

SUBJECT: HTW – BCT Meeting

October 28, 2010

1:00 p.m.

✓	Name	Organization	Phone	E-mail address
FM	Franklin Mark	DTSC	916/255-3584	FMark@dtsc.ca.gov
SS	Steve Sterling	DTSC	916/255-3739	SSterlin@dtsc.ca.gov
MH	Martin Hausladen	U.S. EPA	415/972-3007	Hausladen.martin@epamail.epa.gov
	Lewis Mitani	U.S. EPA	415/972-3032	Mitani.lewis@epa.gov
DGA	Grant Himebaugh	RWQCB	805/542-4636	Ghimebaugh@waterboards.ca.gov
WCM	Bill Mabey	TechLaw Inc	415/281-8730	bmabey@techlawinc.com
GY	Gail Youngblood	Fort Ord BRAC	831/242-7918	gail.youngblood@us.army.mil
DJL	Derek Lieberman	Ahtna	831/242-4873	dlieberman@ahtnaes.com
WKC	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
DE	David Eisen	COE	831/393-9692	David.Eisen@usace.army.mil
	Mark Eldridge	AEC	410/436-6325	Mark.h.eldridge@us.army.mil
M	Peter Kelsall	Shaw E&I	831/883-5810 ext. 810	Peter.Kelsall@shawgrp.com
DK	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
	Ed Ticken	MACTEC E&C	707/793-3882	ejticken@mactec.com
ME	Marc Edwards	COE	831/242-4828	Marc.A.Edwards@usace.army.mil
	Michael Taraszki	MACTEC E&C	510/628-3222	mdtaraski@mactec.com

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✓	Name	Organization	Phone	E-mail address
	Chuck Holman	Ahtna	916/372-2000	cholman@ahtnaes.com
	Kelly O'Meara	Ahtna	916/372-2000	komeara@ahtnaes.com
	Christopher Prescott	USACE	916/557-7227	Christopher.E.Prescott@usace.army.mil
<i>MB</i>	Melissa Broadston	Fort Ord BRAC	831/393-1284	Melissa.broadston@us.army.mil
<i>RE</i>	Roy Evans	HGL	303/984-1167 xt. 5	revans@hgl.com
	<i>Jeff Fenton</i>	<i>MACTEC</i>	<i>707 793 3832</i>	<i>jjfenton@mactec.com</i>
	<i>Bob Carr</i>	<i>EPA</i>	<i>415 972 8913</i>	<i>carr.robert@epa.gov</i>
	<i>Judy C. Huang</i>	<i>EPA</i>	<i>415-972-3681</i>	<i>huang.judy@epa.gov</i>
	<i>John Chesnut</i>	<i>EPA</i>	<i>415-972-3005</i>	<i>chesnut.john@epa.gov</i>

HTW BCT Meeting

October 28, 2010 at 1:00 p.m.

Item	Action	Comment
Community Relations	Status Update	BRAC
OU1 Groundwater Remediation	Status Update	HGL
OU1 Off-Site	Status Update	Shaw
OU2 and 2/12 Treatment Systems	Status Update	Ahtna
Other Groundwater Issues	Status Update	All
OUCTP	Status Update	Shaw
Groundwater Treatment System Optimization	Status Update	Ahtna
OU2 Landfill	Status Update	Shaw
Interim Action Site	Status Update	Shaw
Site 39 Remediation	Status Update	Shaw
FFA Schedule	Status Update	All
FOST/FOSET Issues	Status Update	Ahtna
Calendar Update	Update	All



Former Fort Ord Groundwater Treatment Systems Operational Data and Status

BRAC Cleanup Team Meeting, October 28, 2010

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

Monthly Statistics	Volume Treated (gallons)	Average Flow (gallons per minute)	Percent of Time Online	COC Mass Removed (lbs.)
OU2				
September 2010	32,502,330	752	96.9	2.96
Total since October 1995	5.002 billion			667.13
Sites 2/12				
September 2010	8,210,600	190	86.0	0.81
Total since June 1999	1.371 billion			428.15

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

Key Events for OU2 and Sites 2/12 for September 2010						
There were 31 USAN Notices transmitted to Ahtna September 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	3	4
5	6	7	8	9 Power outage, OU2 down 14 hours, 2/12 down 15 hours. EW-OU2-10-A pump replaced, put into operation.	10	11
12	13	14 Annual extraction well sampling event.	15 Power outage, OU2 down 9 hours, 2/12 down 8 hours.	16	17	18
19	20	21	22	23	24	25
26	27 Faulty pressure switch, 2/12 GWTP offline 77 hours.	28	29	30		

Table 3: September 2010 - OU2 Analytical Results at TS-OU2-INJ

COC	Discharge Limit (µg/L)	Sample Date / Analytical Results	
		9/14/10	9/28/10
1,1-DCA	5.0*	0.62	0.71
1,2-DCA	0.50	0.17	0.27
1,2-DCP	0.50	ND	ND
Benzene	0.50	ND	ND
Carbon Tetrachloride	0.50	ND	ND
Chloroform	2.0*	0.26	0.38
cis-1,2-DCE	6.0*	ND	0.33
Methylene Chloride	0.50	ND	ND
PCE	0.50	ND	ND
TCE	0.50	ND	ND
Vinyl Chloride	0.10	ND	ND

Table 4: September - Sites 2/12 Analytical Results at TS-212-INJ

COC	Discharge Limit (µg/L) ‡	Sample Date / Analytical Results
1,1-DCE	6.0	In accordance with the sampling schedule in the SAP, no GWTP sampling was performed in September. Scheduled process sampling will be performed in November
1,2-DCA	0.50	
1,3-DCP †	0.50	
Chloroform	2.0	
cis-1,2 DCE	6.0	
PCE	3.0	
TCE	5.0	
Vinyl Chloride	0.10	

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.

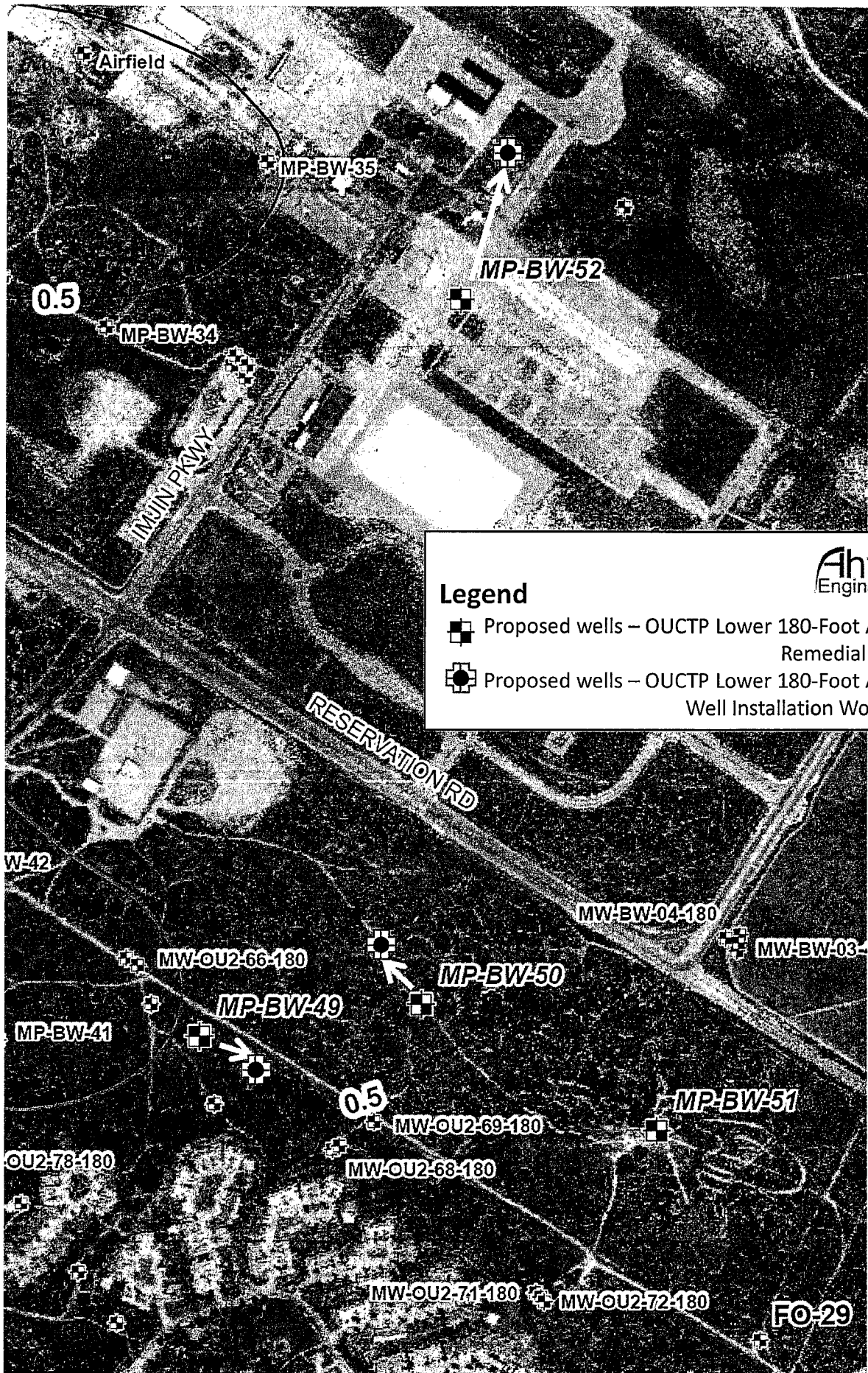
Table 5: AES Document Submittals - Status Summary

