.5 µg/L				0.20J µg/L		0.26J µg/L			0.30J µg/L
dichloromethane	8260B	<5.0 µg/L				<5.0 µg/L		<5.0 µg/L			<5.0 µg/L
chloromethane	8260B	<1.0 µg/L				<1.0 µg/L		<1.0 µg/L			<1.0 µg/L
acetone	8260B	11 µg/L									11 µg/L
2-butanone	8260B										18J µg/L
trichloroethene	8260B	0.23J µg/L				0.57 µg/L		0.76 µg/L			0.67 µg/L
carbon disulfide	8260B							0.20J µg/L			0.27J µg/L





Method<sup>a</sup>

Sample ID	Method <sup>a</sup>	EW-BW-101-A	EW-BW-101-A	EW-BW-101-A	EW-BW-101-A	EW-BW-101-A	EW-BW-101-A	EW-BW-101-A	EW-BW-101-A
Well Type		extraction	extraction	extraction	extraction	extraction	extraction	extraction	extraction
Date		Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 17
		5/5/2010	5/12/2010	5/19/2010	5/26/2010	6/2/2010	6/9/2010	6/16/2010	6/30/2010
well flowrate (operating)		5.5	4.6	5.7	2.2	0+	7.0	2.3	0.0
alkalinity (CaCO <sub>3</sub> total)	HACH <sup>b</sup>	220 mg/L	230 mg/L	248 mg/L	258 mg/L	300 mg/L	282 mg/L	284 mg/L	415 mg/L
pH	meter <sup>c</sup>	6.61	6.62	6.60	6.60	6.56	6.58	6.30	6.30
dissolved oxygen	meter <sup>c</sup>	2.48 ppm	2.32 ppm	2.05 ppm	1.62 ppm	0 ppm	2.5 ppm	5 ppm	0.73 ppm
oxidation reduction potential	meter <sup>c</sup>	-65 mV	-40 mV	-56 mV	-107 mV	-139 mV	-68 mV	-87 mV	-226 mV
conductivity	meter <sup>c</sup>	91.2 mS/cm	117 mS/cm	115 mS/cm	119 mS/cm	127 mS/cm	127 mS/cm	140 mS/cm	183 mS/cm
turbidity	meter <sup>c</sup>	10 NTU	12 NTU	10 NTU	98 NTU	24 NTU	3 NTU	58 NTU	137 NTU
temperature	meter <sup>c</sup>	18.8 °C	18.7 °C	18.3 °C	18.9 °C	21.5 °C	18.4 °C	19.4 °C	19.1 °C
nitrate	300.0					<100 µg/L			µg/L
nitrite	300.0					<100 µg/L			µg/L
sulfate	300.0					18800 µg/L			µg/L
ortho-phosphate	300.0								µg/L
dissolved iron	6010B					1080 µg/L			µg/L
manganese	6010B					4170 µg/L			µg/L
arsenic	6010B					<10 µg/L			µg/L
methane	RSK 175 <sup>d</sup>								
ethane	RSK 175 <sup>d</sup>								
lactate	300.0M								µg/L
propionate	300.0M								µg/L
acetate	300.0M								µg/L
carbon tetrachloride	8260B					0.55 µg/L			µg/L
chloroform	8260B					<0.5 µg/L			µg/L
dichloromethane	8260B					<5.0 µg/L			µg/L
chloromethane	8260B					<1.0 µg/L			µg/L
trichloroethene	8260B					0.52 µg/L			
acetone	8260B					24 µg/L			
2-butanone	8260B					66 µg/L			
carbon disulfide	8260B					1.3 µg/L			
methyl tert-butyl ether	8260B					0.21J µg/L			

**OPERABLE UNIT 1  
OFF-SITE GROUNDWATER EXTRACTION PILOT STUDY**

**STATUS – July 14, 2010**

**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
- System restarted (EW-OU1-93-A operating) – April 7, 2009
- Second rebound study initiated – July 13, 2009 and completed March 22, 2010
- Carbon changeout of lead vessel as part of system mothballing – June 3, 2010
- System mothballing complete – June 7, 2010
- Preliminary Draft of January to March 2010 Quarterly Report issued for USACE review – June 18, 2010.
- Quarterly sampling of monitoring and extraction wells – June 22, 2010.

**SCHEDULE**

- Issue Technical Memorandum with monitoring wells proposed for long-term monitoring – July 2010.

**DATA (Preliminary)**

- Preliminary data from June Quarterly sampling.

**PROBLEMS/CHANGES**

- None.

Summary of Operable Unit 1 Off-Site Monitoring Well Analytical Results

Well Identification	Elevation (ft amsl)	TCE <sup>1</sup> March 28-30, 2006 (µg/L)	TCE May 4, 2006 (µg/L)	TCE May 23, 2006 (µg/L)	TCE September 25, 2006 (µg/L)	TCE Feb 2 & 6, 2007 (µg/L)	TCE April 3, 2007 (µg/L)	TCE May 22, 2007 (µg/L)	TCE September 25, 2007 (µg/L)	TCE December 26, 2007 (µg/L)
MW-OU1-75A	35.87	18.6	2.1	1.7	0.28J	<0.5	<0.5	<0.5J	<0.5	<0.5
MW-OU1-75A	30.87		14	9.8	2.4	0.64	1.5	0.82	0.69	0.45J
MW-OU1-75A	25.87		15	9.5	2.5	0.58	1.7	0.9	0.75	0.46J
MW-OU1-75A	20.87		17	9.5	2.5	15	1.6	0.69	0.76	0.47J
MW-OU1-75A	15.87		20	25(26)	18(18)	0.75	11	12	3.1	2
MW-OU1-76A	32.33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-76A	27.33		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-76A	22.33		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-76A	17.33		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-76A	12.33		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-77A	29.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5J <sup>d</sup>	<0.5	<0.5	<0.5
MW-OU1-77A	24.1		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5J	<0.5	<0.5
MW-OU1-77A	19.1		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-78A	29.91	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5J	0.54	0.36J
MW-OU1-78A	24.91		3.2	2.1J <sup>b</sup>	1.4	1.5	0.85	0.6J	0.56	0.46J
MW-OU1-78A	19.91		2.7	2.3(2.1)	1.1(1.2)	1.7	0.94	0.81J	0.91	0.47J
MW-OU1-79A	29.72	<0.5	<0.5	<0.5J <sup>f</sup>	<0.5	<0.5	<0.5	<0.5J	<0.5	<0.5
MW-OU1-79A	24.72		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5J	<0.5	<0.5
MW-OU1-79A	19.72		<0.5	<0.5	0.59	0.67(0.85)	3.5(3.6)	3.8J(4.0J)	2.9(4.5)	1.3(1.9)
MW-OU1-80A	25.32		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-80A	20.32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-80A	15.32		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-80A	10.32		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-81A	21.39		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-81A	16.39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-81A	11.39		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-81A	6.39		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-81A	1.39		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-89A	31.18	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-89A	24.68	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-89A	18.18	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	27.31	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	22.31	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	17.31	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	12.31	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	7.27	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-91A	26.72	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-91A	21.8	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-91A	16.89	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-91A	11.97	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-91A	7.01	NS	NS	NS	NS	NS	NS	NS	NS	NS
EW-OU1-92-A	35.22	NS	NS	NS	NS	NS	NS	NS	NS	NS
EW-OU1-92-A	30.22	NS	NS	NS	NS	NS	NS	NS	NS	NS
EW-OU1-92-A	25.22	NS	NS	NS	NS	NS	NS	NS	NS	NS
EW-OU1-92-A	20.22	NS	NS	NS	NS	NS	NS	NS	NS	NS
EW-OU1-93-A	32.25	NS	NS	NS	NS	NS	NS	NS	NS	NS
EW-OU1-93-A	27.25	NS	NS	NS	NS	NS	NS	NS	NS	NS
EW-OU1-93-A	22.25	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	18.6	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	13.5	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	8.3	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	3.1	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	-2.1	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	-7.3	NS	NS	NS	NS	NS	NS	NS	NS	NS

<sup>a</sup> There is no associated discrete depth with the well development samples. These are composites.

