SUBJECT: HTW – BCT Meeting
July 10, 2008
1:00 p.m.

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Check (✓)	Name	Organization	Phone	E-mail address
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	phone ROY EVANS			

HTW BCT Meeting

July 10, 2008

Item	Action	Comment
OU1 Groundwater Remediation	Status Update	HGL
OU1 Off-Site	Status Update	
OU2 and 2/12 Treatment Systems	Status Update	
Other Groundwater Issues	Status Update	Quarterly sampling Mini-storage well
OUCTP Pilot Study	Status Update	
Groundwater Treatment System Optimization	Status Update	
OU2 Landfill Gas	Status Update	
Basewide Range Assessment	Status Update	Seaside Risk Assessment, No Action Approval Memos, HA 161 IA Memo
Site 39 FS Addendum and ROD	Status Update	Responsiveness Summary
Site 3 Post Remediation Monitoring	Status Update	
FFA Schedule	Status Update	
FOST/FOSET Issues	Status Update	
Calendar Update	Update	

Site Preparatory Activities

As discussed in the June BCT meeting we are providing maps and a brief description of site preparation activities. These activities are expected to occur over the next couple months.

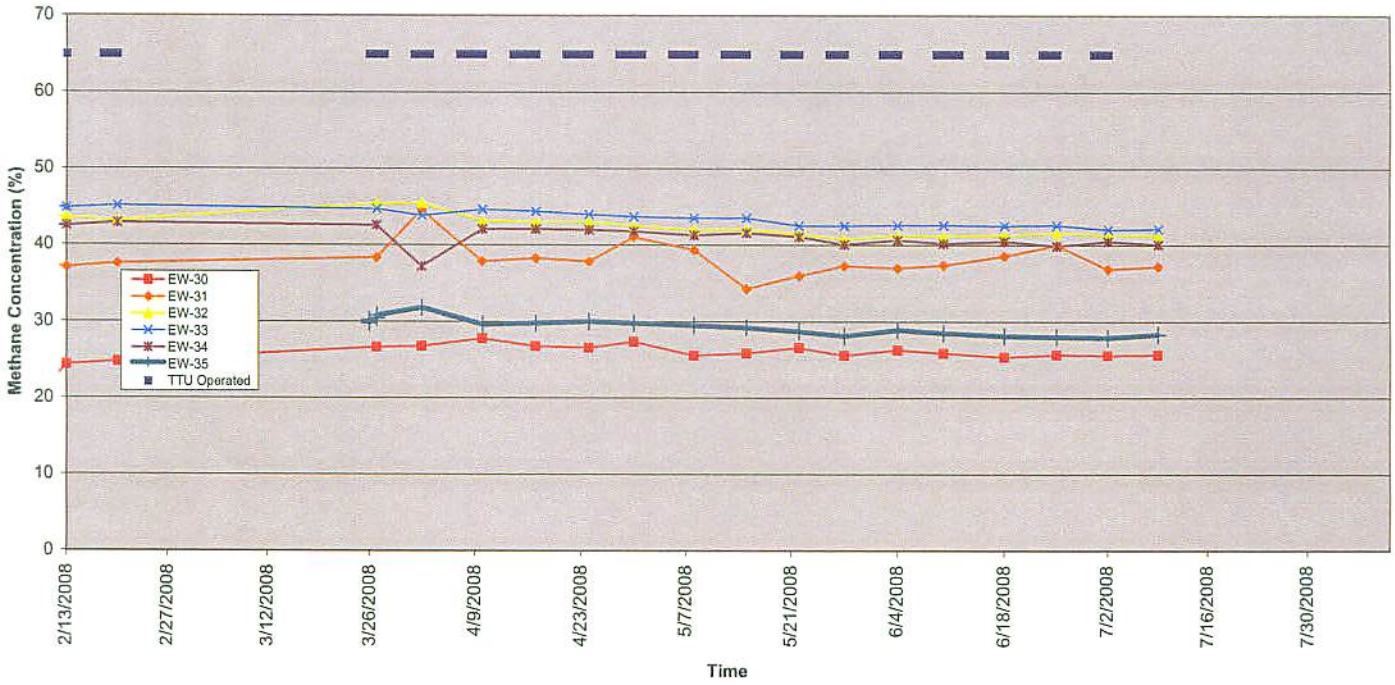
-Range 19: Shaw will be surveying and staking the proposed excavation areas within Range 19 (first map). The areas will also be mowed with a Bobcat modified with a mowing deck to facilitate future access for remediation and restoration.

