

# **HTW BRAC CLEANUP TEAM MEETING AGENDA**

**Wednesday, November 13, 2014 at 1:30 PM**

**Former Fort Ord, California**

## **Community Relations**

- Status Update
- BCT Minutes Status

## **Operable Unit 1 (HGL)**

- Groundwater Remedy

## **Operable Unit 2**

- Groundwater Remedy/Monitoring
- Treated Water Reuse
- Groundwater Treatment Plant Relocation
- Landfills O&M

## **Sites 2 and 12**

- Groundwater Remedy/Monitoring
- Soil Gas Remedy/Monitoring

## **Operable Unit Carbon Tetrachloride Plume**

- Groundwater Monitoring
- Evaluation

## **Basewide Range Assessment**

- Status Update
- Lead Evaluation

## **Site 39 Remediation**

- Status Update
- Habitat Restoration

## **FFA Schedule**

- Status Update
- Document Schedule

## **Action Items**

## **Calendar Update**

# U.S. Army Community Outreach Update

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## Long Term Actions Underway:

1. Develop report: Analysis of 2013-2014 Community Involvement Program and Analysis of 2013 Community Survey Results. Draft report to be issued December 2014.

## Recent Activities:

1. 25OCT Co-sponsored and participated in National Public Lands Day for the Fort Ord National Monument. An estimated 75 participants attended this event.
2. 28OCT Provided Munitions Safety Presentation to (1) Highland Elementary School (470 students, faculty, and staff) and (2) Parents Night (75 participants). Parents Night presentation was in English and Spanish.
3. 6NOV Participated in 16th Annual Central Coast Invasive Weed Symposium (formerly "War on Weeds") – includes Fort Ord tour.

## Upcoming Activities:

1. 13NOV Provide BLM Area B, MRS-16 presentation to Fort Friends
2. 17NOV Provide Fort Ord cleanup tour for York School Math and Science faculty and staff
3. 25NOV Provide Fort Ord cleanup tour for Naval Postgraduate School class, IT 1500
4. December Begin updates of groundwater fact sheets
5. 21FEB Community Involvement Workshop (Topics: Groundwater, Landfill, Site 39, ESCA)
6. 24FEB Technical Review Committee (Topics; Groundwater, Landfill, Site 39, ESCA)
7. April: Earth Day information booths at Presidio of Monterey, California State University Monterey Bay, Naval Postgraduate School
8. 16-19APR Information Booth at the Sea Otter Classic

## STATUS: RESPONSE to COMMUNITY COMMENTS (RTC)

AR Number	Title/Subject	Status
BW-2721.3	Comments submitted by Fort Ord Environmental Justice Network on the Draft Remedial Investigation / Feasibility Study Addendum for Sites 2/12	In progress
BW-2721.2	Comments submitted by Shea Homes on the Draft Remedial Investigation / Feasibility Study Addendum for Sites 2/12	In progress
BW-2674.2	Comments submitted by Mike Weaver, Fort Ord Community Advisory Group - on the Draft Technical Memorandum Evaluation of Lead Concentrations at Selected Sites, Former Fort Ord, California	In progress
ESCA-0267.2	Comments submitted by community member, Gail Youngblood, on the Group 2 Proposed Plan, CSUMB Off-Campus MRA, FORA ESCA RP	In Progress/Part of CSUMB Off-Campus Group 2 ROD Responsiveness Summary
ESCA-0267.3	Comments submitted by community group member Mike Weaver, Fort Ord Community Advisory Group, on the Group 2 Proposed Plan, CSUMB Off-Campus MRA, FORA ESCA RP - at the June 19, 2013 public meeting	In Progress/Part of CSUMB Off-Campus Group 2 ROD Responsiveness Summary
OE-0793.4	Comments submitted by community member, Mike Weaver, Fort Ord Community Advisory Group, on the Group 2 Proposed Plan, CSUMB Off-Campus MRA, FORA ESCA RP	In Progress/Part of MRS-34 ROD Responsiveness Summary

**Sites 2/12, OU2 and OUCTP  
Sample Frequency Changes  
HTW BCT Meeting  
November 13, 2014**

**Wells Meeting QAPP (Army, 2014) Criteria for Sample Frequency Change\***

		Chemical of Concern
<b>Figure 1, Sites 2 and 12</b>		
MW-02-13-180U	A Meets decision criteria to stop sampling <sup>1</sup>	TCE and Cis-1,2-DCE

**Figure 2, OU2 Upper 180-foot Aquifer**

MW-OU2-09-180R	Q Meets decision criteria to reduce from quarterly sampling to annual sampling <sup>2</sup>	TCE
MW-OU2-31-180R	A Meets decision criteria to stop sampling	TCE
MW-OU2-52-180	A Meets decision criteria to stop sampling	TCE
MW-14-03-180	Q Meets decision criteria to reduce from quarterly sampling to annual sampling	TCE

**Figure 3, OUCTP A-Aquifer**

MP-BW-48-133	A Meets decision criteria to stop sampling	CT
MW-BW-23-A	Q Meets decision criteria to reduce from quarterly sampling to annual sampling	CT
EW-BW-159-A	Q Meets decision criteria to reduce from quarterly sampling to annual sampling	CT
MW-BW-31-A	A Due to the detection of CT above the ACL in this annually sampled well, propose increasing the sampling frequency to quarterly.	CT
MW-BW-83-A	WL Downgradient of MW-BW-74-A, propose moving to a quarterly sampling schedule. Will continue to sample MW-BW-74-A quarterly	CT

**Figure 4, OUCTP Upper 180-Foot Aquifer**

MP-BW-41-202	Q Meets decision criteria to reduce from quarterly sampling to annual sampling	CT
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**Sites 2/12, OU2 and OUCTP  
Sample Frequency Changes  
HTW BCT Meeting  
November 13, 2014**

**Figure 5, OUCTP Lower  
180-Foot Aquifer**

MP-BW-31-407	A	Meets decision criteria to stop sampling	CT
MP-BW-34-292	A	Meets decision criteria to stop sampling	CT
MP-BW-34-422	A	Meets decision criteria to stop sampling	CT
MP-BW-35-366	Q	Meets decision criteria to reduce from quarterly sampling to annual sampling	CT
MP-BW-35-402	A	Meets decision criteria to stop sampling	CT
MP-BW-38-327	A	Meets decision criteria to stop sampling	CT and 1,2-DCA
MP-BW-39-350	Q	Meets decision criteria to reduce from quarterly sampling to annual sampling	1,2-DCA
MP-BW-52-338	Q	Meets decision criteria to reduce from quarterly sampling to annual sampling	CT
MP-BW-52-388	Q	Meets decision criteria to reduce from quarterly sampling to annual sampling	CT
MP-BW-52-408	A	Meets decision criteria to stop sampling	

Notes:

\*Based on data collected through the 3rd quarter of 2014.

Q = Well currently sampled on a quarterly schedule

A = Well currently sampled on an annual schedule

WL = Well currently not sampled, water level only

<sup>1</sup> If two consecutive annual monitoring results show concentrations of COCs below their respective LOQs, or below 10% of their respective ACLs, whichever is greater, then the well may be proposed to be removed from the sampling program (Army, 2014).

<sup>2</sup> If four consecutive quarters of monitoring data show concentrations of COCs below their respective limits of quantitation (LOQs), or below 10% of their respective aquifer cleanup levels (ACLs), whichever is greater, then the well may be proposed for annual sampling (Army, 2014).

**Sites 2/12, OU2 and OUCTP  
Sample Frequency Changes  
HTW BCT Meeting  
November 13, 2014**

Department of the Army  
(Army), 2014

Final Quality Assurance Project Plan (QAPP), Former Fort Ord, California, Volume I, Appendix A, Groundwater Extraction and Treatment Systems at Operable Unit 2 and Sites 2 and 12, Groundwater Monitoring Program at Sites 2 and 12, Operable Unit 1, Operable unit 2, and Operable Unit Carbon Tetrachloride Plume, February. (QAPP, BW# AR-2675A)

**Former Fort Ord – Operable Unit (OU)-1 Status Update  
Groundwater Remediation, Well Destruction, and Treatment Plant Decommissioning  
Marina, California  
Base Closure Team Meeting  
13 November 2014**

**OU-1 On-Post Activities for October 2014**

Prepared by HydroGeoLogic, Inc., Roy Evans, Project Manager

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**Attendees: (to be revised after meeting)**

<b>Individual</b>	<b>Attended?</b>	<b>Individual</b>	<b>Attended?</b>
James Specht, USACE		Grant Himebaugh, RWQCB	
Teresa Rodgers, USACE		Edward Ticken, AMEC	
Alex Kan, USACE		Jeff Fenton, AMEC	
Bonnie McNeil, USACE		Derek Lieberman, Ahtna	
Cory Koger, USACE		Brad Clark, Ahtna	
William Collins, BRAC		Holly Dillon, Ahtna	
Tom Ghigliotto, Chenega <sup>1</sup>		Kevin Ghalambor, Burleson	
Melissa Broadston, Chenega <sup>1</sup>		Peter Kelsall, CB&I	
Bart Kowalski, Chenega <sup>1</sup>		Steve Crane, Gilbane	
Cary Stiebel, Chenega <sup>1</sup>		Erin Caruso, Gilbane	
Lewis Mitani, EPA		Lindsay Alexander, Gilbane	
Martin Hausladen, EPA		Larry Friend, Gilbane	
Kimberly Gettman, DTSC		Kevin Siemann, Gilbane	
Franklin Mark, DTSC		Roy Evans, HGL	
Min Wu, Ph.D., DTSC		Kevin Wierengo, HGL	
Edward Walker, DTSC		Sean McStay, UCSC	
Steve Sterling, DTSC			
X = attended in person or by telephone; blank indicates absent from the meeting			

<sup>1</sup>Chenega staff supporting the BRAC  
Ahtna = Ahtna Engineering Services  
BRAC = Base Realignment and Closure Fort Ord Office  
CB&I = Chicago Bridge & Iron, Inc.  
DTSC = California Department of Toxic Substances Control

EPA = U.S. Environmental Protection Agency  
HGL = HydroGeoLogic, Inc.  
RWQCB = Regional Water Quality Control Board  
UCSC = University of California, Santa Cruz  
USACE = U.S. Army Corps of Engineers

**OU-1 Treatment Plant Operations**

HGL reported at the October Base Closure Team (BCT) meeting that the Northwest Treatment System (NWTs) shut down at approximately 1 a.m. on 15 October 2014. Since system startup in 2006, the NWTs has pumped approximately 212 million gallons of groundwater and removed approximately 6.0 pounds of total volatile organic compounds, primarily trichloroethene (TCE).

The cause of the shutdown was a short circuit in the SMART meter. PG&E has temporarily disconnected power to the plant pending replacement of the faulty equipment. As agreed at the October BCT meeting, the plant will remain offline pending review of the results from the upcoming December sampling event. After power is restored, we will determine if there was any damage to the NWTs electrical equipment and/or process control system and make any necessary repairs to restore operability.

### **OU-1 Groundwater Quality Data**

Tables 1A and 1B show the validated TCE and cis-1,2-dichloroethene concentrations, respectively, found in the extraction wells and treatment system in the September 2014 sampling event. All validated TCE results in monitoring wells from that sampling event are presented on Table 2. A Figure showing the September 2014 TCE concentrations is included for reference in Attachment 1. The next planned sampling event is in December 2014.

### **Reporting/Federal Facility Agreement Schedule**

All scheduled submittals have been made for primary and secondary deliverables. The status of submitted and anticipated reports for 2014 is summarized in Table 3. The proposed attainment sampling well location network and sampling schedule, as well as consideration of emerging contaminants were discussed during the September BCT meeting. Preliminary comments and additional EPA guidance concerning implementation of groundwater monitoring to support remedy complete evaluations were provided by the BCT on 05 November 2014. The Draft OU-1 Exit Strategy Technical Memorandum will be prepared after reviewing the new guidance information and submitted for regulatory agency comment. Additional information concerning the Exit Strategy and emerging contaminants is included in Attachment 2 to facilitate further discussion during this meeting.

### **OU-1 Weed Control and Rare Plant Monitoring**

The U.S. Fish and Wildlife Service required that the third year of rare plant monitoring be completed at the former well destruction sites and this survey was completed between 25 April 2014 and 02 May 2014. Additional monitoring was performed in May and June during the well destruction effort at well sites destroyed within the Fort Ord Natural Reserve (FONR). The 2014 FONR Impact Assessment and Habitat and Rare Plant Species Survey Results Report was submitted to the Army for distribution on 10 October 2014.

### **Site Exit/Closure Strategy**

Based on data from the September sampling event, TCE concentrations have met the aquifer cleanup level at all OU-1 monitoring wells. The exit strategy is based on demonstrating that the cleanup objectives of the Record of Decision (ROD) regarding human health protectiveness have been met and, therefore, the ROD cleanup goals have been attained. The human health risk corresponding to Chemical of Concern concentrations observed at the site have met the human health protectiveness objectives for several years.

An OU-1 Exit Strategy Technical Memorandum is being prepared to present the case for OU-1 closure based on cleanup progress to date. The technical memorandum will include



recommendations for performing attainment monitoring that incorporate existing data to the maximum extent. Selected topics from the technical memorandum are summarized in Attachment 2 to facilitate discussion during the BCT meeting.

### **Well Destruction and Treatment Plant Demolition**

Well destruction within OU-1 is complete pending review of attainment monitoring results.

#### **Action Items:**

- The Army will pursue ROE agreements for Armstrong Ranch.
- HGL will respond to regulatory agency and public comments on Draft OU-1 Exit Strategy Technical Memorandum

#### **Ongoing:**

- Submit draft minutes for previous BCT meeting(s)—complete through September 2014.
- Submit approved final minutes for previous BCT meeting(s) — complete through September 2014.

**Fort Ord HTW BCT Meeting  
13 November 2014**

**Fort Ord Operable Unit 1  
Groundwater Remediation, Well Destruction, and Treatment Plant Decommissioning**

**ATTACHMENT 1**

**Reference Table(s) and Figure(s)**

**Table 1A**  
**TCE in OU-1 FONR Groundwater Remediation System – Performance Monitoring**  
**BCT for Former Fort Ord – 22 October 2014**

Began:	FONR Extraction Well (listed from south to north)					Boundary Extraction Well (from west to east)				NWTS												
	Nov-10	Oct-07				Jul-06				INFLUENT	MIDPOINT	EFFLUENT										
Date	IW-10	MW-87	EW-71	MW-85	MW-46AD	EW-63	EW-60	EW-66	EW-62													
TCE (µg/L)																						
11/9/07	Used as monitoring well until pump installed in October 2010. Pumping began 03 November 2010.	16		13		19		14		ND	ND	1.7		ND	11	ND	ND					
1/18/08		11		11		8.9		8.2		ND	ND	1.2		ND	6.0	ND	ND					
3/18/08		11		14		6.7		5.8		ND	0.29	1.5		ND	5.6	ND	ND					
5/27/08		9.7		18		2.5		6.1		ND	ND	1.8		ND	3.9	ND	ND					
7/21/08		9.1		14		4.4		3.4		ND	0.78	1.4		ND	3.6	ND	ND					
9/29/08		9.3	J	15	J	4.3	J	2.9	J	ND	0.90	J	1.7	J	ND	3.8	J	0.19	J	ND		
12/1/08		5.8		11		2.6		1.6		ND	0.82		0.91		ND	2.7		0.35	J	ND		
1/26/09		5.9		10		2.2		1.2		ND	0.48	J	0.78		ND	2.4		ND		ND		
3/9/09		5.8		9.9		2.1		1.2		ND	0.95		0.86		ND	2.7		ND		ND		
6/11/09		6.9		11		2.4		1.5		ND	0.88		1.7		ND	2.6		0.14	J	ND		
9/15/09		6.8		9.4		1.7		0.78		ND	inactive		1.1		0.036	J	2.3		0.35	J	ND	
12/14/09		6.9		7.5		0.84		not sampled		not sampled	inactive		0.94		not sampled	2.3		0.65	J	ND		
3/22/10		7.2		8.5		0.62		0.55		inactive	ND		0.90		inactive	2.3		ND		ND		
6/21/10		7.4		6.5		0.90		0.40	J	inactive	0.86		0.58		inactive	2.1		ND		ND		
9/20/10		7.7		6.6		0.83		0.35	J	discontinued	0.63		0.49	J	inactive	2.3		not sampled		ND		
12/16/10		5.2		6.9		5.2		0.58		0.28	J	discontinued	0.72		0.42	J	inactive	2.6		0.18	J	ND
3/7/11		5.1		6.0		4.6		0.55		0.60	discontinued		0.87		0.42	J	inactive	2.5		0.59		ND
6/7/11	4.2		6.1		4.0		0.78		0.63	discontinued		0.76		0.36	J	inactive	2.6		1.0		ND	
9/20/11	4.5		6.2		4.2		1.10		0.38	J	discontinued	0.57		0.36	J	inactive	2.5		1.7		ND	
12/7/11	3.8		5.1		3.7		not sampled		not sampled	discontinued		inactive		0.27	J	inactive	1.8		2.1		0.13	J
3/15/12	3.7		5.5		3.8		0.70		0.23	J	discontinued	inactive		0.38	J	inactive	0.81		0.32	J	ND	
9/25/12	--		5.3		4.4		--		--	discontinued		inactive		0.19	J	inactive	1.8		0.72	J	ND	
1/8/13	--		5.4		--		--		--	discontinued		ND		0.19	J	inactive	1.5		--		ND	
3/27/13	--		4.8		--		--		--	discontinued		ND		0.23	J	inactive	1.5		--		ND	
6/26/13	--		4.4		--		--		--	discontinued		--		--		inactive	1.7		--		ND	
9/18/13	--		4.7		1.9		--		--	discontinued		0.17	J	0.31	J	inactive	2.0		--		ND	
12/17/13	2.8		4.2		--		--		--	discontinued		--		--		inactive	2.1		--		--	
3/27/14	--		3.4	A	0.89	A	--		--	discontinued		0.22	J/A	0.29	J/A	inactive	1.7		0.92	J/A	ND	A
6/27/14	--		3.7		--		--		--	discontinued		--		--		inactive	0.28		0.39	J	ND	
9/2/14	2.2		4.2		0.88		--		--	discontinued		0.25	J	0.26	J	inactive	1.0		0.41	J	ND	
Notes:	<b>Italics (if used) indicate data not yet validated</b>					<b>Bold font indicates concentration &gt; ACL</b>																
ACL - aquifer cleanup level	-- - Not sampled					µg/L - micrograms per liter							J - Data qualified as estimated									
ND - nondetect	TCE - trichloroethene					NWTS - Northwest Treatment System							FONR - Fort Ord Natural Reserve									
Blue font indicates the concentration is calculated using the weighted average of the active pumping wells.																						

