Fort Ord HTW BCT Meeting – Operable Unit 1 (OU-1) On-Post

Fort Ord HTW BCT Meeting
1:00 PM, 19 August 2008
Monterey, California

MEETING MINUTES
(prepared by HydroGeoLogic, Inc.)

1. Groundwater Remediation System Update

The Northwest Treatment System (NWTS) has operated continuously since the last update on 10 July 2008. The total volume pumped through 18 August 2008 is 62,370,650 gallons. The average treatment rate over the last six weeks has been 94.3 gallons per minute.

The routine bimonthly performance samples from the treatment system and extraction wells were collected on 21 July 2008. Validated results are not yet available. The preliminary analytical results are summarized below:

- The system influent trichloroethene (TCE) concentration decreased slightly to 3.6 micrograms per liter (µg/L) down from 3.9 µg/L in May.
- The system influent cis-1,2-dichloroethene (DCE) concentration increased slightly to 0.41 µg/L up from 0.36 µg/L in May.
- The system effluent concentrations were below detection limit for all ten compounds monitored.
- TCE at individual extraction wells (except MW-OU1-85-A) and system influent were slightly lower than the previous sample in May 2008; MW-OU1-85-a increased from 2.5 to 4.4 parts per billion.
- All extraction wells showed TCE concentrations less than 5.0 µg/L except central wells MW-OU1-87-A (9.1 µg/L) and EW-OU1-71-A (14 µg/L).

2. Long Term Monitoring Update

The third quarter samples (includes annual frequency wells) will be collected in September 2008.

The validated results were received from the second quarter 2008 groundwater sampling event and showed:

- All wells that were non-detect (ND) in the first quarter 2008 sampling event remained ND. All monitoring wells along the northwest boundary road were either ND or less than the detection limit of 0.5 µg/L.
- The off-Post wells MW-OU1-69-A and MW-OU1-70-A showed TCE at 0.23 µg/L and ND, respectively.
- The channel fill wells showed:
    - TCE of 7.4 µg/L at MW-OU1-61-A a decrease from the range of 12 µg/L to 13 µg/L seen in samples from March 2007 through March 2008.
    - TCE of 1.9 µg/L at MW-OU1-67-A (continued decreasing concentration trend that began in December 2007).

3. Other

Attendees are shown in Attachment A.

ATTACHMENT A

ATTENDANCE LIST

SUBJECT: HTW – BCT Meeting
August 19, 2008
1:00 p.m.

Check (✓)	Name	Organization	Phone	E-mail address
	Kate Burger	DTSC	916/255-6537	kburger@dtsc.ca.gov
	Franklin Mark	DTSC	916/255-3584	FMark@dtsc.ca.gov
	Martin Hausladen	U.S. EPA	415/972-3007	Hausladen.martin@epamail.epa.gov
	Lewis Mitani	U.S. EPA	415/972-3032	Mitani.lewis@epa.gov
DGH	**Grant Himebaugh**	RWQCB	805/542-4636	Ghimebaugh@waterboards.ca.gov
	Bill Mabey	TechLaw Inc	415/281-8730	bmabey@techlawinc.com
	Gail Youngblood	Fort Ord BRAC	831/242-7918	gail.youngblood@us.army.mil
DSL	**Derek Lieberman**	Ahtna	831/242-4873	dlieberman@ahtnagov.com
WKC	**Bill Collins**	Fort Ord BRAC	831/242-7920	William.K.Collins@us.army.mil
✓	**Rob Robinson**	Fort Ord BRAC	831/242-7900	clinton.w.robinson@us.army.mil
	George Siller	COE	916/557-7418	George.L.Siller@usace.army.mil
	David Eisen	COE	831/393-9692	David.Eisen@usace.army.mil

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Check (✓)	Name	Organization	Phone	E-mail address
	Mark Eldridge	AEC	410/436-6325	Mark.h.eldridge@us.army.mil
✓	**Peter Kelsall**	Shaw E&I	831/883-5810 ext. 810	Peter.Kelsall@shawgrp.com
✓	**David Kelly**	Shaw E&I	925/288-2321	David.kelly@shawgrp.com
✓	**Jen Moser**	GEM/Shaw E&I	831/883-5812	Jen.moser@shawgrp.com
	Eric Schmidt	Shaw E&I	831/883-5809	Eric.Schmidt@shawgrp.com
✓	**Ed Ticken**	MACTEC E&C	415/884-3176	ejticken@mactec.com
	Marc Edwards	COE		Marc.A.Edwards@usace.army.mil
	Michael Taraszki	MACTEC E&C	415/884-3325	mdtaraski@mactec.com
	Chuck Holman	Ahtna	916/372-2000	cholman@ahtnagov.com
	Kelly O'Meara	Ahtna	916/372-2000	komeara@ahtnagov.com
	Christopher Prescott	USACE		Christopher.E.Prescott@usace.army.mil
	Melissa Broadston	Fort Ord BRAC	831/393-1284	Melissa.broadston@us.army.mil
✓	**Roy Evans**	HGL	303/984-1167 xt. 5	revans@hgl.com

HTW BCT Meeting

August 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	No Action Approval Memos, HA 161 IA Memo
Site 39 FS Addendum and ROD	Status Update	Draft ROD comments Responsiveness Summary
Site 3 Post Remediation Monitoring	Status Update	
FFA Schedule	Status Update	
FOST/FOSET Issues	Status Update	
Calendar Update	Update	

AHTNA
Government Services Corporation

Former Fort Ord Groundwater Treatment Systems Operational Data and Status

BCT Meeting August 19, 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				
July 2008	24,244,383	543	100	2.11
Total since October 1995	4.267 billion			568.59
Sites 2/12				
July 2008	4,829,400	108	92	0.69
Total since May 1999	1.124 billion			394.00