-Range 26: Shaw is mowing the large Pampas grass infestations within Range 26 (second map) with a Bobcat modified with a mowing deck to both prepare the area for prescribed burning this summer/fall and to help provide access to control the spread of Pampas grass which could impact the future habitat restoration objectives following soil remediation. The mowing is also helpful in reducing fuel along the southern boundary of Burn Unit 2.

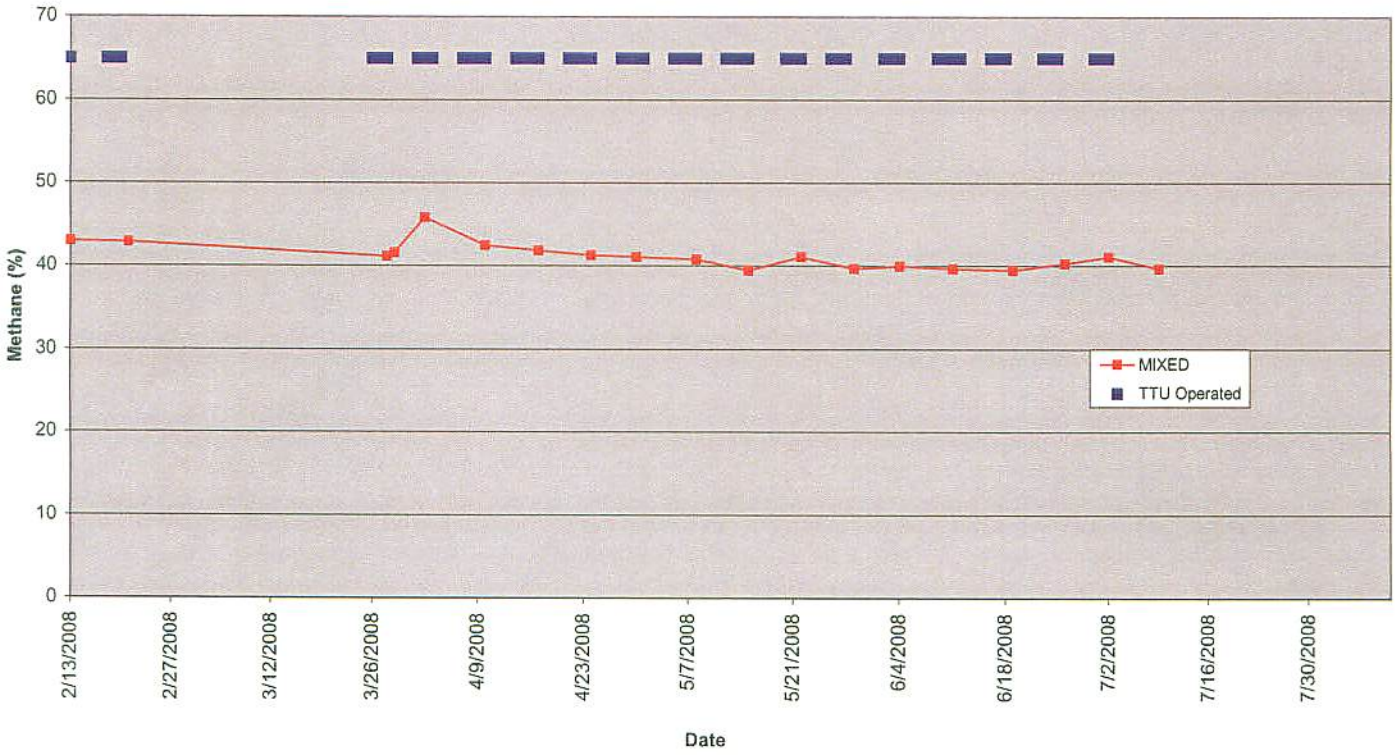
It is anticipated that this work will be ongoing over the next two months.


Pampas Grass Mowing

Methane Concentration vs. Time
(after 02-13-08)
Interior Extraction Wells



Methane Concentration vs. Time
(after 02-13-08)
Mixed Port at TTU



OPERABLE UNIT CARBON TETRACHLORIDE PLUME ENHANCED IN SITU BIOREMEDIATION PILOT STUDY AND REMEDIAL ACTION

STATUS – July 10, 2008

FIELD WORK

- System construction complete – October 25
- Substrate injection initiated - January 29
- 7000 gallons substrate injected – March 27
- System shut off – April 11
- Conceptual Remedial Action Design – Groundwater Summit – June 11.

SCHEDULE

- Monitoring monthly through July then any subsequent quarterly monitoring conducted under Groundwater Monitoring Program.
- July sampling scheduled during week of July 21.
- Preliminary Draft Remedial Action Work Plan w/ Attachment 1 – A-Aquifer (USACE review) – July 18.