**Table 1B**  
**cis-1,2-DCE in OU-1 FONR Groundwater Remediation System – Performance Monitoring**  
**BCT for Former Fort Ord – 22 October 2014**

Began:	FONR Extraction Well (listed from south to north)						Boundary Extraction Well (from west to east)						NWTS							
	Nov-10	Oct-07					Jul-06													
Date	IW-10	MW-87	EW-71	MW-85	MW-46AD	EW-63	EW-60	EW-66	EW-62	INFLUENT	MIDPOINT	EFFLUENT								
<b>cis-1,2-DCE (µg/L)</b>																				
11/09/07	Used as monitoring well until pump installed in October 2010. Pumping began 03 November 2010.	1.9		1.6		2.3		1.70		ND	ND	ND	ND	1.3	ND	ND				
01/18/08		1.20		1.40		1.00		1.20		ND	ND	0.11	ND	0.66	ND	ND				
03/18/08		1.20		1.50		0.74		0.63		ND	ND	ND	ND	0.59	0.11	ND				
05/27/08		0.88		2.10		0.26		0.74		ND	ND	ND	ND	0.36	0.21	ND				
07/21/08		0.80		1.50		0.52		0.37		ND	ND	ND	ND	0.41	0.34	ND				
09/29/08		0.99		1.60		0.54		0.30		ND	ND	0.13	ND	0.42	0.42	0.12				
12/01/08		0.67		1.30		0.33		0.21	J	ND	ND	ND	ND	0.27	J	0.37	J	0.19	J	
01/26/09		0.63		1.20		0.29	J	0.12	J	ND	ND	ND	ND	0.26	J	0.24	J	ND		
03/09/09		0.62		1.20		0.29	J	0.13	J	ND	ND	ND	ND	0.23	J	0.26	J	ND		
06/11/09		0.71		1.10		0.30	J	0.13	J	ND	ND	0.14	J	ND	0.24	J	0.28	J	ND	
09/15/09		0.80		1.00		0.22	J	0.08	J	ND	inactive	0.03	J	ND	0.22	J	0.37	J	0.03	J
12/14/09		0.67		0.65		0.10	J	not sampled		not sampled	inactive	ND	J	not sampled	0.21	J	0.30	J	0.11	J
03/22/10		0.67		0.79		ND		ND		inactive	ND	ND		inactive	0.20	J	0.11	J	0.13	J
06/21/10		0.67		0.53		0.14	J	ND		inactive	ND	ND		inactive	0.20	J	0.23	J	ND	
9/20/10		0.66		0.46	J	ND		ND		discontinued	ND	ND		inactive	0.23	J	not sampled		ND	
12/16/10		0.55		0.66		0.35	J	ND	J	ND	discontinued	ND		inactive	0.27	J	0.28	J	ND	
3/7/11	0.37	J	0.52		0.28	J	0.11	J	ND	discontinued	ND		inactive	0.23	J	0.30	J	ND		
6/7/11	0.35	J	0.55		0.29	J	ND		ND	discontinued	ND		inactive	0.18	J	0.31	J	0.15	J	
9/20/11	0.25	J	0.46	J	0.21	J	ND		ND	discontinued	ND		inactive	0.17	J	0.19	J	0.30	J	
12/7/11	0.27	J	0.48	J	0.19	J	not sampled		discontinued	inactive	ND		inactive	0.16	J	0.17	J	0.23	J	
3/15/12	0.15	J	0.40	J	0.22	J	0.15	J	ND	discontinued	inactive		inactive	ND		0.24	J	ND		
9/25/12	--		0.39	J	0.23	J	--		--	discontinued	inactive		inactive	ND		0.24	J	ND		
1/8/13	--		0.35	J	--		--		--	discontinued	ND		inactive	0.12		--		--		
3/27/13	--		0.34	J	--		--		--	discontinued	ND		inactive	0.12		--		--		
6/26/13	--		0.31	J	--		--		--	discontinued	--		inactive	0.27		--		--		
9/18/13	--		ND		ND		--		--	discontinued	ND		inactive	ND		--		ND		
12/17/13	ND		0.19	J	--		--		--	discontinued	--		inactive	0.23		--		--		
3/27/14	--		0.16	J/A	--		--		--	discontinued	ND	A	ND	A	inactive	0.21	ND	A	ND	A
6/27/14	--		ND		--		--		--	discontinued	--		--	inactive	ND	0.43	J	0.17	J	
9/2/14	ND		0.21	J	ND		--		--	discontinued	ND		ND	inactive	ND	0.48	J	ND		
Notes:	<b>Italics (if used) indicate data not yet validated</b>						<b>Bold font indicates concentration &gt; ACL</b>													
ACL - aquifer cleanup level	-- - Not sampled						µg/L - micrograms per liter						J - Data qualified as estimated							
ND - nondetect	TCE - trichloroethene						NWTS - Northwest Treatment System						FONR - Fort Ord Natural Reserve							
NA - Not Available	Blue font indicates the concentration is calculated using the weighted average of the active pumping wells.																			

**Table 2**  
**Validated OU-1 Sampling Results for September 2014**

Sample Point	Location	TCE	
		$\mu\text{g/L}$	Qualifier
<b>Treatment plant</b>			
NWTS-Influent	Treatment Plant	1.0	
NWTS-Midpoint	Treatment Plant	0.41	J
NWTS-Effluent	Treatment Plant	ND	
<b>Extraction wells</b>			
EW-OU1-60-A*	NW Boundary	0.25	J
EW-OU1-66-A*	NW Boundary	0.26	J
EW-OU1-71-A*	Central FONR	0.88	
MW-OU1-87-A*	Central FONR	4.2	
IW-OU1-10-A*	Central FONR	2.2	
<b>Monitoring wells</b>			
MW-OU1-58-A	NW Boundary	ND	
MW-OU1-57-A	NW Boundary	ND	
MW-OU1-61-A	NW Boundary	4.7	
MW-OU1-61-A	Duplicate	4.0	
EW-OU1-72-A	Central FONR	0.78	
MW-OU1-86-A	Central FONR	0.42	J
PZ-OU1-49-A1	Central FONR	1.2	
MW-OU1-88-A	Central FONR	4.7	
MW-OU1-26-A	Central FONR	2.7	
PZ-OU1-10-A1	Central FONR	2.4	
EW-OU1-52-A	Central FONR	2.9	
EW-OU1-53-A	Central FONR	1.9	

\* Operating extraction well - samples collected from port on discharge pipe.

$\mu\text{g/L}$  = micrograms per liter

FONR = Fort Ord Natural Reserve

ND = nondetect

TCE = trichloroethene

**Table 3**  
**Current Deliverable Schedule**  
**Former Fort Ord, Marina, CA – 13 November 2014**

<b>Deliverable Title</b>	<b>Submittal</b>	<b>Review Comments Due</b>	<b>Status/Remarks</b>
<b><i>Primary Deliverables</i></b>			
Final UFP-QAPP	May 2014	Received	Submitted 29 May 2014
<b><i>Secondary Deliverables</i></b>			
Final 2014 Semiannual Groundwater Monitoring Report	June 2014	August 2014 <sup>1</sup>	Submitted 25 June 2014
Draft 2014 Annual Groundwater Monitoring Report	November 2014	December 2014	In progress
Draft Exit Strategy Technical Memorandum	October 2014	December 2014	In progress
Site Safety and Health Plan Update	September 2014	TBD	
UFP-QAPP 2014 Update	TBD	TBD	To be scheduled after determination of cleanup attainment monitoring sampling requirements
<b><i>Completed Recent Submittals</i></b>			
Preliminary Draft Health & Safety Plan – OU-1 O&M / LTM	5 November 2013	19 November 2013	Army comments addressed
Draft 2013 Annual and 3 <sup>rd</sup> Quarter Groundwater Monitoring Report	January 2014	March 2014	Submitted 17 January 2014
Draft UFP-QAPP	March 2014	May 2014	Submitted 04 March 2014
Draft Work Plan for Well Destruction and Treatment Plant Demolition	February 2014	April 2014	Submitted 11 February 2014
Final 2013 Annual and 3 <sup>rd</sup> Quarter Groundwater Monitoring Report	April 2014	NA	Submitted 04 April 2014
Final Work Plan for Well Destruction and Treatment Plant Demolition	April 2014	NA	Submitted 04 April 2014
Draft Health & Safety Plan – OU-1 O&M/LTM	May 2014	Received	Draft accepted as Final
Draft Well Destruction and Treatment Plant Demolition Completion Report	August 2014	September 2014	Draft accepted as Final Submitted 03 October 2014

<sup>1</sup> The Semiannual Groundwater Monitoring Report is submitted as a final document but review comments are accepted. Any comments are addressed in the Annual Groundwater Monitoring Report.

**Fort Ord HTW BCT Meeting  
13 November 2014**

**Fort Ord Operable Unit 1  
Groundwater Remediation, Well Destruction, and Treatment Plant Decommissioning**

**ATTACHMENT 2**

**DISCUSSION POINTS**

**EXIT STRATEGY AND EMERGING CONTAMINANTS**

## DISCUSSION POINTS

### EXIT STRATEGY AND EMERGING CONTAMINANTS

The following summary presents an overview of key elements of the proposed Exit Strategy based on the discussions held at the September BCT meeting and review of the EPA guidance documents provided on 05 November 2014:

- U.S. Environmental Protection Agency, OSWER Directive 9200.2-144. Groundwater Remedy Completion Strategy, May 2014. EPA, 2014a).
- U.S. Environmental Protection Agency, OSWER Directive 9283.1-44. Recommended Approach for Evaluating Completion of Groundwater Restoration, August 2014. (EPA, 2014b).

The proposed strategy is based on the historic data from the OU-1 groundwater Long Term Monitoring (LTM) program and departs from the specific guidance (EPA, 2014b) in some cases—primarily in the number of samples used in assessing completion of the remediation monitoring (RM) and the attainment monitoring (AM) efforts. The Draft Exit Strategy Technical Memorandum will include supporting information to justify these departures. This approach is consistent with the guidance (EPA, 2014a—page 4), as noted below:

**“This guidance does not alter or supersede existing CERCLA guidance (including existing policy regarding RAOs or cleanup levels). While designed to promote a consistent national approach for implementing groundwater remedies to completion, the recommendations contained within this document are neither substitutions for CERCLA requirements or EPA’s regulations, nor are they regulation themselves. EPA, federal, state, tribal and local decision makers retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance where appropriate.”**

#### **Proposed Attainment Monitoring**

Monitoring wells that have shown long-term history of meeting the Aquifer Cleanup Levels (ACLs) specified in the Record Of Decision (ROD), are located outside of historic plume boundaries, or do not merit further sampling were excluded from the attainment monitoring network. These wells are shown in Table 2. Figure 1 shows the results of the September 2014 sampling event for TCE. The remaining 8 existing OU-1 monitoring wells are located along the main axis of plume migration and will serve as the attainment monitoring points. These wells are identified in Table 3 and shown on Figure 2.

The existing OU-1 pump and treat operation ceased on 15 October and will remain off-line pending review of each attainment monitoring event. Four samples from each well in the attainment monitoring network will be collected and analyzed for all OU-1 chemicals of concern (COC). The resulting data set will be analyzed for the average concentration and trend at each well. The results of that analysis will be evaluated to determine if attainment monitoring is complete.

The proposed attainment monitoring frequency is monthly. Please note this is a change from the every-other-month cycle discussed earlier. This frequency is the minimum acceptable frequency identified in the EPA guidance (EPA, 2014b).



## Emerging Contaminants

During discussions with the regulatory agencies concerning the acceptability and implementation of the exit strategy described above, the agencies expressed concern that the compounds perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) may have been used during fire training activities at the OU-1 source area. These compounds have been used as part of fire-fighting foam and have been identified by the EPA as emerging contaminants. Information concerning the toxicity, fate, and transport characteristics for PFOS and PFOA is presented in Attachment D (EPA 2014b, 2014c). Although drinking water standards for these chemicals have not been established, EPA has developed Preliminary Health Advisory (PHA) standards for concentrations in groundwater (Attachment D). The PHAs for groundwater for PFOS and PFOA are 0.4  $\mu\text{g/L}$  and 0.2  $\mu\text{g/L}$ , respectively. Although these compounds were not identified in the OU-1 ROD, the regulatory agencies stated that the attainment monitoring sampling program must include these potential contaminants in order to evaluate the case for OU-1 closure.

Consequently, the attainment monitoring network wells listed in Table 3 will also be sampled for PFOS and PFOA during either the December 2014 or January 2015 sampling event (depending upon the time required to revise the Quality Assurance Project Plan and obtain analytical laboratory support). If either compound is detected in any well at a concentration greater than the corresponding PHA during this sampling event, then the remediation effort will resume and PFOS and PFOA sampling will be extended as noted in the following paragraph. If neither compound is detected above the method detection limit in any sample, then a second (confirmation) set of samples and analysis for PFOS and PFOA will be performed in the next scheduled sampling event (in either January 2015 or February 2015). If the confirmation samples also show that all PFOS and PFOA concentrations are less than the corresponding method detection limit, then collection and analysis for PFOS and PFOA will be terminated. If either compound is detected in any well at a concentration less than the corresponding PHA during the confirmation sampling, then PFOS and PFOA sampling will be extended through four sampling periods. The decision logic described above is illustrated in Figure 3.

The PFOS and PFOA samples will be collected using low flow sampling methods and analyzed using EPA Method 537 or an alternative approved method with method detection limits less than the PHA concentrations. If the PFOS and PFOA concentrations in all samples are less than their corresponding PHA value, then site closure activities will be based on the results of the attainment monitoring for the COCs specified in the ROD. If the PFOS or PFOA concentration in any sample exceeds the corresponding PHA, then the pump and treat system will resume operation and the attainment monitoring sample results will be evaluated to develop an acceptable path forward to complete the OU-1 remediation effort and attain site closure.

**Table 2**  
**Wells Excluded from the Verification Monitoring Well Network**  
**OU-1, Former Fort Ord, California**

Existing Monitoring Well Identification	Year Installed	Sample Results Summary	Most Recent TCE Concentration			Initial Sample	Total Number of Samples Collected	Number Samples with TCE > ACL
			µg/L	Qualifier	Sample Date			
<i>Verification Complete Based on Previous Sampling</i>								
EW-OU1-49-A	2004	Sampling was suspended in 2008 due to the proximity to PZ-OU1-49-A1 (these locations are 30 feet apart), which consistently had higher TCE concentrations than EW-OU1-49-A. PZ-OU1-49-A1 is included in the verification network.	8.5		3/14/2007	3/15/2006	6	6
EW-OU1-72-A	2006	Last 11 samples ND or < 1 µg/L.	0.78		9/2/2014	11/8/2006	16	3
IW-OU1-73-A	2006	Injection well installed outside of the TCE plume.	NA		NA	NA	NA	NA
IW-OU1-74-A	2006	Injection well installed outside of the TCE plume.	NA		NA	NA	NA	NA
MW-OU1-27-A	1998	Samples have been < ACL and < 1 µg/L since 2008.	0.33	J	3/8/2011	6/7/2006	11	3
MW-OU1-46-A	2001	Well does not fully penetrate A-Aquifer.	NA		NA	NA	NA	NA
MW-OU1-50-A	2004	Samples have been ND since March 2010.	ND		9/18/2013	5/18/2006	30	16
MW-OU1-56-A	2004	All COCs have been ND or < RL in all historical samples.	ND		5/22/2007	3/16/2006	10	0
MW-OU1-57-A	2004	All COCs have been ND since January 2007.	ND		9/2/2014	3/16/2006	34	8
MW-OU1-58-A	2004	All COCs have been ND or < RL since June 2008.	0.15	J	1/8/2013	5/18/2006	34	0
MW-OU1-59-A	2004	Quarterly sampling from 2006 through 2008 contained all ND results.	ND		9/30/2008	3/16/2006	8	0
MW-OU1-67-A	2006	Decreasing trend observed since March 2007.	0.63		9/20/2011	5/18/2006	22	0
MW-OU1-68-A	2006	Last 15 samples have been ND (2006 through 2009).	ND		3/10/2009	5/18/2006	20	0
MW-OU1-82-A	2006	Last 9 samples have been < 1.4 µg/L .	0.61		9/22/2011	11/8/2006	15	0
MW-OU1-83-A	2006	Last 6 samples have been ND or < RL (2008 through 2011).	0.15	J	9/22/2011	11/8/2006	12	0
MW-OU1-84-A	2006	Last 5 samples have been ND (2008 through 2011).	ND		9/22/2011	11/8/2006	12	4
MW-OU1-86-A	2006	Last 5 samples have been < 1 µg/L.	0.42	J	9/2/2014	11/7/2006	19	0
PZ-OU1-02-A1	2004	Piezometer adjacent to IW-OU1-02-A.	NA		NA	NA	NA	NA
PZ-OU1-46-AD2	2005	Piezometer at extraction well MW-OU1-46-AD.	NA		NA	NA	NA	NA

**Notes:**

µg/L = micrograms per liter  
 < = less than  
 > = greater than  
 ACL = Aquifer Cleanup Level  
 COC = contaminant of concern

EW = extraction well  
 IW = injection well  
 J = Data qualified as estimated.  
 MW = monitoring well  
 NA = not available, location has not been sampled

ND = nondetect  
 OU1 = Operable Unit 1  
 PZ = piezometer  
 RL = reporting limit  
 TCE = trichloroethene

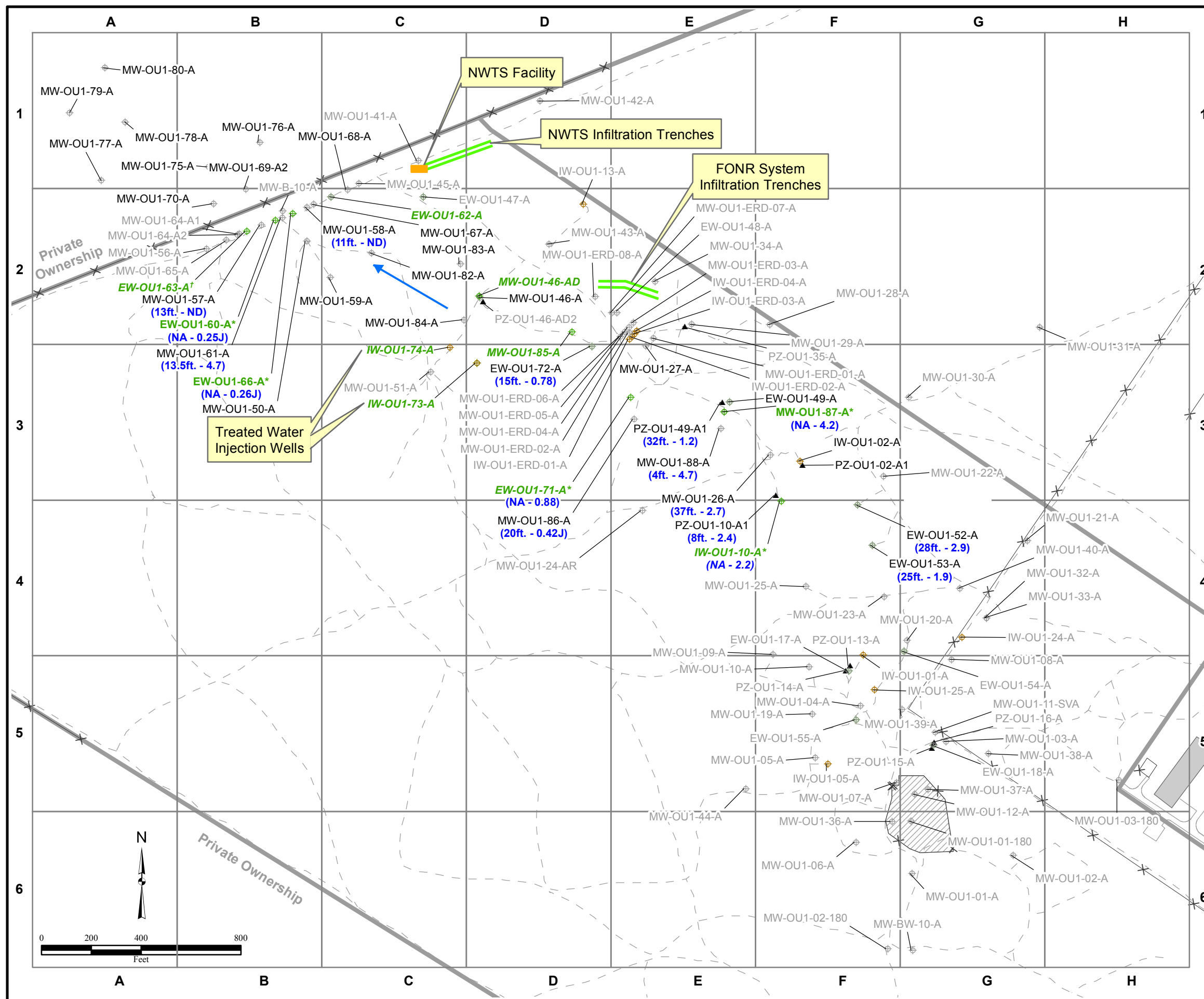
**Table 3**  
**Verification Monitoring Well Network**  
**OU-1, Former Fort Ord, California**