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

Key Events for OU2 and Sites 2/12 for July 2008						
Sunday	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
*23 USAN Notices in June. None of these alerts required the personal attention of the Senior GWTP Operator.		**1**	**2**	**3**	**4**	**5**
6	**7**	**8**	**9** 2/12 shutdown due to PLC communication problems.	**10** 2/12 shutdown due to PLC communication problems.	**11**	**12**
13	**14**	**15**	**16**	**17**	**18**	**19**
20	**21** OU2 & 2/12 instrument calibration conducted.	**22** OU2 & 2/12 instrument calibration conducted.	**23**	**24**	**25**	**26** 2/12 temporarily shutdown for two hours due to operator error.
27	**28**	**29** OU2 & 2/12 instrument calibration completed.	**30**	**31**		

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

COC	Discharge Limit (µg/L)‡	Sample Date / Analytical Results	
		07/09/2008	07/22/2008
1,1-DCA	5.0*	1.0	1.0
1,2-DCA	0.5	0.20 J	0.23 J
1,2-DCP †	0.5	ND	ND
Benzene	0.5	ND	ND
Carbon Tetrachloride	0.5	ND	ND
Chloroform	2.0*	0.47 J	0.48 J
Cis-1,2-DCE	6.0*	0.95	1.1
Methylene Chloride	0.5	ND	ND
PCE	0.5	ND	ND
TCE	0.5	0.11 J	ND
Vinyl Chloride	0.5	ND	ND

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

COC	Discharge Limit (µg/L)‡	Sample Date / Analytical Results				
		07/02/2008	07/09/2008	07/16/2008	07/22/2008	07/30/2008
1,1-DCE	6	ND	ND	ND	ND	ND
1,2-DCA	0.5	0.16 J	0.17 J	0.19 J	0.10 J	0.23 J
1,3-DCP †	0.5	ND	ND	ND	ND	ND
Chloroform	2	0.29 J	0.33 J	0.42 J	0.20 J	0.49 J
Cis-1,2 DCE	6	0.93	1.8	1.3	1.2	1.4
PCE	3	ND	ND	ND	ND	ND
TCE	5	ND	0.11 J	0.16 J	ND	0.19 J
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: July 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	8.9	84.1	333,200	6.9	
EW-12-06-180M	91.8	91.8	3,760,100	77.9	
EW-12-07-180M	15.4	79.9	551,000	11.4	
EW-12-03-180U	13.7	30.3	185,100	3.8	
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:			***4,829,400***	***100.0***	
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	26	55.6	645,770	2.7	
EW-OU2-03-A	0	0.0	0	0.0	Well offline due to low concentrations.
EW-OU2-04-A	89.6	117.5	1,365,370	5.6	
EW-OU2-05-A	96.1	128.0	1,487,100	6.1	
EW-OU2-06-A	58.3	47.0	545,990	2.3	
EW-OU2-01-180	0	0.0	0	0.0	Well offline due to low concentrations.
Total gallons extracted:			*4,044,230*	*16.7*	
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	93.4	27.3	1,136,990	4.7	
EW-OU2-10-A	100	29.5	1,318,560	5.4	
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	100	29.8	1,329,980	5.5	
EW-OU2-02-180	0	0.0	0	0.0	Well offline pending installation of VFD.
Total gallons extracted:			*3,785,530*	*15.6*	
Shoppette					
EW-OU2-05-180	90.4	127.1	5,132,500	21.2	
EW-OU2-06-180	98.8	150.2	6,624,000	27.3	
EW-OU2-16-A	98	21.0	920,000	3.8	
Total gallons extracted:			*12,676,500*	*52.3*	
CSUMB					
EW-OU2-14-A	36.3	25.0	405,400	1.7	
EW-OU2-15-A	0	0.0	0	0.0	Well offline due to low concentrations.
Total gallons extracted:			*405,400*	*1.7*	
Landfill					
EW-OU2-03-180	98.1	14.2	622,000	2.6	
EW-OU2-04-180	0	0.0	0	0.0	Well offline due to low concentrations.
Total gallons extracted:			*622,000*	*2.6*	
Bunker Hill					
EW-OU2-08-180	99.4	61.1	2,710,723	11.2	
Total gallons extracted:			*2,710,723*	*11.2*	
Total OU2 gallons treated:			***24,244,383***	***100.0***	

OPERABLE UNIT 1
OFF-SITE GROUNDWATER EXTRACTION PILOT STUDY

STATUS – August 19, 2008

FIELD WORK

- Well construction complete – December 21
  - 2 extraction wells
  - 3 monitoring wells
- Draft Final OU1 Pilot Study Work Plan distributed – April 22
- Baseline sampling and analysis – June 14
- System construction completed – July 16
- Monitoring well (City of Marina) installation – July 28
- System start-up – August 6
- Monitoring well (City of Marina) development – August 8
- System switched from generator to permanent power (MCWD) – August 13.

SCHEDULE

- Weekly monitoring through September

DATA (Preliminary)

- Baseline sampling and analysis results.
- Week 1 treatment system results

PROBLEMS/CHANGES

- Treated groundwater is being discharged to a discharge basin within the MCWD property. An injection well was not installed.
- One monitoring well has been 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.

Summary of Operable Unit 1 Process System
Trichlorethene Analytical Results

Date	Sample Location				
	Extraction Wells		Granular Activated Carbon Beds		
	OU1PS-EW-92	OU1PS-W-93	OU1PS-INF	OU1PS-BTW	OU1PS-EFF
August 11, 2008	**3.4**[a] µg/L	**8.7**[b] µg/L	**5.4**[c] µg/L	<0.5[d] µg/L	<0.5[e] µg/L

[c] *additional compounds detected: benzene - 1.7 µg/L; isoporoylbenzene - 1.3 µg/L*

[b] *additional compounds detected: benzene - 0.32J µg/L; isoporoylbenzene - 0.58J µg/L; cis-1,2-dichloroethylene - 0.31J µg/L*

[c] *additional compounds detected: benzene - 0.56J µg/L; isoporoylbenzene 0.76J µg/L*

[d] *additional compounds detected: isoporoylbenzene 0.52J µg/L*

[e] *additional compounds detected: benzene - 0.84J µg/L; isoporoylbenzene 0.62J µg/L*

Detectons are shown in bold.
µg/L denotes micrograms per liter.
Data qualified as "J" is estimated.