DATA (Preliminary)

- None

PROBLEMS/CHANGES

- Increased backpressure (due to biofouling) noted in all injection wells after 13 days of operation. Backpressure has resulted in even lower extraction/injection rates, lower substrate metering rates, and system shutdowns. Cleaned wells with hydrogen peroxide to increase substrate metering rates to optimize system operation. Wells EISB-IW-01 (2x), EISB-IW-02 (2x), EISB-EW-03, and EISB-EW-07 cleaned.
- EISB-IW-04 well failed (3/2/2208) injected groundwater percolating to ground surface). Stopped injection at that well. EISB-IW-03 failed (3/13/2008) after cleaning. Restarted and operating at a lower injection rate.
- Low concentrations of dissolved methane in wells EISB-MW-03 (0.61J ug/L) and EISB-EW-06 (0.85J ug/L).
- Theft/vandalism on site over the weekend of April 18 through 20. Conduit/wire cut and removed, container broken into, but no serious damage. Additional damage over the weekend of May 2 though 4. Piping, conduit, and wellhead fittings demobed from wells EISB-EW-02, EISB-EW-04, EISB-EW-06, EISB-EW-08, and EISB-EW-09 (along the access road) to minimize further damage. Additional piping cannot be removed until mid-June due to sensitive plant species. Monthly sampling to be conducted with existing operable equipment in most wells and new dedicated sample pumps in effected wells.

AHTNA
Government Services Corporation

Former Fort Ord Groundwater Treatment Systems Operational Data and Status

BCT Meeting July 10, 2008

Table 1: OU2 and Sites 2/12 GWTP Treatment Statistics.

	Volume Treated (gallons)	Average Flow (gallons per minute)	Percent of Time Online	COC Mass Removed (lbs)
OU2				
June 2008	32,924,610	708	98	2.44
Total since October 1995	4.243 billion			566.48
Sites 2/12				
June 2008	4,610,700	107	77	0.91
Total since May 1999	1.119 billion			393.31

Table 2: OU2 and Sites 2/12 GWTP Calendar of events.

Key Events for OU2 and Sites 2/12 for June 2008						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
1 Eastern Network & EW-OU2-05A offline due to comms problems & resulting PLC faults	**2** Eastern Network & EW-OU2-05A offline due to comms problems & resulting PLC faults	**3**	**4**	**5**	**6**	**7**
8	**9**	**10**	**11**	**12**	**13** OU2 & 2/12 GWTP offline intermittently due to failed check valve	**14** OU2 & 2/12 GWTP offline intermittently due to failed check valve
15 OU2 & 2/12 GWTP offline intermittently due to failed check valve	**16** OU2 & 2/12 GWTP offline intermittently due to failed check valve	**17**	**18** 2/12 GWTP offline due to brief shutdown of OU2	**19**	**20** OU2 & 2/12 GWTP offline to troubleshoot lost comms with remote sites	**21** OU2 & 2/12 GWTP offline to troubleshoot lost comms with remote sites
22 OU2 & 2/12 GWTP offline to troubleshoot lost comms with remote sites	**23** Eastern Network offline to resolve comms problem	**24** OU2 failed check valve replaced. Eastern Network offline to resolve comms problem	**25** Eastern Network offline to resolve comms problem	**26** Eastern Network offline to resolve comms problem	**27** Eastern Network offline to resolve comms problem	**28** Eastern Network offline to resolve comms problem
29 Eastern Network offline to resolve comms problem	**30** Eastern Network offline to resolve comms problem				*36 USAN Notices in June. None of these alerts required the personal attention of the Senior GWTP Operator.	