Existing Monitoring Well Identification	Year Installed	Sample Results Summary	Most Recent TCE Concentration			Proposed Verification Sampling			
			$\mu\text{g/L}$	Qualifier	Sample Date	December 2014	February 2015	April 2015	June 2015
<i>Proposed Monitoring Well Verification Network</i>									
EW-OU1-52-A	2004	Last 3 samples < ACL (collected in 2012, 2013, & 2014)	2.9		09/02/2014		X		
EW-OU1-53-A	2004	Last 2 samples < ACL (collected in 2012 & 2014)	1.9		09/02/2014	X	X		
IW-OU1-02-A	2004	Last 5 consecutive samples < ACL (collected in 2010 & 2011)	3.8		09/21/2011		X		
MW-OU1-26-A	1998	Last 5 consecutive samples < ACL (collected in 2010 & 2011)	2.7		09/02/2014		X		
MW-OU1-61-A	2006	Last sample collected was < ACL	4.7		09/02/2014	X	X	X	X
MW-OU1-88-A	2006	Last 3 samples below the ACL (4.5 $\mu\text{g/L}$ - 4.7 $\mu\text{g/L}$ )	4.7		09/02/2014	X	X		
PZ-OU1-10-A1	2005	Last 3 samples < ACL (collected in 2012, 2013, & 2014)	2.4		09/02/2014		X		
PZ-OU1-49-A1	2004	Last 11 Consecutive samples < ACL (collected in 2012, 2013, & 2014). Note: Located next to EW-OU1-49-A - see Table 2.	1.2		09/02/2014		X		

**Notes:**

- < = less than
- $\mu\text{g/L}$  = micrograms per liter
- ACL = Aquifer Cleanup Level
- EW = extraction well
- IW = injection well
- MW = monitoring well
- OU1 = Operable Unit 1
- PZ = piezometer
- TCE = trichloroethene

**Figure 1**  
**OU-1 FONR A-Aquifer**  
**TCE Concentration in Groundwater**  
**September 2014**  
**Former Fort Ord, CA**

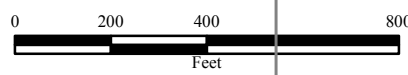


**Legend**

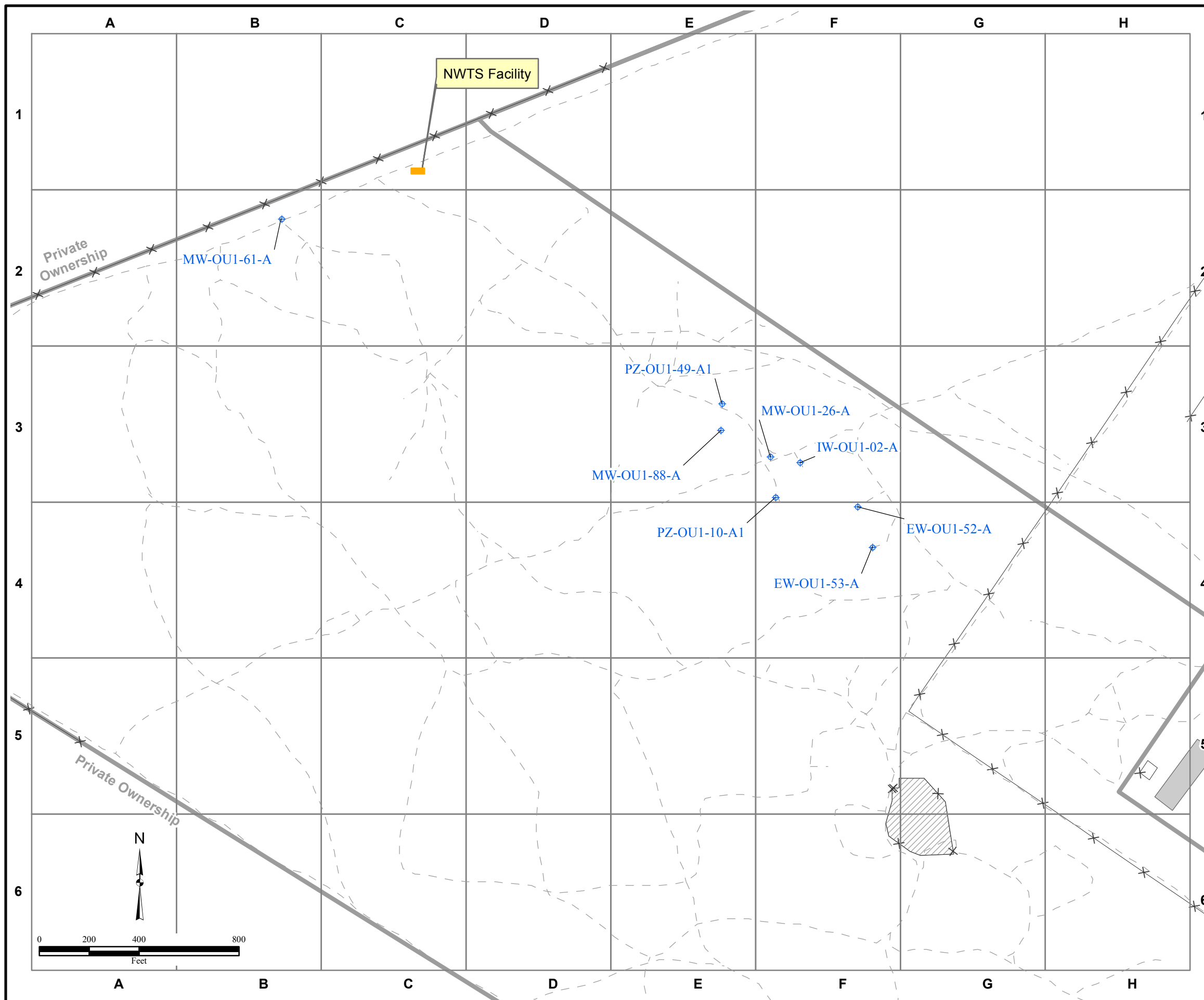
- ⊕ Well
- ⊕ Extraction Well
- ⊕ Injection Well
- ▲ Piezometer or 2-Inch Well
- Groundwater Flow Direction
- ⊕ MW-OU1-21-A Well Destroyed
- MW-OU1-61-A Location with September 2014 TCE Concentrations at or above ACL (5 µg/L)
- (13.5ft. - 13) September 2014 TCE Result (µg/L)
- Sample Elevation (feet above mean sea level)
- 5 TCE contour based on September 2014 Data
- - - Trail/Unimproved Road
- × Fence
- Treated Water Infiltration Trench
- Property Boundary
- Building
- ▨ Former Fire Drill Area

Notes:  
Units of TCE concentration are in micrograms per liter.  
FONR = Fort Ord Natural Reserve  
NWTS = Northwest Treatment System  
ACL = Aquifer Cleanup Level  
ND = nondetect  
NA = Depth is not applicable - sample is from pumping well  
µg/L = micrograms per liter  
Wells shown with an asterisk were not used to develop contour boundaries.  
Wells for which no data are posted were not sampled.  
J = Estimated value  
Green font indicates extraction or injection well.  
Italicized font shows pumping suspended.  
† = Disconnected extraction well. No longer operable.

\\gst-srv-01\HGLGIS\F1\_Ord\MSIW\OU-1 Exit Strategy Technical Memorandum\Fig. 1-1 FONR A-Aquifer TCE Groundwater Concentration.mxd  
9/26/2014 SS  
Source: HGL



**Figure 2**  
**OU-1 Monitoring Well**  
**Verification Network Location**  
**Former Fort Ord, CA**



**Legend**

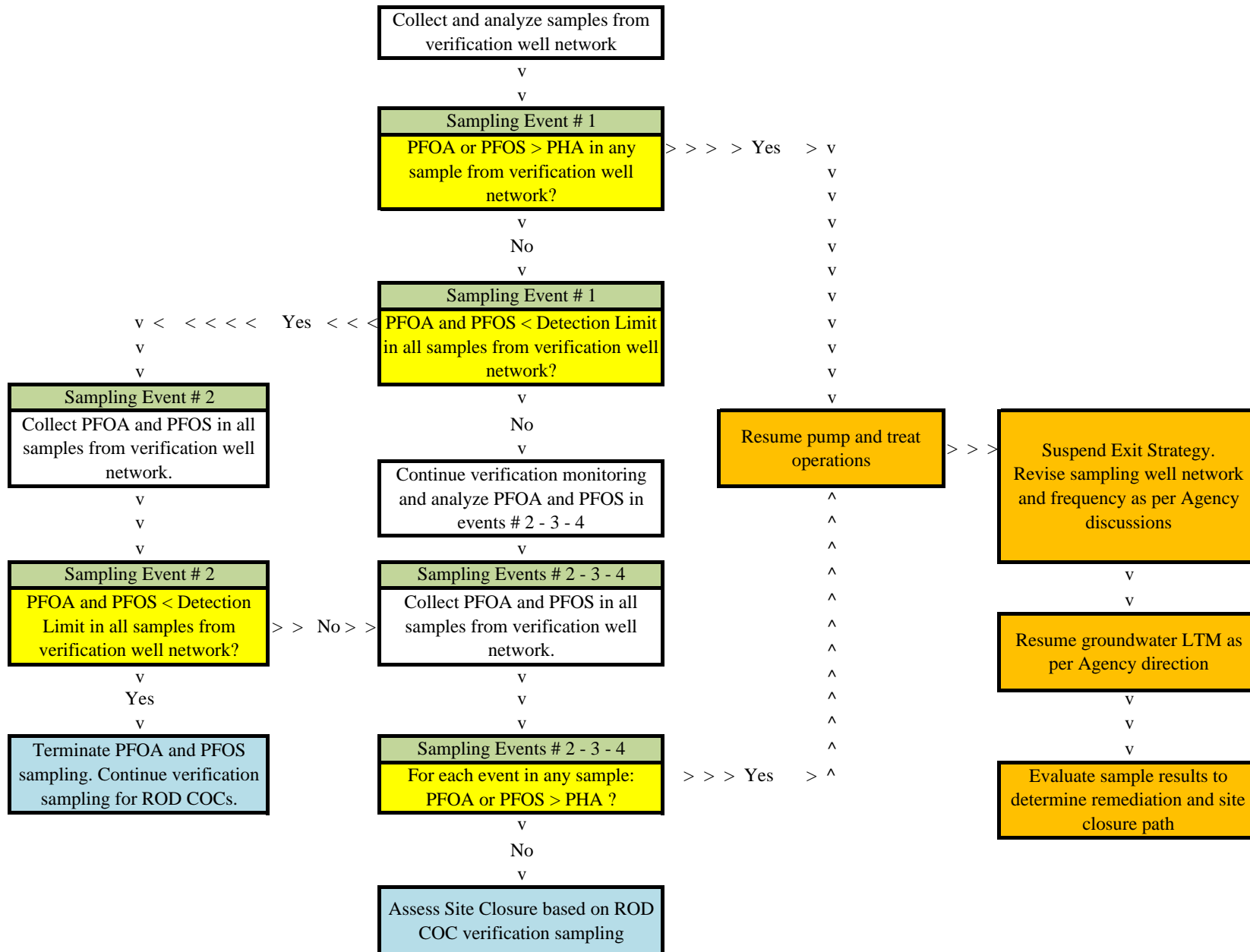
- Well
- Trail/Unimproved Road
- Fence
- Property Boundary
- Building
- Former Fire Drill Area

Note:  
NWTS = Northwest Treatment System

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Fig. 1-2 OU-1 Monitoring Well Verification Network Location.mxd  
9/25/2014 SS  
Source: HGL



**Figure 3**  
**PFOA and PFOS Sampling Program for OU-1**



Notes:

Agency: U.S. Environmental Protection Agency, California Department of Toxic Substance Control, and California Regional Water Quality Board

COC - chemical of concern

LTM - long term monitoring

indicates decision point

PFOA - Perfluorooctanoic Acid

PFOS - Perfluorooctane Sulfonate

PFOA or PFOS > PHA

PHA - Preliminary Health Advisory

ROD - Record of Decision

PFOA and PFOS < PHA



## Former Fort Ord Operable Unit 2 Data and Status

**BCT Meeting, November 13, 2014**

**Table 1:** OU2 GWTP Statistics as of October 31, 2014

Monthly Statistics	Volume Treated (gallons)	Average Flow (gallons per minute)	Percent of Time Online	COC Mass Removed (pounds)
October 2014	24,822,686	556	100.0	1.9
Total since October 1995	6.385 Billion			768

**Table 2:** October 2014 – OU2 Analytical Results at TS-OU2-INJ

COC	Discharge Limit (µg/L)	Sample Date/ Analytical Results
		10/29/2014
1,1-DCA	5.0*	0.44
1,2-DCA	0.50	0.22
1,2-DCP	0.50	ND
Benzene	0.50	ND
CT	0.50	ND
Chloroform	2.0*	0.34
cis-1,2-DCE	6.0*	1.0
Methylene Chloride	0.50	ND
PCE	0.50	ND
TCE	0.50	ND
VC	0.10	ND

**NOTES:**

\* Discharge limits for low carbon affinity compounds were increased to the Aquifer Cleanup Level (ACL).

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

NS Not sampled.

**October 2014 Key Events for OU2**

- October 1: Installed new variable frequency drive (VFD) and reset level switches at EW-OU2-12-A, well online
- October 10: Installed new pressure transducer in EW-OU2-16-A, well online
- October 10: Follow-up samples at eight wells for 3Q14 groundwater monitoring event
- October 13: Preparatory meeting with Shea and Sanco for stormwater infiltration pipe installation near MW-OU2-40-A
- October 13: EW-OU2-06-A offline pending repairs to electrical conduit
- October 15: EW-OU2-09-180 offline for 48 hours October 12 to 14 due to transducer fault, which was repaired on October 15 and well online
- October 29: GWTP sampling
- 3Q14 data validation is complete and data was uploaded to FODIS.
- Review of 3Q14 data identified 19 wells meeting criteria for frequency reduction (at OU2 and OUCTP) and 2 wells for frequency increase (at OUCTP). See additional handouts for more information.

**November 2014 Scheduled Events for OU2**

- GWTP sampling
- OU2 GWTP motor control center electrical inspection
- Repair EW-OU2-06-A electrical conduit

**Table 3:** Document Submittals – Status Summary

Title	Version	Issue Date
Operable Unit 2 Second Quarter 2014 Groundwater Monitoring and Treatment System Report	Final	October 31, 2014





**Table 4: October 2014 OU2 Extraction Well Status (as of October 31)**

Well Identification	Comments	Select COC Concentrations (µg/L) 3Q 2014*				
		TCE	PCE	1,2-DCA	VC	CT
<b>Western Network</b>						
EW-OU2-01-A	Offline due to low concentrations, sampled with PDBs <sup>†</sup>	0.27	ND	ND	ND	ND
EW-OU2-02-A	Offline due to pump failure on 09/13/2014	Not Sampled				
EW-OU2-03-A	Offline due to low concentrations, sampled with PDBs <sup>†</sup>	Not Sampled				
EW-OU2-04-A	Online to capture western TCE plume	1.4	ND	ND	ND	ND
EW-OU2-05-A	Adjacent to MW-OU2-40-A <sup>§</sup>	<b>5.0</b>	0.22	ND	ND	ND
EW-OU2-06-A	Offline due to damaged electrical conduit on 10/13/2014	4.4	0.37	ND	ND	ND
EW-OU2-01-180	No pump in well, sampled with PDBs	<b>7.6</b>	ND	ND	ND	ND
<i>Total gallons extracted: 4,726,607</i>						
<b>Eastern Network</b>						
EW-OU2-07-A	Offline due to low concentrations <sup>‡</sup>	Not Sampled				
EW-OU2-08-A	Offline due to low concentrations <sup>‡</sup>	Not Sampled				
EW-OU2-09-A		0.88	0.55	<b>0.51</b>	ND	ND
EW-OU2-10-A	Offline due to pump failure on 09/29/2014	2.4	1.3	<b>0.94</b>	0.079	ND
EW-OU2-11-A	Offline due to biofouling, screen damaged, sampled with PDBs	0.92	0.65	ND	ND	ND
EW-OU2-12-A	Intermittent issues with starter motor failure (replaced 10/01/2014)	<b>11.1</b>	<b>3.3</b>	<b>0.53</b>	<b>0.18</b>	ND
EW-OU2-13-A	Intermittent operation due to low water level	<b>9.1</b>	2.5	<b>2.4</b>	ND	ND
EW-OU2-02-180	Offline due to breach in well casing identified in August 2012	Not Sampled				
<i>Total gallons extracted: 2,705,056</i>						
<b>Shoppette</b>						
EW-OU2-05-180		<b>6.0</b>	0.50	ND	ND	ND
EW-OU2-06-180	Offline due to pump failure in February 2012	Not Sampled				
EW-OU2-16-A	Offline due to pump failure 5/17/2014, replaced 8/5/2014, failed pressure transducer replaced 10/10/2014, intermittent operation due to low water level	<b>7.4</b>	<b>4.3</b>	<b>1.5</b>	<b>0.67</b>	ND
<i>Total gallons extracted: 7,286,467</i>						
<b>CSUMB</b>						
EW-OU2-14-A	Previously offline due to low concentrations, online 7/14/14 due to 2014-2Q TCE results above ACL	1.1	0.33	ND	ND	ND
EW-OU2-15-A	Offline due to low concentrations, pump failure	Not Sampled				
<i>Total gallons extracted: 625,959</i>						
<b>Landfill</b>						
EW-OU2-03-180		<b>11.2</b>	0.59	ND	ND	0.20
EW-OU2-04-180	Offline due to low concentrations <sup>‡</sup>	Not Sampled				
<i>Total gallons extracted: 7,413,303</i>						
<b>Bunker Hill</b>						
EW-OU2-07-180	No pump in well, sampled with PDBs	1.9	1.1	ND	ND	ND
EW-OU2-08-180	Offline due to low concentrations	1.9	0.37	ND	ND	ND
EW-OU2-09-180	OUCTP Upper 180-Foot Aquifer remedy**, offline intermittently 10/12/2014 to 10/14/2014 due to transducer malfunction	ND	0.17	ND	ND	0.16
<i>Total gallons extracted: 2,065,294</i>						
<b>Total OU2 gallons treated: 24,822,686</b>						