<sup>b</sup> Data qualified as "J" is estimated with low bias.

<sup>c</sup> Data qualified as "UJ" is estimated non-detect due to quality control outliers.

<sup>d</sup> An estimated concentration of carbon disulfide detected in this sample (0.75%).

<sup>e</sup> cis-1,2-dichloroethylene also detected at 0.26J µg/L.

<sup>f</sup> cis-1,2-dichloroethylene also detected at 0.35J µg/L.

<sup>g</sup> tetrachloroethylene also detected at 0.27J µg/L.

Detections are shown in bold.

ft amsl denotes feet above mean sea level.

µg/L denotes micrograms per liter.

TCE denotes trichloroethene.

Summary of Operable Unit 1 Off-Site Monitoring Well Analytical Results

Well Identification	Elevation (ft amsl)	TCE February 27, 2008 (µg/L)	TCE July 14, 2008 (µg/L)	TCE September 15, 2008 (µg/L)	TCE December 8, 2008 (µg/L)	TCE March 16, 2009 (µg/L)	TCE April 14, 2009 (µg/L)	TCE May 11, 2009 (µg/L)	TCE June 9, 2009 (µg/L)	TCE June 13, 2009 (µg/L)
MW-OU1-75A	35.87	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-75A	30.87	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-75A	25.87	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-75A	20.87	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-75A	15.87	1.9	1.4	1/1.3	0.21J(0.22J)	<0.5	NS	NS	0.46J(0.49J)	NS
MW-OU1-76A	32.33	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-76A	27.33	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-76A	22.33	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-76A	17.33	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-76A	12.33	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	<0.5	NS
MW-OU1-77A	29.1	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	<0.5	NS
MW-OU1-77A	24.1	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-77A	19.1	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	<0.5	NS
MW-OU1-78A	29.91	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-78A	24.91	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-78A	19.91	0.37J	0.67	0.56	0.21J	<0.5	0.21J	<0.5	<0.5	NS
MW-OU1-79A	29.72	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 (<0.5)	<0.5	<0.5	NS
MW-OU1-79A	24.72	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-79A	19.72	3.0(4.1)*	10(2.0)†	0.22J	<0.5	<0.5	<0.5	<0.5 (<0.5)	<0.5 (<0.5)	NS
MW-OU1-80A	25.32	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-80A	20.32	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-80A	15.32	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-80A	10.32	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	<0.5	NS
MW-OU1-81A	21.39	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	<0.5	NS
MW-OU1-81A	16.39	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-81A	11.39	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-81A	6.39	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-81A	1.39	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	<0.5	NS
MW-OU1-89A	31.18	<0.5†	<0.5	NS	NS	NS	NS	NS	NS	NS
MW-OU1-89A	24.68	<0.5	<0.5	NS	NS	NS	NS	NS	NS	NS
MW-OU1-89A	18.18	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	<0.5	NS
MW-OU1-90A	27.31	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	<0.5	NS
MW-OU1-90A	22.31	<0.5	<0.5	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	17.31	<0.5	<0.5	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	12.31	<0.5	<0.5	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	7.27	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	<0.5	NS
MW-OU1-91A	26.72	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	<0.5	NS
MW-OU1-91A	21.8	<0.5	<0.5	NS	NS	NS	NS	NS	NS	NS
MW-OU1-91A	16.89	<0.5	<0.5	NS	NS	NS	NS	NS	NS	NS
MW-OU1-91A	11.97	<0.5	<0.5	NS	NS	NS	NS	NS	<0.5	NS
MW-OU1-91A	7.01	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS	NS	NS
EW-OU1-92-A	35.22	NS	NS				NS	NS		NS
EW-OU1-92-A	30.22	NS	NS	2.0	0.62	1.4	NS	NS	1.2	NS
EW-OU1-92-A	25.22	NS	NS				NS	NS		NS
EW-OU1-92-A	20.22	NS	NS				NS	NS		NS
EW-OU1-93-A	32.25	NS	NS				NS	NS		NS
EW-OU1-93-A	27.25	NS	NS	4.9	2.1	7.4	NS	NS	1.7	NS
EW-OU1-93-A	22.25	NS	NS				NS	NS		NS
MW-OU1-94A	18.6	NS	NS	0.33J	0.21J	<0.5	0.21J	<0.5	<0.5	NS
MW-OU1-94A	13.6	NS	NS	0.36J	NS	NS	NS	NS	NS	<0.5
MW-OU1-94A	8.3	NS	NS	0.36J	NS	NS	NS	NS	NS	NS
MW-OU1-94A	3.1	NS	NS	0.38J	NS	NS	NS	NS	NS	NS
MW-OU1-94A	-2.1	NS	NS	0.36J	NS	NS	NS	NS	NS	NS
MW-OU1-94A	-7.3	NS	NS	0.47J	<0.5	<0.5	0.21J	<0.5	<0.5	<0.5