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

Well Identification	Elevation (ft amsl)	TCE[a] March 28-30, 2006 (µg/L)	TCE May 4, 2006 (µg/L)	TCE May 23, 2006 (µg/L)	TCE September 25, 2006 (µg/L)	TCE Feb 2 & 6, 2007 (µg/L)	TCE April 3, 2007 (µg/L)	TCE May 22, 2007 (µg/L)	TCE September 25, 2007 (µg/L)	TCE December 26, 2007 (µg/L)	TCE February 27, 2008 (µg/L)	TCE July 14, 2008 (µg/L)
MW-OU1-75A	35.87		2.1	1.7	0.28J	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-75A	30.87		14	9.8	2.4	0.64	1.6	0.82	0.69	0.45J	NS	NS
MW-OU1-75A	25.87	18.6	15	9.5	2.5	0.58	1.7	0.9	0.75	0.46J	NS	NS
MW-OU1-75A	20.87		17	9.5	2.6	15	1.6	0.69	0.76	0.47J	NS	NS
MW-OU1-75A	15.87		20	26	18	0.75	11	12	3.1	2	1.9	1.4
MW-OU1-76A	32.33		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-76A	27.33		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-76A	22.33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-76A	17.33		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-76A	12.33		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-77A	29.1		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5[d]	<0.5	<0.5	<0.5	<0.5
MW-OU1-77A	24.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-77A	19.1		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-78A	29.91		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.54	0.36J	NS	NS
MW-OU1-78A	24.91	1.9	3.2	2.1J-[b]	1.4	1.5	0.85	0.6	0.56	0.46J	NS	NS
MW-OU1-78A	19.91		2.7	2.3	1.2	1.7	0.94	0.81	0.91	0.47J	0.37J	0.67
MW-OU1-79A	29.72		<0.5	<0.5UJ[c]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-79A	24.72	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-79A	19.72		<0.5	<0.5	0.59	0.67/0.85	3.5/3.6	3.8/4.0	2.9/4.5	1.3/1.9	3.0/4.1[e]	10/2.0[f]
MW-OU1-80A	25.32		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-80A	20.32	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-80A	15.32		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-80A	10.32		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-81A	21.39		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-81A	16.39		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-81A	11.39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-81A	6.39		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS	NS
MW-OU1-81A	1.39		<0.5	<0.5	<0.5	<0.5	<0.5/<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-89A	31.18	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5[g]	<0.5
MW-OU1-89A	24.68	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5
MW-OU1-89A	18.18	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5
MW-OU1-90A	27.31	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5
MW-OU1-90A	22.31	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5
MW-OU1-90A	17.31	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5
MW-OU1-90A	12.31	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5
MW-OU1-90A	7.27	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5
MW-OU1-91A	26.72	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5
MW-OU1-91A	21.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5
MW-OU1-91A	16.89	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5
MW-OU1-91A	11.97	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5
MW-OU1-91A	7.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5

[a] There is no associated descrete depth with the well development samples. These are composites.

[b] Data qualified as "J-" is estimated with low bias.

[c] Data qualified as "UJ" is estimated non-detect due to quality control outliers.

[d] An estimated concentration of carbon disulfide detected in this sample (0.75J).

[e] cis-1,2-dichloroethylene also detected at 0.26J µg/L

[f] cis-1,2-dichloroethylene also detected at 0.35J µg/L

[g] tetrachloroethylene also detected at 0.27J µg/L.

Detectons are shown in bold.

ft amsl denotes feet above mean sea level.

µg/L denotes micrograms per liter.

TCE denotes trichloroethene.

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

STATUS – August 19, 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.
- Monitoring completed – July 24

SCHEDULE

- Subsequent quarterly monitoring conducted under Groundwater Monitoring Program.
- Demobe equipment – September 2008
- Preliminary Draft RA Work Plan/RD (Attachment 1 – A-Aquifer) [USACE review] – July 25.
- Draft RA Work Plan/RD (Attachment 1 – A-Aquifer) [Agency Review] – August 29

DATA (Preliminary)

- Preliminary data from June/July pilot study monitoring.

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.

GRAPHIC PRESENTATION OF TRENDS IN DATA OVER TIME

WEEK 21

		Parameter													
Well ID	**Location**	alkalinity	DO	ORP	lactate	propionate	acetate	nitrate	manganese	iron	sulfate	CT	CF	ketones	CS_2
EISB-EW-01	downgradient	+	-/+	-											
EISB-EW-02	upgradient	O	+/-	O	O	O	+/-	O	O	O	O	- (1.1)	- (<0.5)	O	O
EISB-EW-03	downgradient	+	-/+	-	+/-	+	+	-	+	+	-	- (0.32J)	- (<0.5)	+	+
EISB-EW-04	upgradient	O	+/-	-/+											
EISB-EW-05	downgradient	+	-/+	-											
EISB-EW-06	upgradient	+/-	-/+	-	O	+/-	+/-	-/+	+	+/-	-/+	-/+ (1.4)	-/+ (<0.5)	+/-	+/-
EISB-EW-07	downgradient	+	-	-	O	O	O	-	+	+	-	- (<0.5)	- (<0.5)	+	+
EISB-EW-08	upgradient	O	-/+	-/+											
EISB-EW-09	upgradient	O	O	-/+	O	O	O	O	+	+	O	+ (2.7)	+ (0.25J)	O	O
EISB-EW-10	downgradient	+	-/+	-											
EISB-EW-11	center	+/-	O	-/+								- (<0.5)	O (<0.5)		
EISB-EW-12	downgradient	+	-	-	O	+	+	-	+	+	-	- (<0.5)	O (<0.5)	+	+
EISB-EW-13	center	+	O	-											
EISB-EW-14	upgradient	O	O	-											
EISB-EW-15	center	+/-	-	-								- (1.9)	-/+ (0.23J)		
EISB-MW-01	btwn IW-02 & IW	+	-	-	+/-	+	+	-	+	+	-	- (<0.5)	O (<0.5)	+	+
EISB-MW-02	near IW-04	+/-	-/+	-/+	+/-	+/-	+/-	-/+	+	+/-	O	-/+ (1.6)	O (0.24J)	+/-	O
EISB-MW-03	near IW-04	+	-	-	+/-	+	+	-	+	+	-	- (<0.5)	+/- (<0.5)	+	+/-
EISB-MW-04	near IW-04	+/-/+	-/+	-	O	O	O	-/+	+	+	O	-/+/- (2.1)	+/-/+ (0.24J	+/-	+/-
EISB-MW-05	near IW-04	+	-/+	-	+/-	+	+	-	+	+	-	- (<0.5)	+/- (<0.5)	+	+
MW-BW-77A	off-site	+	-	-	O	O	O	O	+	+	+	+/- (0.30J)	O (<0.5)	O	O
MW-BW-78A	off-site	O	-	-	O	O	O	+/-	O	O	O	-/+ (0.51)	O (<0.5)	O	O
MW-BW-79A	off-site	O	+/-	-/+	O	O	O	O	O	O	O	O (<0.5)	O (<0.5)	O	O

