SUBJECT: HTW – BCT Meeting
February 23, 2007
10:00 a.m.

Check (✓)	Name	Organization	Phone	E-mail address
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SG	**Sue Goss**	DTSC	916/ 255-6403	sgoss@dtsc.ca.gov
	Chao Thao	DTSC	916/255-3649	CThao@dtsc.ca.gov
	John Chesnutt	U.S. EPA	415/972-3005	Chesnutt.john@epa.gov
	Martin Hausladen	U.S. EPA	415/972-3007	Hausladen.martin@epamail.epa.gov
	Grant Himebaugh	RWQCB	805/542-4636	Ghimebaugh@waterboards.ca.gov
WM	**Bill Mabey**	TechLaw Inc	415/281-8730	bmabey@techlawinc.com
	Gail Youngblood	Fort Ord BRAC	831/242-7918	gail.youngblood@monterey.army.mil
DJL	**Derek Lieberman**	Fort Ord BRAC	831/242-4873	Derek.Lieberman@monterey.army.mil
✓	**Bill Collins**	Fort Ord BRAC	831/242-7920	William.collins@monterey.army.mil
	George Siller	COE	916/557-7418	George.L.Siller@usace.army.mil

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Check (✓)	Name	Organization	Phone	E-mail address
	Christopher Prescott	COE	916/557-7227	Christopher.E.Prescott@usace.army.mil
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	**Ed Ticken**	MACTEC E&C	415/884-3176	ejticken@mactec.com
	Carlene Merey	MACTEC E&C	415/884-3276	cmerey@mactec.com
	**Marc Edwards**	COE	831/884-9925 ext 244	Marc.A.Edwards@usace.army.mil
	Michael Taraszki	MACTEC E&C	415/884-3325	mdtaraski@mactec.com
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	Kara Romero	Ahtna	831/384-3735	kromero@ahtnagov.com
	**Kelly O'Meara**	Ahtna	916/372-2000	komeara@ahtnagov.com
	**Mike Bombard**	HydroGeoLogic	916/614-8770	mbombard@hgl.com
	**Don Jones**	HydroGeoLogic	916/614-8770	djones@hgl.com

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Check (✓)	Name	Organization	Phone	E-mail address
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HTW BCT Meeting

February 23, 2007 at 10:00 a.m.
BRAC conference room

Item	Action	Comment
OU1 Groundwater Remediation	Status Update	HGL
OU1 Groundwater Characterization	Status Update	Shaw
OU2 and 2/12 Treatment Systems	Status Update	
OUCTP RI/FS ROD/ Pilot Study	Status Update	Chloroform issue
Other Groundwater Issues	Update	Quarterly Sampling Marina Heights University Villages
Groundwater Treatment System Optimization	Status Update	
OU2 Landfill Gas	Status Update	
Basewide Range Assessment	Status Update	Comments to Rev 1C
Site 39 Eco Risk Work	Status Update	
Site 39 Feasibility Study Addendum	Status Update	
Site 3 Post Remediation Monitoring	Status Update	
FFA Schedule	Status Update	
Five Year Review report	Status Update	IA Sites concurrence letters
FOST/FOSL/FOSET Issues	Status Update	
Open House and Calendar Update	Update	

HGL AGENDA

Fort Ord HTW BCT Meeting
10:00 AM, February 23, 2007
Monterey, California

1. *Groundwater Remediation Project Update*
   - HCPP System operation update.
2. *Quarterly LTM*
   - Draft 2nd Quarter 2006 LTM Report submitted on 06 February 2007.
   - Final 1st Quarter 2006 LTM Report to be submitted on 23 February 2007 including responses to FOEJN comments.
   - 3rd Quarter 2006 LTM report currently in progress. Currently scheduled to be submitted on 09 May 2007.
   - Received 4th Quarter 2006 data back from validation.
3. *Other Submittals*
   - Final Hydraulic Control Pilot Project Construction Report submitted on 30 January 2006.
   - Final 2006 Rare Plant Survey and Annual FONR Impact Report to be submitted to the Army on 23 February 2007.
4. *Modification to FONR Portion of OU-1 Treatment System*
   - Discussion of letter submitted to Regulators and Army on 14 February 2007.

