

**Former Fort Ord Operable Unit (OU)-1 – Base Closure Team (BCT) Meeting
Final Minutes
Groundwater Remediation, Well Destruction, and Treatment Plant Decommissioning
Marina, California
26 February 2016**

OU-1 On-Post Activities for 16 January through 17 February 2016

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

Attendees: (to be revised after meeting)

Individual	Attended?	Individual	Attended?
James Specht, USACE		Grant Himebaugh, RWQCB	X
Teresa Rodgers, USACE	X	Jeff Fenton, AMEC	X
Alex Kan, USACE		Derek Lieberman, Ahtna	X
Bonnie McNeill, USACE		Eric Schmidt, Ahtna	X
Cory Koger, USACE		Holly Dillon, Ahtna	X
Jonathan Whipple, USACE	X	Megan Gehrke, Ahtna	
William Collins, BRAC	X	Thor Anderson, Burleson	X
Tom Ghigliotto, Chenega ¹		Peter Kelsall, CB&I	
Melissa Broadston, Chenega ¹	X	Steve Crane, Kemron	X
Bart Kowalski, Chenega ¹	X	Erin Caruso, Gilbane	X
Cary Stiebel, Chenega ¹		Larry Friend, Gilbane	
Judy Huang, EPA	X	Kevin Siemann, Gilbane	
Martin Hausladen, EPA		Monique Perry, Gilbane	
Kimberly Gettman, DTSC	X	Roy Evans, HGL	X
Min Wu, Ph.D., DTSC	X	Kevin Wierengo, HGL	
Steve Sterling, DTSC	X	Gage Dayton, Ph.D., UCSC	
Edward Walker, DTSC			
X = attended in person or by telephone; blank indicates absent from the meeting			

Notes:

¹Chenega 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

The northwest treatment system (NWTS) remains offline in accordance with the OU-1 Exit Strategy. 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 system control logic and pump P-111 have been checked and are operating correctly. The pump P-111 recent failure to start is believed to be the result of human error.

Reporting/Federal Facility Agreement Schedule

The status of ongoing and anticipated reports for OU-1 is summarized in Table 2. Ongoing efforts are as follows:

- The Draft Technical Memorandum summarizing the results of Attainment Monitoring events 1 through 4 was submitted on 29 January 2016. Thus far, EPA provided comments via email. The Draft Final version will be submitted two weeks after all agency and public comments are received—the comment period ends on 01 March 2016.
- The RWQCB stated that they had sent a “no comment” letter to the Army this afternoon.

OU-1 Groundwater Sampling and Analytical Results

Table 1 presents the validated analytical results for the Attainment Monitoring program to date for trichloroethene (TCE), perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). All analytical results show that chemical concentrations in OU-1 groundwater for all compounds tested have remained well below the aquifer cleanup levels (ACLs) established in the Record of Decision (ROD) or the screening values established in the Exit Strategy. The attached Figures 9 and 10 (from the Draft Technical Memorandum) show the TCE, PFOA, and PFOS concentrations, respectively, for each well.

OU-1 Exit Strategy Implementation

The regulatory agencies concurred that the sampling effort scheduled to occur 18 – 23 February 2016 is not needed. No further sampling is scheduled pending agency review and concurrence with the Draft Final Technical Memorandum to be submitted in March. The site closure process will be initiated upon receiving all agency approvals for the Draft Final Technical Memorandum.

The Five Year Review cycle for the former Fort Ord cleanup ends this year (2012 – 2016). EPA stated that this will be the final Five Year Review if there are no institutional controls (IC) associated with site closure. However, if IC(s) remain in place, then follow-up Five Year Review efforts will be required. The Army/HGL will review the Record of Decision (ROD) and the subsequent

Explanation of Significant Differences (ESD) to determine if the water supply well Prohibition Zone established in the area encompassing OU-1 is identified as an IC in the ROD or the ESD.

OU-1 Weed Control and Rare Plant Monitoring

HGL presented the results of the 2015 Fort Ord Natural Reserve Impact Assessment Report to representatives from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife and others in a meeting at the BRAC office on 17 February 2016.

New /Current Action Items:

- Regulatory agencies – submit final comments on the Draft Technical Memorandum by 01 March 2016—all agency comments have been submitted.
- HGL to attend and participate in Community Involvement Workshop on 27 February 2016 at Fort Ord—this was completed.

Ongoing:

- Submit draft minutes for previous BCT meeting(s)—complete through January 2015.
- Submit final minutes for previous BCT meeting(s)—complete through January 2015.