Document	Date Submitted	Comments Due
Preliminary Draft Quality Assurance Project Plan Sites 2 and 12, and Operable Unit 2 Groundwater Treatment Systems, and Quarterly Monitoring at Sites 2 and 12, Operable Unit 2 and Operable Unit Carbon Tetrachloride Plume, Former Fort Ord, California	9/3/10	9/24/10 (all comments received, revision in progress)
Draft Site Safety and Health Plan, Former Fort Ord, California	9/8/10	10/8/10 (all comments received, revision in progress)





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

Well Identification	% On	Avg. gpm	Total Gallons	% of Total	Comments	TCE (µg/L) 3Q 2010
Site 12 Extraction Wells						
EW-12-05-180M	84.5	71	3,088,400	38		6.8
EW-12-06-180M	85.4	67	2,897,200	35		7.3
EW-12-07-180M	6.6	1	27,900	0	COCs previously below ACLs, will restart pump	5.4
EW-12-03-180U	0.2	0	2,600	0	Well offline due to low concentrations	0.16
EW-12-03-180M	85.8	51	2,188,600	27		1.3
EW-12-04-180U	0.2	0	5,900	0	Well offline due to low concentrations	0.38
EW-12-04-180M	0	0	0	0	Pump removed, sampled with PDBs	0.53
<i>Total 2/12 gallons treated:</i>			<i>8,210,600</i>	<i>100.0</i>		
OU2 Extraction Wells						
<i>Western Network</i>						
EW-OU2-01-A	0	0	0	0	Well offline due to low concentrations	Not Sampled
EW-OU2-02-A	2.8	1	62,950	0	Well offline due to low concentrations	0.88
EW-OU2-03-A	0	0	0	0	Well offline due to low concentrations, sampled with PDBs	0.46
EW-OU2-04-A	91.8	44	1,890,080	5		1.1
EW-OU2-05-A	96.9	48	2,075,120	6		3.0
EW-OU2-06-A	96.5	35	1,525,650	5		5.0
EW-OU2-01-180	0	0	0	0	No pump in well, sampled with PDB	5.5
<i>Total gallons extracted:</i>			<i>5,553,800</i>	<i>17</i>		
<i>Eastern Network</i>						
EW-OU2-07-A	0	0	0	0	Well offline due to low concentrations	ND
EW-OU2-08-A	74.1	16	679,010	2	Cycling due to low water level	0.60
EW-OU2-09-A	97.8	24	1,053,770	3		2.6
EW-OU2-10-A	65.2	12	525,020	2	Pump motor failure, pump replaced	2.9
EW-OU2-11-A	0	0	0	0	Pump removed due to biofouling, screen damaged	1.2
EW-OU2-12-A	96.9	11	476,870	1	Low yield; running at reduced capacity	5.9
EW-OU2-13-A	98.1	27	1,181,620	4		10.2
EW-OU2-02-180	97.7	91	3,925,440	12		9.5
<i>Total gallons extracted:</i>			<i>7,841,730</i>	<i>24</i>		
<i>Shoppette</i>						
EW-OU2-05-180	95.2	132	5,700,700	18		6.2
EW-OU2-06-180	94.3	123	5,304,900	16		4.6
EW-OU2-16-A	98.1	18	781,300	2	High drawdown, operating with new level settings	9.2
<i>Total gallons extracted:</i>			<i>11,786,900</i>	<i>36</i>		
<i>CSUMB</i>						
EW-OU2-14-A	98.1	22	966,900	3		1.0
EW-OU2-15-A	0	0	0	0	Well offline due to low concentrations	Not Sampled
<i>Total gallons extracted:</i>			<i>966,900</i>	<i>3</i>		
<i>Landfill</i>						
EW-OU2-03-180	94.3	102	4,403,000	14		14.5
EW-OU2-04-180	0	0	0	0	Well offline due to low concentrations	ND
<i>Total gallons extracted:</i>			<i>4,403,000</i>	<i>14</i>		
<i>Bunker Hill</i>						
EW-OU2-07-180	0	0	0	0	No pump in well, sampled with PDB	3.7
EW-OU2-08-180	87.2	45	1,950,000	6		1.1
<i>Total gallons extracted:</i>			<i>1,950,000</i>	<i>6</i>		
<i>Total OU2 gallons treated:</i>			<i>35,502,330</i>	<i>100</i>		