Summary of Operable Unit 1 Off-Site Monitoring Well Analytical Results

Well Identification	Elevation (ft amsl)	TCE September 10, 2009 (µg/L)	TCE October 8, 2009 (µg/L)	TCE October 19, 2009 (µg/L)	TCE December 8, 2009 (µg/L)	TCE January 13, 2010 (µg/L)	TCE February 11, 2010 (µg/L)	TCE March 22, 2010 (µg/L)	TCE June 22, 2010 (µg/L)
MW-OU1-75A	35.87	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-75A	30.87	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-75A	25.87	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-75A	20.87	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-75A	15.87	0.53	NS	NS	0.47J	NS	NS	0.41J	0.71
MW-OU1-76A	32.33	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-76A	27.33	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-76A	22.33	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-76A	17.33	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-76A	12.33	<0.5	NS	NS	<0.5	NS	NS	<0.5	<0.5
MW-OU1-77A	29.1	<0.5	NS	NS	<0.5	NS	NS	<0.5	<0.5
MW-OU1-77A	24.1	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-77A	19.1	<0.5	NS	NS	<0.5	NS	NS	<0.5	<0.5
MW-OU1-78A	29.91	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-78A	24.91	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-78A	19.91	<0.5	NS	NS	<0.5	NS	NS	<0.5	0.38J
MW-OU1-79A	29.72	<0.5	NS	NS	<0.5	NS	NS	<0.5	<0.5
MW-OU1-79A	24.72	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-79A	19.72	<0.5 (<0.5)	NS	NS	<0.5 (<0.5)	NS	NS	<0.5	<0.5 (<0.5)
MW-OU1-80A	25.32	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-80A	20.32	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-80A	15.32	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-80A	10.32	<0.5	NS	NS	<0.5	NS	NS	<0.5	<0.5
MW-OU1-81A	21.39	<0.5	NS	NS	<0.5	NS	NS	<0.5	<0.5
MW-OU1-81A	16.39	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-81A	11.39	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-81A	6.39	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-81A	1.39	<0.5	NS	NS	<0.5	NS	NS	<0.5	<0.5
MW-OU1-89A	31.18	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-89A	24.68	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-89A	18.18	<0.5	NS	NS	<0.5	NS	NS	<0.5	<0.5
MW-OU1-90A	27.31	<0.5	NS	NS	<0.5	NS	NS	<0.5	<0.5
MW-OU1-90A	22.31	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	17.31	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	12.31	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-90A	7.27	<0.5	NS	NS	<0.5	NS	NS	<0.5	<0.5
MW-OU1-91A	26.72	<0.5	NS	NS	<0.5	NS	NS	<0.5	NS
MW-OU1-91A	21.8	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-91A	16.89	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-91A	11.97	<0.5	NS	NS	<0.5	NS	NS	NS	NS
MW-OU1-91A	7.01	NS	NS	NS	NS	NS	NS	<0.5	<0.5
EW-OU1-92-A	35.22		NS	NS		NS	NS		<0.5
EW-OU1-92-A	30.22		NS	NS		NS	NS		<0.5
EW-OU1-92-A	25.22	0.8	NS	NS	0.7	NS	NS	0.41J	<0.5
EW-OU1-92-A	20.22		NS	NS		NS	NS		<0.5
EW-OU1-93-A	32.25		NS	NS		NS	NS		0.27J
EW-OU1-93-A	27.25	1.5	NS	NS	1.6	NS	NS	0.30J	0.27J
EW-OU1-93-A	22.25		NS	NS		NS	NS		0.26J
MW-OU1-94A	18.6	<0.5	<0.5	<0.5	0.26J	<0.5	<0.5	<0.5	0.21J
MW-OU1-94A	13.5	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	8.3	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	3.1	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	-2.1	NS	NS	NS	NS	NS	NS	NS	NS
MW-OU1-94A	-7.3	<0.5	<0.5	<0.5	0.24J	<0.5	<0.5	<0.5	0.21J

**Thermal Treatment Unit  
Operation Summary  
2007 - 2010**

<b>TREATMENT SYSTEM OPERATION SUMMARY</b>	
Treatment System Start Date:	6/4/2001
TTU Start Date:	4/4/2006
Last Reading Date/Time:	7/9/2010 14:30
<b>Historical through 2009 (TTU only):</b>	
Total TTU Hours:	32,808
Total TTU Hours Operated:	14,292
% TTU Operation:	43.6%
Total Pounds of Methane Removed:	1,802,161
Total Pounds of VOCs Removed:	202
<b>Current Year 2010</b>	
Total Hours:	4,632
Total Hours Operated:	1328
% TTU Operation:	28.7%
Total Pounds of Methane Removed:	116,320
<b>Cumulative:</b>	
% TTU Operation:	41.7%
Total Pounds of Methane Removed:	1,918,481

	Total Pounds Removed	Pounds/week
Pounds of Methane Removed (2007)	540,920	10,374
Pounds of Methane Removed (2008)	293,169	5,622
Pounds of Methane Removed (2009)	455,507	8,736
Pounds of Methane Removed (2010)	116,320	4,219

<b>EXTRACTION SYSTEM (2010)</b>					
Location	Last Instantaneous Methane Reading (%)	Last Instantaneous Flow Rate Reading (scfm)	Current Methane Removal Rate (lbs/day)	2010 % Operation	2010 Methane Removed (Lbs)
<b>Area E</b>					
EP-36	34.4	19	385.5	27.6	24177
<b>Area F</b>					
EW-30	20.1	0	0.0	1.1	0
EW-31	33	2	38.9	27.6	7363
EW-32	37.8	13	289.8	27.6	18398
EW-33	34.5	20	407.0	27.6	19349
VF-4	47	2	55.4	27.6	7830
<b>Area D</b>					
EW-34	35.4	24	501.1	27.6	32262

**Notes:**

1. TTU shut down from 3/19 thru 4/6 to allow LFG rebound.
2. TTU O&M performed from on 4/20-21
3. TTU shut down from 4/30 thru 5/11 to allow LFG rebound.



# Site 39 Remedial Action Status Update 07/14/2010

## Ongoing Documents

- Issued Final Appendix SSWP (FWV) for Subsurface MEC Removal at HA26.
- Issued Draft Appendix SSWP (FWV) for screening at HA 44 to Agencies.
- Issue Final Appendix SSWP (FWV) for Subsurface MEC Removal on New Surfaces.

## Engineering Activities

### Site 39

- Completed placement of additional transects.
- Completed 2009-2010 wetland monitoring.

### OU2 Landfills

- Completed design/grading plan for E/F Hill as borrow source for vegetative cover.

## Construction Activities

### Site 39

- Surveying, bio clearance, and mowing/limbing
  - Completed HAs 27, 27A, 29, 33, 36, 43, 18, 22, 23, and 19
  - Surveying started at HA 26, 39/40, 44, 48, and 34
- Excavation
  - Completed HAs 27, 27A, 29, 33, 36, 43, 23, 22, 18, and 19
  - Completed over-excavation at HA 19 at four locations
  - Continue excavation at HA 26 -
  - Planning for HA 44 – start date of 7/26..delayed
- Sampling
  - Completed HAs 27, 27A, 29, 33, 43, 22, 23, 18, 36, and 19
  - Collected over-excavation samples from HA 19.
- QC Seeding
  - Recovered all 7 seeds placed to date
  - Placed seeds at HA 26
- Pre-remediation Subsurface Removal
  - HA 26 DGM complete, target requisition and anomaly excavation ongoing
  - Tentative completion date is July 30
- Post-remediation MEC Survey of New Surface
  - Riso Road DGM, target reacquisition, and anomaly excavation completed
  - Planning for DGM and/or mag and dig at low probability HAs
  - Tentative start date of 7/14.
- Planning for HAs 39/40, 28, and 34
- Implement erosion control measures, as needed
- Completed road improvements and repairs for HA 26

### OU2 Landfills

- Completed Phase 1 vegetative layer removal
- Hauled and placed soil from HA 27, 27A, 29, 33, 36, 22, 23, 43, 18, and 19
- Implement erosion control measures, as needed
- Completed moving 12,000cy soil into Area E and stockpile base rock
- Continue Phase 2 vegetative layer removal

## Technical Memorandum

Tech Memos (TM) will present analytical results with the objective of receiving preliminary concurrence from Agencies that remediation is complete and acceptable and re-contouring/ restoration can occur. (see attached table).