AHTNA
Government Services Corporation

AGSC Status Update
Former Fort Ord
Groundwater Treatment Systems Operational Data
January 2007

OU2 GWTP TREATMENT STATISTICS			
OU2 Treatment (Month)	Volume Treated (gallons)	Average Operational Flow (gallons per minute)	Percent of Time Online
January 2007	22,428,820	682	98
Grand Total (Since October 1995)	*4.251 billion*		
SITES 2/12 GWTP TREATMENT STATISTICS			
Sites 2/12 Treatment (Month)	Volume Treated (gallons)	Average Operational Flow (gallons per minute)	Percent of Time Online
January 2007	2,645,600	169	44
Grand Total (since May 1999)	*992,446,027*		

Operational Issues:

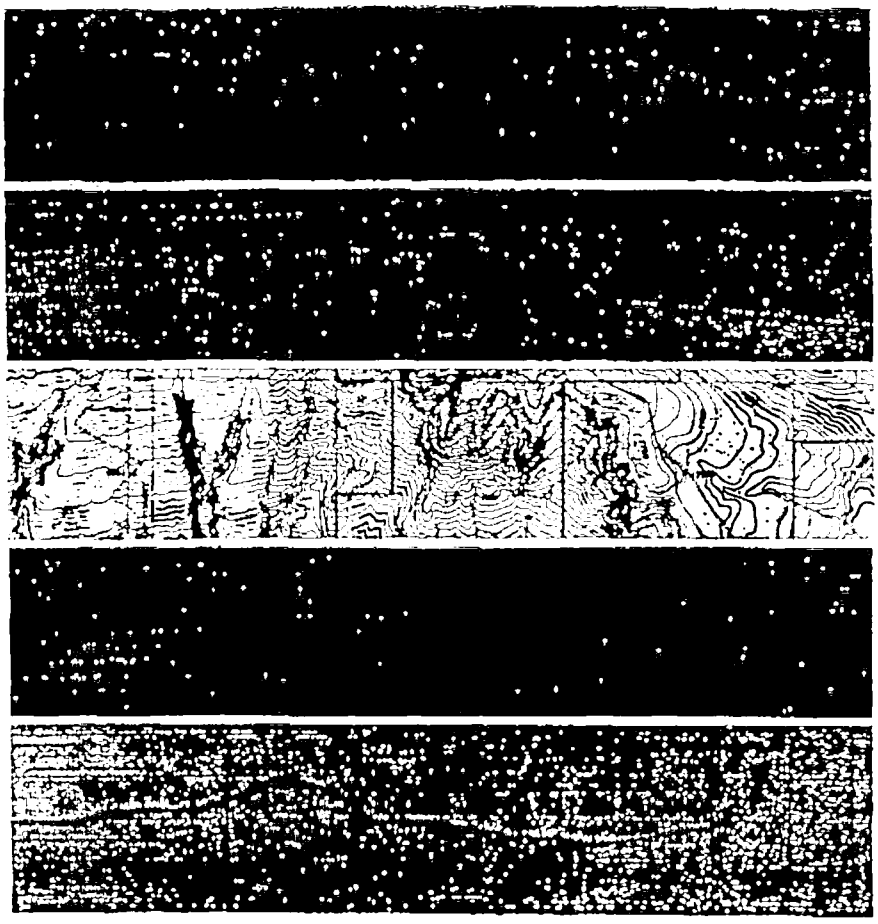
- On January 3, KTA Tator was on site for internal inspection of the GAC vessels.
- On January 12, repairs were completed to the manway doors and flanges on the GAC vessels.
- On January 14, a power outage caused a shutdown of the OU2 GWTP for 6 hours and 45 minutes. The GWTP was restarted and operated continuously after communications links were established.
- On January 17, Siemens was on site for delivery of granular activated carbon. The 2/12 GWTP was restarted immediately after the delivery.
- On January 23, Siemens was on site for a carbon change out of GAC A. Extraction well flows were reduced during carbon change out (approximately 3.5 hours) and resumed normal flows afterwards. Also on this date, KTA Tator was on site during the carbon change out for internal inspection of GAC A.