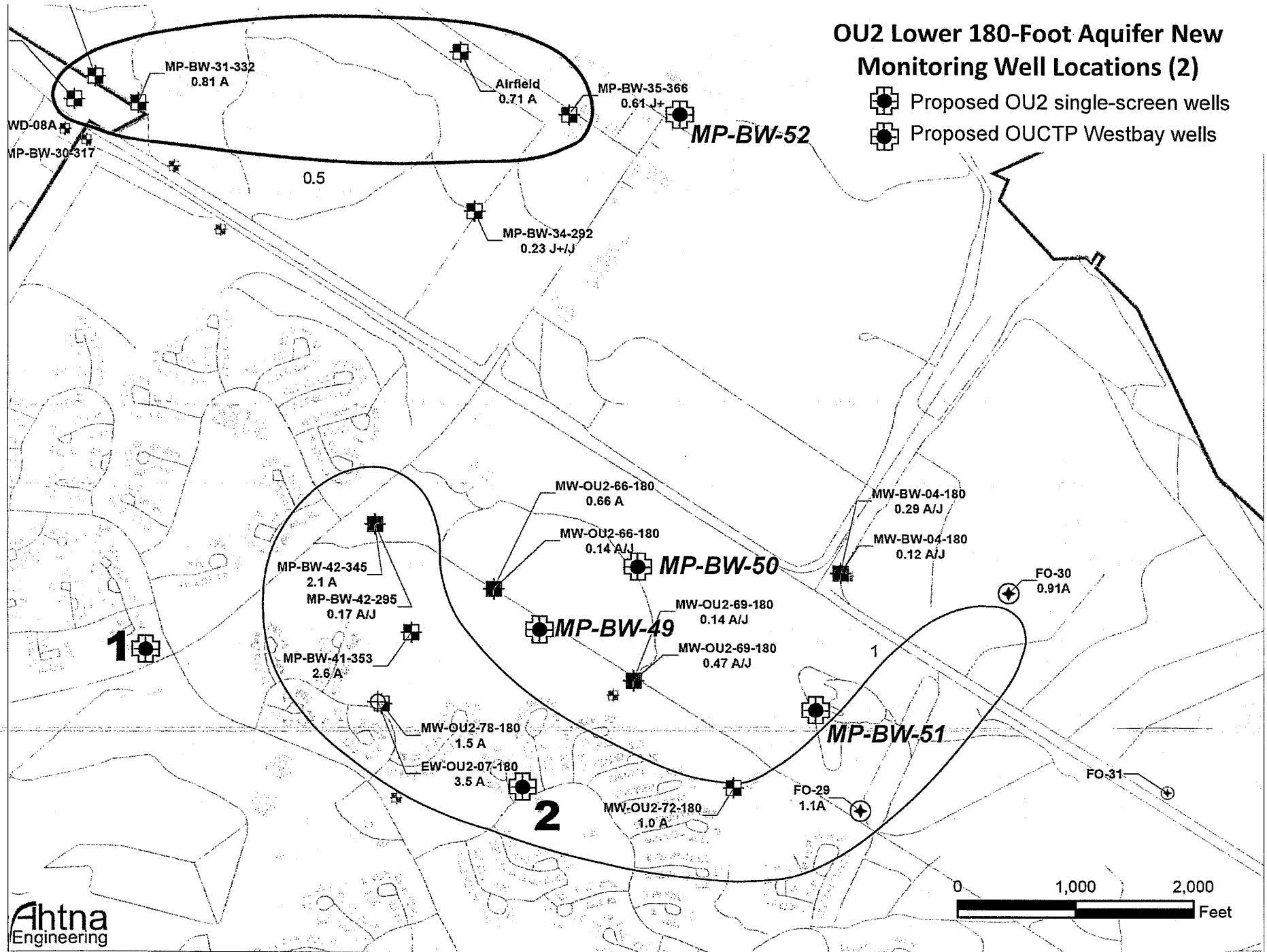
Ahtna
Engineering

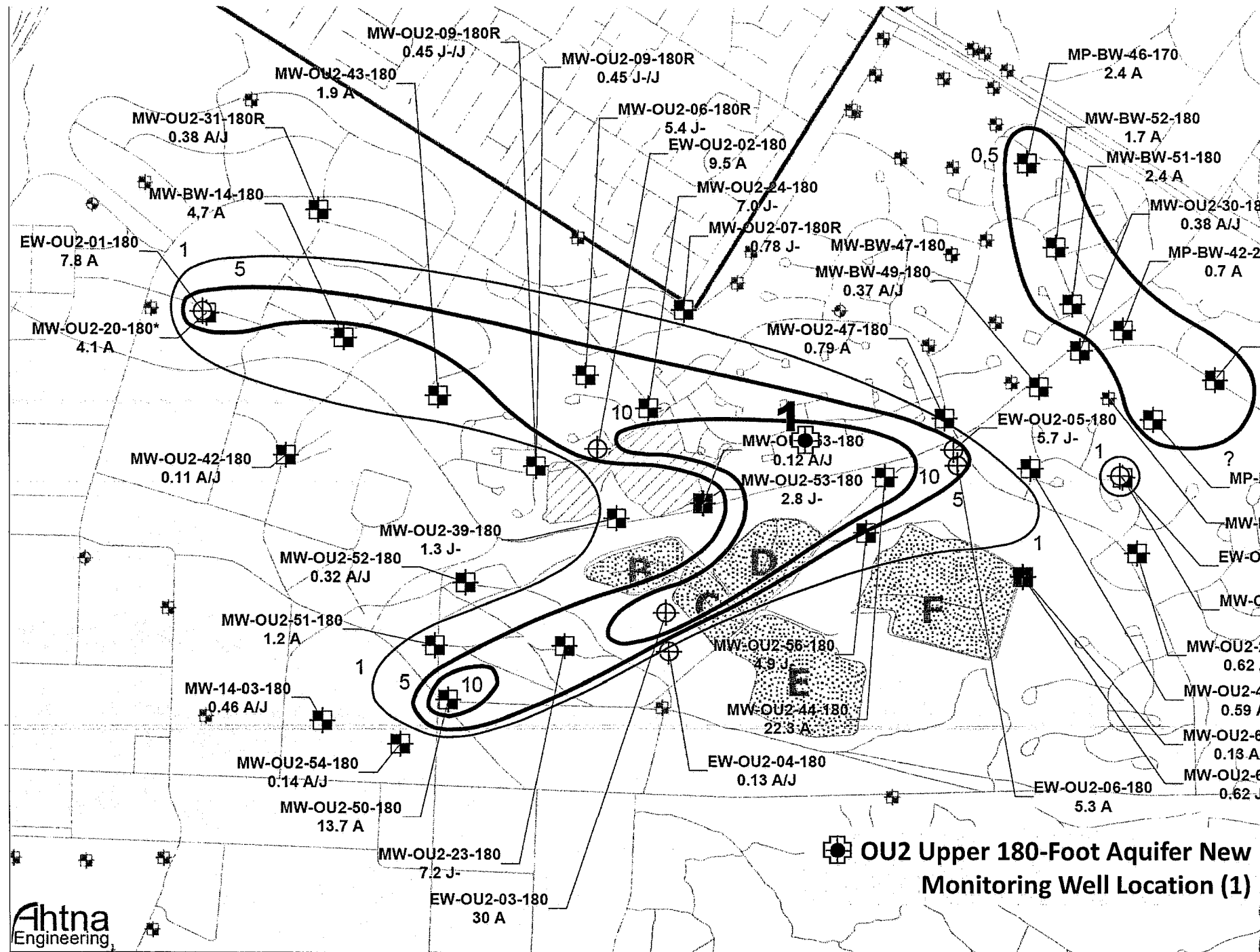
Legend

-  Proposed wells – OUCTP Lower 180-Foot Aquifer Remedial Design
-  Proposed wells – OUCTP Lower 180-Foot Aquifer Well Installation Work Plan

OU2 Lower 180-Foot Aquifer New Monitoring Well Locations (2)

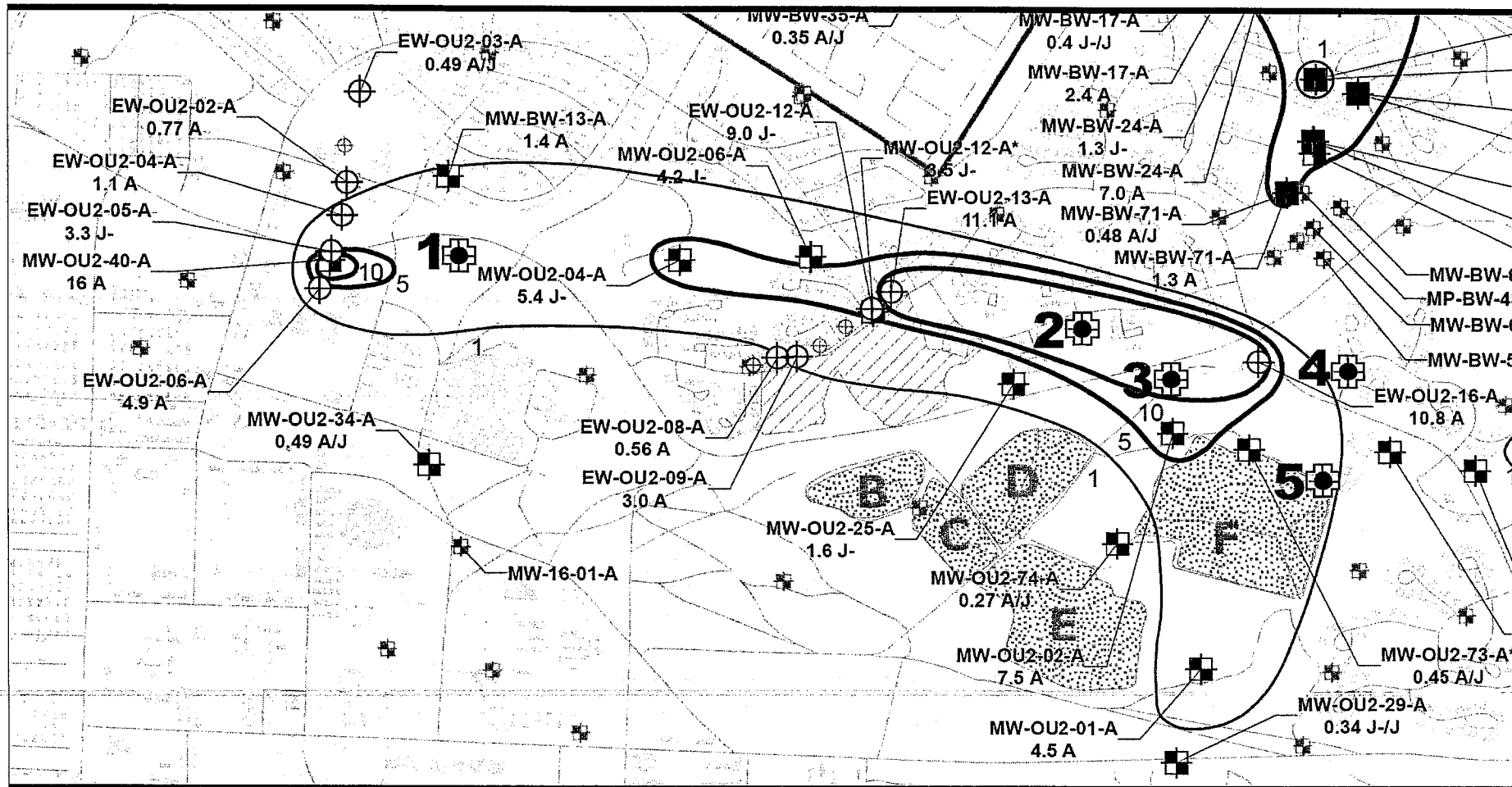
- Proposed OU2 single-screen wells
- Proposed OUCTP Westbay wells





+
OU2 Upper 180-Foot Aquifer New Monitoring Well Location (1)

⊕ OU2 A-Aquifer New Monitoring Well Locations (5)



U.S. Army Community Outreach Update

Actions Underway:

1. Need to confirm BCT updates to Marina in Motion (MIM) prior to community involvement workshops
2. Updating all fact sheets – on-going
3. Complete 2011 schedule of outreach-oriented activities to include:
 - Risk communication class
 - Off-post BCT meeting Now: April 25-27, 2010 in San Francisco. BCT meetings to be held at USEPA.

Recent Activities:

1. Participated in September 30: FORA ESCA Informal Community Workshop
2. Completed all community notifications for 2010 prescribed burns.
3. On-going: preparation of prescribed burn notification after action report.
4. Conducted October 13 CIW and October 14 TRC.
5. Participated in October 23 Public Lands Day activities at the Former Fort Ord.
6. Provided bus tour for Super JTI participants on October 26

Upcoming Activities

1. Conduct Fort Ord Cleanup tour for staff at Monterey County Health Department (TBD)
2. 12 NOV Provide cleanup bus tour for CSUMB Environmental Club/Associated Students
3. 24 NOV Provide cleanup bus tour for Naval Postgraduate School class – international students
4. Schedule for Super JTI
 - Training on-going

Topics of Interest
USEPA TAG
Prescribed Burn Outreach

STATUS: RESPONSE to COMMUNITY COMMENTS (RTC)

AR Number	Title/Subject	Status
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	<p>RTC is in progress.</p> <p>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).</p> <p>Part 2: Issue draft CWM report -October. The initial letter is in the Administrative Record and report, when ready, will also be included in the Administrative Record.</p>
OE-0723.4, 9/29/2010	Comments submitted by community group member, Dan Amadeo - Marina In Motion - on the Draft MRS-BLM Units 14 and 19, Technical Memorandum, Former Fort Ord, California (2009 Burns)	RTC is in progress.

What Happens Next: 2011

Fort Ord Cleanup a look ahead

January

January 12

Community Involvement Workshop, 6:30 p.m. Meeting Begins

Location: Marina Library 190 Seaside Circle, Marina CA

Topics:

- Groundwater Cleanup Update
- Environmental Services Cooperative Agreement

January 13

Technical Review Committee, 10:00 a.m. – 12:00 p.m.