Table 1
OU-1 Attainment Monitoring Results for TCE, PFOA, and PFOS

Analyte	TCE				PFOA				PFOS			
Aquifer Cleanup Level or Screening Value	5 µg/L				400 ng/L				200 ng/L			
Sample Event #	1	2	3	4	1	2	3	4	1	2	3	4
Sample Date(s)	5/8/2015	7/17/2015	10/2/2015	12/11/2015	5/11/2015	7/20/2015	10/5/2015	12/14/2015	5/11/2015	7/20/2015 & 7/24/15	10/5/2015	12/14/2015
Well Identification	Groundwater Concentration: TCE in µg/L; PFOA and PFOS in ng/L											
EW-OU1-53-A	1.6	1.8	1.3	1.4	14 J-	13.0	9	13	UJ-	ND	ND	ND
EW-OU1-52-A	3.8	3.7	3.0	2.9	3 J-	4.0	4	5	UJ-	ND	ND	ND
PZ-OU1-10-A1**	3.3	2.5	2.0	1.6	120 J-	Not sampled			UJ-	Not sampled		
IW-OU1-02-A	1.8	1.8	1.8	1.9	9 J-	10.0	7	9	UJ-	ND	ND	ND
MW-OU1-26-A	2.5	2.5	2.3	2.2	34 J-	44.0	42	39	7 J-	12.0	15	12
MW-OU1-88-A	4.0	3.2 J-	3.9	3.9	270 J-	230.0	180	210	64 J-	62.0	37	33
						260.0*	200*	200*		72.0*	44*	36*
PZ-OU1-49-A1	1.8	2.0	2.2	1.9	7 J-	8.0	9	11	UJ-	ND	ND	ND
MW-OU1-61-A	3.9	4.4	3.7	3.4	3 J-	3.0	2 J	2	UJ-	ND	ND	ND
	4.4*	4.3*	3.7*	3.5*	4* J-				UJ-			

Notes:

µg/L = micrograms per liter
 * = Duplicate
 ND = Not detected
 ng/L = nanograms per liter

OU1 = Operable Unit 1
 TCE = trichloroethene
 PFOA = perfluorooctanoic acid
 PFOS = perfluorooctane sulfonate

U = Not detected
 J- = Potential low bias in reported result

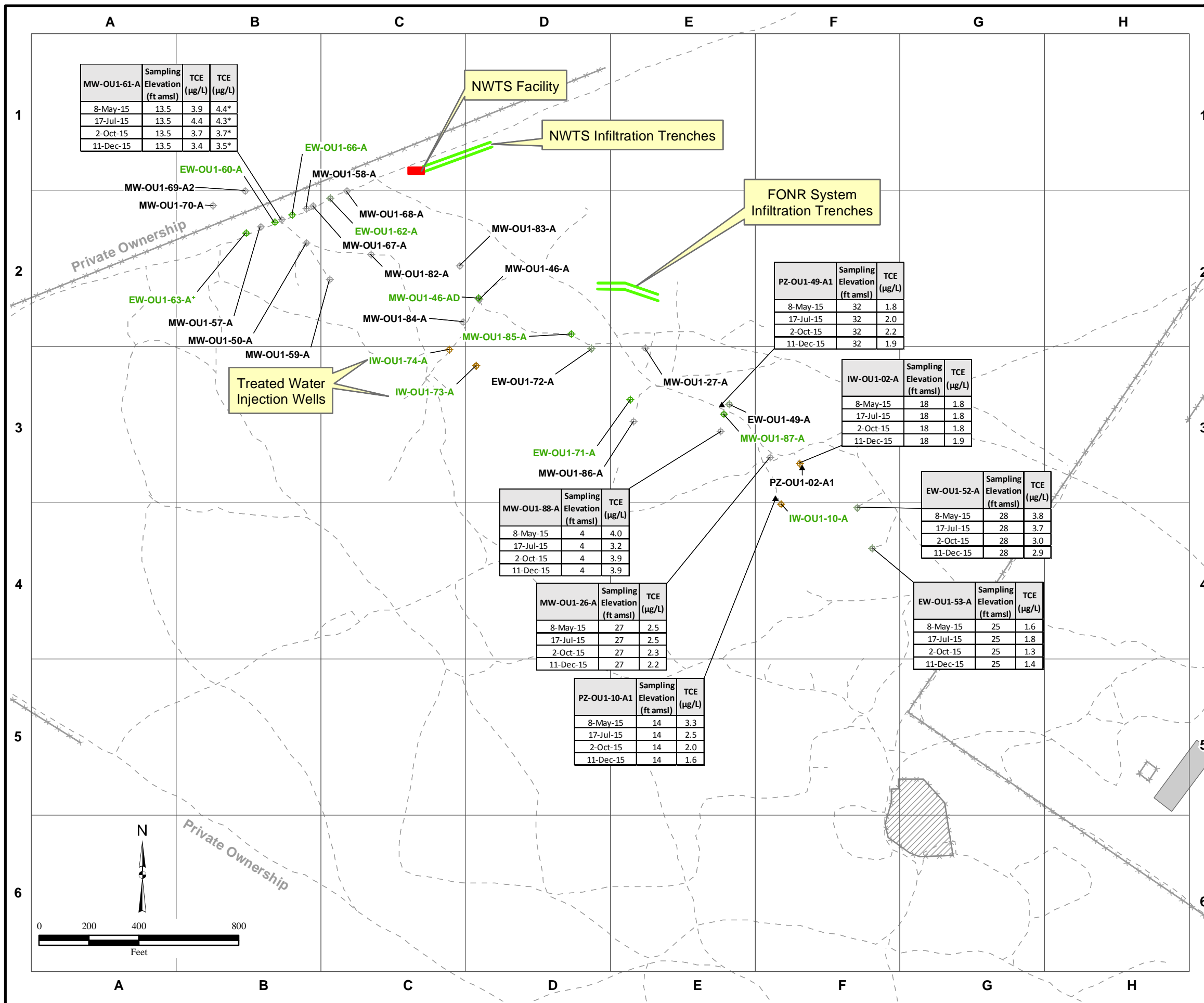
** PZ-OU1-10-A1 was deleted from the sampling network for PFOA and PFOS after Event #1