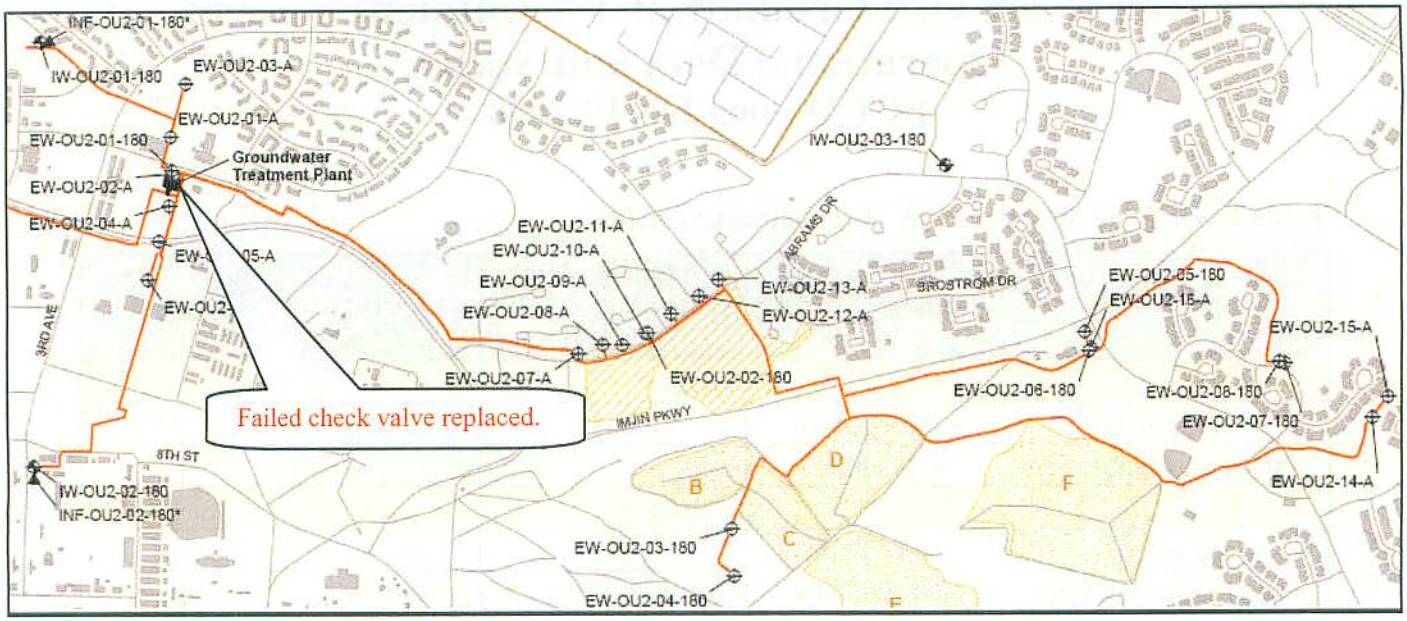


Figure 1: OU2 GWTP Treatment Events June 2008.