Location: BRAC Office, Building 4463, Ord Military Community

- Groundwater Cleanup Update
- Environmental Services Cooperative Agreement

February

February 26

Fort Ord Cleanup Bus Tour / Open House. FOCUS: Groundwater and Site 39 Cleanup, Landfill, Munitions Clearance

Location: Building 4522, Joe Lloyd Way, Former Fort Ord

Tour 1 Departs at 10:00 am

Tour 2 Departs at 11:45

March

Small Community Group Meetings and Tours

April

April 13

Community Involvement Workshop, 6:30 p.m. Meeting Begins

Location: Marina Library 190 Seaside Circle, Marina CA

Topics:

- Prescribed Burn Update
- Environmental Services Cooperative Agreement

April 14

Technical Review Committee, 10:00 a.m. – 12:00 p.m.

Location: BRAC Office, Building 4463, Ord Military Community

- Prescribed Burn Update
- Environmental Services Cooperative Agreement

April 22

Earth Day Information Booth - California State University Monterey Bay

May

May 7-8

Information Booth at Marina Festival of the Winds

Glorya Jean Tate Park, Marina, CA

May

Guided Nature Walk Inside the Impact Area (Date to be Determined)

June

June 25

Fort Ord Cleanup Bus Tour / Open House. FOCUS: Munitions Clearance and Prescribed Burns

Location: Building 4522, Joe Lloyd Way, Former Fort Ord

Tour 1 Departs at 10:00 am
Tour 2 Departs at 11:45

J u l y

July 1 Burn Season Begins

Small Community Group meetings

July 13

~~Community Involvement Workshop, 6:30 p.m. Meeting Begins~~

~~Location: Marina Library 190 Seaside Circle, Marina CA~~

~~Topics:~~

- ~~• Landfill and Site 39 Update~~
- ~~• Environmental Services Cooperative Agreement~~

July 14

~~Technical Review Committee, 10:00 a.m. — 12:00 p.m.~~

~~Location: BRAC Office, Building 4463, Ord Military Community~~

~~Topics:~~

- ~~• Landfill and Site 39 Update~~
- ~~• Environmental Services Cooperative Agreement~~

A u g u s t

Small Community Group meetings

August 10

Community Involvement Workshop, 6:30 p.m. Meeting Begins

Location: Marina Library 190 Seaside Circle, Marina CA

Topics:

- Landfill and Site 39 Update
- Environmental Services Cooperative Agreement

August 11

Technical Review Committee, 10:00 a.m. — 12:00 p.m.

Location: BRAC Office, Building 4463, Ord Military Community

Topics:

- Landfill and Site 39 Update
- Environmental Services Cooperative Agreement

S e p t e m b e r

September 2-3

Information Booth at the Monterey County Fair

Date to be confirmed

California State University Monterey Bay (CSUMB) Welcome Fair Info Booth, 12:00 p.m. — 2:00 p.m.

Location: CSUMB Main Quad

O c t o b e r

October 12

~~Community Involvement Workshop, 6:30 p.m. Meeting Begins~~

~~Location: Marina Library 190 Seaside Circle, Marina CA~~

~~Topics:~~

- ~~• Military Munitions Program Update~~
- ~~• Environmental Services Cooperative Agreement~~

October 13

~~Technical Review Committee, 10:00 a.m. — 12:00 p.m.~~

~~Location: BRAC Office, Building 4463, Ord Military Community~~

~~Topics:~~

- ~~• Military Munitions Program Update~~

Visit our website, www.fortordcleanup.com or call Melissa Broadston at (831) 393-1284 for updates.

October 22

Bureau of Land Management Public Lands Day/Make a Difference Day

Location: Various Backcountry Locations at Fort Ord

Join other volunteers to help with Fort Ord projects including: habitat restoration, trash pick-up, and trail maintenance.

N o v e m b e r

Small Community Group Meetings and Tours

D e c e m b e r

December 31 Burn Season Ends

No meetings scheduled

HydroGeoLogic, Inc.
Agenda & Notes

Fort Ord Hazardous and Toxic Waste Base Closure Team (BCT) Meeting
28 October 2010, 10:00 AM
Santa Rosa, California

1. Groundwater Remediation System Update

The Northwest Treatment System (NWTS) operated without interruption from 20 September through 06 October 2010. During construction (beginning 07 October and continuing through 15 October) to expand the remediation system to include pumping from well IW-OU1-10-A, treatment operations were intermittently shut down for safety reasons. Construction effort details are provided in item number 4. Except for these deliberate interruptions for construction safety, the injection pump operated continuously since the last BCT meeting. From 20 September through 11 October 2010, the average pumping rate was 47.9 gallons per minute (gpm).

Thus far in 2010, the NWTS has removed approximately 0.39 pound of TCE. Since system start-up in 2006, the NWTS has removed approximately 4.8 pounds of total volatile organic compounds.

On 01 September, a minor leak was discovered in each of the two lead granular activated carbon (GAC) tanks (i.e., the northernmost pair, units F-301A and F-302A). The units were isolated as a precaution although the leaks were not sufficient to cover the floor of the containment area. Repairs to the leaking air pressure valve were completed on 29 September and normal service was restored. In the interval, the remaining two GAC tanks (units F-301B and F-302B) were used to treat extracted groundwater. The regularly scheduled performance monitoring sampling effort was conducted on 20 September 2010 and excluded the mid-point sample between the GAC units.

On 04 October, a minor leak was again detected on the lead GAC tank. This leak originated from the coupling connecting the inflow pipe to the GAC tank. As before, these units were isolated and units F-301B and F-302B were used to treat extracted groundwater. A replacement coupling was obtained and installed on 11 October and the system was returned to normal operation. The leaking coupling showed significant corrosion. Consequently, the remaining couplings will be replaced during the week of 25 October as a preventive measure.

Extraction well EW-OU1-60-A operated nearly continuously from the last BCT meeting (22 September) through 18 October except for deliberate shutdowns as noted above. The average pumping rate was approximately 1.1 gpm.

2. Long-Term Monitoring Update

The preliminary laboratory analytical results are presented in Table 1 for the performance monitoring samples collected on Monday, 20 September. Validated analytical results will be presented when available. As illustrated in Table 1, TCE concentrations remained below 1 microgram per liter ($\mu\text{g/L}$) at all extraction wells except MW-OU1-87-A and EW-OU1-71-A. The reported concentrations were very similar to the June 2010 sampling results—the maximum difference was 0.3 $\mu\text{g/L}$.

TCE concentrations at wells in the long-term monitoring (LTM) network were typically very similar to those in the previous sampling (either March 2010 or September 2009 depending upon the sample frequency at any given well). The principal changes observed since the March 2010 sampling were:

- The TCE concentration at well EW-OU1-53-A decreased by 1.1 µg/L and increased by 0.8 µg/L at well EW-OU1-52-A. The magnitude of these changes is not particularly significant in relation to the trend observed at each individual well. However, well EW-OU1-53-A is closer to the trailing edge of the TCE plume by approximately 200 feet. The September 2010 results mark the first time that the TCE concentration at that location has been less than that observed further downgradient at well EW-OU1-52-A. From the initial sampling event in September 2007 through the September 2009 samples, TCE at well EW-OU1-53-A ranged from 10 µg/L to 12 µg/L, while the corresponding values at well EW-OU1-52-A varied between 3.9 µg/L and 5.0 µg/L. This observed shift in relative concentrations may indicate that the maximum concentrations in the trailing edge of the plume have passed well EW-OU1-53-A.
- Well MW-OU1-61-A near the northwest boundary of former Fort Ord is the only well in that region showing a TCE concentration greater than the cleanup target. TCE concentrations have been increasing at this location since December 2008 and reached 15 µg/L in the March 2010 sample. The September 2010 sample result for well MW-OU1-61-A, however, showed TCE at 8.8 µg/L. Well MW-OU1-50-A is upgradient of MW-OU1-61-A by approximately 150 feet. TCE concentrations at MW-OU1-50-A have been trending lower since September 2007 (16 µg/L) and have been ≤ 1 µg/L since September 2009. The September 2010 TCE concentration at MW-OU1-50-A was the lowest observed at that well (0.31 µg/L) since sampling began in 2006. Together, these results suggest that the TCE concentration at MW-OU1-61-A may be in a final downward trend. A chart showing the TCE concentrations observed in past samples from wells MW-OU1-50-A and MW-OU1-61-A is attached for reference.

The preliminary draft figure showing TCE concentration contours for the September 2010 groundwater sampling is also attached for reference (Figure 6 from the upcoming 2010 Annual and Third Quarter Groundwater Monitoring Report).

Baseline samples from the 2-inch well PZ-OU1-10-A1 and from well IW-OU1-10-A to define the monitoring interval for future LTM sampling were also collected during the time frame (as described in the *Draft Fort Ord Natural Reserve (FONR) Remediation System Expansion Design Technical Memorandum* submitted on 17 September 2010). A summary of historical sampling results from IW-OU1-10-A is attached for reference (see Attachment A). The analytical results from the baseline samples are shown below.

Baseline TCE Concentrations* (September 2010)
Performance Monitoring for IW-OU1-10-A Groundwater Extraction

PZ-OU1-10-A1		IW-OU1-10-A	
Sample Elevation	TCE	Sample Elevation	TCE
Feet amsl	µg/L	Feet amsl	µg/L
25.17	2.0	25.22	7.7
14.17	3.3	13.22	7.0
8.17	3.2	7.22	6.4

* - preliminary unvalidated data
amsl - above mean sea level

The data from both wells show minimal variation with depth. PZ-OUI-10-A1 was re-sampled on 21 October. Those results will be evaluated with other available data to select the appropriate sampling interval for LTM.