not favorable | neutral | favorable

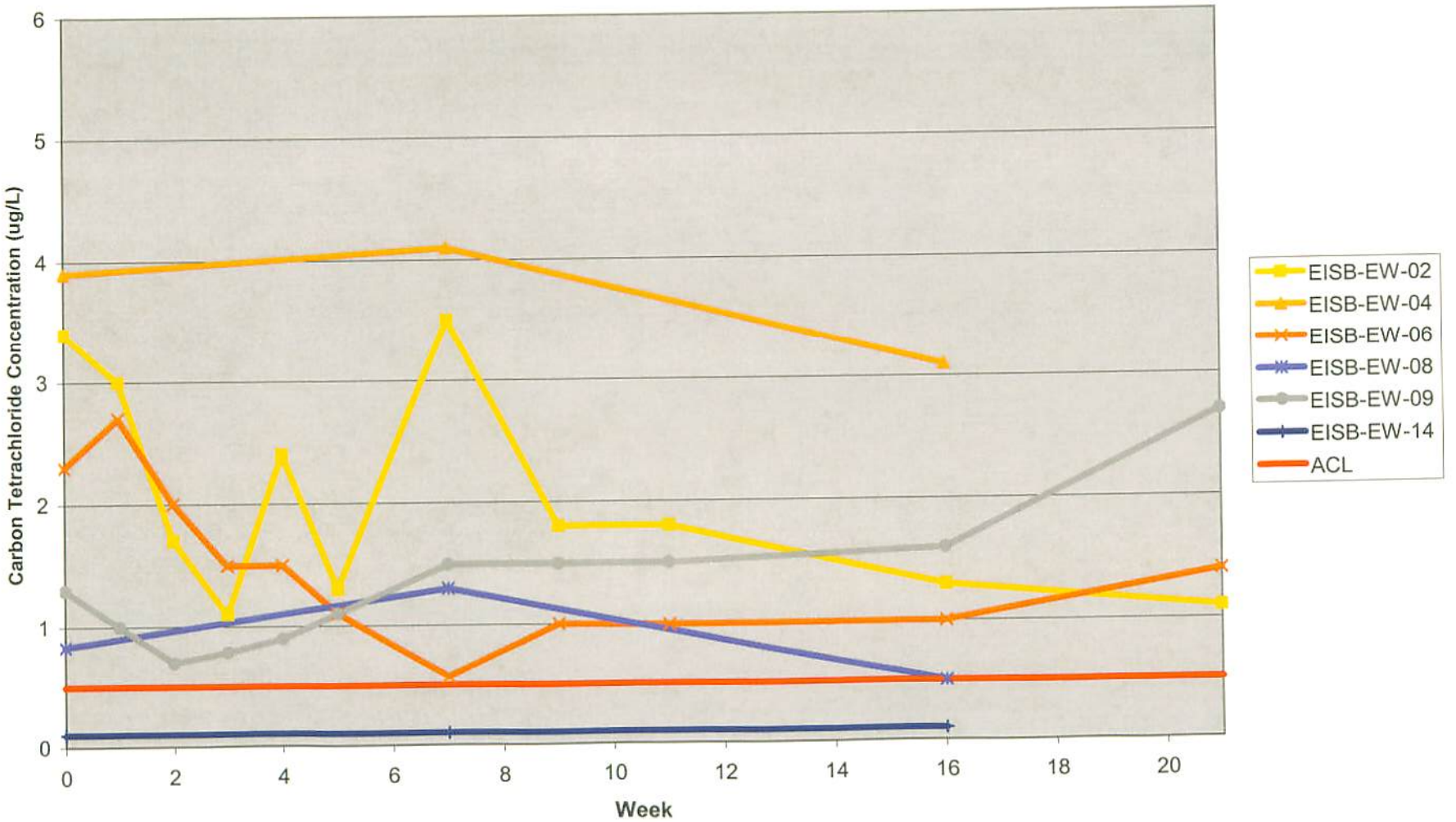
GRAPHIC PRESENTATION OF TRENDS IN DATA OVER TIME

WEEK 25

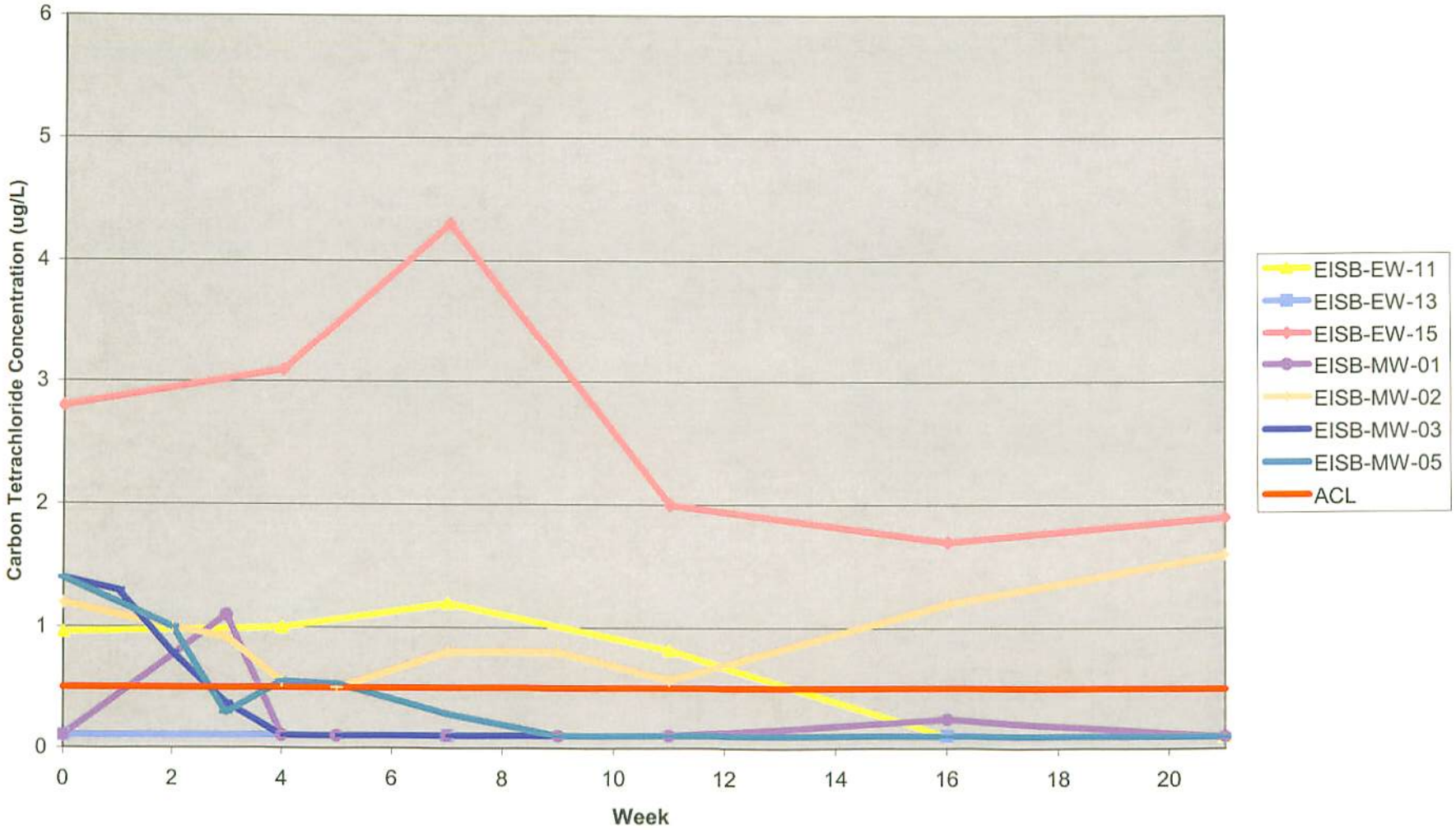
		Parameter													
Well ID	**Location**	alkalinity	DO	ORP	lactate	propionate	acetate	nitrate	manganese	iron	sulfate	CT	CF	ketones	CS_2
EISB-EW-01	downgradient	+	-	-											
EISB-EW-02	upgradient	O	+/-	O											
EISB-EW-03	downgradient	+	-/+/-	-											
EISB-EW-04	upgradient	O	O	-/+											
EISB-EW-05	downgradient	+	-/+/-	-											
EISB-EW-06	upgradient	+/-	-/+/-	-/+											
EISB-EW-07	downgradient	+	-	-											
EISB-EW-08	upgradient	O	-/+	-/+											
EISB-EW-09	upgradient	+/-	-	-/+/-											
EISB-EW-10	downgradient	+	-	-											
EISB-EW-11	center	+/-	-	-/+											
EISB-EW-12	downgradient	+	-	-											
EISB-EW-13	center	+	-/+	-/+											
EISB-EW-14	upgradient	O	O	-/+											
EISB-EW-15	center	+/-	O	-/+											
EISB-MW-01	btwn IW-02 & IW	+	-	-											
EISB-MW-02	near IW-04	+/-	-/+	-/+											
EISB-MW-03	near IW-04	+	-	-											
EISB-MW-04	near IW-04	+/-/+	-/+/-	-/+/-											
EISB-MW-05	near IW-04	+	-	-											
MW-BW-77A	off-site	+/-	-/+	-/+											
MW-BW-78A	off-site	+	-/+	-/+											
MW-BW-79A	off-site	O	-/+	-/+											