### Technical Memorandum Status Update

HA	Issued to Army for review	Issued to Agencies for review	Comments		
			EPA	DTSC	RWQCB
27	3/12	3/18, 4/12	5/5, add BU	3/22, 5/5	5/4, No Comment
22	4/12	4/12	5/5, No Comment	Ok at BCT	No Comment
43	4/20	4/20	5/5, No Comment	Ok at BCT	4/21, No Comment
36	4/23	4/26, 5/21	5/6, terminology	5/17, 5/26, No Comment	4/26, No Comment
23	5/17	6/4	Ok at BCT	7/13, typo, no comment	6/7, No Comment
33	6/4	6/22	7/6, no comment	7/13, no comment	
27A	7/1	7/6			
29	7/7	7/12			
18	7/9	7/12			
19					

Site 39 MEC/MD Found

No.	Munitions Response Site	Burn Unit	Historical Area	Date	Item	Description	Step	Type	Northing	Easting
1	MRS-BLM	1	27	11/04/09	Grenade, hand, practice, M69	Excavation	1	MD	2107999	5738782
2	MRS-BLM	5	29	11/23/09	Projectile, 40mm, practice, M781	Excavation	1	MD	2107895	5744808
3	MRS-BLM	5	29	11/23/09	Cartridge, 40mm, practice, M781	Stockpile	5	DMM	2107345	5744852
4	MRS-BLM	3	23	12/22/09	Grenade, hand, smoke, M18 series	mowing/Excavation	1	DMM	2114089	5734171
5	MRS-BLM	5	29	12/29/09	Cartridge, 40mm, practice, M781	Stockpile	5	DMM	2107345	5744852
6	MRS-BLM	5	29	12/29/09	Cartridge, 40mm, practice, M781	Stockpile	5	DMM	2107345	5744852
7	MRS-BLM	21	36	01/11/10	Projectile, 40mm, practice, M407A1	Outside remediation area	NA	UXO	2119364	5752353
8	MRS-BLM	21	36	01/14/10	Grenade, hand, smoke, white phosphorous, M34	Stockpile	5	MD	2119561	5752435
9	MRS-BLM	21	36	01/27/10	Igniter, time fuse, blasting, M2	Excavation	1	MD	2119410	5752434
10	MRS-BLM	21	36	01/28/10	Grenade, hand, smoke, white phosphorous, M34	Excavation	1	MD	2119420	5752474
11	MRS-BLM	3	23	02/17/10	Cartridge, 40mm, practice, M781	Excavation	1	DMM	2114092	5734157
12	MRS-BLM	Watkins Gate	18	03/04/10	Grenade, hand, training, MK1A1	Excavation	1	MD	2120892	5738150
13	MRS-BLM	2	26	07/12/10	Grenade, hand, practice, M69	Excavation	1	MD	2109628	5736799
14	MRS-BLM	2	26	07/12/10	Signal, illumination, ground, M125 series	Excavation	1	MD	2109635	5736796
15	MRS-BLM	2	26	07/12/10	Projectile, 60mm, mortar, illumination, M83 series	Excavation	1	MD	2109551	5736765

**Site 39 Remediation  
Excavated Volume  
(as of 7/9/2010)**

Summary						
Historical Area	FS Total Plan (bank cy)	Actual Plan To Date (bank cy)	% Planned To Date	OX/SP To Date (bank cy)	Total To Date (bank cy)	Remediation Status
18	2,730	2,730	100%		2,730	complete
18 OVEREX				20	20	complete
22	80	100	100%		100	complete
23	440	440	100%		440	complete
27	120	120	100%		120	complete
27A	1,030	1,030	100%		1,030	complete
27A OVEREX				470	470	complete
27A STOCKPILE				240	240	complete
29	2,580	2,580	100%		2,580	complete
29 OVEREX				330	330	complete
29 STOCKPILE				280	280	complete
33	20	20	100%		20	complete
36	2,750	2,580	100%		2,580	complete
36 OVEREX				40	40	complete
43	150	150	100%		150	complete
19	26,510	26,510	100%		26,510	complete
19 OVEREX		20		20	20	complete
26	24,760	24,760	9%		2,182	
39/40	6,520		0%		-	
48	140		0%		-	
44	3,340		0%		-	
28	6,920		0%		-	
34	26,270		0%		-	
37	19,430		0%		-	
<b>Total</b>	<b>123,790</b>	<b>61,040</b>	<b>49%</b>	<b>1,400</b>	<b>39,842</b>	

**Working Schedule for Site 39 Field Work  
(as of 07/9/2010)**

TASK	HISTORICAL AREA	ACRES	Total Proposed (Bank CY)	Total Excavated (Bank cy)	Pre-Remediation					Remediation							
					Veg Clearance	Surface MEC Removal	DGM	Target Reaquisition	Subsurface MEC Removal	Surveying	Bio Clearance	Mowing/Limbing	Site Prep	Excavation	Over-excavation	Transport to OU2 Landfill	Sampling
1	27	0.1	120	120	NA	NA	NA	NA	NA	10/19	10/28	10/28	11/2	11/2 11/4	NA	1/6	11/18
2	27A	0.6	1030	1740	NA	NA	NA	NA	NA	10/19 10/20	10/29	10/28 10/29	11/4	11/4 11/13	1/4, 1/5, 2/2, 3/31	1/6 1/7, 2/2, 2/3, 4/8	11/19, 1/11
3	29	1.0	2580	3190	NA	NA	NA	NA	NA	10/21	10/29	11/5, 11/9	11/9 11/12, 11/16	11/17 12/1	1/6	12/28- 12/31, 1/6, SP on 2/2	12/2, 1/12, SP on 2/9,
4	OU2 Landfill Phase 1				NA	NA	NA	NA	NA	10/27	NA	11/9 11/12	12/1	12/2, 12/31, 1/11	NA	NA	NA
5	36 (Explosives)	0.51	2750	2790	NA	NA	NA	NA	NA	10/22	12/10	12/24	1/11	1/12 2/1	3/22	1/12 2/1, 3/22	2/9, 3/22
6	43	0.1	150	150	NA	NA	NA	NA	NA	10/20	10/26	NA	2/2	2/8 2/9	NA	3/16	2/9, 2/23
7	33 (Explosives)	0.01	20	20	NA	NA	NA	NA	NA	10/20	12/10	12/24	1/27	1/27	NA	1/27	2/9
8	OU2 Landfill Phase 1				NA	NA	NA	NA	NA	NA	NA	NA	NA	2/16 3/4	NA	NA	NA
9	Austin Stockpile				NA	NA	NA	NA	NA	NA	12/10	12/21	2/1	NA	NA	NA	NA
10	22	0.1	80	80	NA	NA	NA	NA	NA	10/20	10/26	12/22	2/4	2/9 2/10	NA	3/16	2/23
11	23	0.3	440	440	NA	NA	NA	NA	NA	10/22 & 10/26	12/10	12/22	2/4	2/10, 2/16-17	NA	3/16	2/23
12	18	1.4	2730	2750	NA	NA	NA	NA	NA	10/26-27, 12/3, 12/8-	12/21, 2/4	1/8, 1/11, 2/4,	2/16	2/17 3/4	3/4	3/16 3/23	3/4, 3/9, 3/31, 4/20
13	19	13.8	26510	26530	NA	NA	NA	NA	NA	12/16 2/3	2/8, 3/4	2/16 3/11	3/8 3/16	3/17 5/13	6/24, 6/28	3/24 5/24	4/13 - 5/26, 6/28
14	OU2 Landfill Phase 2				NA	NA	NA	NA	NA	10/27	NA	NA	NA	5/17 7/22	NA	NA	NA
15	26	13.9	24760	2182	3/3 3/30	4/8 4/23	4/12 4/30	5/3 7/2	5/10 7/30	6/14 8/5	3/3, 5/17	NA	5/4 6/28	6/28 9/16		7/12 9/16	8/2 9/23
16	39/40	2.5	6520		NA	NA	NA	NA	9/13 10/21	5/17 (ex)	7/14	7/19 7/22	9/6 9/9	9/13 10/21		9/13 10/21 (1X/wk)	9/27 10/28
17	44	1.8	3340		7/8, 9	7/19	NA	NA	7/26 8/27	5/17 (ex)	5/25, 6/15, 7/7	7/8, 9	7/19 7/22	7/26 8/27		8/5, 8/19, 8/27	8/09 9/2
18	48	0.05	140		7/26 7/27	7/26 7/27	NA	NA	7/26 7/27	5/17	6/3 6/10	NA	7/26 7/27	7/26 7/27		7/28	7/28
19	28	3.2	6920							6/14 (ex)							
20	34	7.9	26270							5/18 (ex)							
21	37	6.2	19430														
<b>Total</b>		<b>53.5</b>	<b>123790</b>	<b>39992</b>													