3. Report Submittals

Table 2 summarizes the status of scheduled reports through 2010. The 2010 First Quarter Groundwater Monitoring Report was submitted on 30 July. Comments were due at the end of September.

The *Draft Fort Ord Natural Reserve (FONR) Remediation System Expansion Design Technical Memorandum* was submitted on 17 September. There were no comments from the regulatory agencies and the final document will be submitted as soon as stamped drawings are received from the electrical subcontractor. We appreciate the cooperation extended by everyone to make this construction possible this season by quickly reviewing that document.

4. Other

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

HGL mobilized on 11 October and began constructing facilities on 12 October to initiate pumping from well IW-OUI-10-A. We expect construction to be completed by 28 October.

4b) *Previous Meeting Minutes*

Draft meeting minutes for August and September will be submitted within the next 2 weeks.

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 Santa Rosa CA - October 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
	TCE (ng/L)										
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
6/10/2010	7.4	6.5	0.90	0.40	J inactive	0.86	0.58	inactive	2.1	ND	ND
9/20/2010	7.7	6.6	0.83	0.35	J inactive	0.63	0.49	J inactive	2.3	not sampled	ND
cis-1,2-DCE (ng/L)											
11/9/2007	1.9	1.6	2.3	1.70	ND	ND	ND	ND	1.3	ND	ND
1/18/2008	1.20	1.40	1.00	1.20	ND	ND	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	ND	0.27	J 0.37	J 0.19
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	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
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
3/22/2010	0.67	0.79	ND	ND	inactive	ND	ND	inactive	0.20	J 0.11	J 0.13
6/10/2010	0.67	0.53	0.14	J ND	inactive	ND	ND	inactive	0.20	J 0.23	J ND
9/20/2010	0.66	0.46	J ND	ND	inactive	ND	ND	inactive	0.23	J not sampled	ND
Italics (if used) indicate data not yet validated					Bold font indicates concentration > ACL						

Table 2
Current Deliverable Schedule
BCT Meeting for Former Fort Ord, Santa Rosa CA –October 2010

Deliverable	Scheduled Submittal	Status / Remarks (Bold font indicates submittal)
<i>Primary Deliverables</i>		
None Scheduled for 2010		
<i>Secondary Deliverables</i>		
Draft 2007 Annual and Fourth Quarter Groundwater Monitoring Report	August 2010	In progress.
Agency Comments	October 2010	
Final 2007 Annual and Fourth Quarter Groundwater Monitoring Report	November 2010	
Agency Comments	NA	
First Quarter 2009 Groundwater Monitoring Report	June 2009	Submitted 22 June 2009.
Agency Comments	August 2009	No Comment.
Draft 2009 Annual and Third Quarter Groundwater Monitoring Report	February 2010	Submitted 08 February 2009.
Agency Comments	April 2010	Agencies approved changes to 2010 sample frequency—no other comments.
Final 2009 Annual and Third Quarter Groundwater Monitoring Report	August 2010	Submitted 05 August 2010.
Agency Comments	NA	FOCAG comments addressed.
2010 First Quarter Groundwater Monitoring Report	July 2010	Submitted 30 July 2010.
Agency Comments	September 2010	Awaiting comments (to be addressed in Draft 2010 Annual Groundwater Monitoring Report).
Draft 2010 Annual and Third Quarter Groundwater Monitoring Report	November 2010	Sampling complete. Preliminary analytical data received 20 October.
Agency Comments	January 2011	
Final 2010 Annual and Third Quarter Groundwater Monitoring Report	February 2011	
Agency Comments	NA	
Final Rebound Evaluation Report	December-2010	In progress.
Agency Comments	NA	
Draft Fort Ord Natural Reserve (FONR) Remediation System Expansion Design Technical Memorandum	September 2010	Submitted 17 September without construction drawings (submitted 24 September)
Agency Comments	01 – 08 October	Accepted without comment
Final Fort Ord Natural Reserve (FONR) Remediation System Expansion Design Technical Memorandum	November 2010	Awaiting stamped drawings

Bold denotes completed submittals.

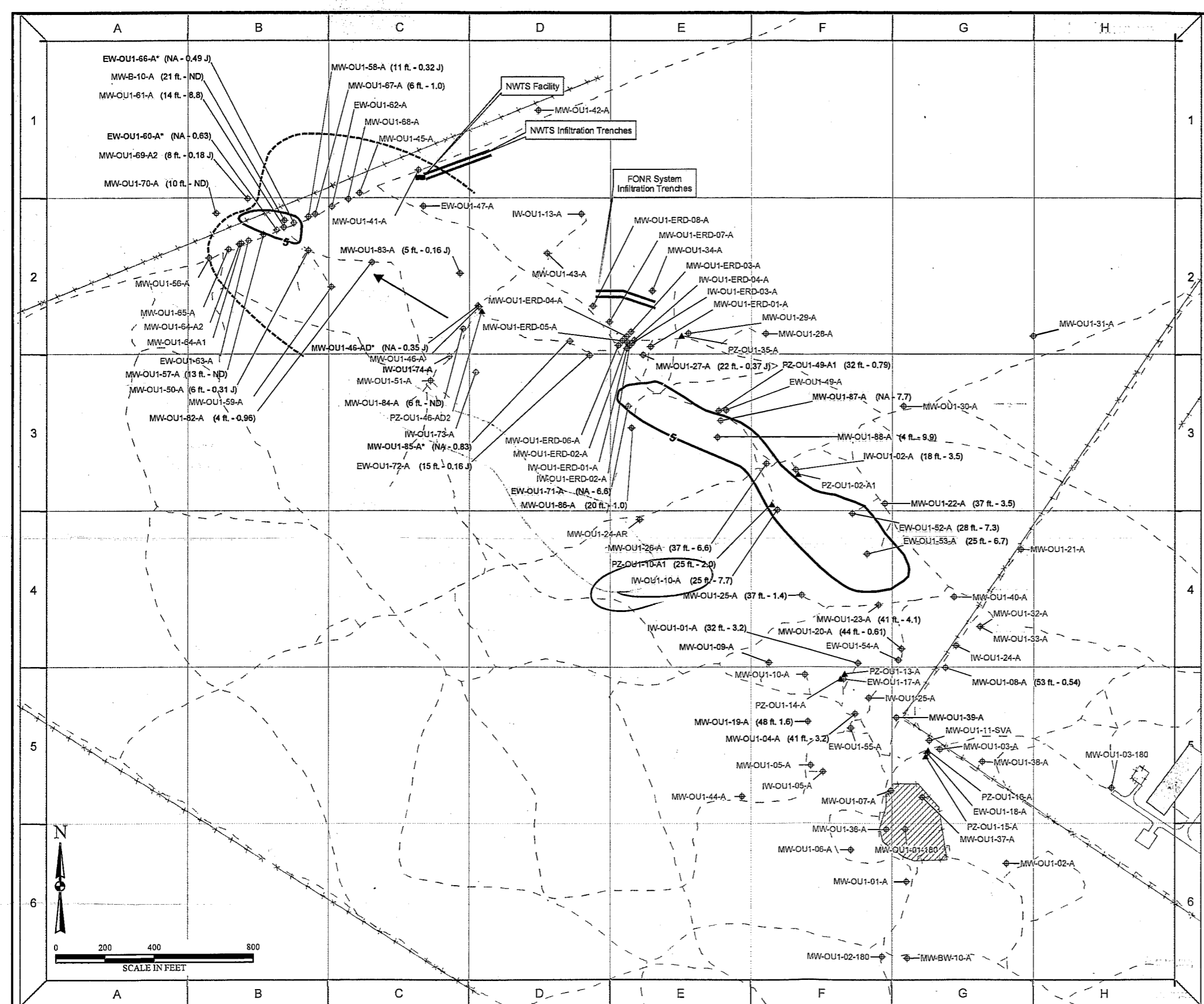
Preliminary Draft
Figure 6
OU-1 FONR
TCE Concentrations in Groundwater
September 2010

Legend

- ⊕ Monitoring Well
- ⊕ Extraction Well
Bold green font indicates active well
- ⊕ Injection Well
Bold green font indicates active well
- ▲ Piezometer
- Locations With September 2010 TCE Concentration At Or Above ACL (5 µg/L)
- 5 — TCE Contour (µg/L)
Based on September 2010 Data
- Well ID
— September 2010 TCE Result (µg/L)
— Sample Elevation (feet above mean sea level)
- - - Trail/Unimproved Road
- ⊗ Fence
- Treated Water Infiltration Trench
- - - Estimated Northwest Treatment System Capture Zone
- ▨ Former Fire Drill Area
- ← General Direction of Groundwater Flow

Notes:
 Units of TCE concentrations are in ppb
 ND = Non-detect
 NA = Depth is not applicable - sample is from pumping well
 J = Estimated Value
 µg/L = Micrograms per liter
 Wells shown with an asterisk were not used to develop contour boundaries.
 Active extraction wells were typically not included because the data is not location-specific. Data from extraction wells EW-OU1-71-A and MW-OU1-37-A were used to infer the 5 µg/L TCE contour because the results at those wells suggest higher TCE concentrations nearby.
 PZ-OU1-10-A1 was not used in the TCE contouring because nearby IW-OU1-10-A values were higher.
 Well names appearing in gray were not included in OU-1 Groundwater Monitoring Program.
 Wells for which no data are posted were not sampled.