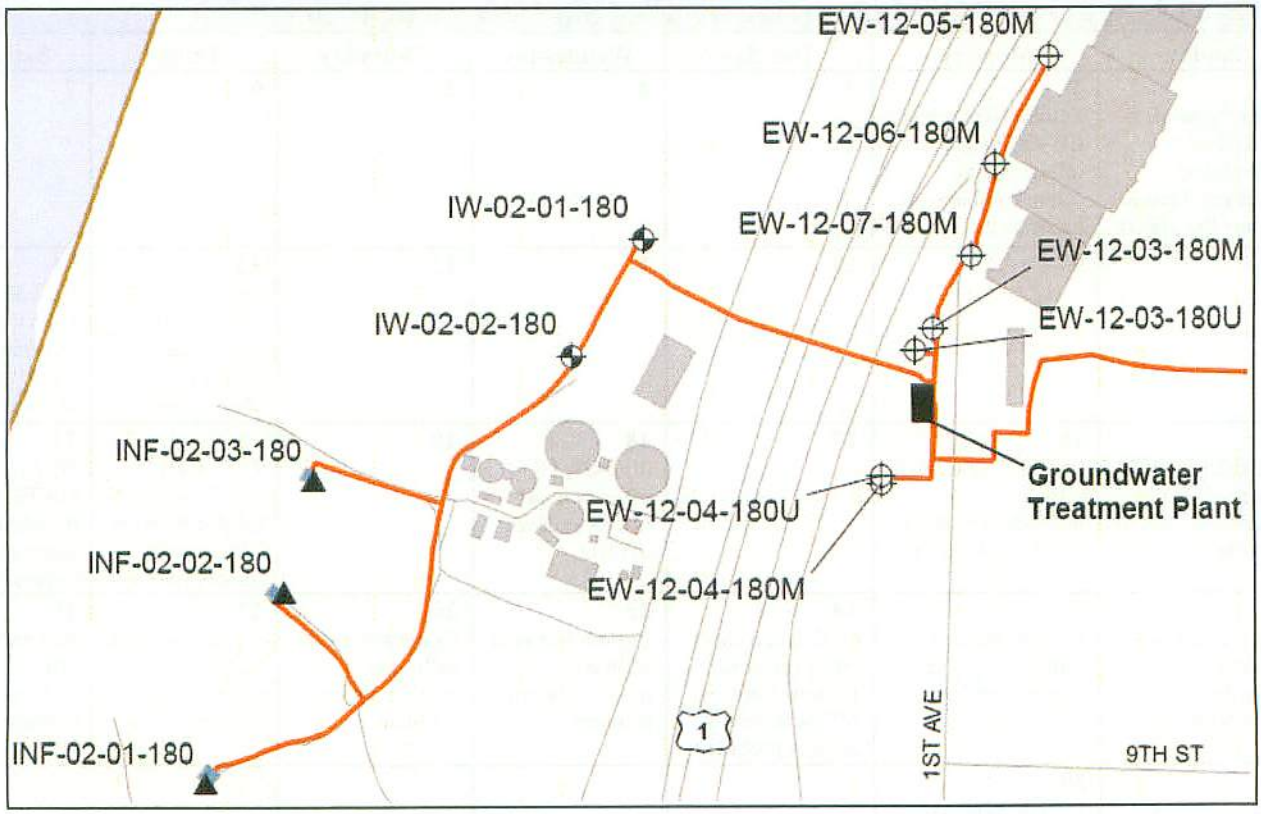


Figure 2: Sites 2/12 GWTP Treatment Events June 2008.

Table 3: June 2008 OU2 Analytical Results at TS-OU2-INJ.

COC	Discharge Limit (µg/L)‡	Sample Date / Analytical Results	
		6/11/2008	6/26/2008
1,1-DCA	5.0*	0.94	1.1
1,2-DCA	0.5	0.17 J	0.25
1,2-DCP †	0.5	ND	ND
Benzene	0.5	ND	ND
Carbon Tetrachloride	0.5	ND	ND
Chloroform	2.0*	0.38 J	0.47 J
Cis-1,2-DCE	6.0*	0.53	0.82
Methylene Chloride	0.5	ND	ND
PCE	0.5	ND	ND
TCE	0.5	0.07 J	ND
Vinyl Chloride	0.5	ND	ND

Table 4: June 2008 Sites 2/12 Analytical Results at TS-212-INJ

COC	Discharge Limit (µg/L)‡	Sample Date / Analytical Results				
		06/03/2008	06/11/2008**	06/19/2008**	06/26/2008**	06/03/2008
1,1-DCE	6	ND	ND	ND	ND	ND
1,2-DCA	0.5	0.11 J	0.13 J	0.20 J	0.21 J	0.11 J
1,3-DCP †	0.5	ND	ND	ND	ND	ND
Chloroform	2	0.27 J	0.25 J	0.41 J	0.37 J	0.27 J
Cis-1,2 DCE	6	0.65	1.7	0.75	1.0	0.65
PCE	3	ND	ND	ND	ND	ND
TCE	5	ND	ND	0.07 J	ND	ND
Vinyl Chloride	0.1	ND	ND	ND	ND	ND

NOTES:

J The analyte was positively identified, but the associated numerical value is an approximate concentration greater than the Method Detection Limit (MDL) but less than the Practical Quantitation Limit (PQL).

ND The analyte was not detected above MDL.

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

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

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

** Preliminary data; validation has not been completed.

J± Data are qualified as estimated, with a high (+) or low (-) bias likely to have occurred. False positives or false negatives are unlikely to have been reported.

Table 5: June 2008 OU2 and Sites 2/12 Extraction Well Status.

Well Identification	% On	Avg. gpm	Total Gallons	% of Total	Comments
Site 12 Extraction Wells					
EW-12-05-180M	54.3	42	1,831,300	39.7	
EW-12-06-180M	80.3	64	2,760,900	59.9	
EW-12-07-180M	1.0	0.4	18,500	0.4	
EW-12-03-180U	0.0	0	0	0.0	Well offline due to low concentrations.
EW-12-03-180M	0.0	0	0	0.0	Well offline due to low concentrations.
EW-12-04-180U	0.0	0	0	0.0	Well offline due to low concentrations.
EW-12-04-180M	0.0	0	0	0.0	Ceased operating on 11/21/2005.
Total 2/12 gallons treated:			***4,610,700***	***100***	
OU2 Extraction Wells					
Western Network					
EW-OU2-01-A	0.0	0	0	0.0	Well offline due to low concentrations.
EW-OU2-02-A	85.4	107	4,626,630	40.1	
EW-OU2-03-A	0.0	0	0	0.0	Well offline due to low concentrations.
EW-OU2-04-A	50.9	83	3,588,080	31.1	
EW-OU2-05-A	62.3	49	2,110,830	18.3	
EW-OU2-06-A	26.8	28	1,221,620	10.6	
EW-OU2-01-180	0.0	0	0	0.0	Well offline due to low concentrations.
Total gallons extracted:			*11,547,160*	*35.1*	
Eastern Network					
EW-OU2-07-A	0.0	0	0	0.0	Well offline due to low concentrations.
EW-OU2-08-A	0.0	0	0	0.0	Well offline due to low concentrations.
EW-OU2-09-A	77.5	19	827,930	32.4	
EW-OU2-10-A	77.0	19	835,260	32.7	
EW-OU2-11-A	0.0	0	0	0.0	Well offline due to area construction.
EW-OU2-12-A	0.0	0	0	0.0	Well offline due to area construction.
EW-OU2-13-A	77.5	21	893,260	34.9	
EW-OU2-02-180	0.0	0	0	0.0	Well offline pending installation of VFD.
Total gallons extracted:			*2,556,450*	*7.8*	
Shoppette					
EW-OU2-05-180	90.2	106	4,564,300	42.9	
EW-OU2-06-180	90.1	123	5,304,100	49.8	
EW-OU2-16-A	90.0	18	778,600	7.3	
Total gallons extracted:			*10,647,000*	*32.3*	
CSUMB					
EW-OU2-14-A	76.0	18	773,000	100.0	
EW-OU2-15-A	0.0	0	0	0.0	Well offline due to low concentrations.
Total gallons extracted:			*773,000*	*2.3*	
Landfill					
EW-OU2-03-180	87.3	117	5,047,000	100.0	
EW-OU2-04-180	0	0	0	0.0	Well offline due to low concentrations.
Total gallons extracted:			*5,047,000*	*15.3*	
Bunker Hill					
EW-OU2-08-180	93.1	54	2,354,000	100.0	
Total gallons extracted:			*2,354,000*	*7.2*	
Total OU2 gallons treated:			***32,924,610***	***100***	