Notes:  
11/17 date completed  
11/18 tentative scheduled start and end dates  
11/23





## Former Fort Ord Groundwater Treatment Systems Operational Data and Status

BRAC Cleanup Team Meeting, July 14, 2010

**Table 1:** OU2 and Sites 2/12 GWTP Treatment Statistics, as of June 30, 2010.

Monthly Statistics	Volume Treated (gallons)	Average Flow (gallons per minute)	Percent of Time Online	COC Mass Removed (lbs.)
<b>OU2</b>				
June 2010	30,948,530	716.4	95.2	2.44
Total since October 1995	4.899 billion			658.15
<b>Sites 2/12</b>				
June 2010	9,718,479	225.0	99.3	0.84
Total since June 1999	1.344 billion			425.08

**Table 2:** OU2 and Sites 2/12 GWTP Calendar of Events, as of June 30, 2010.

Key Events for OU2 and Sites 2/12 for June 2010						
There were 46 USAN Notices transmitted to Ahtna June 1-30, 2010. None of these alerts required the personal attention of the Senior GWTP Operator.						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2 Replaced pump at EW-OU2-05-180. Repaired and replaced pump at EW-OU2-09-A.	3 Replaced pump at EW-OU2-03-180 and EW-12-05-180M.	4	5
6	7	8	9	10 OU2 false leak detection alarm, downtime 0.5 hours.	11	12
13	14	15	16	17	18	19
20	21 OU2 power outage, downtime 29 hours. Started Second Quarter 2010 sampling event.	22 EW-OU2-10-A pump motor failure.	23 OU2 carbon change out on GACs B&C, A&D now in lead positions, downtime 5 hours. Performance Evaluation sampling.	24	25 2/12 carbon change out on GACs A&B, A in lead position, downtime 5 hours.	26
27	28	29	30			

**Table 3: June 2010 - OU2 Analytical Results at TS-OU2-INJ**

COG	Discharge Limit (ug/L)	Sample Date / Analytical Results	
		6/3/10	6/23/10 <sup>1</sup>
1,1-DCA	5.0*	0.79	ND
1,2-DCA	0.50	0.33	ND
1,2-DCP	0.50	ND	ND
Benzene	0.50	ND	ND
Carbon Tetrachloride	0.50	ND	ND
Chloroform	2.0*	0.49	ND
cis-1,2-DCE	6.0*	0.71	ND
Methylene Chloride	0.50	ND	ND
PCE	0.50	0.14	ND
TCE	0.50	0.40	ND
Vinyl Chloride	0.10	ND	ND

**Table 4: June 2010 - Sites 2/12 Analytical Results at TS-212-INJ**

COG	Discharge Limit (ug/L) <sup>‡</sup>	Sample Date / Analytical Results		
		6/3/10	6/8/10	6/28/10 <sup>1</sup>
1,1-DCE	6.0	ND	ND	ND
1,2-DCA	0.50	0.23	0.30	ND
1,3-DCP †	0.50	ND	ND	ND
Chloroform	2.0	0.32	0.38	ND
cis-1,2 DCE	6.0	0.67	0.72	ND
PCE	3.0	ND	ND	ND
TCE	5.0	0.38	0.39	ND
Vinyl Chloride	0.10	ND	ND	ND

**NOTES:**

ND The analyte was not detected above the limit of quantitation.

\* 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.

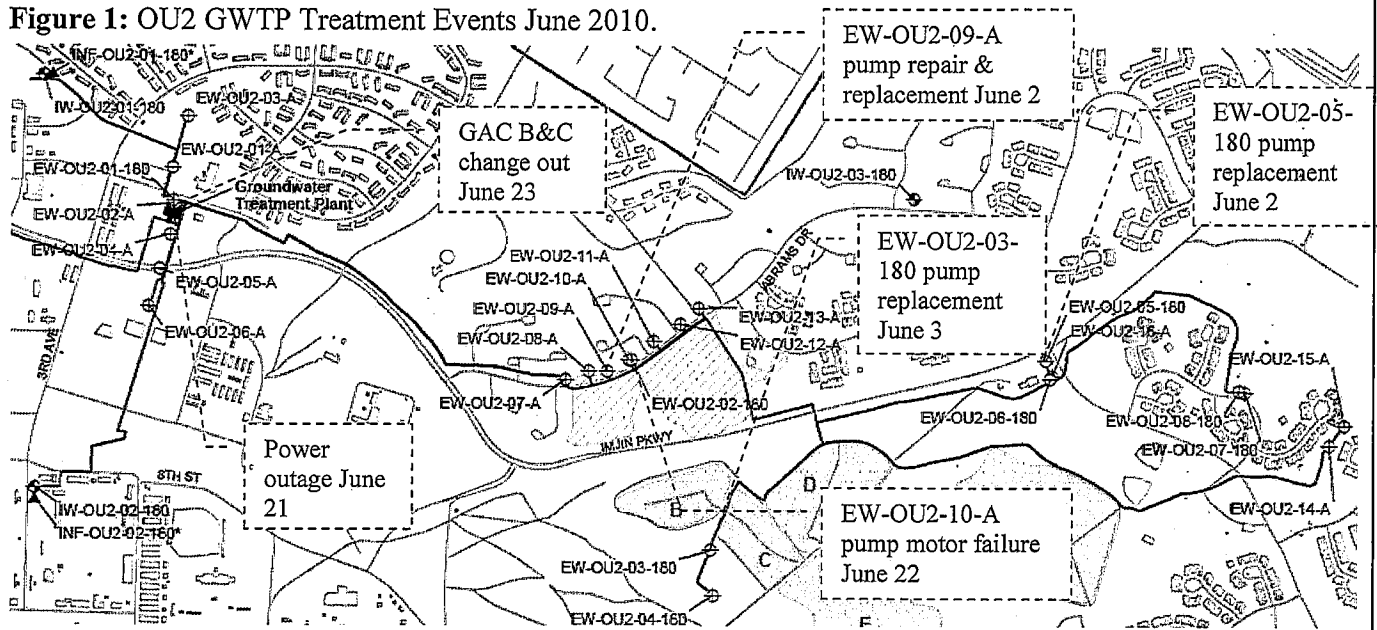
† The reported value is the sum of both cis- and trans-isomers.