- On January 24, Siemens was on site for a carbon change out of GAC D. Extraction well flows were reduced during carbon change out (approximately 3.5 hours) and resumed normal flows afterwards. Also at this time, KTA Tator was on site during the carbon change out for internal inspection of GAC D.
- On January 28, a power outage occurred and shutdown the GWTP for approximately 8 hours. Once communications were established, the systems were restarted at reduced flow rates.
- On January 29, EW-OU2-06-A was not restarting after the prior weekend power outage. Preliminary diagnostics showed no power supply to the extraction well. PSI has been scheduled for February 6 to diagnose cause of problem with power supply. Variable frequency drives 520 and 910 failed to power up also on this day. Preliminary diagnosis shows the Variable Frequency Drives as inoperable. PSI will also diagnose the cause of failure and schedule the replacement of the VFDs.

USAN Alerts:

- For the month of January, AGSC received a total of 57 notifications from USAN. Next month a spreadsheet of these notifications will be included in the status update.

042 - 251



FINAL FEASIBILITY STUDY REPORT*
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
FORT ORD LANDFILLS
FORT ORD, MONTEREY, CALIFORNIA
FOR U.S. ARMY CORPS OF ENGINEERS

Job No. 13846-007-043
October 1, 1993

DAMES & MOORE

environmental resources from detected soil and groundwater contamination were identified.

9. The persistence and permanence of the potential adverse effects are extremely low once Upper Aquifer contamination has been reduced to the levels listed in Table 4A. Section 6.2 of the FS discusses reduction of toxicity, mobility and volume of contaminants through treatment.

The RAO concentrations listed in Table 4A are 1) selected from among the values listed in Table 4 (including potential ARARs and TBCs), or 2) calculated from the Risk Assessment's mathematical models. The risk-based RAOs are concentrations of the chemicals of concern which, when used in the Risk Assessment's mathematical models to calculate potential cancer risk, result in a predicted excess cancer risk of 1×10^{-5} for potential exposure to each chemical. The calculated potential cumulative excess cancer risk summed over all the chemicals of concern is 6×10^{-5}. This cumulative risk is within EPA's acceptable risk range (10^{-4} to 10^{-6}). TBC values were considered but not selected as RAOs. The concentrations listed in Table 4A are slightly above background which, for the chemicals of concern, is less than 0.1 μg/L (not detectable). Although these RAOs are very health protective, Title 23 CCR, Chapter 15, Article 5, requires that cleanup objectives may not be set above background unless detailed technical or economic evaluations show that achievement of restoration to background is infeasible.

A literature search including a review of technical papers was performed to evaluate the feasibility of achieving cleanup to background. In general, while significant mass removal of contaminants can be achieved from contaminated aquifers, there has been little success in reducing concentrations to low target levels, including MCLs. This is due to a variety of factors, including the fact that even highly soluble contaminants adhere to soil particles because groundwater pumping causes preferential flow in high-permeability areas (Travis and Doty, 1990). To exacerbate the problem, even where low residual concentrations have been achieved, once pumps are turned off, concentrations tend to rise again (USEPA, 1989). A small number of sites have reportedly reached groundwater contaminant levels close to MCLs. However, strong concerns remain regarding the "rebound effect" once the pump and treat systems are turned off (Simon and McCulloch, 1992). Groundwater extraction systems increase groundwater flow by drawing down the water table at the well head to increase the hydraulic gradient. Drawing down the groundwater table causes saturated soils near the water table to become dewatered. Contaminants that remain adsorbed onto the soils are not affected; these soils become saturated again after the system is stopped and the groundwater returns to its prepumping level. As these soils become resaturated, residual contaminants come into contact