Table 6: OU2 Extraction Well Organic Data.

Well Identification	Analytical Results (µg/L)		
	Chloroform (2.0)	**Cis-1,2-DCE (6.0)**	**TCE (5.0)**
Western Network			
EW-OU2-01-A	0.17 J	ND	0.92
EW-OU2-02-A	0.17 J	ND	1.1
EW-OU2-03-A	*Not Sampled*		
EW-OU2-04-A	0.26 J	0.15 J	2.4
EW-OU2-05-A	0.4 J	1.1	**5.2**
EW-OU2-06-A	0.77	1.4	**5.7**
EW-OU2-01-180	*Not Sampled*		
Eastern Network			
EW-OU2-07-A	ND	ND	ND
EW-OU2-08-A	ND	ND	0.14 J
EW-OU2-09-A	0.24 J	4.3	4.7
EW-OU2-10-A	0.44 J	3.4	**5.7**
EW-OU2-11-A	*Not sampled*		
EW-OU2-12-A	*Not sampled*		
EW-OU2-13-A	1.7	1.4	**17**
EW-OU2-02-180	0.22 J	3.1	**6.4**
Shoppette			
EW-OU2-05-180	0.27 J	0.64	**8.6**
EW-OU2-06-180	0.33 J	1.1	**5.5**
EW-OU2-16-A	**4.2**	**12**	**15**
CSUMB			
EW-OU2-14-A	0.5	ND	1.6
EW-OU2-15-A	*Not sampled*		
Landfill			
EW-OU2-03-180	0.17 J	2	**22**
EW-OU2-04-180	ND	ND	0.43 J
Bunker Hill			
EW-OU2-08-180	0.12 J	0.44 J	1.5

NOTES:

J The analyte was positively identified, but the associated numerical value is an approximate concentration greater than the Method Detection Limit (MDL) but less than the Practical Quantitation Limit (PQL).

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

Bold Sample above MCL

Table 7: Site 12 Extraction Well Organic Data.

Well Identification	Analytical Results (µg/L)			
	Cis-1,2-DCE (6.0)	PCE (3.0)	TCE (5.0)	Vinyl Chloride (0.1)
EW-12-03-180M	Not Sampled			
EW-12-03-180U	ND	0.22 J	0.23 J	ND
EW-12-04-180M	Not Sampled			
EW-12-04-180U	0.33 J	0.36 J	1.3	ND
EW-12-05-180M	**6.6**	**4.8**	**14**	0.10
EW-12-06-180M	**6**	2.3	**14**	ND
EW-12-07-180M	3.3	2.7	**5.3**	ND

NOTES:

J The analyte was positively identified, but the associated numerical value is an approximate concentration greater than the Method Detection Limit (MDL) but less than the Practical Quantitation Limit (PQL).