<sup>1</sup> Sample collected following a carbon change out.

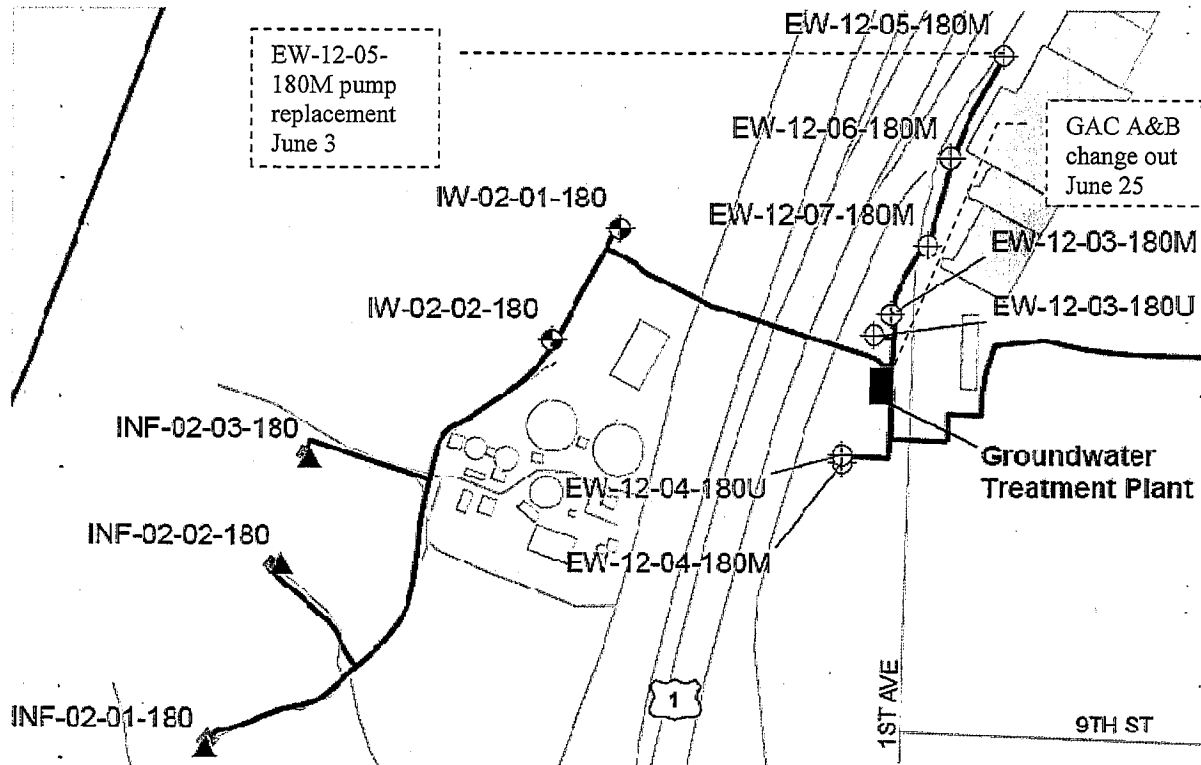
**Table 5: AES Document Submittals - Status Summary**

Document	Submitted	Comments Due
Draft Final Annual Groundwater Treatment Systems Operation Data Summary Report, January through December 2009, Operable Unit 2 and Sites 2 and 12 Groundwater Remedies, Former Fort Ord, California	June 18, 2010	July 21, 2010

**Figure 1: OU2 GWTP Treatment Events June 2010.**



**Figure 2: Sites 2/12 GWTP Treatment Events June 2010.**





**Table 6: June 2010 OU2 and Sites 2/12 Extraction Well Status (as of June 30)**

Well Identification	% On	Avg. gpm	Total Gallons	% of Total	Comments	TCE (µg/L) 1Q 2010
<b>Site 12 Extraction Wells</b>						
EW-12-05-180M	4.7	4.2	183,276	1.9		Not Sampled
EW-12-06-180M	94.2	87.5	3,781,326	38.9		6.4
EW-12-07-180M	98.5	65.6	2,833,167	29.2		2.6
EW-12-03-180U	0.1	0.0	975	0.0	Well offline due to low concentrations	0.16
EW-12-03-180M	94.1	67.6	2,919,736	30.0		1.2
EW-12-04-180U	0.0	0.0	0	0.0	Well offline due to low concentrations	0.26
EW-12-04-180M	0.0	0.0	0	0.0	Pump removed, sampled with PDBs	0.99
<i>Total 2/12 gallons treated:</i>			<b>9,713,479</b>	<b>100.0</b>		
<b>OU2 Extraction Wells</b>						
<b>Western Network</b>						
EW-OU2-01-A	0.0	0.0	0	0.0	Well offline due to low concentrations	Not Sampled
EW-OU2-02-A	6.7	3.5	149,380	0.5		0.61
EW-OU2-03-A	0.0	0.0	0	0.0	Well offline due to low concentrations, sampled with PDB	0.87
EW-OU2-04-A	92.0	44.3	1,914,690	6.2		0.95
EW-OU2-05-A	94.2	47.2	2,038,150	6.6		2.6
EW-OU2-06-A	94.2	34.7	1,500,580	4.8		4.2
EW-OU2-01-180	0.0	0.0	0	0.0	No pump in well, sampled with PDB	6.5
<i>Total gallons extracted:</i>			<b>5,602,800</b>	<b>18.1</b>		
<b>Eastern Network</b>						
EW-OU2-07-A	0.0	0.0	0	0.0	Well offline due to low concentrations	0.16
EW-OU2-08-A	62.4	14.3	619,360	2.0	Cycling due to low water level	0.60
EW-OU2-09-A	90.1	22.1	953,620	3.1		3.1
EW-OU2-10-A	36.0	5.3	230,740	0.7	Pump motor failure	4.2
EW-OU2-11-A	0.0	0.0	0	0.0	Pump removed due to biofouling, screen damaged	Not Sampled
EW-OU2-12-A	1.8	0.2	6,930	0.0	Low yield; running at reduced capacity	5.5
EW-OU2-13-A	95.9	27.3	1,178,460	3.8		12.1
EW-OU2-02-180	95.5	124.8	5,389,320	17.4		9.3
<i>Total gallons extracted:</i>			<b>8,378,430</b>	<b>27.1</b>		
<b>Shoppette</b>						
EW-OU2-05-180	89.2	116.1	5,014,700	16.2		Not Sampled
EW-OU2-06-180	88.4	124.0	5,354,900	17.3		4.9
EW-OU2-16-A	90.9	19.2	831,100	2.7	High drawdown, operating with new level settings	13.2
<i>Total gallons extracted:</i>			<b>11,200,700</b>	<b>36.2</b>		
<b>CSUMB</b>						
EW-OU2-14-A	94.1	22.7	979,600	3.2		1.3
EW-OU2-15-A	0.0	0.0	0	0.0	Well offline due to low concentrations	Not Sampled
<i>Total gallons extracted:</i>			<b>979,600</b>	<b>3.2</b>		
<b>Landfill</b>						
EW-OU2-03-180	68.3	61.6	2,659,000	8.6		Not Sampled
EW-OU2-04-180	0.0	0.0	0	0.0	Well offline due to low concentrations	0.21
<i>Total gallons extracted:</i>			<b>2,659,000</b>	<b>8.6</b>		
<b>Bunker Hill</b>						
EW-OU2-07-180	0.0	0.0	0	0.0	No pump in well, sampled with PDB	4.9
EW-OU2-08-180	92.0	49.3	2,128,000	6.9		1.0
<i>Total gallons extracted:</i>			<b>2,128,000</b>	<b>6.9</b>		
<i>Total OU2 gallons treated:</i>			<b>30,943,530</b>	<b>100.0</b>		