TABLE 4A
CHEMICALS OF CONCERN
IN GROUNDWATER AND REMEDIAL ACTION OBJECTIVES

Groundwater Chemical of Concern	Reasons for Listing	Risk-Based Concentration µg/L	Federal or State MCL µg/L
Benzene	1	3	**1**
Carbon Tetrachloride	1	1	**0.5**
Chloroform	2	2	100
1,1-Dichloroethane	1	Not Evaluated	5
1,2-Dichloroethane	1	1	**0.5**
cis-1,2-Dichloroethene	1	Not Evaluated	6
1,2-Dichloropropane	1,2	1	5
Dichloromethane	1,2	20	5
Tetrachloroethene	1,2	3	5
Trichloroethene	1,2	6	5
Vinyl Chloride	1,2	<0.1	0.5

NOTE: "Reasons for Listing" are:

1. The chemical was detected in groundwater during the period of September 1990 through June 1992 at concentrations exceeding the Federal or State MCL.

2. Based on the Future Land Use, Reasonable Maximum Exposure (to Upper Aquifer or 180-Foot Aquifer Groundwater) scenarios described in the Risk Assessment, an estimated potential excess cancer risk level exceeding 10^{-6} is associated with this chemical (see Table 10 of the Feasibility Study for a summary of the Risk Assessment results which serve as the basis for this determination).

NOTE: RAOs are a Federal or State MCL, or a risk-based concentration back-calculated from the results of the Risk Assessment, whichever is lower. The lowest value is shown in bold type. The risk-based concentrations are calculated by assuming that there is a linear relationship between the concentrations used in the Risk Assessment's mathematical models and the RME risk calculated for each chemical (see Table 10).

Based on the Risk Assessment's conservative models of exposure which are designed to overestimate potential health effects, the risk-based concentrations listed above result in a calculated potential excess cancer risk of 10^{-5} (1 in 100,000). The combined, or additive effect of exposure to all chemicals at the RAOs was found to be 6×10^{-5}. This residual potential risk is within the range considered acceptable for remedial sites (EPA, 1988).

TABLE 10
SUMMARY OF ESTIMATED LIFETIME CANCER RISKS
Future Land Use - RME Case Resident (child) - Upper Aquifer
Site 2 Landfills, Fort Ord

Chemical	Risk from Each Exposure Pathway							Total Chemical Risk
	Dermal Contact With Soil	Soil Ingestion	Inhalation of Particulates	Inhalation of VOCs	Groundwater Ingestion	Dermal Contact With Groundwater	Inhalation During Showering	
BHC-Beta	2.51E-07	2.51E-07	5.85E-10					5.02E-07
DDE	2.62E-08	2.62E-08	5.92E-11					5.24E-08
DDT	3.48E-08	3.48E-08	7.87E-11					6.98E-08
Dieldrin	8.92E-07	8.92E-07	2.02E-09					1.78E-06
Heptachlor	1.48E-07	1.48E-07	3.35E-10					2.97E-07
1,4-Dichlorobenzene				1.90E-10	8.68E-07	6.14E-08	8.68E-07	1.80E-06
1,2-Dichloroethane				9.23E-10	3.99E-06	1.86E-08	3.99E-06	8.00E-06
1,2-Dichloropropane				1.30E-09	5.55E-06	5.17E-08	5.55E-06	1.12E-05
Benzene				6.17E-10	7.47E-07	1.46E-08	7.47E-07	1.51E-06
Bromodichloromethane				1.37E-09	2.85E-06	1.57E-08	2.85E-06	5.72E-06
Bromoform				1.30E-11	1.69E-07	4.40E-10	8.55E-08	2.55E-07
Carbon tetrachloride				3.21E-09				3.12E-09
Chloroform				6.65E-09	7.72E-07	6.47E-09	1.01E-05	1.09E-05
Dibromochloromethane				4.37E-10	2.30E-06	6.64E-09	2.30E-06	4.61E-06
Methylene chloride				7.73E-10	4.77E-06	2.00E-08	1.02E-06	5.80E-06
Tetrachloroethene				8.94E-08	4.97E-06	2.22E-07	1.76E-07	5.46E-06
Trichloroethene				1.55E-07	8.95E-06	1.42E-07	1.38E-05	2.31E-05
Vinyl chloride				2.12E-05	7.91E-05	5.16E-07	1.21E-05	1.13E-04
Total Pathway Risk	1.35E-06	1.35E-06	3.08E-09	2.15E-05	1.15E-04	1.08E-06	5.36E-05	1.94E-04