**NOTES:**

ND = The analyte was not detected above the limit of detection

\* Concentrations in **bold** type is equal to or exceeds the ACL

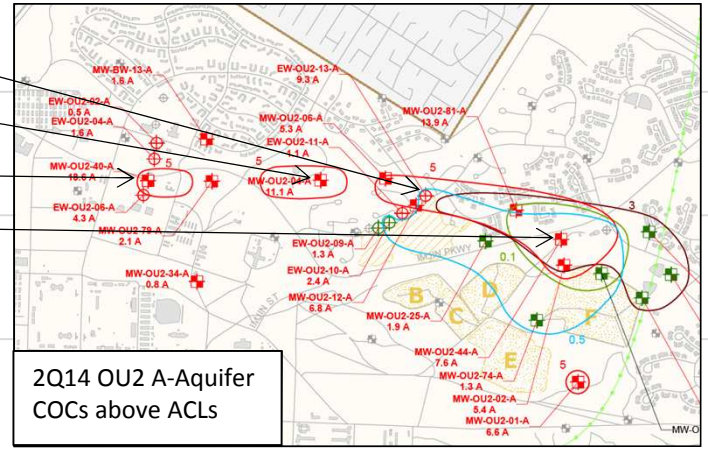
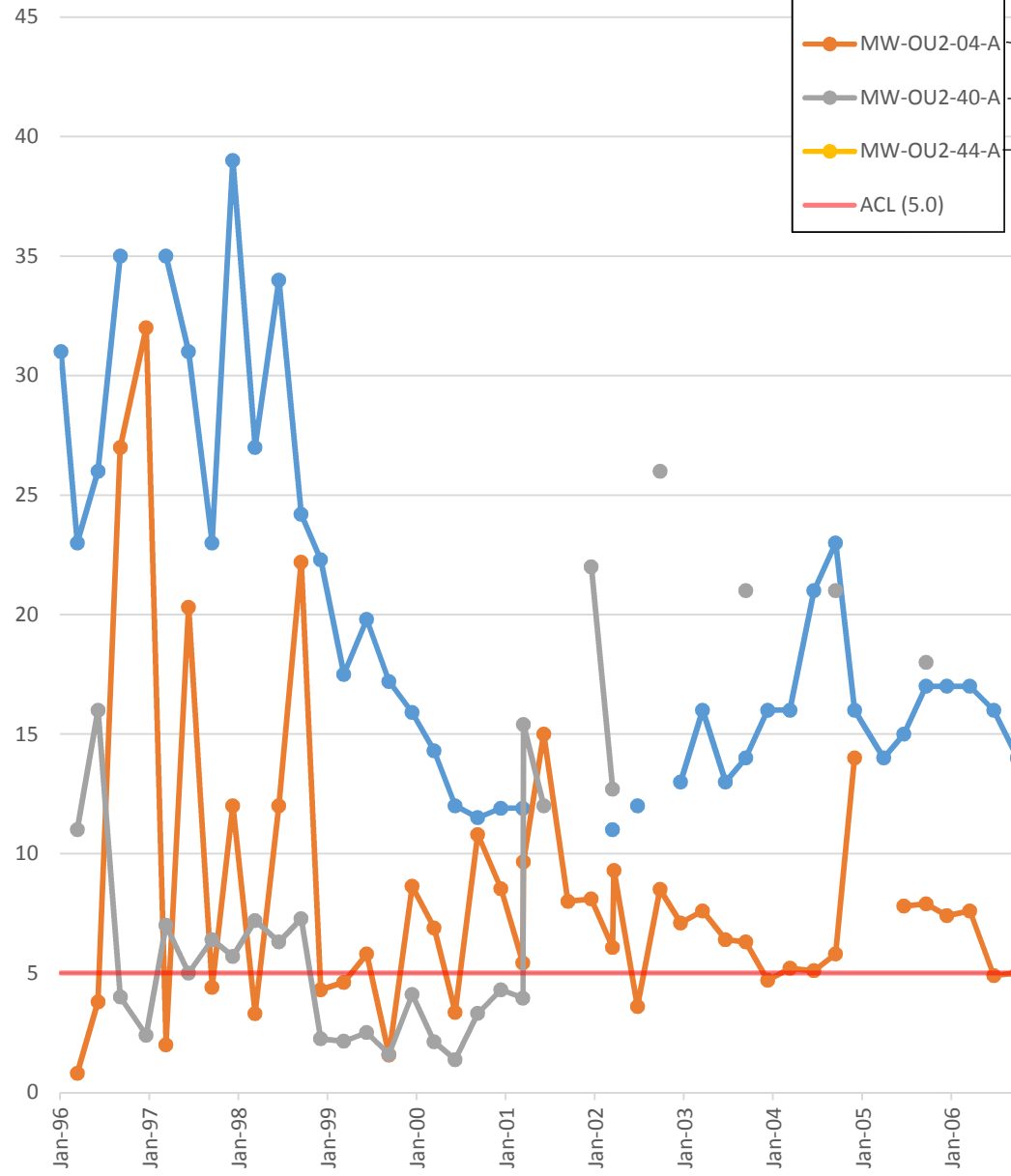
<sup>†</sup> Sampled annually per QAPP decision rules

<sup>‡</sup> Removed from the GWMP per QAPP decision rules

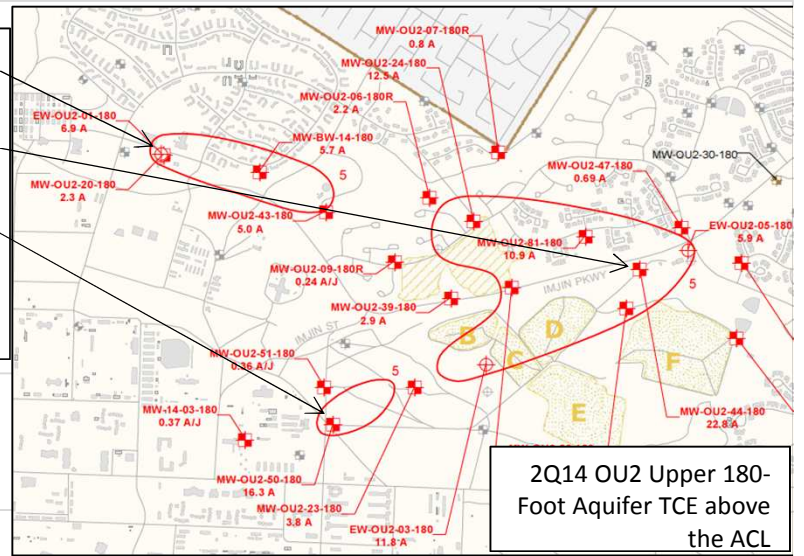
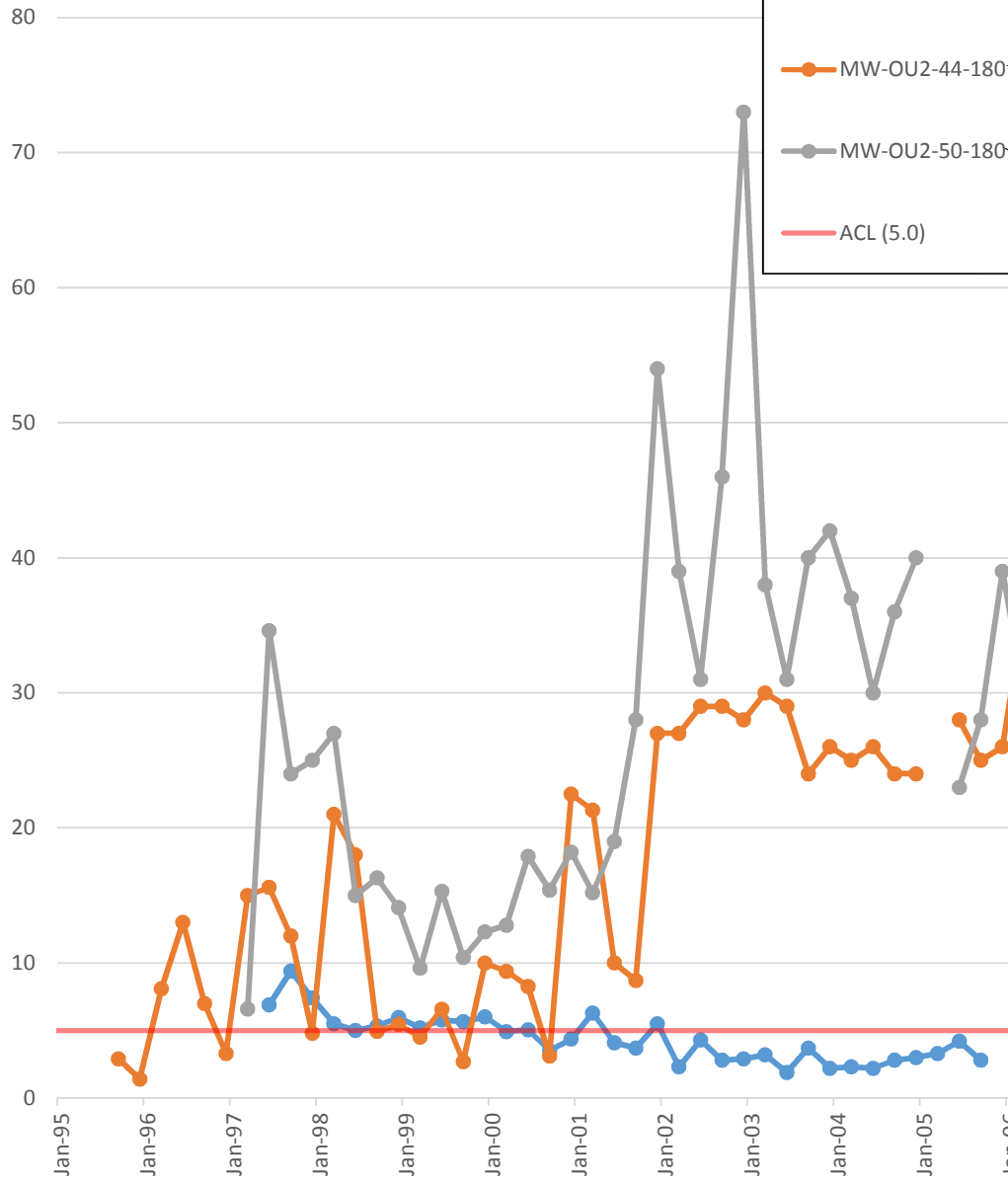
<sup>§</sup> MW-OU2-40-A concentration of TCE = 15.8 µg/L (3Q2014)

\*\* cis-1,2-DCE also detected at 1.3 µg/L (3Q2014)

# OU2 A-Aquifer TCE ( $\mu\text{g/L}$ )



# OU2 Upper 180-Foot Aquifer TCE (µg/L)



2Q14 OU2 Upper 180-Foot Aquifer TCE above the ACL



## Former Fort Ord Sites 2 and 12 Data and Status

**BCT Meeting, November 13, 2014**

**Table 1:** Sites 2/12 GWTP Statistics as of October 31, 2014

Monthly Statistics	Volume Treated (gallons)	Average Flow (gallons per minute)	Percent of Time Online	COC Mass Removed (pounds)
October 2014	7,438,220	167	100.0	0.42
Total since April 1999	1.780 Billion			466

**Table 2:** October 2014 – Sites 2/12 Analytical Results at TS-212-INJ

COC	Discharge Limit (µg/L)‡	Sample Date / Analytical Results
		10/7/2014
1,1-DCE	6.0	ND
1,2-DCA	0.50	0.15
1,3-DCP†	0.50	ND
Chloroform	2.0	0.22
cis-1,2 DCE	6.0	0.69
PCE	3.0	ND
TCE	5.0	ND
VC	0.10	ND

**NOTES:**

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

NS not sampled.

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

‡ Discharge limits are the ACLs for injection over the plume.

**October 2014 Key Events for Sites 2/12**

- October 7: GWTP sampling
- 3Q14 data validation is complete and data was uploaded to FODIS.
- Review of 3Q14 data did not identify any sampling frequency changes at Sites 2/12.

**November 2014 Scheduled Events for Sites 2/12**

- GWTP sampling

**Table 3:** Document Submittals – Status Summary

Title	Version	Issue Date
Sites 2 and 12 Second Quarter 2014 Groundwater and Soil Vapor Monitoring and Treatment System Report	Final	October 31, 2014
Basewide Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12	Draft Final	November 2014
Quality Assurance Project Plan, Former Fort Ord, California, Volume I, Appendix C, Revision 0, Soil Gas Monitoring at Sites 2 and 12	Draft	November 2014
Explanation of Significant Differences No. 1, Basewide Remedial Investigation Sites 2 and 12	Draft	December 2014

**Table 4:** October 2014 Sites 2/12 Extraction Well and Select Monitoring Well Status (as of October 31)

Well Identification	Comments	Select COC Concentrations (µg/L) 3Q 2014*			
		TCE	PCE	cis-1,2-DCE	VC
EW-12-05-180M		4.4	<b>6.0</b>	1.2	ND
EW-12-06-180M		2.6	0.48	0.86	ND
EW-12-07-180M	Offline due to low concentrations	3.3	0.70	1.00	ND
EW-12-03-180U	Offline due to low concentrations, sampled with PDBs†	0.41	ND	0.55	ND
EW-12-03-180M	Offline due to low concentrations, sampled with PDBs	3.1	0.23	1.8	ND
EW-12-04-180U	Offline due to low concentrations, sample with PDBs†	1.1	0.15	0.50	ND
EW-12-04-180M	Offline due to low concentrations, sampled with PDBs‡	Not Sampled			
MW-12-09R-180	MW east of and upgradient from EW-12-05-180M	0.39	<b>4.8</b>	ND	ND
MW-12-14-180M	MW north of and upgradient from EW-12-05-180M	2.0	0.32	0.12	ND
MW-12-17-180U	New MW east of EW-12-06-180M	0.61	0.51	ND	ND
MW-12-20-180U	New MW northeast of MW-12-09R-180	0.27	<b>3.0</b>	ND	ND
MW-12-24-180U	New MW adjacent to MW-12-09R-180	3.3	<b>55.5</b>	ND	ND
MW-12-25-180U	New MW east of MW-12-09R-180	ND	<b>4.3</b>	ND	ND
MW-12-31-180M	New MW in TCE soil gas plume area	0.32	0.25	ND	ND
<b>Total 2/12 Extraction Well gallons treated: 7,438,220</b>					