Y:/Fl_Ord/OM9/TO_201/GW_Monitoring_2010_Q3/
 (6)TCE_in_GW_September_2010.mxd
 10/21/10 RB
 Source: HGL



Attachment A
Previous Sample Results at Well IW-OU1-10-A

Location Identification	Sample Date	Sample Depth (feet)	Sample Elevation (feet msl)	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCA	1,2-DCE (total)	Benzene	Chloroform	MEK	PCE	TCE
ACL ²				200	5.0	6.0	0.5	6.0	1.0	2.0	1900	5.0	5.0
RL ³				0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.0	0.5	0.5
IW-OU1-10-A	3/24/2005	102	43	ND A	ND A	ND A	ND A	ND A	ND A	ND A	ND A	ND A	2.3 A
		119	26	ND A	ND A	ND A	ND A	0.65 A	ND A	ND A	ND A	ND A	9.9 A
		131	14	ND A	ND A	ND A	ND A	0.60 A	ND A	ND A	ND A	ND A	8.7 A
		137	8	ND A	ND A	ND A	ND A	0.57 A	ND A	ND A	ND A	ND A	8.3 A
	6/17/2005	119	26	ND A	ND A	ND A	ND A	0.78 A	ND A	ND A	ND A	ND A	9.9 A
		137	8	ND A	ND A	ND A	ND A	0.72 A	ND A	ND A	ND A	ND A	8.9 A
	9/20/2005	119	26	ND A	ND A	ND A	ND A	0.70 A	ND A	ND A	ND A	ND A	8.8 A
	3/15/2006	119	23**	ND UJ/A	ND UJ/A	ND UJ/A	ND UJ/A	0.55 J/A	ND UJ/A	ND UJ/A	ND UJ/A	ND UJ/A	6.6 J/A
	6/29/2006	117	25**	ND UJ/A	ND UJ/A	ND UJ/A	ND UJ/A	0.41 J+/A	ND UJ/A	ND UJ/A	ND UJ/A	ND UJ/A	5.1 J+/A
	9/25/2006	117	25**	ND A	ND A	ND A	ND A	0.80 A	ND A	0.21 J/A	ND A	ND A	7.2 A
	12/6/2006	117	25**	ND A	ND A	ND A	ND A	0.68 A	ND A	0.16 J/A	ND A	ND UJ/A	5.9 A
	3/15/2007	117	25**	ND UJ-/A	ND UJ-/A	ND UJ-/A	ND UJ-/A	0.64 J-/A	ND UJ-/A	0.15 J-/A	ND A	ND UJ-/A	5.9 J-/A
	9/13/2007	117	25**	ND A	ND A	ND A	ND A	0.64 A	ND A	0.20 J/A	ND A	ND A	6.3 A
	3/20/2008	117	25**	ND A	ND A	ND A	ND A	0.81 A	ND A	ND A	ND A	ND A	8.9 A
	10/1/2008	117	25**	ND A	ND A	ND A	ND A	0.82 A	ND A	0.26 J/A	ND A	ND A	9.6 J/A
	3/11/2009	117	25**	ND A	ND A	ND A	ND A	0.70 A	ND A	0.24 J/A	ND A	ND A	7.5 A
9/16/2009	117	25**	ND A	0.068 J/A	ND A	ND A	1.135 J/A	0.011 J/A	0.33 J/A	ND A	ND A	8.2 A	
3/24/2010	117	25**	ND A	ND A	ND A	ND A	0.47 J/A	ND A	0.16 J/A	ND A	ND A	6.0 A	

Notes:

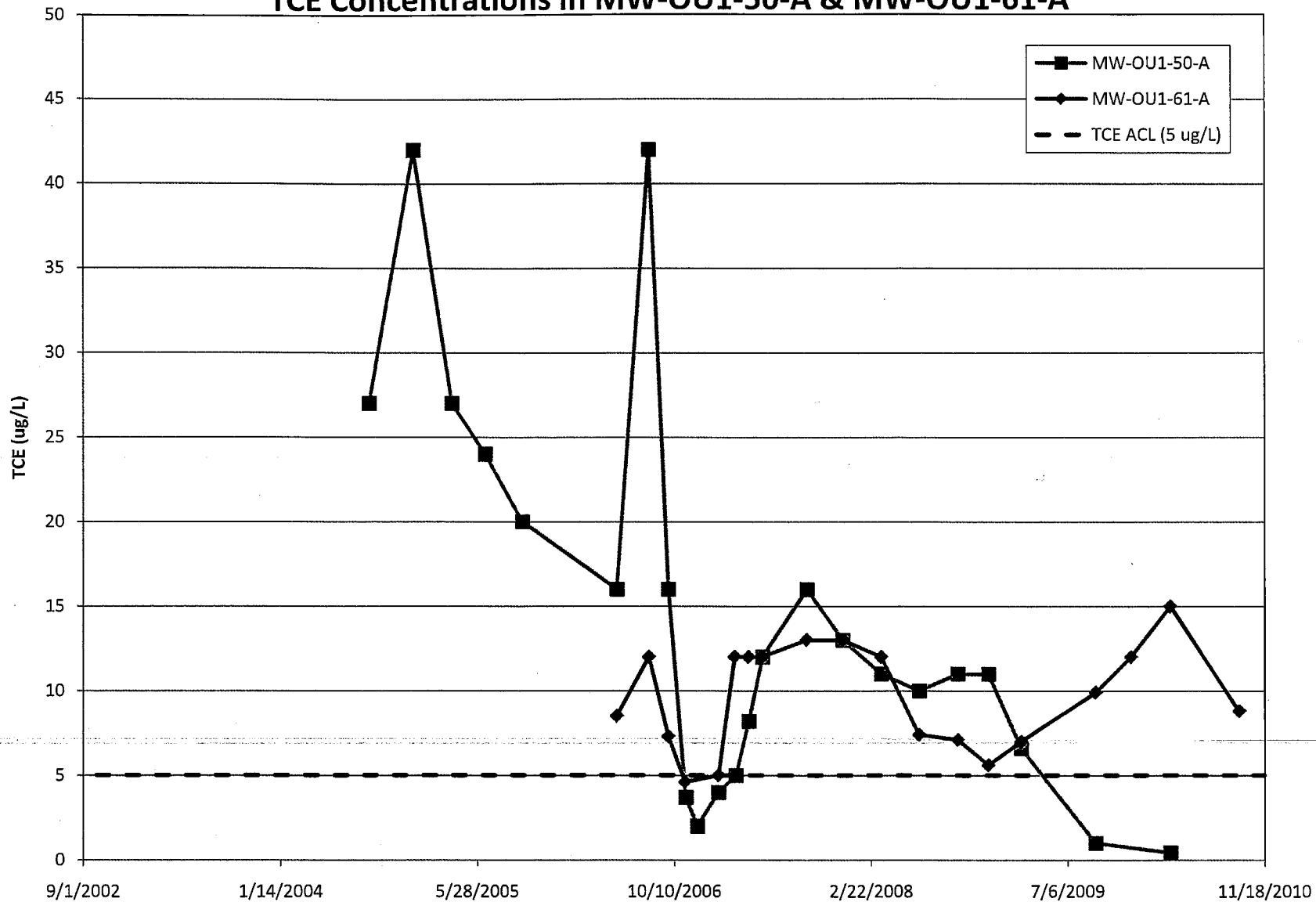
** Change in Top Of Casing elevation

¹A value indicates the depth a passive diffusion bag (PDB) sample was collected, 0 or - indicates another method of sampling was used.

²OU-1 Record of Decision (ROD) (July 25, 1995).

³Reporting limits (RL) per Final Sampling and Analysis Plan, July 2004 with the exception of February, March and April RLs (see Quarter 1, 2004 report).

TCE Concentrations in MW-OU1-50-A & MW-OU1-61-A



**OU2 Landfills
Status Update
10/28/2010**

Ongoing Documents

- Final 2009 Annual OU2 Landfills Report
- FWV for hook up of 5 vents to the Area D and F headers

Recently Completed Activities

- Annual VOC sampling
- Quarterly methane monitoring
- Roll landfill slopes to crush gopher burrows
- Construct berms at Area E for erosion control in preparation for the rainy season

Planned and Ongoing Activities

- Implement erosion control measures, as needed
- Haul and place soil from Site 39 Range Remediation at Area E vertical expansion
- Conduct Annual TTU Source Testing – November
- Gopher trapping
- Application of straw and barley seeds at Area E for erosion control

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

TREATMENT SYSTEM OPERATION SUMMARY	
Treatment System Start Date:	6/4/2001
TTU Start Date:	4/4/2006
Last Reading Date/Time:	10/15/2010 15:25
Historical through 2009 (TTU only):	
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
Current Year 2010	
Total Hours:	7,128
Total Hours Operated:	2062
% TTU Operation:	28.9%
Total Pounds of Methane Removed:	179,602
Cumulative:	
% TTU Operation:	41.0%
Total Pounds of Methane Removed:	1,981,763