not favorable | neutral | favorable

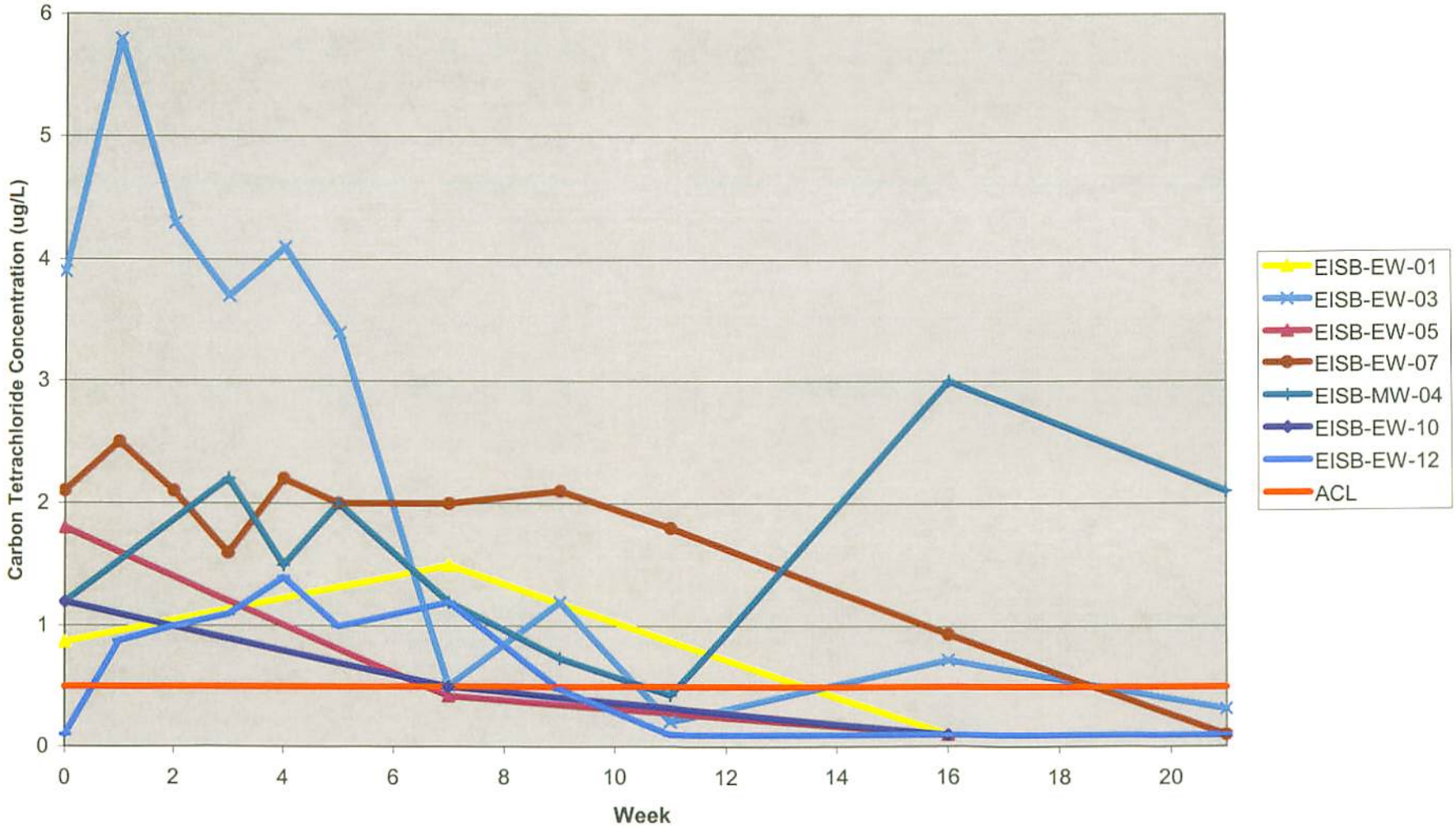
Upgradient Wells



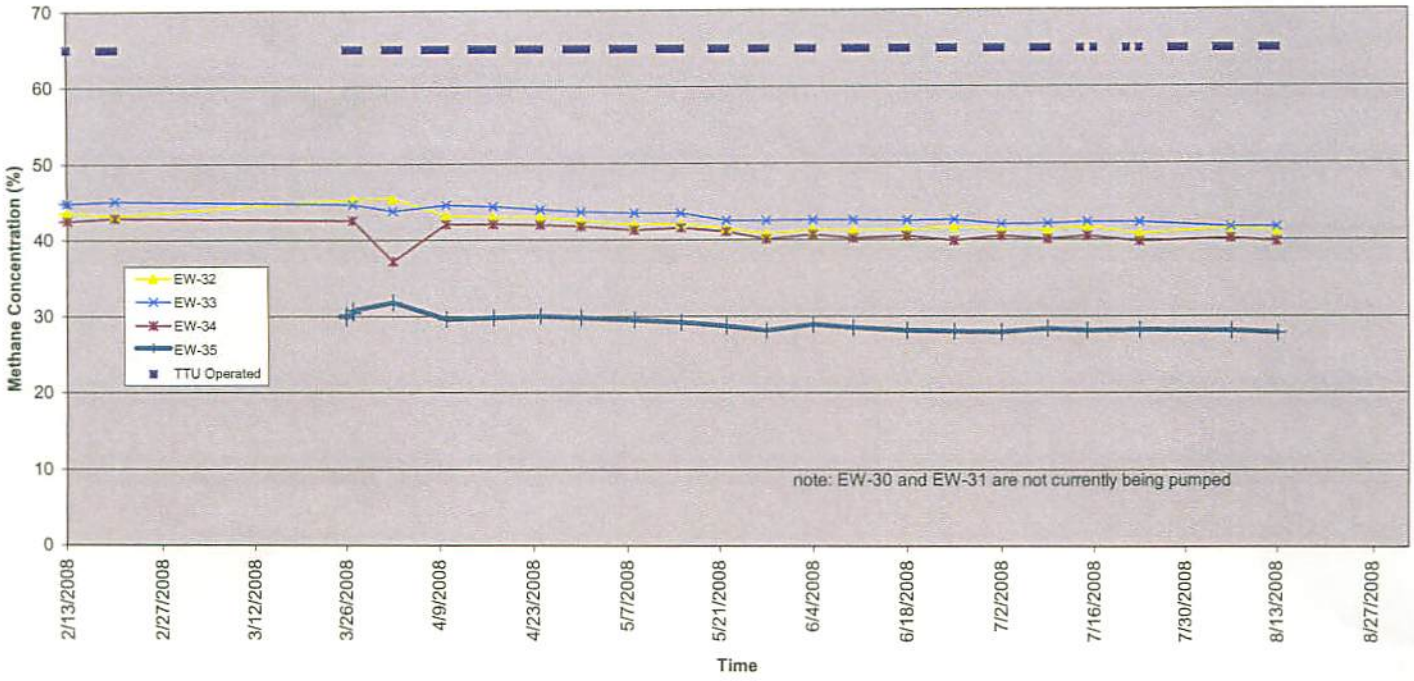
Middle Wells



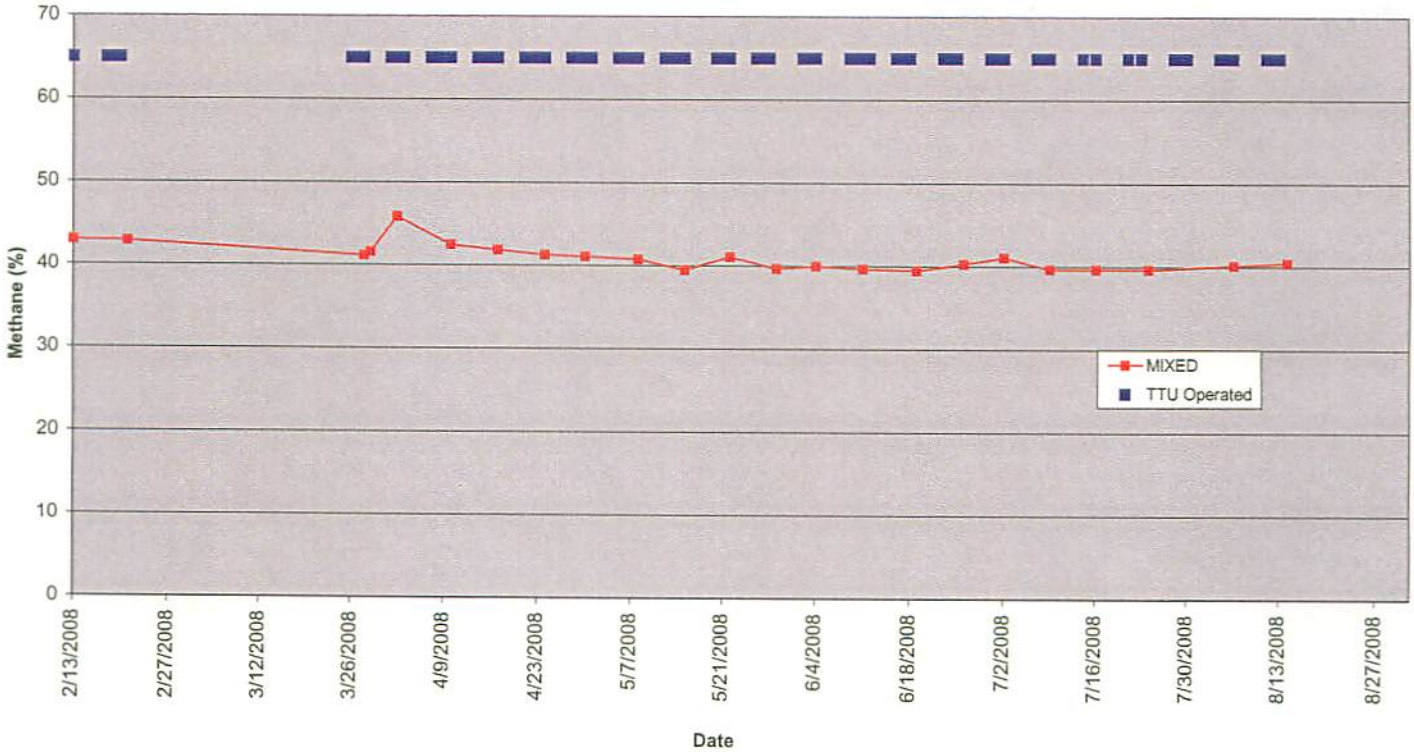
Downgradient Wells



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



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



Thermal Treatment Unit
Operation Summary
2007/2008

Start Date/Time:	1/1/2007
Last Reading Date/Time:	8/13/2008 16:30
Total Hours (2007):	8760
Total Hours Operated (2007):	4035.4
% Operation (2007):	48.7%
Total Hours (2008):	5416.5
Total Hours Operated (2008):	1733.7
% Operation (2008):	32.0%
Cumulative % Operation (since 1/1/2007):	40.7%

Pounds of Methane Removed (2007)	372759
Pounds of Methane Removed (2008)	133359

Date TTU Started	Date TTU Shutdown	Hours Operated
1/1/07 0:00	3/8/07 12:00	1561.0
3/29/07 8:30	3/29/07 12:30	4.0
4/7/07 7:30	5/4/07 16:00	656.5
5/21/07 8:00	6/18/07 8:00	672.0
7/9/07 14:00	7/13/07 15:00	97.0
8/9/07 7:30	8/10/07 11:00	27.5
8/20/07 7:30	8/31/07 16:00	272.5
9/17/07 8:00	9/21/07 15:00	103.0
9/24/07 12:00	9/24/07 15:00	3.0
10/9/07 8:00	10/11/07 16:30	56.5
10/15/07 7:15	10/17/07 16:45	57.4
10/22/07 7:40	10/24/07 16:45	57.0
10/29/07 7:15	10/31/07 16:45	57.4