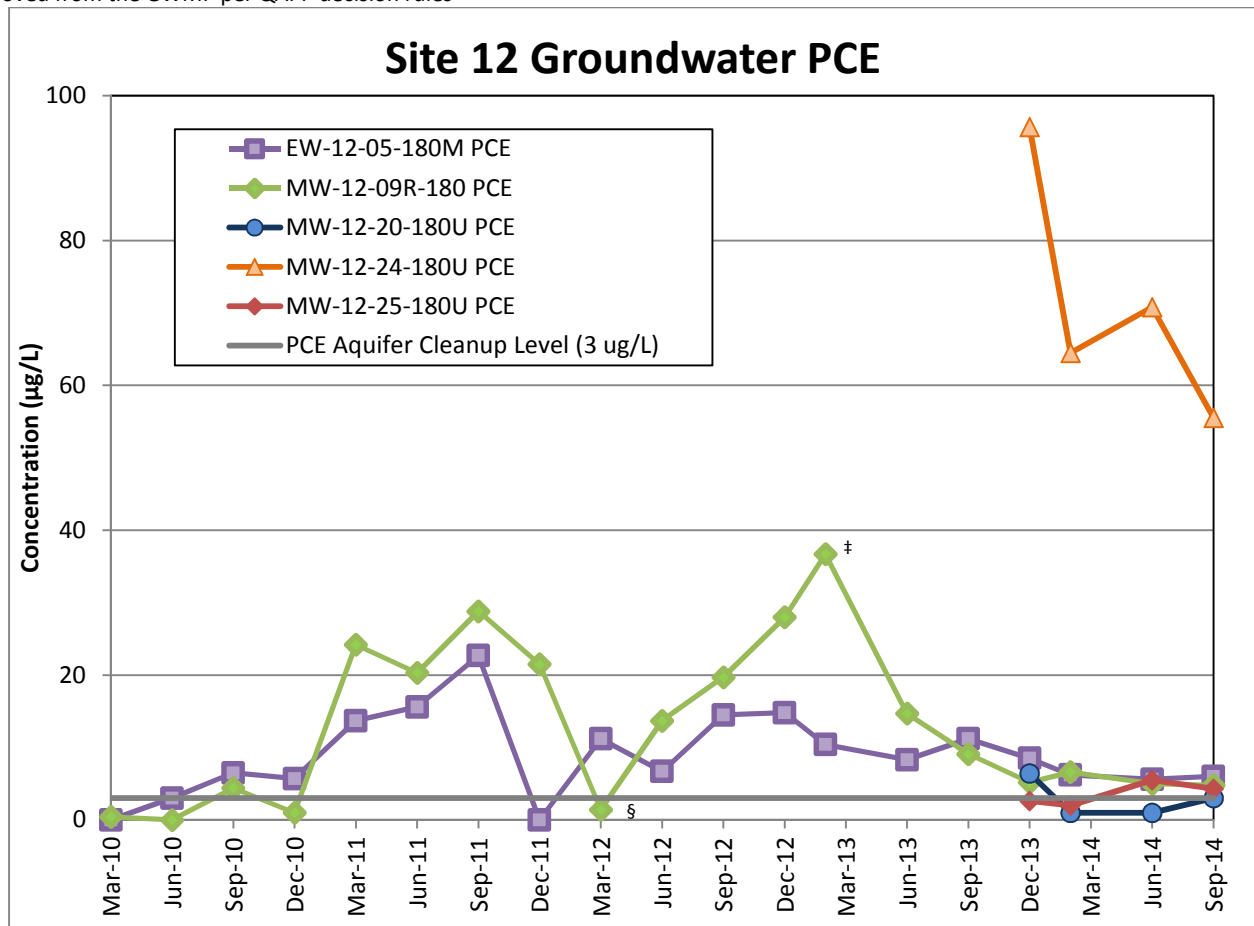
**NOTES:**

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

\* Concentrations in **bold** type exceed the ACL

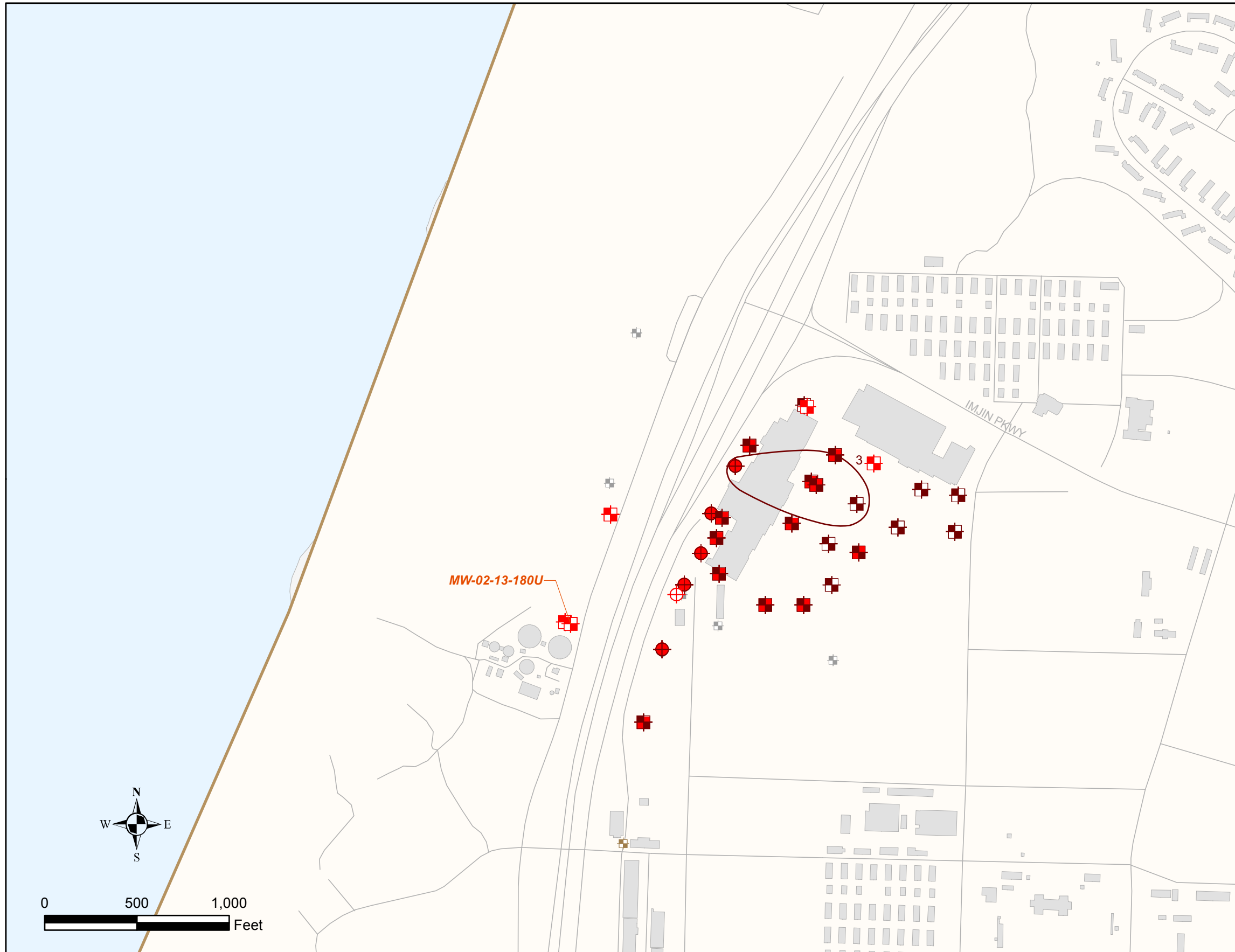
† Sampled annually per QAPP decision rules

‡ Removed from the GWMP per QAPP decision rules



\* The PCE detection from MW-12-09R-180 in March 2012 was flagged with a J- qualifier which indicates a low bias.

† The PCE detection from MW-12-09R-180 in March 2013 was flagged with a J+ qualifier which indicates a high bias.

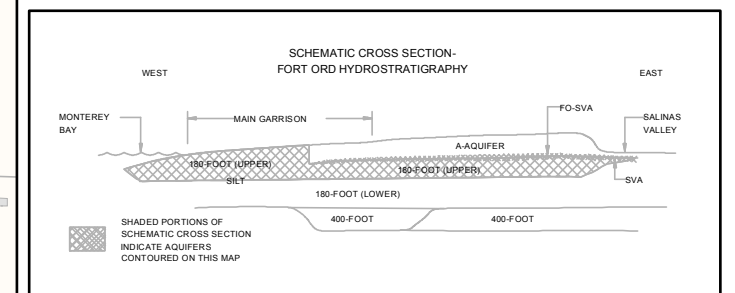


**EXPLANATION**

- Monitoring Well with TCE Detection, and No ACL Exceedances by Other COCs
- Monitoring Well with PCE Detection
- Monitoring Well with TCE and PCE Detection
- Extraction Well with TCE and PCE Detection
- MW-02-13-180U** Meets decision criteria to stop sampling as defined in Volume I, Appendix A of the Final UFP QAPP. (Army, 2014)
- Monitoring Well - TCE or PCE not detected and no other COC ACL exceedances
- Monitoring Well not sampled this quarter
- Piezometer not sampled this quarter
- Extraction Well not sampled this quarter
- Injection Well not sampled this quarter
- Chemical of Concern (COC) Aquifer Cleanup Level (ACL) Exceedance Contour in µg/L**
- 3** Tetrachloroethene (PCE)
- Roads
- Facilities
- Former Fort Ord Boundary

**NOTES:**

- (1) Contours are based on one interpretation of the data that were available at the time this report was prepared; other interpretations may be possible.
- (2) Contours based on highest value obtained from multiple bags where applicable.



DRAWN:	RJP	JOB NUMBER:	OD14170870
ENGINEER:		SCALE:	AS SHOWN
CHECKED:	DAH	DATE:	10/2014
APPROVED:	JJF	DATE:	10/2014

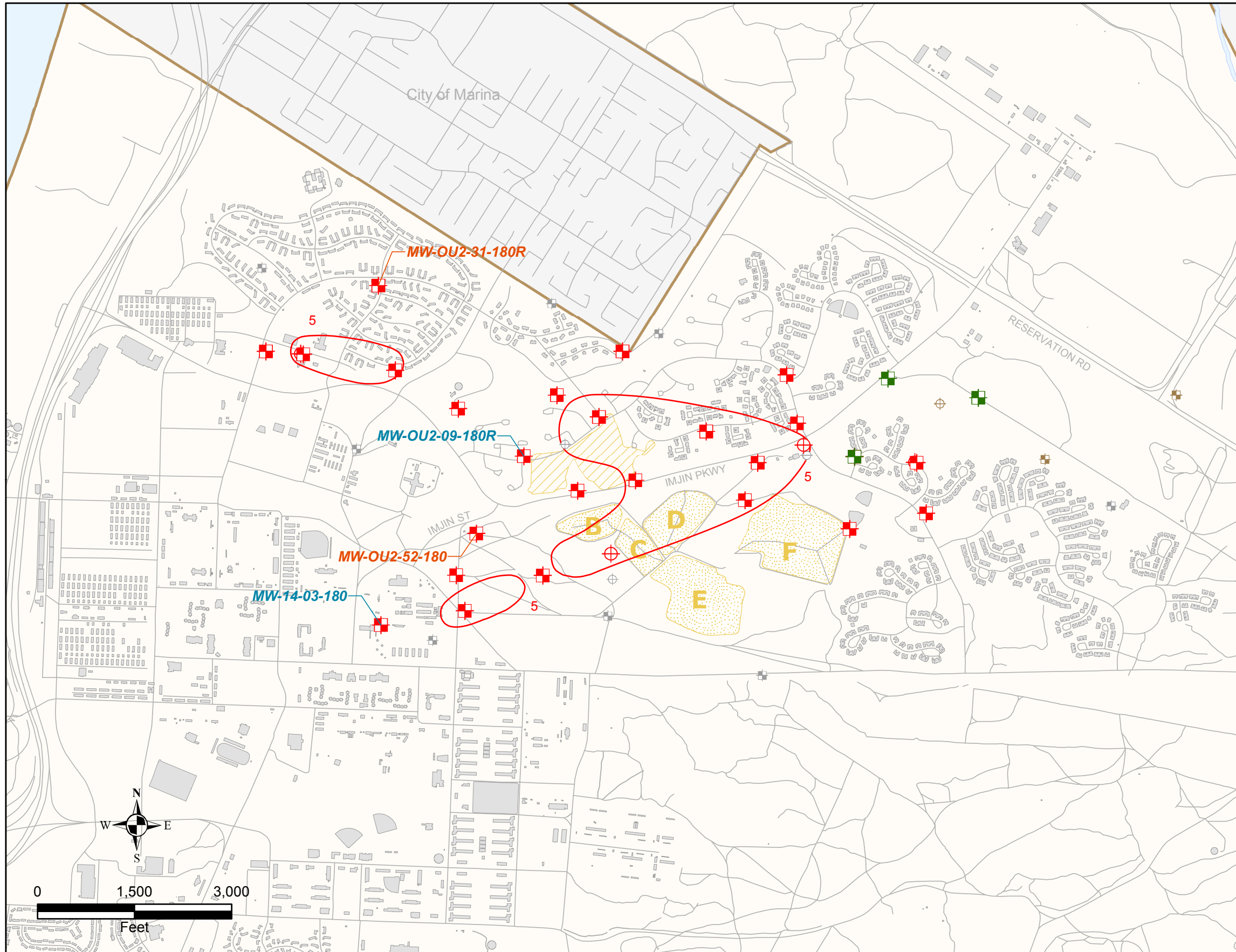


Based on Data Collected Through  
Third Quarter 2014  
Former Fort Ord, California














Sample Frequency Changes  
Sites 2 and 12  
Upper 180-Foot Aquifer  
West of the SVA

FIGURE

**1**

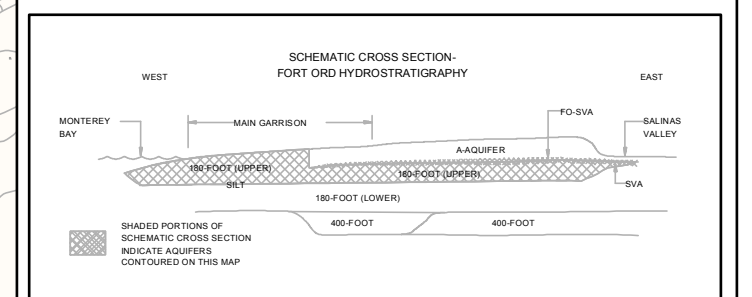


**EXPLANATION**

-  Monitoring Well with TCE Detection, and No ACL Exceedances by Other COCs
  -  Extraction Well with TCE Detection, and No ACL Exceedances by Other COCs
  - MW-OU2-09-180R** Meets decision criteria to reduce from quarterly sampling to annual sampling as defined in Volume I, Appendix A of the Final UFP QAPP. (Army, 2014)
  - MW-OU2-52-180** Meets decision criteria to stop sampling as defined in Volume I, Appendix A of the Final UFP QAPP. (Army, 2014)
  -  Monitoring Well with COC ACL Exceedance (not TCE)
  -  Monitoring Well TCE Not Detected, and No Other COC ACL Exceedances
  -  Extraction Well TCE Not Detected, and No Other COC ACL Exceedances
  -  Monitoring Well Not Sampled This Quarter
  -  Extraction Well Not Sampled This Quarter
- Chemical of Concern (COC) Aquifer Cleanup Level (ACL) Exceedance Contour in µg/L
- 5**  Trichlorethene (TCE)
- Approximate extent of Fort Ord Landfill Cells
-  OU2 Landfill Areas B through F
  -  Cell A (clean closed)
  -  Roads
  -  Facilities
  -  Former Fort Ord Boundary

**NOTES:**

- (1) Contours are based on one interpretation of the data that were available at the time this report was prepared; other interpretations may be possible.
- (2) Contours based on highest value obtained from multiple bags where applicable.
- (3) Contours near wells not sampled this quarter are inferred from previous analytical data.



DRAWN:	RJP	JOB NUMBER:	OD14170870
ENGINEER:		SCALE:	AS SHOWN
CHECKED:	DAH	DATE:	10/2014
APPROVED:	JJF	DATE:	10/2014



Based on Data Collected Through  
Third Quarter 2014  
Former Fort Ord, California

Sample Frequency Changes  
OU2  
Upper 180-Foot Aquifer

FIGURE  
**2**



## Operable Unit Carbon Tetrachloride Plume A-Aquifer Evaluation

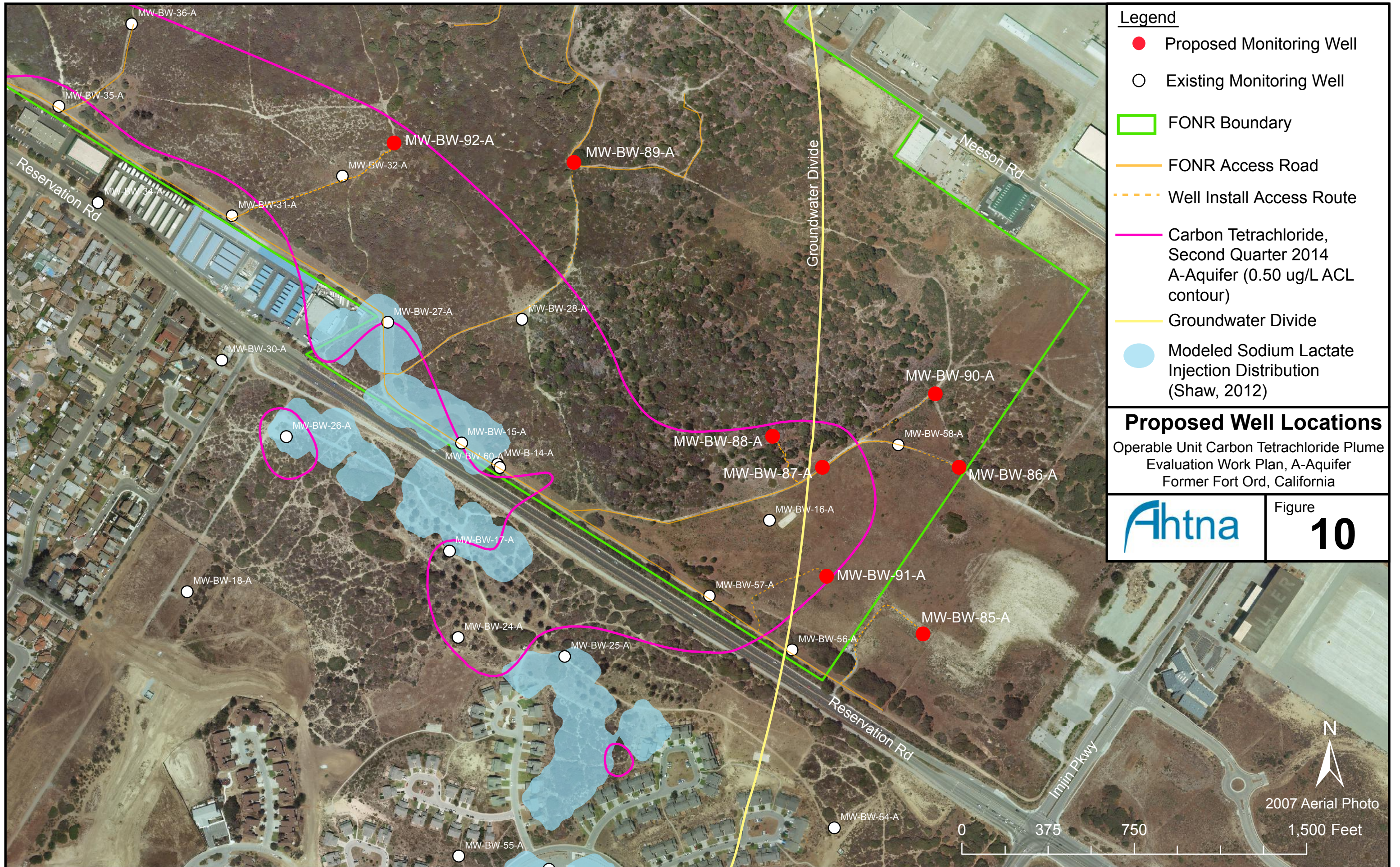
### **OUCTP Evaluation Work Plan**

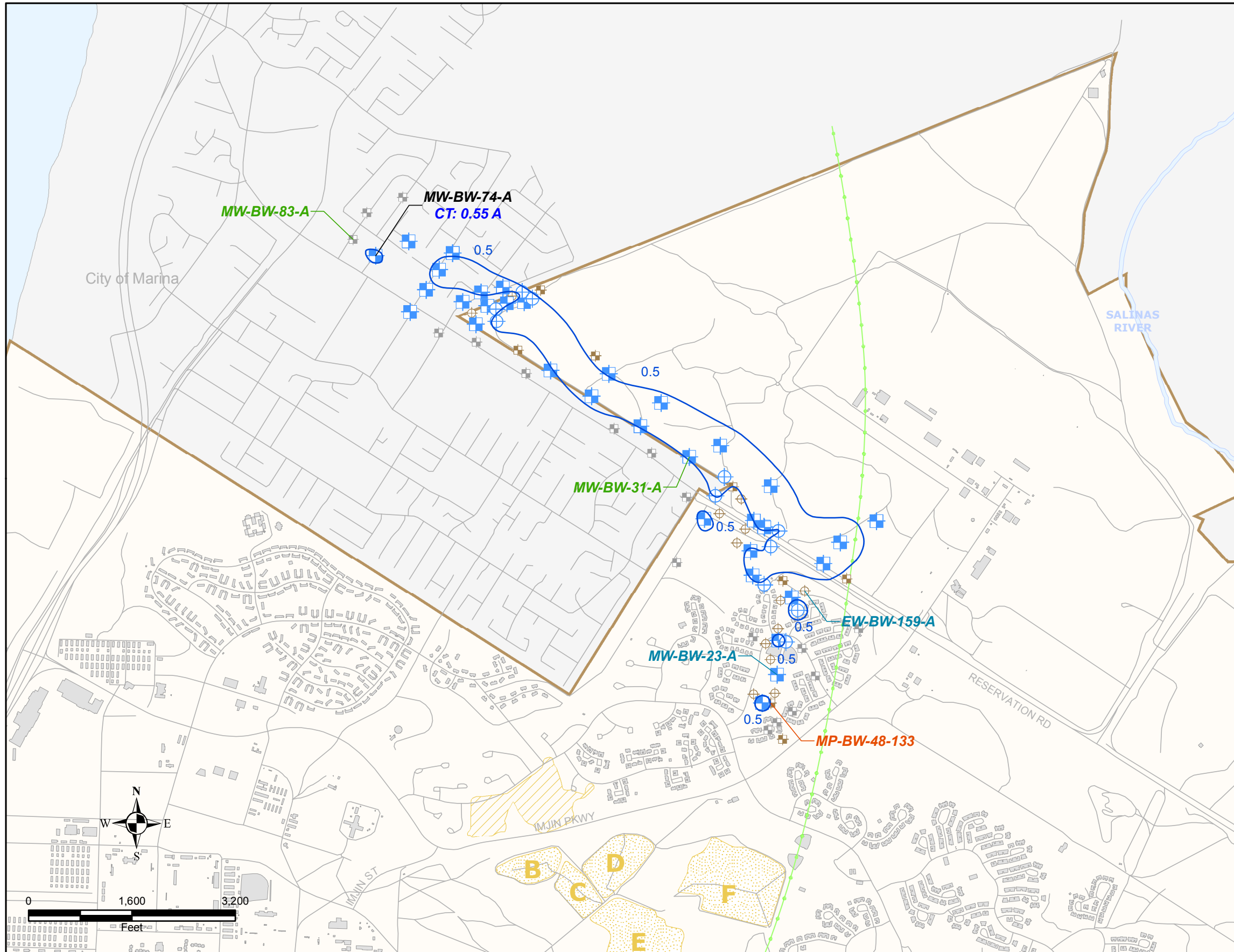
**Purpose:** Design and implement installation of eight monitoring wells within and near the FONR, and collect additional site information to further characterize the groundwater gradient and chemistry of the north and northeastern portions of OUCTP in the A-Aquifer.