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

Bold Sample above MCL

OPERABLE UNIT 1
OFF-SITE GROUNDWATER EXTRACTION PILOT STUDY

STATUS – July 10, 2008

FIELD WORK

- Well construction complete – December 21
  - 2 extraction wells
  - 3 monitoring wells
- Well development complete – January 3
- Wells surveyed – January 15
- Marina Coast Water District (MCWD) Meeting – February 13
- Draft Final OU1 Pilot Study Work Plan distributed – April 22

SCHEDULE

- System construction – July 8
- Baseline sampling and analysis – July 14
- System Startup – July 16
- Monitoring Well Installation (City of Marina) – July 28

DATA (Preliminary)

- none

PROBLEMS/CHANGES

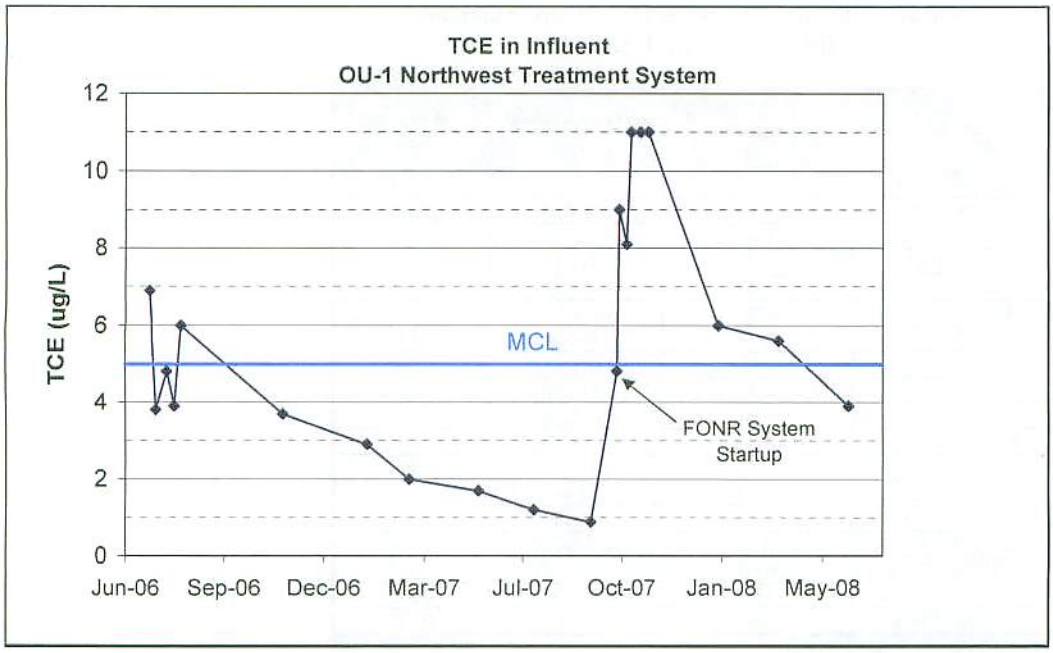
- Treated groundwater will be discharged to a discharge basin within the MCWD property. An injection well was not installed.
- Building permit required for canopy installation but not for concrete pad installation.
- Coordinating system power with MCWD. Planning to start system with temporary (generator) power.
- One monitoring well will be installed in the City of Marina to determine the downgradient extent of the plume. Well number and location is based on the decision criteria in the Draft Work Plan.
- Break in occurred over the weekend of May 23 through 26. Someone cut the MCWD fence and wandered around the treatment pad area. Nothing was taken or destroyed.

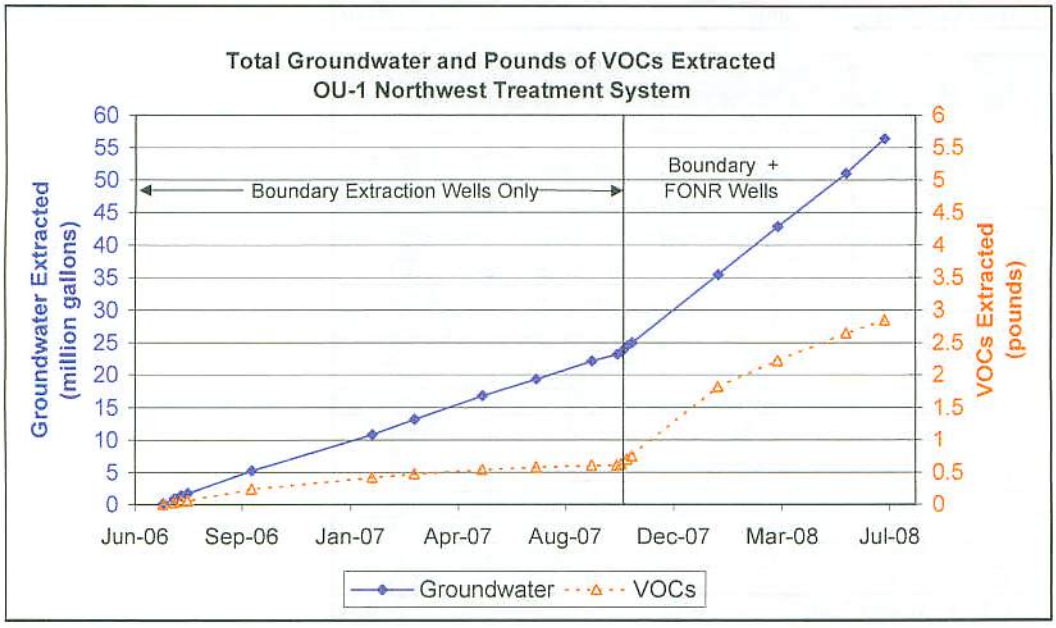
Fort Ord OU-1
Northwest Treatment System Operational Summary
July 10, 2008 BCT Meeting