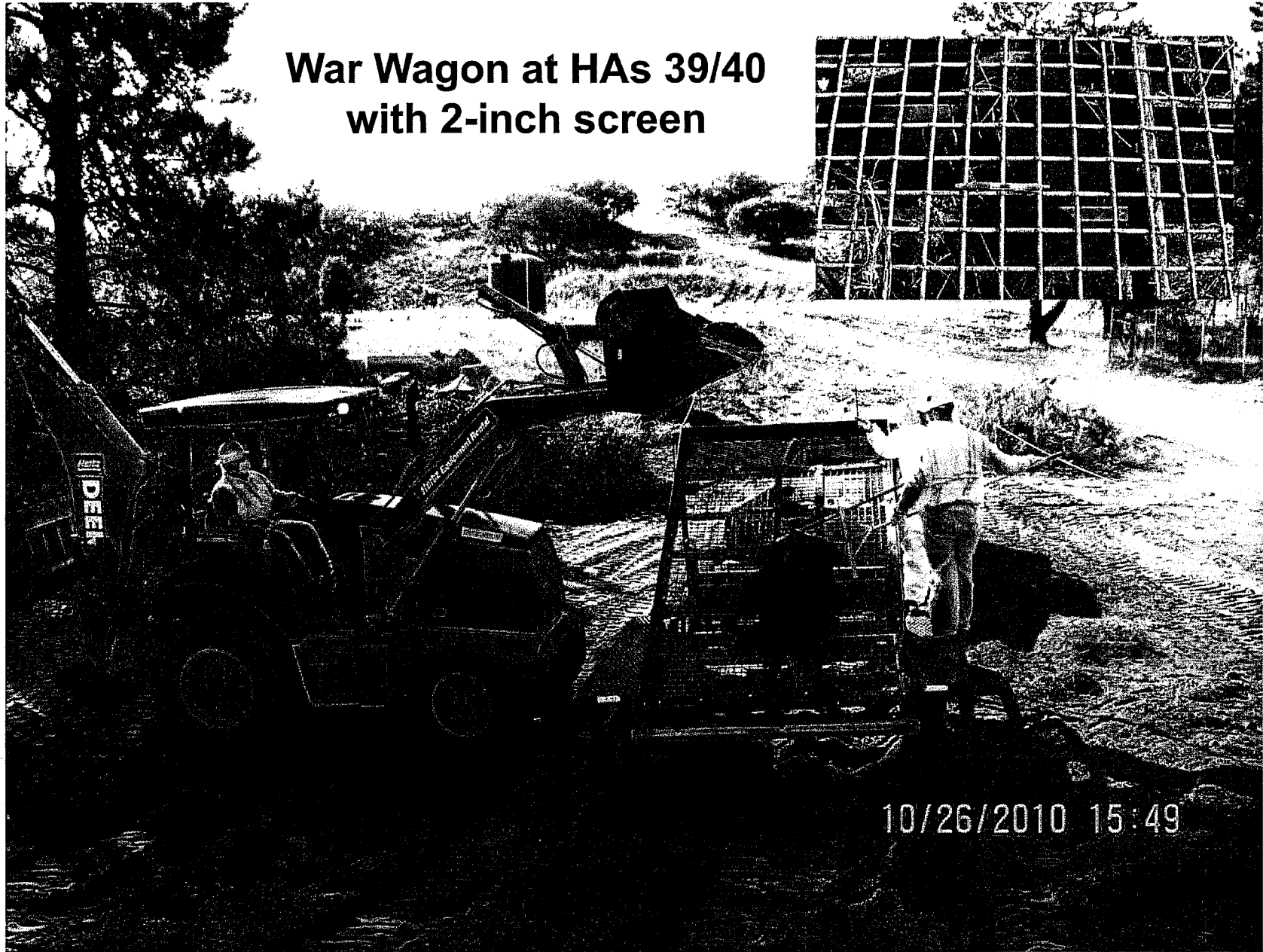
	Total Pounds Removed	Pounds/week
Pounds of Methane Removed (2007)	540,920	10,374
Pounds of Methane Removed (2008)	293,169	5,622
Pounds of Methane Removed (2009)	455,507	8,736
Pounds of Methane Removed (2010)	179,602	4,233

EXTRACTION SYSTEM (2010)					
Location	Last Instantaneous Methane Reading (%)	Last Instantaneous Flow Rate Reading (scfm)	Current Methane Removal Rate (lbs/day)	2010 % Operation	2010 Methane Removed (Lbs)
Area E					
EP-36	35.2	26	539.8	27.5	37419
Area F					
EW-31	38.9	17	390.1	27.5	10475
EW-32	35.4	22	459.4	26.7	27133
EW-33	36.2	21	448.4	27.5	30876
EW-34	34.8	27	554.2	27.5	46505
VF-4	50.3	9	267.0	24.4	9538
Area D					
EW-35	26.2	7	108.2	27.5	7302

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.

**War Wagon at HAs 39/40
with 2-inch screen**



10/26/2010 15:49

Area E
(Looking South)

Water Bar



1.5 foot high -
15 foot wide buffer zone



10/25/2010 13:27

Site 39 Remedial Action Status Update 10/28/2010

Ongoing Documents

- None

Ongoing Engineering Activities

- None

Construction Activities

Site 39

- Excavation
 - Completed HA 26 and 44
 - Continue HAs 39/40 – use war wagon with 2-inch diameter screen
 - Continue at 28
- Sampling
 - Results for haul road samples from HA 26 due 10/29
 - Samples from over-excavation of stockpile area at HA 44 below screening levels
 - Continue sampling at HAs 39/40 and 28
 - Step out samples at HA 48 below screening levels. Need to do mag and dig approximately 25 cy of soil (see inset on attached map)
- QC Seeding
 - Recovered all 16 seeds placed at completed HAs
 - Placed two seeds at HA 39/40 – these have not yet been recovered
 - Placed two seeds at HA 28 – these have not yet been recovered
- Pre-remediation DGM Survey of New Surface
 - Start HA 34
- Regrading
 - HA 19
- Post-remediation DGM Survey of New Surface
 - Completed fieldwork at HAs 19 and 44
 - Continue processing data from HAs 19 and 44
- Post-remediation Subsurface Removal of New Surface
 - Completed HAs 18, 27, 27A, 29, 36, and 43
 - Start reacq at HA 44
 - Reacq at HA 19 after HA 44
- Erosion Control after Subsurface Removal
 - Application of straw and barley seeds – QA yet to be performed – tentative start date is 11/1

OU2 Landfills

- Start application of straw and barley seeds for erosion control

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).

- HA 26 – TM to be issued 10/28
- HA 44 – waiting on validated data

Technical Memorandum Status Update

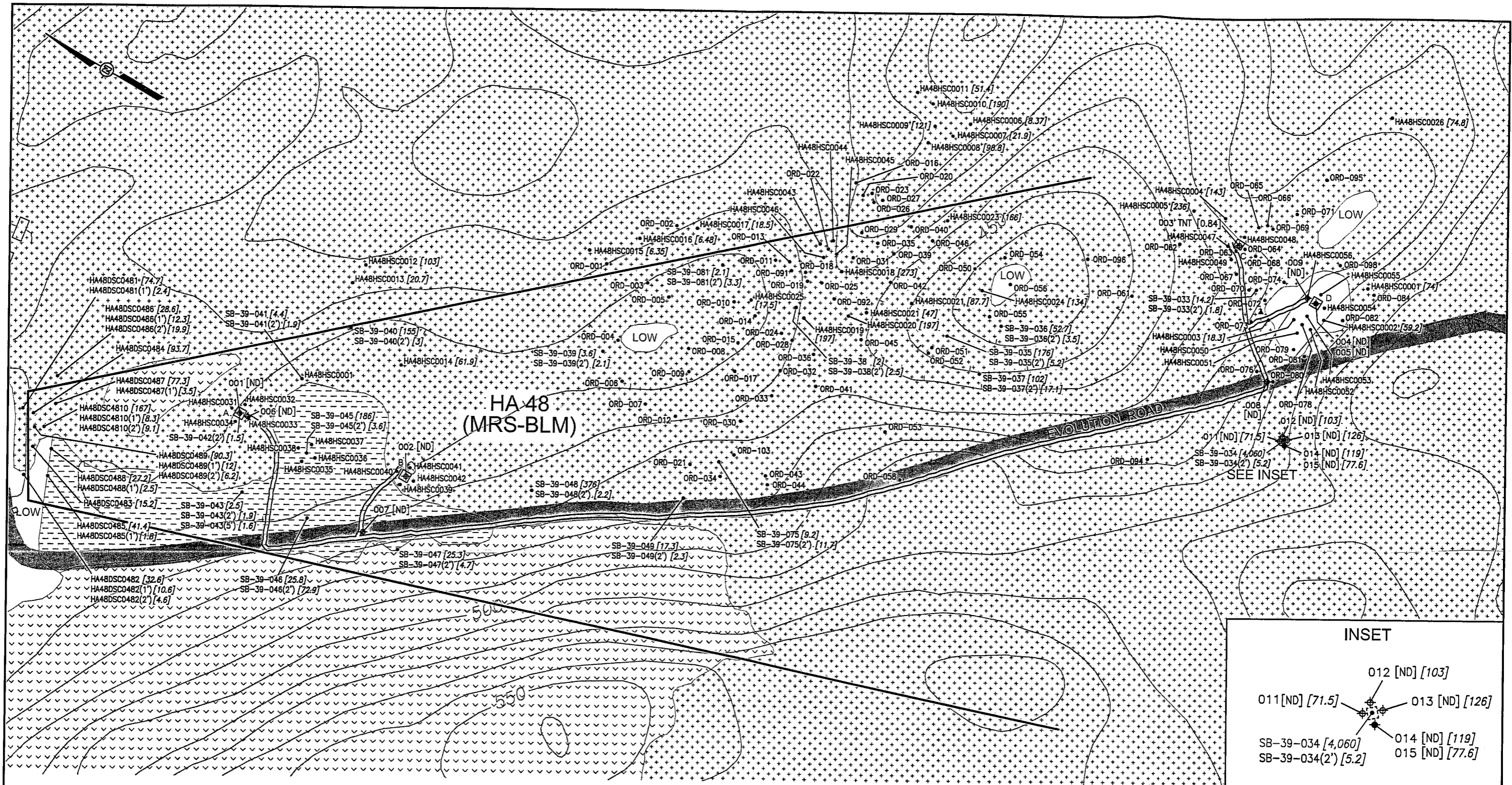
HA	Issued to Army for review	Issued to Agencies for review	Comments		
			EPA	DTSC	RWQCB
27	3/12	3/18, 4/12	5/5, add BU	3/22, 5/5	5/4, No Comment
22	4/12	4/12	5/5, No Comment	Ok at BCT	No Comment
43	4/20	4/20	5/5, No Comment	Ok at BCT	4/21, No Comment
36	4/23	4/26, 5/21	5/6, terminology	5/17, 5/26, No 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	No Comment
27A	7/1	7/6	ok at BCT, 7/14	7/21, no comment	No Comment
29	7/7	7/12	7/22, no comment	8/6, calc comment, ok	No Comment
18	7/9	7/12	7/22, no comment	7/22, typo, 7/27 no add comment	No Comment
19	8/20	8/23	8/26, no comment	9/8, 9/15 No comments	No Comment
48					
44					
26					
39/40					
28					