- Support the ongoing interpretation of completed EISB deployments
- Provide additional data on groundwater flow direction and gradients
- Confirm the configuration of the groundwater divide
- Assess the presence of CT downgradient and east of the groundwater divide
- Support the design and implementation of an additional EISB deployment area(s), if necessary.

Scheduling of field work for after June 1<sup>st</sup>, or after the beginning of the dry season (i.e., outside the primary growing season for rare plants).

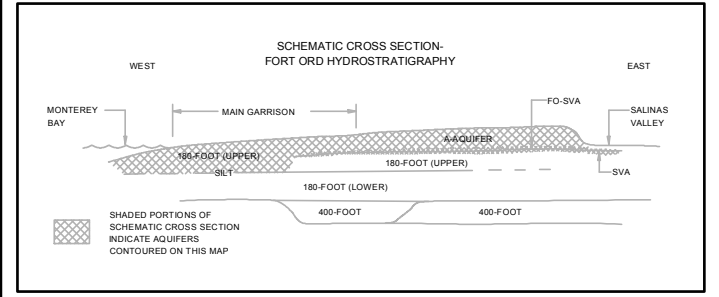






EXPLANATION	
	Monitoring Well with CT Detection
	Extraction Well with CT Detection
<b>MW-BW-23-A</b>	Meets decision criteria to reduce from quarterly sampling to annual sampling as defined in Volume I, Appendix A of the Final UFP QAPP. (Army, 2014)
<b>MP-BW-48-133</b>	Meets decision criteria to stop sampling as defined in Volume I, Appendix A of the Final UFP QAPP. (Army, 2014)
<b>MW-BW-83-A</b>	Meets decision criteria to increase sample frequency to quarterly as per QAPP decision rules. (Army, 2014)
	Monitoring Well CT Not Detected
	Extraction Well CT Not Detected
	Monitoring Well Not Sampled This Quarter
	Extraction Well Not Sampled This Quarter
Chemical of Concern (COC) Aquifer Cleanup Level (ACL) Exceedance Contour in µg/L	
<b>0.5</b> —	Carbon tetrachloride (CT)
Approximate extent of Fort Ord Landfill Cells	
	OU2 Landfill Areas B through F
	Cell A (clean closed)
	Approximate Location of a Groundwater Divide
	Roads
	Facilities
	Former Fort Ord Boundary

- NOTES:
- (1) Contours are based on one interpretation of the data that were available at the time this report was prepared; other interpretations may be possible.
  - (2) Contours based on highest value obtained from multiple bags where applicable.
  - (3) Contours near wells not sampled this quarter are inferred from previous analytical data.

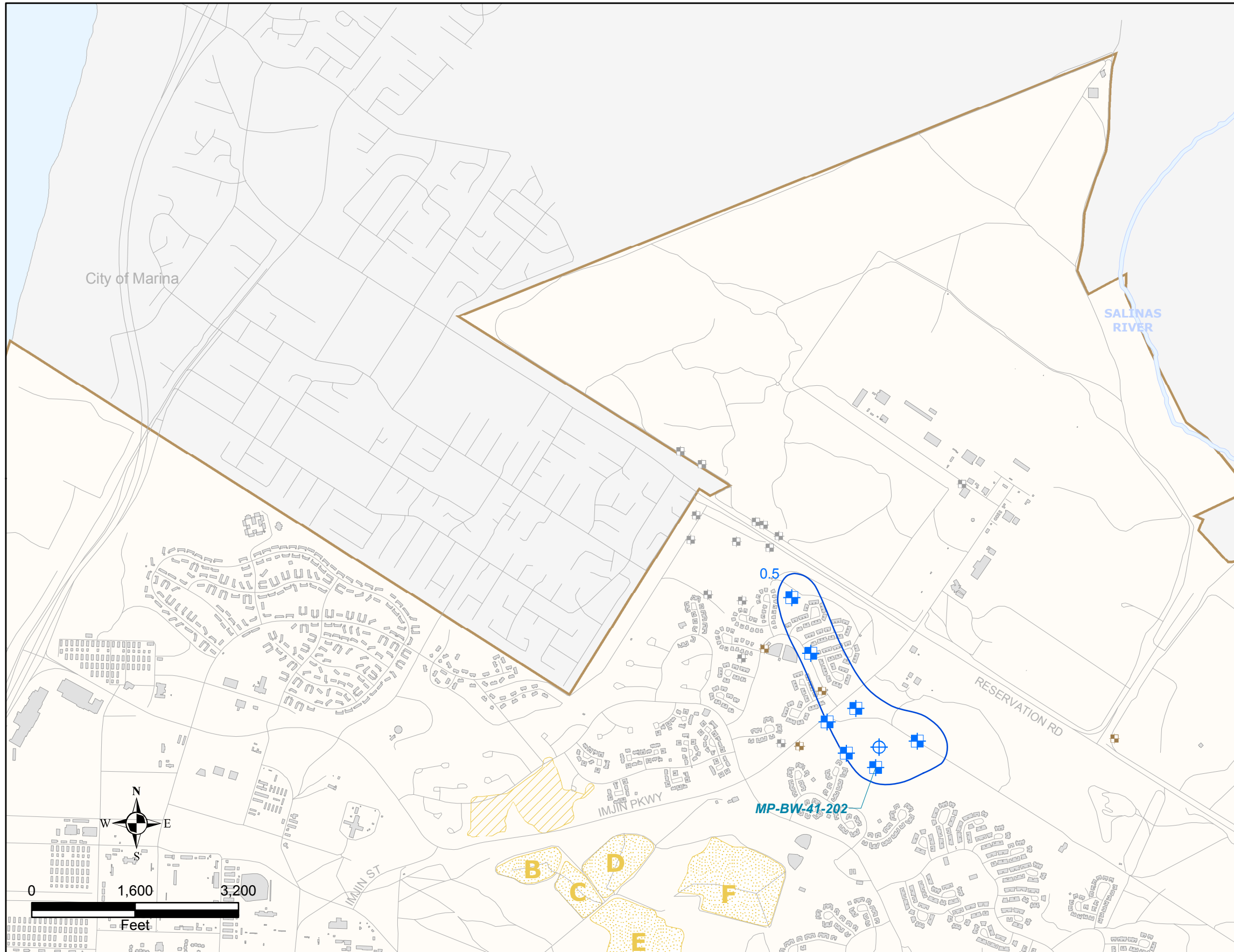


DRAWN:	RJP	JOB NUMBER:	OD14170870
ENGINEER:		SCALE:	AS SHOWN
CHECKED:	DAH	DATE:	10/2014
APPROVED:	JJF	DATE:	10/2014



Based on Data Collected Through  
Third Quarter 2014  
Former Fort Ord, California

Sample Frequency Changes OUCTP A-Aquifer	FIGURE <b>3</b>
------------------------------------------------	--------------------



### EXPLANATION

- Monitoring Well with CT Detection
- Extraction Well with CT
- MP-BW-41** Meets decision criteria to reduce from quarterly sampling to annual sampling as defined in Volume I, Appendix A of the Final UFP QAPP. (Army, 2014)
- Monitoring Well CT Not Detected
- Extraction Well CT Not Detected
- Monitoring Well Not Sampled This Quarter

Chemical of Concern (COC) Aquifer Cleanup Level (ACL) Exceedance Contour in µg/L

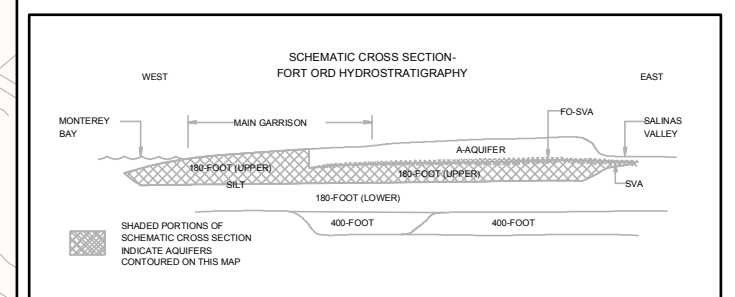
**0.5** Carbon tetrachloride (CT)

Approximate extent of Fort Ord Landfill Cells

- OU2 Landfill Areas B through F
- Cell A (clean closed)

- Approximate Location of a Groundwater Divide
- Roads
- Facilities
- Former Fort Ord Boundary

- NOTES:
- (1) Contours are based on one interpretation of the data that were available at the time this report was prepared; other interpretations may be possible.
  - (2) Contours based on highest value obtained from multiple bags where applicable.
  - (3) Contours near wells not sampled this quarter are inferred from previous analytical data.



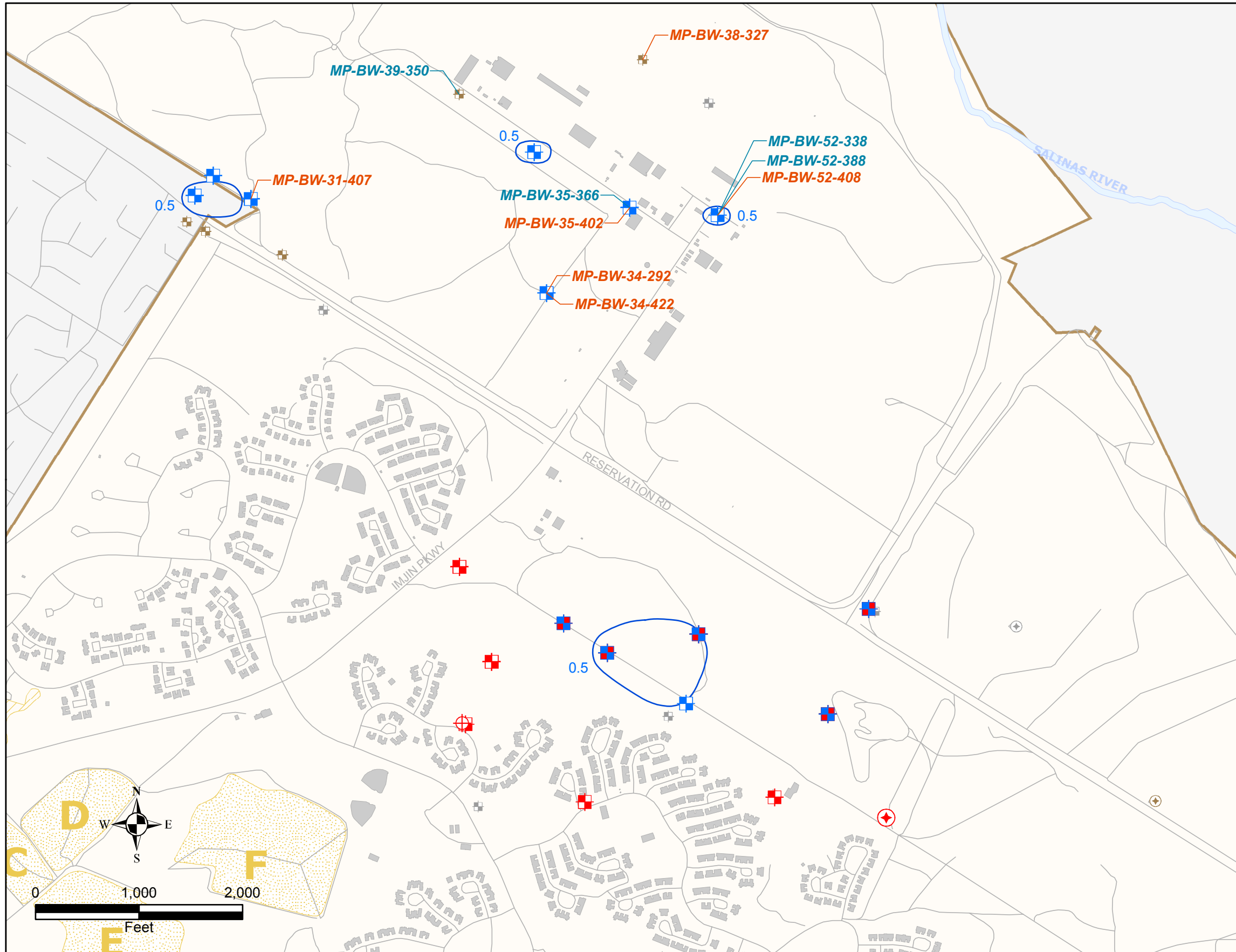
DRAWN:	RJP	JOB NUMBER:	OD14170870
ENGINEER:		SCALE:	AS SHOWN
CHECKED:	DAH	DATE:	10/2014
APPROVED:	JJF	DATE:	10/2014



Based on Data Collected Through  
Third Quarter 2014  
Former Fort Ord, California

Sample Frequency Changes  
OUCTP  
Upper 180-Foot Aquifer

FIGURE  
**4**



### EXPLANATION

- Monitoring Well with CT Detection
- Monitoring Well with TCE Detection
- Remediation Extraction Well with TCE Detection
- Active Supply Well with TCE Detection
- Monitoring Well with TCE and CT Detections

**MP-BW-39-350** Meets decision criteria to reduce from quarterly sampling to annual sampling as defined in Volume I, Appendix A of the Final UFP QAPP. (Army, 2014)

**MP-BW-38-327** Meets decision criteria to stop sampling as defined in Volume I, Appendix A of the Final UFP QAPP. (Army, 2014)

- Monitoring Well CT Not Detected
- Active Supply Well CT Not Detected
- Monitoring Well Not Sampled This Quarter
- Supply Well Not Sampled This Quarter

Chemical of Concern (COC) Aquifer Cleanup Level (ACL) Exceedance Contour in µg/L

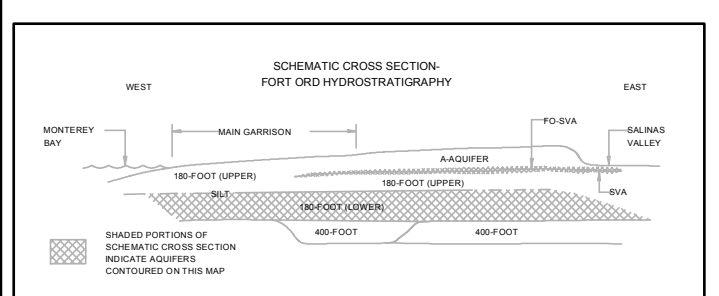
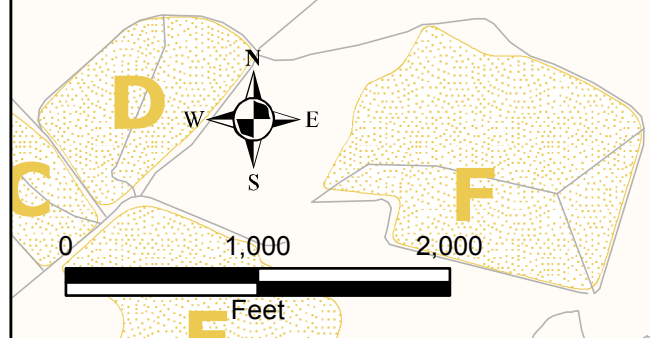
**0.5** — Carbon tetrachloride (CT)

Approximate extent of Fort Ord Landfill Cells

- OU2 Landfill Areas B through F
- Cell A (clean closed)

- Roads
- Facilities
- Former Fort Ord Boundary

- NOTES:
- (1) Contours are based on one interpretation of the data that were available at the time this report was prepared; other interpretations may be possible.
  - (2) Contours based on highest value obtained from multiple bags where applicable.
  - (3) Supply wells FO-29, FO-30 and FO-31 have been renamed as 29(a), 30(b) and 31(c) respectively. The wells are referred to by the original names in this report for consistency.