1E-06 = 1/1,000,000

Table 2-6
Summary of TCE Analytical Results

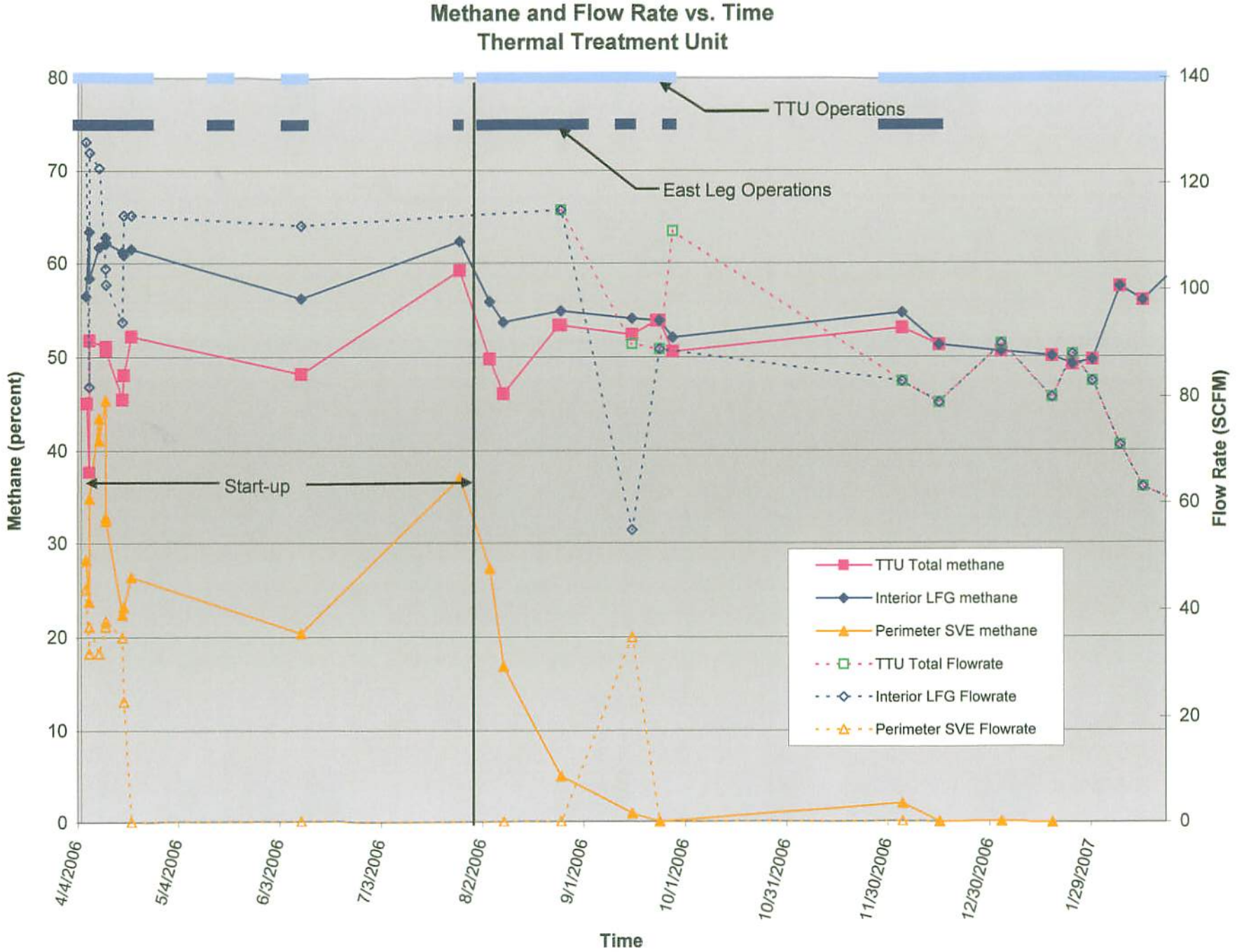
WELL IDENTIFICATION	DEPTH SAMPLED-Elevation	TCE[a] March 28-30, 2006 (ug/L)	TCE May 4, 2006 (ug/L)	TCE May 23, 2006 (ug/L)	TCE September 25, 2006 (ug/L)	TCE Feb 2 & 6, 2007 (ug/L)
MW-OU1-75A	35.87	18.6	2.1	1.7	0.28J	<0.5
MW-OU1-75A	30.87	--	14	9.8	2.4	0.64
MW-OU1-75A	25.87	--	15	9.5	2.5	0.58
MW-OU1-75A	20.87	--	17	9.5	2.6	15
MW-OU1-75A	15.87	--	20	26	18	0.75
MW-OU1-76A	32.33	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-76A	27.33	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-76A	22.33	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-76A	17.33	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-76A	12.33	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-77A	29.1	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-77A	24.1	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-77A	19.1	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-78A	29.91	1.9	<0.5	<0.5	<0.5	<0.5
MW-OU1-78A	24.91	--	3.2	2.1J-[b]	1.4	1.5
MW-OU1-78A	19.91	--	2.7	2.3	1.2	1.7
MW-OU1-79A	29.72	<0.5	<0.5	<0.5UJ[c]	<0.5	<0.5
MW-OU1-79A	24.72	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-79A	19.72	--	<0.5	<0.5	0.59	0.67/0.85
MW-OU1-80A	25.32	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-80A	20.32	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-80A	15.32	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-80A	10.32	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-81A	21.39	<0.5	<0.5	<0.5	<0.5	<0.5
MW-OU1-81A	16.39	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-81A	11.39	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-81A	6.39	--	<0.5	<0.5	<0.5	<0.5
MW-OU1-81A	1.39	--	<0.5	<0.5	<0.5	<0.5