**HydroGeoLogic, Inc.**  
**Agenda & Notes**

Fort Ord Hazardous and Toxic Waste Base Closure Team (BCT) Meeting  
13 July 2010, 10 AM  
Monterey, California

**1. Groundwater Remediation System Update**

The Northwest Treatment System (NWTS) operated without interruption during June (last weekly inspection at time these notes were prepared was on 28 June 2010). From 01 June through 28 June 2010, the average pumping rate was 52.7 gallons per minute (gpm). Thus far in 2010, the NWTS has removed approximately 0.25 pound of trichloroethene (TCE). Since system startup in 2006, the NWTS has removed approximately 4.7 pounds of total volatile organic compounds.

The pressure switch for the bag filters at the NWTS was repaired. The new fan for the extraction well EW-OU1-60-A flow controller has arrived but the existing fan appears to be functioning properly. The new fan is being kept in reserve until needed. Extraction well EW-OU1-60-A operated intermittently and pumped approximately 24,000 gallons during this month; however, it was off-line during the last weekly inspection on 28 June.

The treatment system and selected extraction wells were sampled on 21 June 2010. Well EW-OU1-60-A was operating on that day and a sample was collected. Laboratory analytical results have not been received but are expected soon. Analytical results from previous sampling efforts for the operating extraction wells and the treatment system are presented in Table 1.

**2. Long-Term Monitoring Update**

The validated data for the March 2010 sampling event showed no change from previously reported values. A preliminary draft of the TCE concentration contours from the 2010 First Quarter Groundwater Monitoring Report (in progress) is attached (Figure 7) for reference. The 2010 First Quarter Groundwater Monitoring Report will be submitted in July. The next groundwater sampling event is scheduled for September 2010.

**3. Report Submittals**

Table 2 summarizes the status of scheduled reports through 2010. HGL received comments from the Fort Ord Community Action Group on the Draft 2009 Annual and Fourth Quarter Groundwater Monitoring Report and worked with the Army to address those comments. Draft responses were provided to the agencies for review and were accepted. The final version of the report is being prepared.

Preparation has also begun on the First Quarter 2010 Groundwater Monitoring Report.

**4. Other**

**4a) *IW-OU1-10-A System Expansion***

HGL and the Army are preparing contract documents to support the upcoming remediation expansion to include pumping from well IW-OU1-10-A. At the June BCT meeting, the agencies accepted the outline for the IW-OU1-10-A Design Technical Memorandum that will be submitted after the design is completed. The IW-OU1-10-A Design Technical Memorandum is tentatively scheduled for submittal in late July or early August. Construction will begin after the review and comment response is completed. We expect construction to be completed within one month of startup.

As discussed last month, HGL is requesting a rapid review (within two to three weeks) to facilitate compliance with the Habitat Management Plan (in particular, to complete the project within the dry season). Are the agencies still in agreement with this timetable?

***4b) Previous Meeting Minutes***

No comments have been received yet on the Draft June 2010 BCT OU-1 meeting minutes. However, the time between the June and July meetings was shorter than usual and the review period is still open if necessary. Can the June minutes be accepted as submitted or is more review time needed?

There are no other planned agenda items.

**Table 1**  
**TCE and Cis-1,2-DCE in OU-1 FONR Groundwater Remediation System - Performance Monitoring**  
**BCT Meeting for Former Fort Ord, at Monterey CA - July 2010**

Sample Date	FONR Extraction Well (listed from south to north) Began Operation October 2007				Boundary Extraction Well (listed from west to east) Began Operation July 2006				NWTS										
	MW-87	EW-71	MW-85	MW-46AD	EW-63	EW-60	EW-66	EW-62	INFLUENT	MIDPOINT	EFFLUENT								
<b>TCE (µg/L)</b>																			
11/9/2007	16	13	19	14	ND	ND	1.7	ND	11	ND	ND								
1/18/2008	11	11	8.9	8.2	ND	ND	1.2	ND	6.0	ND	ND								
3/18/2008	11	14	6.7	5.8	ND	0.29	1.5	ND	5.6	ND	ND								
5/27/2008	9.7	18	2.5	6.1	ND	ND	1.8	ND	3.9	ND	ND								
7/21/2008	9.1	14	4.4	3.4	ND	0.78	1.4	ND	3.6	ND	ND								
9/29/2008	9.3	J	15	J	4.3	J	2.9	J	ND	0.90	J	1.7	J	ND	3.8	J	0.19	J	ND
12/1/2008	5.8	11	2.6	1.6	ND	0.82	0.91	ND	2.7	0.35	J	ND							
1/26/2009	5.9	10	2.2	1.2	ND	0.48	J	0.78	ND	2.4	ND	ND							
3/9/2009	5.8	9.9	2.1	1.2	ND	0.95	0.86	ND	2.7	ND	ND								
6/11/2009	6.9	11	2.4	1.5	ND	0.88	1.7	ND	2.6	0.14	J	ND							
9/15/2009	6.8	9.4	1.7	0.78	ND	inactive	1.1	0.036	J	2.3	0.35	J	ND						
12/14/2009	6.9	7.5	0.84	not sampled	not sampled	inactive	0.94	not sampled	2.3	0.65	J	ND							
3/22/2010	7.2	8.5	0.62	0.55	inactive	ND	0.90	inactive	2.3	ND	ND								
6/21/2010	<i>Awaiting laboratory analytical results</i>																		
<b>cis-1,2-DCE (µg/L)</b>																			
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	0.11	ND	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	0.13	ND	0.42	0.42	0.12								
12/1/2008	0.67	1.30	0.33	0.21	J	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	0.26	J	0.24	J	ND					
3/9/2009	0.62	1.20	0.29	J	0.13	J	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	0.14	J	ND	0.24	J	0.28	J	ND			
9/15/2009	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		
12/14/2009	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			
3/22/2010	0.67	0.79	ND	ND	inactive	ND	ND	inactive	0.20	J	0.11	J	0.13	J					
6/21/2010	<i>Awaiting laboratory analytical results</i>																		
<b>Italics (if used) indicate data not yet validated</b>												<b>Bold font indicates concentration &gt; ACL</b>							