DRAWN:	RJP	JOB NUMBER:	OD14170870
ENGINEER:		SCALE:	AS SHOWN
CHECKED:	DAH	DATE:	10/2014
APPROVED:	JJF	DATE:	10/2014



Based on Data Collected Through  
Third Quarter 2014  
Former Fort Ord, California

Sample Frequency Changes  
OUCTP  
Lower 180-Foot Aquifer

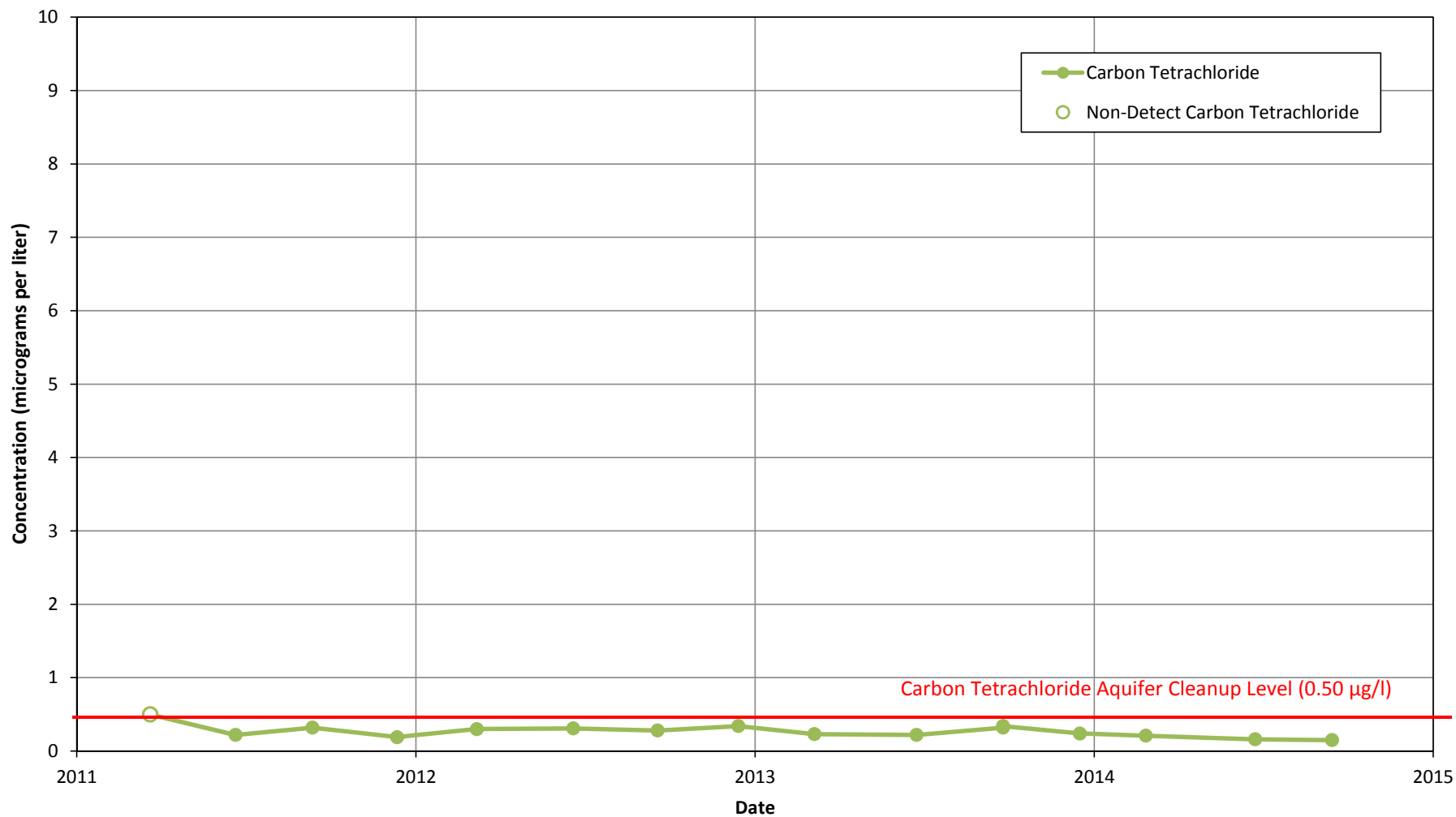
FIGURE  
**5**



**OU2, Sites 2/12 and OUCTP Groundwater  
Fort Ord BCT Meeting  
November 13, 2014**

**Third Quarter (Q3) Groundwater Data**

- Validation of the Q3 data is complete. The validated data was uploaded to FODIS on October 27, 2014 and mailed out on November 4, 2014.
- Review of third quarter sampling results identified 19 wells meeting the QAPP criteria for sample frequency reduction (see list and Figures 1-5).
- For OUCTP A-Aquifer wells MW-BW-31-A and MW-BW-83-A, we are proposing to increase the sampling frequency due to recent carbon tetrachloride detections in the well or in an adjacent well (Figure 3).



Note: Non-detect values are posted as the reporting limit



Carbon Tetrachloride Concentration Over Time  
 MP-BW-52-388  
 2011 through 3rd Quarter 2014  
 Former Fort Ord  
 Former Fort Ord, California

Figure

**20**

DRAWN ZC	JOB NUMBER OD14170870	CHECKED	CHECKED DATE	APPROVED	APPROVED DATE
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**OU2 Landfills and TTU  
Operation and Maintenance  
Status Update  
November 13, 2014**



**Landfill Maintenance**

- Monterey County inspection 8/19/14 – no issues.
- Routine landfill maintenance ongoing – minor erosion repairs, brush and weed removal, mowing.

**TTU Operations/Landfill Gas Monitoring**

- Operating every other week since 2/6/12 (approx. 90 hrs in each 2 week cycle).
- Methane concentration at TTU approx. 38%, declining slowly.
- No operational problems.
- TTU source testing completed 6/5/14 by Best Environmental; results similar to previous years.
- Annual VOCs monitoring completed 6/5/14.
- Next quarterly perimeter probe monitoring scheduled week of 12/8/14.
- Annual P.E. inspection to be completed before end of year.
- Replacement ring for top of TTU stack to be installed in next 2 weeks.

**OU2 Landfill Closure**

- No current activities.

**Thermal Treatment Unit  
Operation Summary  
2006 - 2014**

<b>TREATMENT SYSTEM OPERATION SUMMARY</b>	
<b>Treatment System Start Date:</b>	<b>6/4/2001</b>
<b>TTU Start Date:</b>	<b>4/4/2006</b>
<b>Last Reading Date/Time:</b>	<b>10/23/2014 14:22</b>
<b>Historical through 2013 (TTU only):</b>	
Total TTU Hours:	<b>67,872</b>
Total TTU Hours Operated:	<b>23,903</b>
% TTU Operation:	<b>35.2%</b>
Total Pounds of Methane Removed:	<b>2,638,229</b>
<b>Current Year 2014:</b>	
Total Hours:	<b>7,224</b>
Total Hours Operated:	<b>1693</b>
% TTU Operation:	<b>23%</b>
Total Pounds of Methane Removed:	<b>150,572</b>
<b>Cumulative (since TTU startup in 2006):</b>	
% TTU Operation:	<b>34.1%</b>
Total Pounds of Methane Removed:	<b>2,788,801</b>

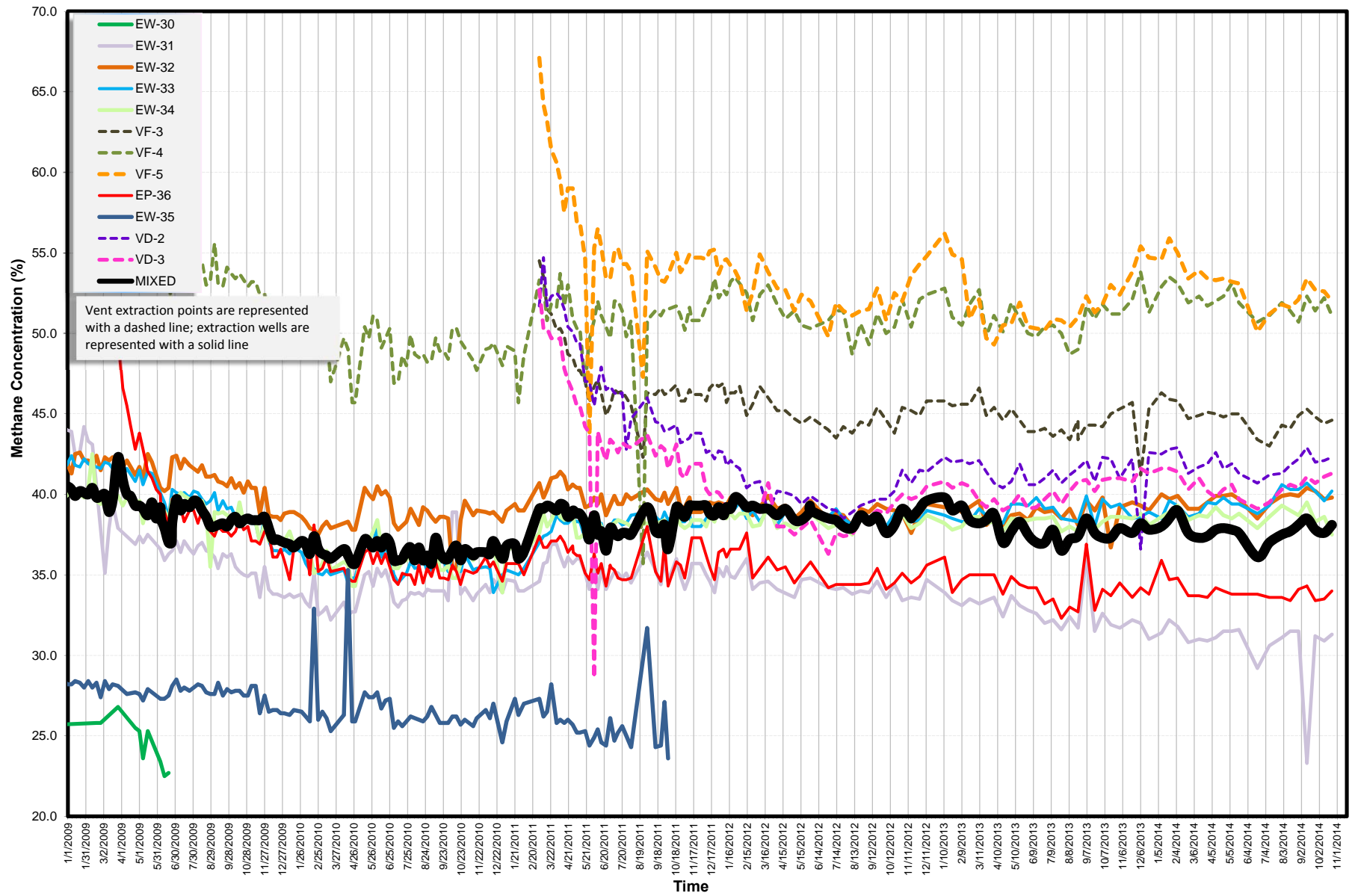
	<b>Total Pounds Removed</b>	<b>Pounds/week</b>
Pounds of Methane Removed (2007)	<b>532,181</b>	<b>10,206</b>
Pounds of Methane Removed (2008)	<b>288,433</b>	<b>5,532</b>
Pounds of Methane Removed (2009)	<b>448,148</b>	<b>8,595</b>
Pounds of Methane Removed (2010)	<b>212,684</b>	<b>4,079</b>
Pounds of Methane Removed (2011)	<b>228,085</b>	<b>4,374</b>
Pounds of Methane Removed (2012)	<b>229,400</b>	<b>4,399</b>
Pounds of Methane Removed (2013)	<b>187,782</b>	<b>3,601</b>
Pounds of Methane Removed (2014)	<b>150,572</b>	<b>3,502</b>

	<b>Total Pounds COCs Removed</b>
2007	<b>6.2</b>
2008	<b>3.1</b>
2009	<b>3.4</b>
2010	<b>1.4</b>
2011	<b>1.4</b>
2012	<b>1.2</b>
2013	<b>1.1</b>
2014	<b>0.8</b>

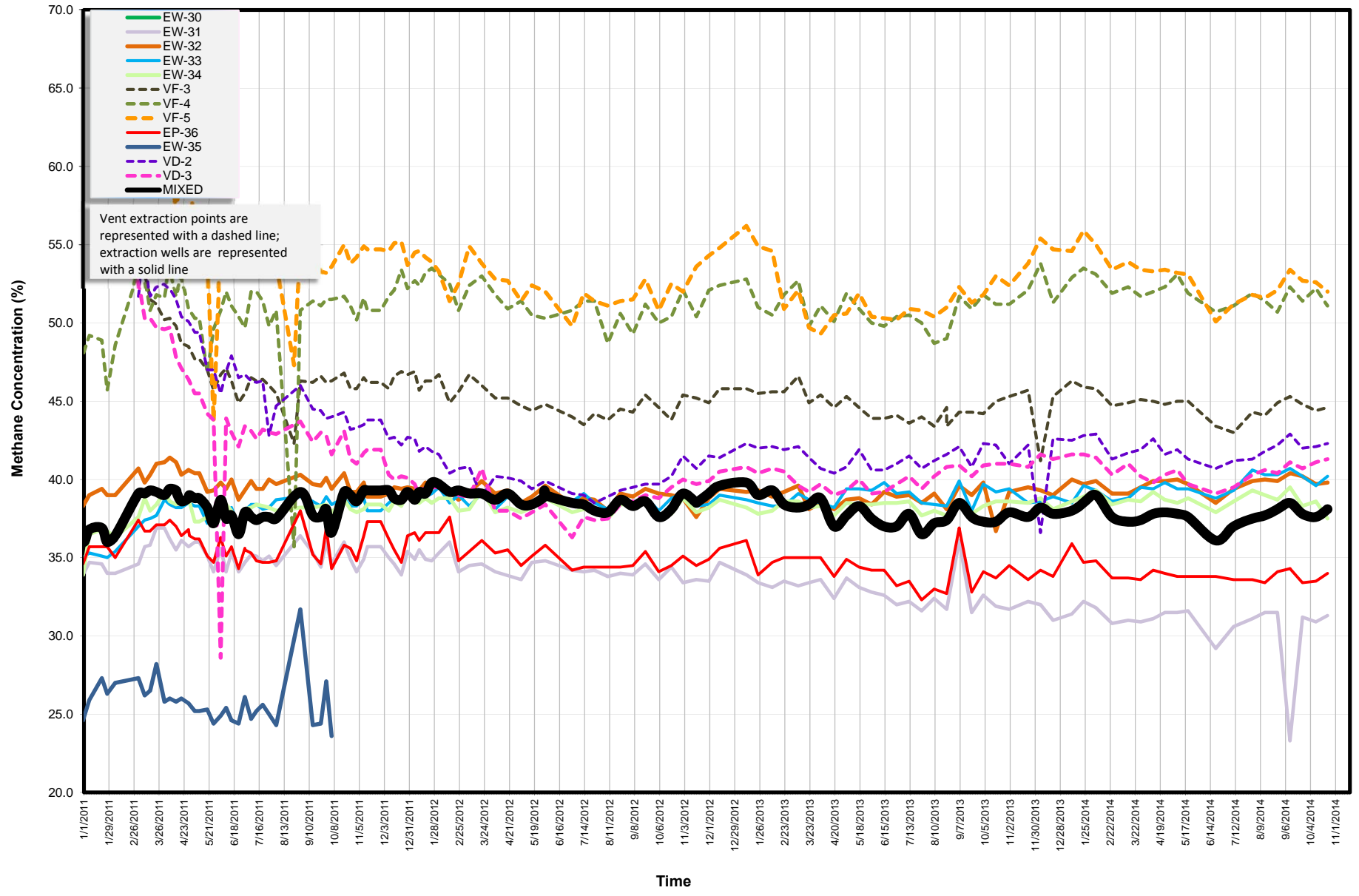
<b>EXTRACTION SYSTEM (2014)</b>						
<b>Location</b>	<b>Last Instantaneous Methane Reading (%)</b>	<b>Last Instantaneous Flow Rate Reading (scfm)</b>	<b>Current Methane Removal Rate (lbs/day)</b>	<b>2014 % Operation</b>	<b>2014 Methane Removed (Lbs)</b>	<b>% Contribution of Each Extraction Source</b>
<b>Area E</b>						
EP-36	34.0	25.0	501	24	35308	22%
<b>Area F</b>						
EW-31	31.3	14.0	258	24	19218	12%
EW-32	39.8	15.0	352	25	25456	16%
EW-33	40.2	13.0	308	24	19952	12%
EW-34	37.5	21.0	464	24	35642	22%
VF-3	44.6	4.0	105	24	7114	4%
VF-4	51.1	4.0	121	24	6315	4%
VF-5	52.0	1.0	31	24	6312	4%
<b>Area D</b>						
EW-35	32.6	0.0	0	0	0	0%
VD-2	42.3	1.0	25	24	2638	2%
VD-3	41.3	1.0	24	24	2303	1%
<b>MIXED</b>						
MIXED	38.1	96.0	2157	24	150572	100%



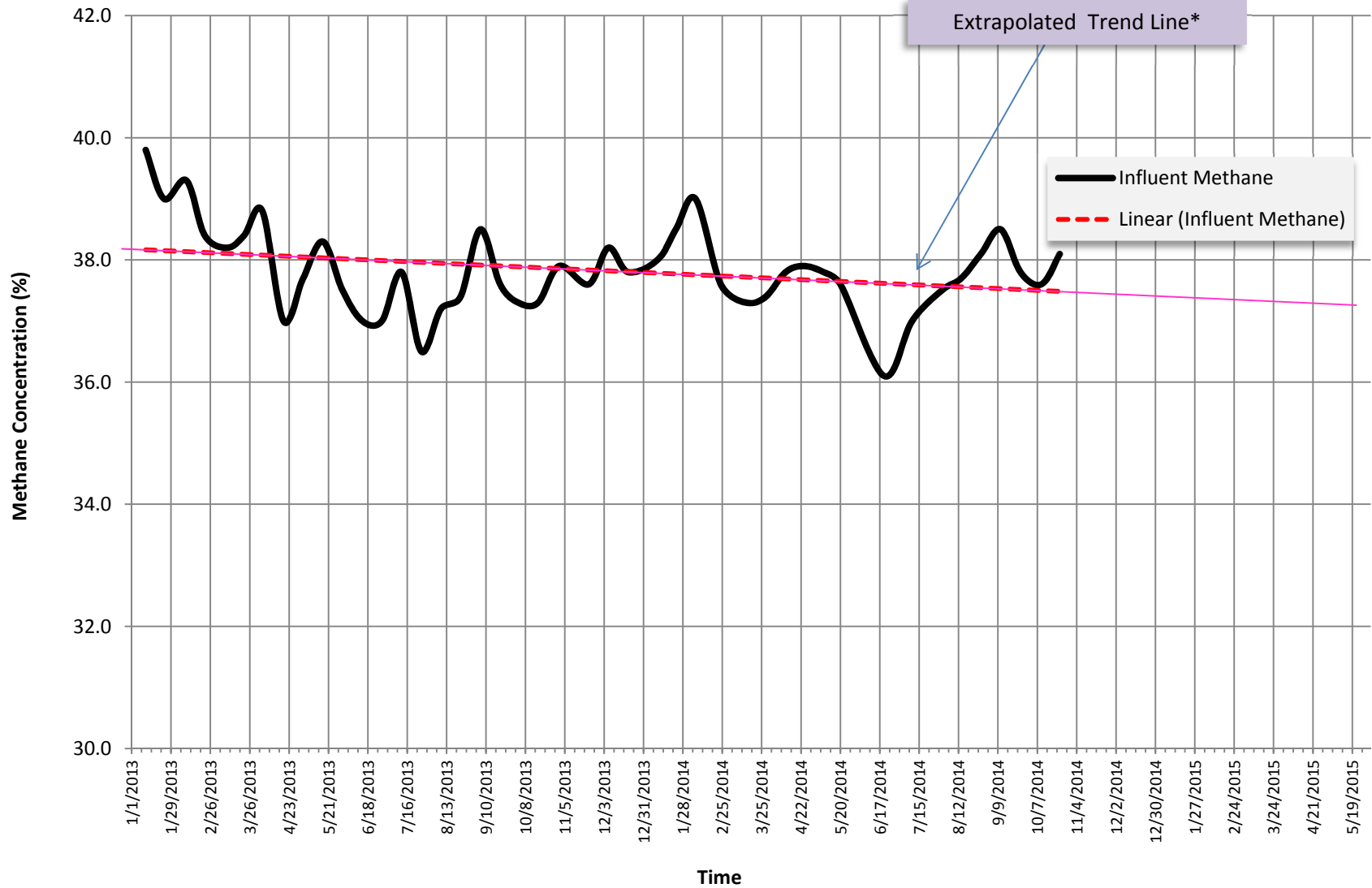
TTU Extraction Sources  
OU2 Landfill  
From 01/01/2009 to Present



# Methane Concentration vs. Time OU2 Landfill Extraction Sources 1/1/2011 to present



**Methane Concentration vs. Time  
OU2 Landfill Extraction Sources  
01/01/2013 to present**



\* Trend line generated from all data 1/1/13 to present



**BRA and Lead Evaluation Status**  
**Fort Ord HTW BCT**  
**13 November 2014**

**Basewide Range Assessment**

- Draft TM recommending no further sampling for Unit 6 was released on July 22, 2014. DTSC comments received and draft responses provided to the agencies. Additional comments were received from DTSC. Draft Final TM to be submitted this week.
- A preliminary draft BRA sampling plan for Units 10, 7, and 33 was submitted on September 9, 2014. Army asked to revise and submit after submittal of BRA QAPP.
- Performed BRA site reconnaissance in Unit 2.