Table 2
Current Deliverable Schedule
Former Fort Ord, Marina, CA – 26 February 2016

Deliverable Title	Submittal	Review Comments Due	Status/Remarks
<i>Primary Deliverables</i>			
None Pending			
<i>Secondary Deliverables</i>			
Draft PFOA/PFOS Sampling Results Technical Memorandum Attainment Monitoring Events 1 - 4	29 January 2016	29 February 2016	In review
Draft Final PFOA/PFOS Sampling Results Technical Memorandum Attainment Monitoring Events 1 - 4	15 March 2016	16 April 2016	Awaiting comments on Draft version
Draft OU-1 Final Closeout Report	March 2016	May 2016	Schedule assumes agency concurrence with Draft Final Technical Memorandum
<i>Completed Recent Submittals</i>			
Final Exit Strategy Technical Memorandum	March 2015	April 2015	Draft Final approved without comment. Change pages distributed 12 May 2015
Site Safety and Health Plan Update	March 2015	Not Applicable	Army approved revisions
Final UFP-QAPP Revision 1	March 2015	April 2015	Draft Final approved without comment. Change pages distributed 14 May 2015
2015 Semiannual Groundwater Monitoring Report ¹	07 August 2015	10 September 2015	Accepted without comment
Draft 2015 Annual Groundwater Monitoring Report ¹	15 October 2015	16 November 2015	Draft Accepted without comment; final submitted 03 December 2015
Final UFP-QAPP Revision 2	14 October 2015	16 November 2015	

¹ 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.

Figure 9
Attainment Monitoring Summary
TCE Concentrations in
OU-1 A-Aquifer
Former Fort Ord, CA