**Table 2**  
**Deliverable Schedule**  
**IPM / BCT Meeting for Former Fort Ord, Marina CA – July 2010**

Deliverable	Scheduled Submittal	Status / Remarks ( <b>Bold font indicates submittal</b> )
<i>Primary Deliverables</i>		
<b>None Scheduled for 2010</b>		
<i>Secondary Deliverables</i>		
Draft 2007 Annual and Fourth Quarter Groundwater Monitoring Report	July 2010	In Progress.
Agency Comments	August 2010	
Final 2007 Annual and Fourth Quarter Groundwater Monitoring Report	September-2010	
Agency Comments	NA	
<b>First Quarter 2008 Groundwater Monitoring Report</b>	<b>July 2009</b>	<b>Submitted 21 August 2009</b>
Agency Comments	NA	
<b>Third Quarter 2008 Groundwater Monitoring Report</b>	<b>March 2009</b>	<b>Submitted 19 March 2009</b>
Agency Comments	May 2009	No Comment
<b>Draft 2008 Annual and Fourth Quarter Groundwater Monitoring Report</b>	<b>May 2009</b>	<b>Comments received on 2<sup>nd</sup> through 4<sup>th</sup> Quarter reports</b>
Agency Comments	Sept 2009	<b>Received</b>
<b>Final 2008 Annual and Fourth Quarter Groundwater Monitoring Report</b>	<b>December 2009</b>	<b>Submitted 18 December 2009</b>
Agency Comments	NA	
<b>First Quarter 2009 Groundwater Monitoring Report</b>	<b>June 2009</b>	<b>Submitted 22 June 2009</b>
Agency Comments	August 2009	No Comment
<b>Draft 2009 Annual and Third Quarter Groundwater Monitoring Report</b>	<b>February 2010</b>	<b>Submitted 08 February 2009</b>
Agency Comments	<b>April 2010</b>	Agencies approved changes to 2010 sample frequency with no other comments. FOCAG comments are being addressed.
Final 2009 Annual and Third Quarter Groundwater Monitoring Report	July 2010	
Agency Comments	NA	
Final Rebound Evaluation Report	July 2010	In Progress.
Agency Comments	NA	
Draft IW-OU1-10-A Design Technical Memorandum	July 2010	
Agency Comments	August 2010	
Final IW-OU1-10-A Design Technical Memorandum	August 2010	

**Bold** denotes completed submittals.



# U.S. Army Community Outreach Update

---

## **Actions:**

1. Proposal for letter/update/fact sheet to be distributed to Monterey Bay Estates II residents. Purpose of notification is to discuss results (non-detect) from monitoring well 94 and overall results of off-site Operable Unit 1 groundwater investigation and cleanup.
2. Continued work on interactive map for web site (per Fort Ord Environmental Justice Network comments/requests).
3. Update Fort Ord cleanup section of California State University Monterey Bay web site.

## **Recent Activities:**

1. June 26, 2010: Hosted the semi-annual community open house / bus tour that emphasized munitions cleanup with a drive around and one stop at the Impact Range. Attended by over 130 people.
2. July 9, 2010 Published Public Notice for FOST 11
3. Attended Superfund JTI candidates' workshop: July 13<sup>th</sup>. Attended by about 50 people.

## **Upcoming Activities**

1. July Conduct prescribed burn briefings for officials at California State University Monterey and Monterey County Health Department.
2. Conduct Fort Ord Cleanup tour for staff at Monterey County Health Department.
3. July 14-15: Host the Community Involvement Workshop followed by the Technical Review Committee. Presentations are updates on the Environmental Services Cooperative Agreement, Site 39 and Landfill. Additional poster session is for Administrative Record.
4. July 28: Provide Prescribed Burn presentation at the Fort Ord Reuse Authority user's group meeting.
5. July 28: Provide Prescribed Burn presentation at the Fire Chief's meeting.
6. September 3 Participate in an information booth at the Monterey County Fair.

# STATUS: RESPONSE to COMMUNITY COMMENTS (RTC)

AR Number	Title/Subject	Status
OE-0714.3, 6/5/10	Comments submitted by community group - Fort Ord Community Advisory Group on the Draft Track 2 Del Rey Oaks Remedial Design/Remedial Action Work Plan, Former Fort Ord, California	RTC is in progress-collaboration among Army, ESCA and City of Del Rey Oaks.
ESCA-0249.5, 6/10/10	Comments submitted by Mike Weaver of FOCAG on the Draft Group 3 RI/FS Report, Del Rey Oaks / Monterey, Laguna Seca Parking, and Military Operations in Urban Terrain Site MRAs, FORA ESCA Remediation Program	RTC is in progress—ESCA Program.
IAFS-235E.3, 1/15/10	Comments from Mike Weaver [Fort Ord Community Advisory Group] on the Draft Final Work Plan, Historical Area 161 Excavation, Inter-Garrison Training Area, Former Fort Ord, California	RTC is in progress. Part 1: Initial response complete: a letter to CAG noting that we are preparing report/documents that will response to these comments/questions (IAFS-235E.4, 5/4/10). Part 2: Issue draft CWM report-July The initial letter and report will be in the Administrative Record.
OU1-575.2, 4/12/10	Comments submitted by Mike Weaver on the Draft 2009 Annual and Third Quarter Groundwater Monitoring Report, Operable Unit 1, Fritzsche Army Airfield Fire Drill Area, Former Fort Ord, California	The RTC will be incorporated into the Draft Final document. Issue date scheduled for July 21, 2010.
OE-0712.3, 4/23/10	Comments submitted by the Fort Ord Community Advisory Group on the Draft Prescribed Burn 2009 MRS-BLM Units 14 and 19 After Action Report, Former Fort Ord, Monterey County, California	The RTC is complete and included in the Draft Final document. OE-0712B is scheduled for 7/31/10.
OUCTP-0036N.4, 5/20/10	Comments from Mike Weaver [Fort Ord Community Advisory Group] on the Draft Work Plan, Operable Unit Carbon Tetrachloride Upper 180' Aquifer, Former Fort Ord, California	The RTC will be included in Draft Final document.
OU2-676.2, 5/21/10	Comments from Mike Weaver [Fort Ord Community Advisory Group] Draft Annual Report of Quarterly Monitoring, October 2008 through September 2009, Groundwater Monitoring Program, Sites 2 and 12, OU2, and OUCTP, Former Fort Ord, California	RTC is complete and in Volume 1, Appendix G of the Draft Final report. OU2-676A, 8/18/10
OE-0708A.2, 6/4/10	Comments submitted by community group - Fort Ord Environmental Justice Network on the Draft Final MRS-BLM Units 15, 21, 32 and 34 Prescribed Burn Plan	RTC is complete and in the Final document. (OE-078B, 6/30/10)
OE-0708A.3, 6/3/10	Comments submitted by community group - Fort Ord Community Advisory Group Draft Final MRS-BLM Units 15, 21, 32 and 34 Prescribed Burn Plan	RTC is completed and is in the Final document. (OE-078B, 6/30/10)