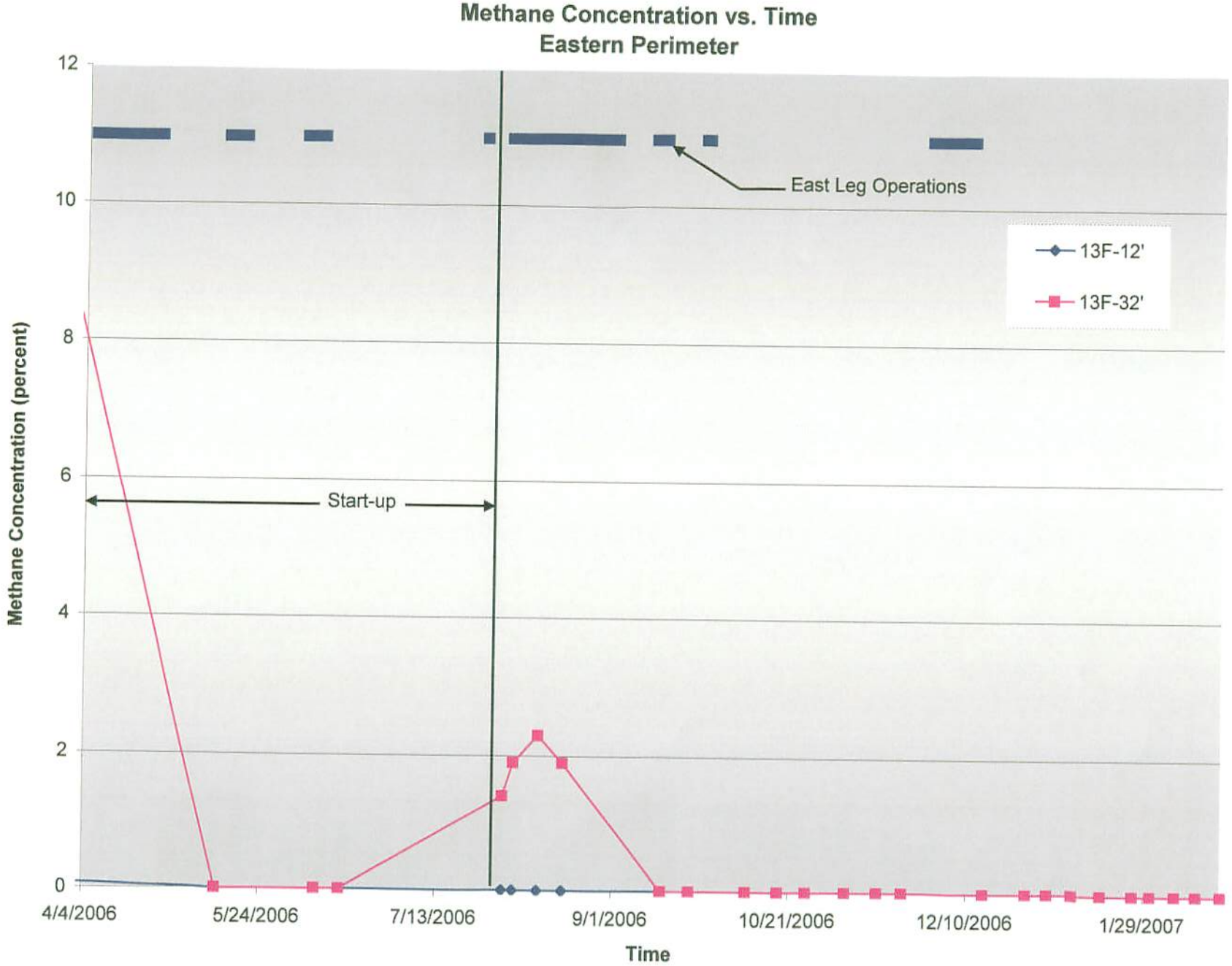
Notes:

[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


Methane and Flow Rate vs. Time
Thermal Treatment Unit
TTU Operations
East Leg Operations
Start-up
TTU Total methane
Interior LFG methane
Perimeter SVE methane
TTU Total Flowrate
Interior LFG Flowrate
Perimeter SVE Flowrate
Methane (percent)
Flow Rate (SCFM)
Time
0
10
20
30
40
50
60
70
80
0
20
40
60
80
100
120
140
4/4/2006
5/4/2006
6/3/2006
7/3/2006
8/2/2006
9/1/2006
10/1/2006
10/31/2006
11/30/2006
12/30/2006
1/29/2007


Methane Concentration vs. Time
Eastern Perimeter
Methane Concentration (percent)
12
10
8
6
4
2
0
East Leg Operations
13F-12'
13F-32'
Start-up
4/4/2006
5/24/2006
7/13/2006
9/1/2006
10/21/2006
12/10/2006
1/29/2007
Time