**Site 39 Remediation
Excavated Volume
(as of 10/25/2010)**

Summary						
Historical Area	FS Total Plan (bank cy)	Actual Plan To Date (bank cy)	OX/SP To Date (bank cy)	Total To Date (bank cy)	% FS Total Plan To Date	Remediation Status
18	2,730	2,730		2,730	100%	complete
18 OVEREX			20	20		complete
22	80	100		100	100%	complete
23	440	440		440	100%	complete
27	120	120		120	100%	complete
27A	1,030	1,030		1,030	100%	complete
27A OVEREX			470	470		complete
27A STOCKPILE			240	240		complete
29	2,580	2,580		2,580	100%	complete
29 OVEREX			330	330		complete
29 STOCKPILE			280	280		complete
33	20	20		20	100%	complete
36	2,750	2,580		2,580	100%	complete
36 OVEREX			40	40		complete
43	150	150		150	100%	complete
19	26,510	26,510		26,510	100%	complete
19 OVEREX		40	40	40		complete
26	24,760	24,760		24,760	100%	complete
26 OVEREX			70	70		complete
AUSTIN STOCKPILE						
48	140	140		140	100%	complete
44	3,340	3,340		3,340	100%	complete
44 OVEREX			230	230		complete
44 STOCKPILE			500	500	100%	
39/40	6,520	6,520		2,372	36%	
28	6,920	6,920		1,642	24%	
34	26,270	26,270			-	
37	19,430	19,430			-	
Total	123,790	123,680	2,220	70,734	57%	

Note:

$$\% \text{ FS Total Plan To Date} = \frac{\text{Total To Date (including OX/SP)}}{\text{FS Total Plan}}$$



LEGEND

- CHARACTERIZATION SAMPLE LOCATION
- ⊕ CONFIRMATION SAMPLE LOCATION
- ◆ CONFIRMATION SAMPLE LOCATION WITH FIELD DUPLICATE
- TNT [0.84] EXPLOSIVES CONCENTRATION (mg/kg)
- ND NOT DETECTED
- [4.6] LEAD CONCENTRATION (mg/kg)

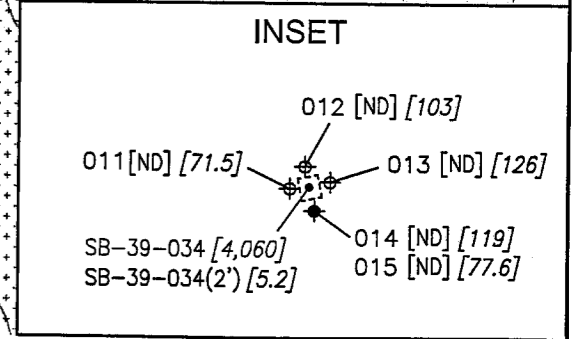
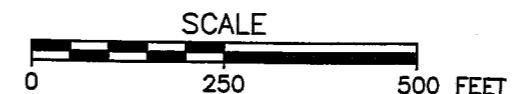
- HAUL ROUTE
- - - AREA TO BE EXCAVATED
- ▭ AREA EXCAVATED TO 1 FT. DEPTH
- ▭ AREA EXCAVATED TO 3.5 FT. DEPTH
- ▨ FUEL BREAK MAINTENANCE
- A SEE TABLE 1. HA 48 RANGE-WIDE WEIGHTED AVERAGE
- ▲ DMM - 60mm

HABITAT QUALITY DESIGNATION:

- ▭ LOW
- ▭ MEDIUM
- ▭ HIGH
- ▭ VERY HIGH

NOTES:

1. CONFIRMATION SAMPLE LOCATIONS ARE IDENTIFIED HERE BY SAMPLE NUMBER. FOR CLARITY, PREFIX HA48-0 IS NOT SHOWN.



		DEPARTMENT OF THE ARMY SACRAMENTO DISTRICT, CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA	
DESIGNED: J. MOSER	FIGURE 1 CONFIRMATION SAMPLING RESULTS HA48		
DRAWN: K. BLACK	FORMER FORT ORD, CALIFORNIA		
CHECKED:	DATE APPROVED:	FILE No.	HA48_excav_confirm

**Working Schedule for Site 39 Field Work
(as of 10/25/2010)**

TASK	HISTORICAL AREA	Pre-Remediation					Remediation									Post-Remediation			
		Veg Clearance	Target Box/Surface MEC	DGM	Target Reacquisition	Subsurface MEC Removal	Surveying	Bio Clearance	Mowing/Li mbing	Site Prep	Excavation	Over-excitation	Transport to OU2 Landfill	Sampling	Tech Memo	Regrading	DGM	Subsurface MEC Removal	Erosion Control
1	27	NA	NA	NA	NA	NA	10/19	10/28	10/28	11/2	11/2 11/4	NA	1/6	11/18	11/19, 3/18, 4/12	7/14	7/14 7/15	9/16, 10/5	
2	27A	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	7/6	8/2	8/2 8/4	9/16	
3	29	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, 4/13	7/12	8/11 8/12	8/17 8/19	9/16, 10/5-6	
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	NA	NA	NA	NA	NA
5	36 (Explosives)	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	4/26, 5/21	7/19	6/7, 7/29- 7/30	9/13 9/16	
6	43	NA	NA	NA	NA	NA	10/20	10/26	NA	2/2	2/8 2/9	NA	3/16	2/9, 2/23	4/20	7/26	7/26	10/13 - 14	
7	33 (Explosives)	NA	NA	NA	NA	NA	10/20	12/10	12/24	1/27	1/27	NA	1/27	2/9	6/22	7/21	7/26	11/8	
8	OU2 Landfill Phase 1	NA	NA	NA	NA	NA	NA	NA	NA	NA	2/16 3/4	NA	NA	NA	NA	NA	NA	NA	NA
9	Austin Stockpile	NA	NA	NA	NA	NA	NA	12/10	12/21	2/1	10/28		10/28	10/28	NA				
10	22	NA	NA	NA	NA	NA	10/20	10/26	12/22	2/4	2/9 2/10	NA	3/16	2/23	4/12	7/14	7/15 7/20	10/14 - 15, 11/8	
11	23	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	6/4	7/14	7/15 7/20, 7/26	11/9	
12	18	NA	NA	NA	NA	NA	10/26-27, 12/3, 12/8-9, 12/15	12/21, 2/4	1/8, 1/11, 2/4, 2/9	2/16	2/17 3/4	3/4	3/16 3/23	3/4, 3/9, 3/31, 4/20	7/12	8/3 8/10	8/3 8/12	10/12 - 13	
13	19	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, 7/22	3/24 5/24	4/13 - 5/26, 6/28	8/23	10/26 10/27	9/20 10/12	11/9 - 12	
14	OU2 Landfill Phase 2	NA	NA	NA	NA	NA	10/27	NA	NA	NA	5/17 7/26	NA	NA	NA	NA	NA	NA	NA	NA
15	26	3/3 3/30	4/8 4/23	4/12 4/30	5/3 7/2	5/10 7/23	6/14 8/3	3/3, 5/17	NA	5/4 6/28	6/28 9/2	9/1	7/12 9/15	8/9 9/14	10/28	11/15	11/15 - 24		
16	39/40	NA	NA	NA	NA	9/16 12/10	5/17 (ex)	7/14	7/21 7/22	9/7 9/15	9/16 12/10		10/26 12/16	9/22 12/10					
17	44	7/8, 7/9	7/30	NA	NA	8/2 9/13	5/17 (ex)	5/25, 6/15, 7/7	7/8, 7/9	7/26 8/2	8/2 9/8	9/8, 10/13	9/8 9/14	8/3 - 9/2, 9/13	11/29		10/13, 10/20	11/1 - 4	
18	48	7/26	7/26 7/30	NA	NA	7/26 7/30	5/17	6/3 6/10	NA	7/26	7/26 7/30	NA	7/26 7/30	8/3, 8/25					
19	28	7/21	8/11 8/27	8/30 8/31	NA	9/23 9/30	6/14 (ex)	7/21	7/21	10/6 10/18	10/19 11/11		10/25 11/18	10/21 11/11					
20	34	7/23 7/28	8/6	10/25 11/04	NA	NA	5/18 (ex)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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