11/5/07 7:20	11/7/07 15:30	56.2
11/13/07 7:15	11/15/07 16:00	56.7
11/19/07 7:30	11/21/07 15:30	56.0
11/26/07 7:00	11/28/07 15:15	56.2
12/3/07 7:00	12/5/07 16:00	57.0
12/10/07 7:00	12/12/07 15:30	56.5
12/17/07 7:30	12/19/07 16:30	57.0
12/31/07 9:00	1/3/08 15:00	78.0
1/7/08 7:30	1/9/08 16:30	57.0
1/14/08 8:00	1/16/08 16:00	56.0
1/21/08 7:45	1/23/08 16:00	56.3
1/28/08 12:00	1/30/08 16:00	51.0
2/4/08 8:00	2/6/08 16:00	56
2/11/08 7:20	2/13/08 16:10	56.9
2/18/08 7:00	2/20/08 15:00	56
3/26/08 8:00	3/28/08 12:30	52.5
4/1/08 7:45	4/3/08 15:15	55.5
4/7/08 7:15	4/10/08 16:00	80.7
4/14/08 7:00	4/17/08 13:00	78.0
4/21/2008 7:00	4/24/2008 15:00	80.0
4/28/08 7:00	5/1/08 7:40	72.7
5/5/08 7:00	5/8/08 15:20	80.3
5/12/08 8:30	5/15/08 8:50	72.3
5/20/08 7:05	5/22/08 14:40	55.6
5/26/08 9:00	5/28/08 16:00	55.0
6/2/08 7:00	6/4/08 16:00	57.0
6/9/08 9:00	6/10/08 16:00	31.0
6/11/08 10:00	6/12/08 10:00	24.0
6/16/08 9:00	6/18/08 16:00	55.0
6/23/08 7:00	6/25/08 15:00	56.0
6/30/08 7:00	7/2/08 16:00	57.0
7/7/08 7:00	7/10/08 0:00	65.0
7/14/08 7:30	7/16/08 16:00	56.5
7/21/08 7:00	7/23/08 16:00	57.0
7/28/08 6:45	7/30/08 16:00	57.2
8/4/08 6:45	8/6/08 16:00	57.2
8/11/08 6:45	8/13/08 16:30	57.8
		0.0
		0.0
		0.0
		0.0
		0.0
		0.0