Date	Influent TCE Concentration (µg/L)	Volume Treated (gal)	Mass Removed (lb)
6/27/06-7/1/06	6.90	190,000	0.011
7/2/06-7/12/06	3.80	781,680	0.025
7/13/06-7/19/06	4.80	425,980	0.017
7/20/06-7/26/06	3.90	371,170	0.012
7/27/06-9/29/06	6.00	3,497,030	0.175
9/30/06-1/29/07	3.70	5,514,470	0.170
1/30/07-3/13/07	2.90	2,351,090	0.057
3/13/07-5/22/07	2.00	3,698,570	0.062
5/23/07-7/16/07	1.70	2,571,340	0.037
7/17/07-9/11/07	1.20	2,833,230	0.028
9/12/07-10/07/07	0.88	1,035,270	0.008
10/8/07-10/11/07	4.80	345,910	0.014
10/12/07-10/17/07	9.00	897,440	0.067
10/18/07-10/22/07	8.10	468,080	0.032
10/23/01-1/17/08	11.00	10,520,280	0.966
1/18/08-3/17/08	6.00	7,379,340	0.370
3/18/08 - 5/26/08	5.60	8,224,750	0.385
5/27/08-7/5/08	3.90	5,312,810	0.173
Total Volume Pumped (gal)			56,418,440
Total Mass Removed (lb)			2.61
Average Pumping Rate (gpm)			54.01

Date	Influent Cis-1,2-DCE Concentration	Volume Treated (gal)	Mass Removed (lb)
6/27/06-7/1/06	0.00	190,000	0.000
7/2/06-7/12/06	0.00	781,680	0.000
7/13/06-7/19/06	0.00	425,980	0.000
7/20/06-7/26/06	0.00	371,170	0.000
7/27/06-9/29/06	0.00	3,497,030	0.000
9/30/06-1/29/07	0.15	5,514,470	0.007
1/30/07-3/13/07	0.16	2,351,090	0.003
3/13/07-5/22/07	0.10	3,698,570	0.003
5/23/07-7/16/07	0.00	2,571,340	0.000
7/17/07-9/11/07	0.00	2,833,230	0.000
9/12/07-10/07/07	0.00	1,035,270	0.000
10/8/07-10/11/07	0.00	345,910	0.000
10/12/07-10/17/07	0.68	897,440	0.005
10/18/07-10/22/07	0.97	468,080	0.004
10/23/01-11/1/07	1.70	1,148,980	0.016
11/1/07 - 1/17/07	1.30	9,371,300	0.102
1/18/08-3/17/08	0.66	7,379,340	0.041
3/18/08 - 5/26/08	0.59	8,224,750	0.041
5/26/08 - 7/5/08	0.36	5,312,810	0.016
Total Mass Removed (lb)			0.24

Date	Influent Totalizer FI-131 Reading	Gallons since previous reading	Average Rate (gpm)	%Uptime
6/16/2008	53910800	1,000,650	101.2	100
6/23/2008	54960550	1,049,750	100.5	100
6/30/2008	55908550	948,000	98.8	100
7/5/2008	56418440	509,890	67.4	59
Period Total Gallons Treated				2,998,400
Period Average Pumping Rate (gallons per minute				80.0
Period % Uptime				91.7


TCE in Influent
OU-1 Northwest Treatment System
TCE (ug/L)
12
10
8
6
4
2
0
MCL
FONR System
Startup
Jun-06
Sep-06
Dec-06
Mar-07
Jul-07
Oct-07
Jan-08
May-08


Total Groundwater and Pounds of VOCs Extracted
OU-1 Northwest Treatment System
Groundwater Extracted
(million gallons)
60
55
50
45
40
35
30
25
20
15
10
5
0
Boundary Extraction Wells Only
Boundary +
FONR Wells
VOCs Extracted
(pounds)
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Jun-06
Sep-06
Jan-07
Apr-07
Aug-07
Dec-07
Mar-08
Jul-08
Groundwater
VOCs