Legend

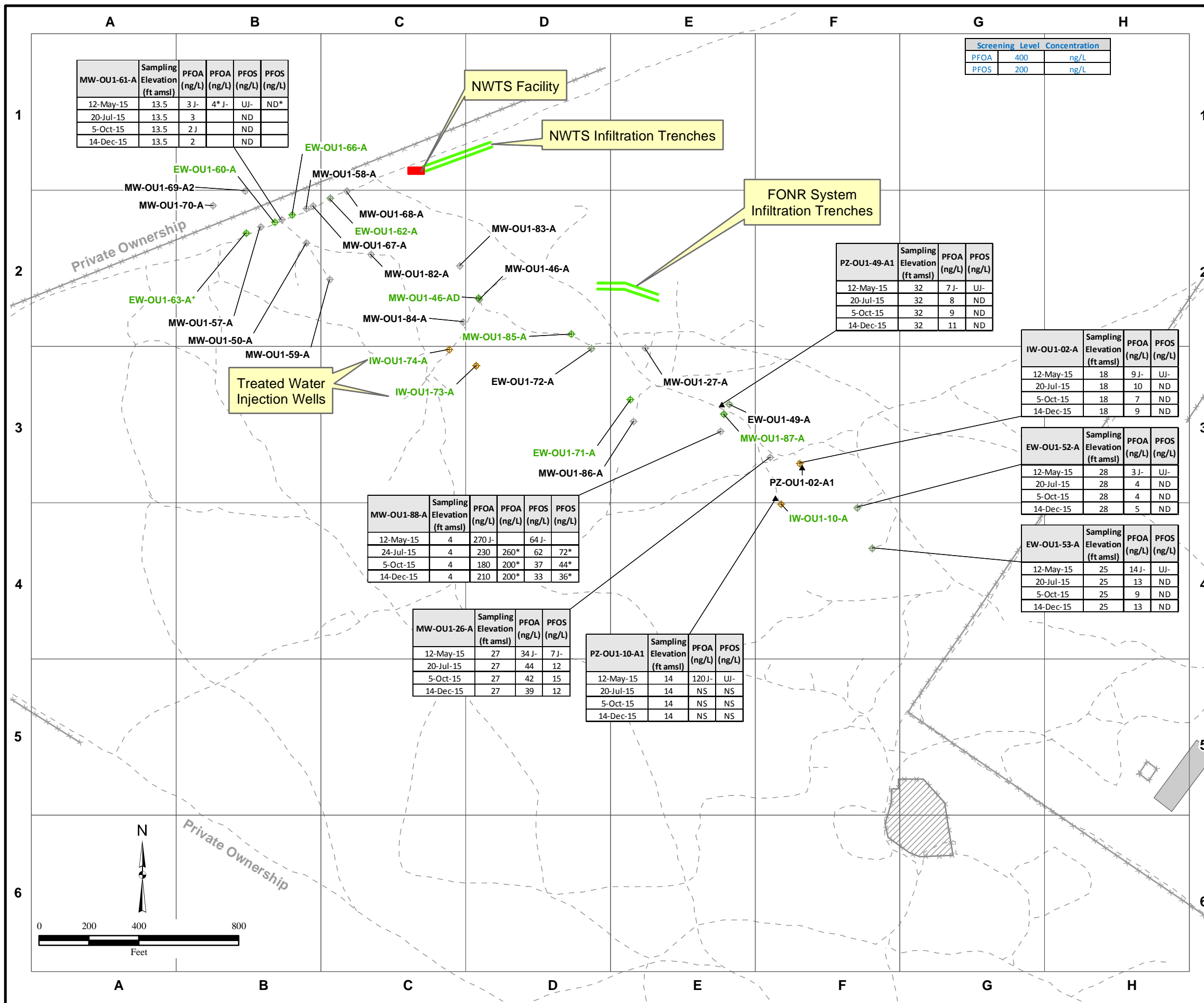
- ⊕ Monitoring Well
- ⊕ Extraction Well
- ⊕ Injection Well
- ▲ Piezometer or 2-Inch Well
- MW-OU1-70-A Well Identification
- - - Trail/Unimproved Road
- ⋯ Fence
- Treated Water Infiltration Trench
- ▨ Former Fire Drill Area
- Structure
- NWTS Facility

Notes:
Well labels in green font indicate extraction or injection well.
Wells not sampled are not part of Attainment Monitoring Network.
* = Duplicate Sample
† = Indicates disconnected extraction well. No longer operable.
ft amsl = feet above mean sea level
µg/L = micrograms per liter
NWTS = Northwest Treatment System
FONR = Fort Ord Natural Reserve

\\gst-srv-01\HGLGIS\Ft_Ord_MSIW\OU-1_AME_1-4_RS_TM\
(09)AttainMS_TCE_OU1_A-Aq.mxd
1/6/2016 TB
Source: HGL



Figure 10
Attainment Monitoring Summary
PFOA and PFOS Concentrations
in OU-1 A-Aquifer
Former Fort Ord, CA



Legend

- Monitoring Well
- Extraction Well
- Injection Well
- Piezometer or 2-Inch Well
- MW-OU1-70-A Well Identification
- Trail/Unimproved Road
- Fence
- Treated Water Infiltration Trench
- Former Fire Drill Area
- Structure
- NWTS Facility

Notes:
 Well labels in green font indicate extraction or injection well.
 Wells not sampled are not part of Attainment Monitoring Network.
 *=Duplicate Sample
 +=Indicates disconnected extraction well. No longer operable.
 ft amsl=feet above mean sea level
 FONR=Fort Ord Natural Reserve
 J=Sample result estimated value potentially biased low
 J=Sample result estimated value
 ND=Nondetect
 NS=Not Sampled
 ng/L=nanograms per liter
 NWTS=Northwest Treatment System
 PFOA=Perfluorooctanoic Acid
 PFOS=Perfluorooctane Sulfonate
 UJ=Not detected; Sample result biased low