YEAR_Month	SumOfPOUNDS_METHANE
2007/1	76359
2007/2	62445
2007/3	14078
2007/4	52738
2007/5	29140
2007/6	37584
2007/7	8491
2007/8	26379
2007/9	9733
2007/10	20464
2007/11	19753
2007/12	15595
2008/1	23914
2008/2	13635
2008/3	3615
2008/4	27888
2008/5	20123
2008/6	17680
2008/7	17944
2008/8	8561

HGL AGENDA & NOTES

Fort Ord HTW BCT Meeting
1:00 PM, 19 August 2008
Monterey, California

1. *Groundwater Remediation System Update*

Northwest Treatment System (NWTS) has operated continuously since last update on 10 July 2008. Total volume pumped through 18 August 2008 is 62,370,650 gallons. The average treatment rate over the last six weeks has been 94.3 gallons per minute.

Samples were collected on 21 July from the treatment system and extraction wells; preliminary (un-validated) results showed:

- System influent TCE concentration decreased slightly to 3.6 µg/L (from 3.9 µg/L in May).
- System influent cis-1,2-DCE concentration increased slightly to 0.41µg/L (from 0.36 µg/L in May).
- System effluent concentrations were below detection limit for all ten compounds monitored.
- TCE at individual extraction wells (except MW-85) and system influent slightly lower than the previous sample in May; MW-85 increased from 2.5 to 4.4 ppb.
- All extraction wells showed TCE concentrations less than 5 µg/L except central wells MW-85 (9.1 µg/L) and EW-71 (14 µg/L).

2. *Long Term Monitoring Update*

Third quarter (includes annual frequency wells) samples will be collected in September.

We received the validated results from the 2nd Quarter 2008 Groundwater sampling:

- All wells that were "non-detect" (ND) in the 1st Quarter 2008 sampling remained at ND. All monitoring wells along the NW boundary road were either ND or less than the detection limit of 0.5 µg/L.
- The off-Post wells MW-OU1-69-A and MW-OU1-70-A showed TCE at 0.23 µg/L and ND, respectively.
- The channel fill wells showed:
    - TCE of 7.4 µg/L at MW-OU1-61-A (decrease from the range of 12 µg/L to 13 µg/L seen in samples from March 2007 through March 2008).
    - TCE of 1.9 µg/L at MW-OU1-67-A (continued decreasing concentration trend that began in December 2007).

DEPARTMENT OF THE ARMY
FORT ORD OFFICE, ARMY BASE REALIGNMENT AND CLOSURE
P.O. BOX 5008, BUILDING #4463 GIGLING ROAD
MONTEREY, CA 93944-5008

REPLY TO
ATTENTION OF:

AUG 19 2008

Base Realignment and Closure Office

Franklin Mark
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento,CA 95826

Dear Mr. Mark:

The following is a Summary Letter Report describing the discovery of Levin's projector fragments – WWI munitions debris – and approximately 2.5 pounds of suspected *Trinitrotoluene* (TNT) fragments found in a burial pit at a depth of 4 to 5 feet below grade along the west side of General Jim Moore Boulevard (Figure 1). On May 23, 2008 the Environmental Services Cooperative Agreement Remediation Program (ESCA RP) contractor discovered the items, surveyed the hole with GPS, and backfilled the hole once the debris was removed. The items were handled and disposed of in accordance with ESCA RP Work Plans.

On June 12, 2008 the ESCA RP contractor notified the Army of the discovery in accordance with the ESCA. On July 9, 2008 the Army collected soil samples to determine if soil contamination exceeding the human health or ecological screening levels is present.

A backhoe was used to excavate down to a depth of five feet to expose the soil where the suspected TNT pieces were encountered. Three soil samples were collected, one each from five feet below grade, 6-foot, and 7-foot depths. The sample collected from the 5-foot depth was analyzed for explosives using EPA Method 8330. The preliminary laboratory results determined that concentrations of TNT, 2-AM-4, 6-DNT, and 4-AM-2, 6-DNT were all below the designated screening levels for former Fort Ord (Table 1). Therefore the samples collected from 6 and 7 feet were not analyzed by the laboratory. The final validated results are expected in early September.

Sampling was conducted in accordance with the accepted protocols and analytical methods. No further investigation is recommended based on the results of this sampling effort.

A copy of this letter has been provided for information to Ms. Judy Huang of the U.S. Environmental Protection Agency and to Mr. Roman Racca of the Department of Toxic Substances Control. If you have any questions regarding this information, please contact me at (831) 242-7918.

Sincerely,

Gail Youngblood
BRAC Environmental Coordinator

Enclosures