**Lead Evaluation Technical Memorandum**

- The Army met with DTSC and EPA toxicologists. ITSI Gilbane prepared background information for HA 18 and HA 23 and USACE prepared hazard indexes in response to comments received. Response to comments sent to EPA and DTSC on 21 July 2014.
- Ongoing discussions with US Army ELD and discussions with DTSC toxicologist.
- Army and Gilbane coordinating sampling at HA 23D.

Issue Year	Site	Document Title	DocType	Version	Proposed Issue Date	Issue Date Status	Comments Due	Author Org	Notes
2014	Basewide	Analysis of the 2013 Community Survey and 2013-2014 Community Outreach Program, Fort Ord, California	External	DRAFT	30-Dec-14			Fort Ord BRAC	
2014	Basewide	Explanation of Significant Differences No. 1, Basewide Remedial Investigation, Sites 2 and 12, Former Fort Ord, CA	Internal	PREDRAFT	3-Sep-14	ISSUED	18-Sep-14	Ahtna	
2014	Basewide	Explanation of Significant Differences No. 1, Basewide Remedial Investigation, Sites 2 and 12, Former Fort Ord, CA	Internal	DRAFT	10-Dec-14			Ahtna	Revised FFA schedule was sent to agencies on 10/1
2015	Basewide	Explanation of Significant Differences No. 1, Basewide Remedial Investigation, Sites 2 and 12, Former Fort Ord, CA	Internal	DRAFT FINAL	5-Mar-15			Ahtna	Revised FFA schedule was sent to agencies on 10/1
2015	Basewide	Explanation of Significant Differences No. 1, Basewide Remedial Investigation, Sites 2 and 12, Former Fort Ord, CA	External	FINAL	1-May-15			Ahtna	Revised FFA schedule was sent to agencies on 10/1. Draft and Draft Final will be reviewed internally.
2014	Basewide	Quality Assurance Project Plan Volume 1, Appendix C, Soil Gas Monitoring at Sites 2 and 12	Internal	PREDRAFT	3-Oct-14	ISSUED	17-Oct-14	Ahtna	
2014	Basewide	Quality Assurance Project Plan Volume 1, Appendix C, Soil Gas Monitoring at Sites 2 and 12	External	DRAFT	12-Nov-14			Ahtna	New Date; Will revise the FFA schedule
2015	Basewide	Quality Assurance Project Plan Volume 1, Appendix C, Soil Gas Monitoring at Sites 2 and 12	External	DRAFT FINAL	11-Feb-15			Ahtna	New Date; Will revise the FFA schedule
2015	Basewide	Quality Assurance Project Plan Volume 1, Appendix C, Soil Gas Monitoring at Sites 2 and 12	External	FINAL	27-Mar-15			Ahtna	New Day; Will revise the FFA schedule
2014	Basewide	Quality Assurance Project Plan Volume 1, Appendix A, Revision 3, Groundwater Monitoring	Internal	PREDRAFT	7-Nov-14	ISSUED	23-Nov-14	Ahtna	
2014	Basewide	Quality Assurance Project Plan Volume 1, Appendix A, Revision 3, Groundwater Monitoring	External	DRAFT	9-Dec-14			Ahtna	
2015	Basewide	Quality Assurance Project Plan Volume 1, Appendix A, Revision 3, Groundwater Monitoring	External	DRAFT FINAL	11-Feb-15			Ahtna	
2015	Basewide	Quality Assurance Project Plan Volume 1, Appendix A, Revision 3, Groundwater Monitoring	External	FINAL	31-Mar-15			Ahtna	
2014	Basewide	Quality Assurance Project Plan Volume 1, Appendix B, Soil Sampling	Internal	PREDRAFT	1-Oct-14	ISSUED	7-Nov-14	ITSI Gilbane	
TBD	Basewide	Quality Assurance Project Plan Volume 1, Appendix B, Soil Sampling	External	DRAFT	TBD			ITSI Gilbane	
TBD	Basewide	Quality Assurance Project Plan Volume 1, Appendix B, Soil Sampling	External	DRAFT FINAL	TBD			ITSI Gilbane	
TBD	Basewide	Quality Assurance Project Plan Volume 1, Appendix B, Soil Sampling	External	FINAL	TBD			ITSI Gilbane	
2014	Basewide	Sites 2 and 12 Groundwater and Soil Vapor Monitoring and Treatment System Annual Report, October 2013 through September 2014	Internal	PREDRAFT	3-Dec-14			Ahtna / AMEC	
2014	Basewide	Sites 2 and 12 Groundwater and Soil Vapor Monitoring and Treatment System Annual Report, October 2013 through September 2014	External	DRAFT	31-Dec-14			Ahtna / AMEC	
2015	Basewide	Sites 2 and 12 Groundwater and Soil Vapor Monitoring and Treatment System Annual Report, October 2013 through September 2014	External	DRAFT FINAL	5-Mar-15			Ahtna / AMEC	
2015	Basewide	Sites 2 and 12 Groundwater and Soil Vapor Monitoring and Treatment System Annual Report, October 2013 through September 2014	External	FINAL	21-Apr-15			Ahtna / AMEC	
2014	Basewide	Sites 2 and 12 Groundwater and Soil Vapor Monitoring and Treatment System Quarterly Report, Second Quarter 2014	External	FINAL	31-Oct-14	ISSUED	None	Ahtna / AMEC	
TBD	Basewide	Technical Memorandum Evaluation of Lead Concentrations at Selected Sites, Former Fort Ord, California	External	DRAFT FINAL	TBD			ITSI Gilbane	
TBD	Basewide	Technical Memorandum Evaluation of Lead Concentrations at Selected Sites, Former Fort Ord, California	External	FINAL	TBD			ITSI Gilbane	
2014	OU1	2014 Annual and Third Quarter OU-1 Groundwater Monitoring Report	External	DRAFT	22-Dec-14			HydroGeoLogic, Inc.	
2015	OU1	2014 Annual and Third Quarter OU-1 Groundwater Monitoring Report	External	DRAFT FINAL	8-Feb-15			HydroGeoLogic, Inc.	
2015	OU1	2015 Semiannual OU-1 Groundwater Monitoring Report	External	FINAL	21-Jun-15			HydroGeoLogic, Inc.	Comments accepted and incorporated in 2015 Annual OU-1 Groundwater Monitoring Report

Issue Year	Site	Document Title	DocType	Version	Proposed Issue Date	Issue Date Status	Comments Due	Author Org	Notes
2014	OU1	OU-1 Exit Strategy Technical Memorandum	Internal	PREDRAFT	3-Oct-14	ISSUED	10-Oct-14	HydroGeoLogic, Inc.	Received; Updates made regarding emerging contaminants PFOA/PFOS and distributed for Army review 31-Oct-14
TBD	OU1	OU-1 Exit Strategy Technical Memorandum	External	DRAFT	TBD			HydroGeoLogic, Inc.	
TBD	OU1	OU-1 Exit Strategy Technical Memorandum	External	DRAFT FINAL	TBD			HydroGeoLogic, Inc.	
TBD	OU1	OU-1 Exit Strategy Technical Memorandum	External	FINAL	TBD			HydroGeoLogic, Inc.	
TBD	OU1	OU-1 UFP-QAPP Update	External	DRAFT	TBD			HydroGeoLogic, Inc.	
TBD	OU1	OU-1 UFP-QAPP Update	External	DRAFT FINAL	TBD			HydroGeoLogic, Inc.	
2014	OU1	Well Destruction and Former OU-1 Treatment Plant Decommissioning Completion Report Former Fort Ord, California	External	DRAFT	11-Aug-14	ISSUED	16-Sep-14	HydroGeoLogic, Inc.	
2014	OU1	Well Destruction and Former OU-1 Treatment Plant Decommissioning Completion Report Former Fort Ord, California	External	DRAFT FINAL	25-Sep-14			HydroGeoLogic, Inc.	Draft accepted as Final
2014	OU2	Construction QC and QA Report, OU2 Landfills, Area E Phase 1	External	DRAFT FINAL	14-Jul-14	ISSUED	14-Aug-14	ITSI Gilbane	
2014	OU2	Construction QC and QA Report, OU2 Landfills, Area E Phase 1	External	FINAL	9-Oct-14	ISSUED	None	ITSI Gilbane	
2014	OU2	Operable Unit 2 Groundwater Monitoring and Treatment System Annual Report, October 2013 through September 2014	Internal	PREDRAFT	3-Dec-14			Ahtna / AMEC	
2014	OU2	Operable Unit 2 Groundwater Monitoring and Treatment System Annual Report, October 2013 through September 2014	External	DRAFT	31-Dec-14			Ahtna / AMEC	
2015	OU2	Operable Unit 2 Groundwater Monitoring and Treatment System Annual Report, October 2013 through September 2014	External	DRAFT FINAL	5-Mar-15			Ahtna / AMEC	
2015	OU2	Operable Unit 2 Groundwater Monitoring and Treatment System Annual Report, October 2013 through September 2014	External	FINAL	21-Apr-15			Ahtna / AMEC	
2014	OU2	Operable Unit 2 Groundwater Monitoring and Treatment System Quarterly Report, Second Quarter 2014	External	FINAL	31-Oct-14	ISSUED	None	Ahtna / AMEC	
2014	OU2	Quality Assurance Project Plan, Superfund Response Actions, Former Fort Ord, California, Volume 1, OU2 Landfill, Appendix D	External	DRAFT FINAL	14-Nov-14			ITSI Gilbane	New Date; Will revise FFA schedule;
2015	OU2	Quality Assurance Project Plan, Superfund Response Actions, Former Fort Ord, California, Volume 1, OU2 Landfill, Appendix D	External	FINAL	5-Jan-15		None	ITSI Gilbane	New Date; Will revise FFA schedule
2014	OUCTP	Operable Unit Carbon Tetrachloride Plume A-Aquifer Remedy Evaluation Work Plan	Internal	PREDRAFT	3-Sep-14	ISSUED	17-Sep-14	Ahtna	
2014	OUCTP	Operable Unit Carbon Tetrachloride Plume A-Aquifer Remedy Evaluation Work Plan	External	DRAFT	31-Oct-14	ISSUED	1-Dec-14	Ahtna	
2015	OUCTP	Operable Unit Carbon Tetrachloride Plume A-Aquifer Remedy Evaluation Work Plan	External	DRAFT FINAL	2-Jan-15			Ahtna	
2015	OUCTP	Operable Unit Carbon Tetrachloride Plume A-Aquifer Remedy Evaluation Work Plan	External	FINAL	16-Feb-15		None	Ahtna	
2014	OUCTP	Operable Unit Carbon Tetrachloride Plume Groundwater Monitoring Annual Report, October 2013 through September 2014	Internal	PREDRAFT	3-Dec-14			Ahtna / AMEC	
2014	OUCTP	Operable Unit Carbon Tetrachloride Plume Groundwater Monitoring Annual Report, October 2013 through September 2014	External	DRAFT	31-Dec-14			Ahtna / AMEC	
2015	OUCTP	Operable Unit Carbon Tetrachloride Plume Groundwater Monitoring Annual Report, October 2013 through September 2014	External	DRAFT FINAL	5-Mar-15			Ahtna / AMEC	
2015	OUCTP	Operable Unit Carbon Tetrachloride Plume Groundwater Monitoring Annual Report, October 2013 through September 2014	External	FINAL	21-Apr-15		None	Ahtna / AMEC	
2014	OUCTP	Operable Unit Carbon Tetrachloride Plume Groundwater Monitoring Quarterly Report, Second Quarter 2014	External	FINAL	31-Oct-14	ISSUED	None	Ahtna / AMEC	
2014	RI Sites	Report, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12	External	DRAFT	11-Aug-14	ISSUED	8-Oct-14	Ahtna	

Issue Year	Site	Document Title	DocType	Version	Proposed Issue Date	Issue Date Status	Comments Due	Author Org	Notes
2014	RI Sites	Report, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12	External	DRAFT FINAL	21-Nov-14			Ahtna	Revised FFA schedule was sent to agencies on 10/1
2015	RI Sites	Report, Remedial Investigation/Feasibility Study Addendum at Sites 2 and 12	External	FINAL	28-Jan-15		None	Ahtna	Revised FFA schedule was sent to agencies on 10/1
2014	RI Sites	Technical Memorandum, Basewide Range Assessment Investigation, Unit 6, Former Fort Ord, California	External	DRAFT	22-Jul-14	ISSUED	25-Aug-14	ITSI Gilbane	
2014	RI Sites	Technical Memorandum, Basewide Range Assessment Investigation, Unit 6, Former Fort Ord, California	External	DRAFT FINAL	21-Nov-14			ITSI Gilbane	New Date
2015	RI Sites	Technical Memorandum, Basewide Range Assessment Investigation, Unit 6, Former Fort Ord, California	External	FINAL	28-Jan-15		None	ITSI Gilbane	New Date
TBD	RI Sites	Technical Memorandum, Basewide Range Assessment Investigations, Units 7, 10, 33, Former Fort Ord, California	External	DRAFT	TBD			ITSI Gilbane	Delayed for Basewide Soil Sampling QAPP (Vol I, App B) approval
TBD	RI Sites	Technical Memorandum, Basewide Range Assessment Investigations, Units 7, 10, 33, Former Fort Ord, California	External	DRAFT FINAL	TBD			ITSI Gilbane	Delayed for Basewide Soil Sampling QAPP (Vol I, App B) approval
TBD	RI Sites	Technical Memorandum, Basewide Range Assessment Investigations, Units 7, 10, 33, Former Fort Ord, California	External	FINAL	TBD			ITSI Gilbane	Delayed for Basewide Soil Sampling QAPP (Vol I, App B) approval
TBD	RI Sites	Technical Memorandum, Basewide Range Assessment Investigations, Watkins Gate Burn Area, Former Fort Ord, California	External	DRAFT	TBD			ITSI Gilbane	Delayed for Basewide Soil Sampling QAPP (Vol I, App B) approval
TBD	RI Sites	Technical Memorandum, Basewide Range Assessment Investigations, Watkins Gate Burn Area, Former Fort Ord, California	External	DRAFT FINAL	TBD			ITSI Gilbane	Delayed for Basewide Soil Sampling QAPP (Vol I, App B) approval

November 2014						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						<a href="#">1</a>
<a href="#">2</a>	<a href="#">3</a>	<a href="#">4</a>	<a href="#">5</a> MR IPM (10am)  HTW IPM (130pm)	<a href="#">6</a>	<a href="#">7</a>	<a href="#">8</a>
<a href="#">9</a>	<a href="#">10</a>	<a href="#">11</a>	<a href="#">12</a>	<a href="#">13</a> MR BCT (10am)  HTW BCT (1:30 pm)	<a href="#">14</a>	<a href="#">15</a>
<a href="#">16</a>	<a href="#">17</a>	<a href="#">18</a>	<a href="#">19</a> BRAC Thanksgiving (11:30a)	<a href="#">20</a> ESCA Reg Mtg (1pm)	<a href="#">21</a>	<a href="#">22</a>
<a href="#">23</a>	<a href="#">24</a>	<a href="#">25</a>	<a href="#">26</a>	<a href="#">27</a>	<a href="#">28</a>	<a href="#">29</a>
<a href="#">30</a>						

December 2014						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	<a href="#">1</a>	<a href="#">2</a>	<a href="#">3</a>	<a href="#">4</a>	<a href="#">5</a>	<a href="#">6</a>
<a href="#">7</a>	<a href="#">8</a>	<a href="#">9</a> ESCA Reg Mtg (1pm)	<a href="#">10</a> MR IPM (10am)  HTW IPM (130pm)	<a href="#">11</a>	<a href="#">12</a>	<a href="#">13</a>
<a href="#">14</a>	<a href="#">15</a>	<a href="#">16</a>	<a href="#">17</a>	<a href="#">18</a>	<a href="#">19</a>	<a href="#">20</a>
<a href="#">21</a>	<a href="#">22</a>	<a href="#">23</a>	<a href="#">24</a>	<a href="#">25</a>	<a href="#">26</a>	<a href="#">27</a>
<a href="#">28</a>	<a href="#">29</a>	<a href="#">30</a>	<a href="#">31</a>			



	January 2015					
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				<a href="#">1</a>	<a href="#">2</a>	<a href="#">3</a>
<a href="#">4</a>	<a href="#">5</a>	<a href="#">6</a>	<a href="#">7</a>	<a href="#">8</a>	<a href="#">9</a>	<a href="#">10</a>
<a href="#">11</a>	<a href="#">12</a>	<a href="#">13</a>	<a href="#">14</a> MR IPM (10am)  HTW IPM (130pm)	<a href="#">15</a>	<a href="#">16</a>	<a href="#">17</a>
<a href="#">18</a>	<a href="#">19</a>	<a href="#">20</a>	<a href="#">21</a>	<a href="#">22</a>	<a href="#">23</a>	<a href="#">24</a>
<a href="#">25</a>	<a href="#">26</a>	<a href="#">27</a>	<a href="#">28</a>	<a href="#">29</a>	<a href="#">30</a>	<a href="#">31</a>

	February 2015					
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<a href="#">1</a>	<a href="#">2</a>	<a href="#">3</a>	<a href="#">4</a>	<a href="#">5</a>	<a href="#">6</a>	<a href="#">7</a>
<a href="#">8</a>	<a href="#">9</a>	<a href="#">10</a>	<a href="#">11</a>	<a href="#">12</a>	<a href="#">13</a>	<a href="#">14</a>
<a href="#">15</a>	<a href="#">16</a>	<a href="#">17</a>	<a href="#">18</a>	<a href="#">19</a>	<a href="#">20</a>	<a href="#">21</a> Bus Tour / Open House
<a href="#">22</a>	<a href="#">23</a>	<a href="#">24</a> TRC Meeting	<a href="#">25</a>	<a href="#">26</a>	<a href="#">27</a>	<a href="#">28</a>

Proposed Basewide QAPP Structure Changes  
Former Fort Ord

<b>Basewide QAPP</b>				
<b>Volume I – HTW</b>			<b>Volume II - MEC</b>	
Appendix A	Groundwater		Appendix A	Munitions
Appendix B	Soil			
Appendix C	Soil Gas		Appendix B	Air Monitoring during Burns
Appendix D	Landfill Gas			