

SUBJECT: HTW – BCT Meeting
January 10, 2007
1:00 p.m.

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

January 10, 2007 at 1:00 p.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	
Other Groundwater Issues	Update	Marina Heights University Villages
Groundwater Treatment System Optimization	Status Update	
OU2 Landfill Gas	Status Update	
Basewide Range Assessment	Status Update	
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	
FOST/FOSL/FOSET Issues	Status Update	
December HTW meeting minutes	Review/Approve	
Calendar Update	Update	

**Operable Unit 1 Groundwater Treatment System
FFA Schedule**

Deliverable / Event	Current Deadlines (Previous Deadlines)	Remarks / Reason for Change
Draft Final Work Plan Hydraulic Control Pilot Project Operable Unit 1	1/06	Issued
Comments Due	2/06	
Final Work Plan Hydraulic Control Pilot Project Operable Unit 1	4/06 (3/06)	Issued
Draft OU 1 Hydraulic Control Pilot Project Construction Report	9/06 (7/06)	Issued
Comments Due	11/06	
Draft Final OU 1 Groundwater Treatment Pilot Study Construction Report	1/07 (11/06)	
Comments Due	3/07	
Draft Phase 1 Site Characterization Workplan	12/05	
Comments Due	1/06	
Draft Final Phase 1 Site Characterization Workplan	2/06	
Comments Due	3/06	
Draft Phase 1 Site Characterization Report	7/06	
Comments Due	8/06	
Draft Final Phase 1 Site Characterization Report	9/06	
Comments Due	10/06	
Draft Interim Hydraulic Control Pilot Project Evaluation Report	3/07	
Comments Due	5/07	
Draft Final Interim Hydraulic Control Pilot Project Evaluation Report	7/07 (3/07)	
Comments Due	9/07	
Draft 60% Engineering Design Report Volume 2 Modeling & Design Analysis	2/06 (1/06)	Issued

Deliverable / Event	Current Deadlines (Previous Deadlines)	Remarks / Reason for Change
Comments Due	3/06	
Draft 60% Engineering Design Report Volume 3 of 3 Engineering Calculations	5/06 (2/06)	Issued
Comments Due	6/06	
Draft 100% Engineering Design Report Volume 1 of 3 Geology & CSM	6/06 (3/06)	Issued
Comments Due	7/06	
Draft 100% Engineering Design Report Volume 2 of 3 Modeling & Design Analysis	5/06 (4/06)	Issued
Comments Due	6/06	
Draft 100% Engineering Design Report Volume 3 of 3 Engineering Calculations	7/06 (4/06)	Issued
Comments Due	8/06	
Final 100% Engineering Design Report Volume 1 of 3 Geology & CSM	7/06 (5/06)	Issued
Final 100% Engineering Design Report Volume 2 of 3 Modeling & Design Analysis	7/06 (10/05)	Issued
Final 100% Engineering Design Report Volume 3 of 3 Engineering Calculations	9/06 (10/05)	Issued
Draft Explanation of Significant Difference Former Fort Ord Operable Unit 1 (ESD)	6/07 (3/07)	Awaiting determination of ESD versus ROD Amendment
Comments Due	8/07	
Final Explanation of Significant Difference Former Fort Ord Operable Unit 1 (ESD)	10/07 (6/07)	Awaiting determination of ESD versus ROD Amendment
Comments Due	3/07	
Draft FONR Groundwater Remediation System Construction Completion Report	1/08 (5/07)	Delayed due to need for additional design information
Comments Due	3/08	

Deliverable / Event	Current Deadlines (Previous Deadlines)	Remarks / Reason for Change
Draft Final FONR Groundwater Remediation System Construction Completion Report	4/08 (7/07)	Delayed due to need for additional design information
Comments Due	6/08	
Final FONR Groundwater Remediation System Construction Completion Report	7/08	



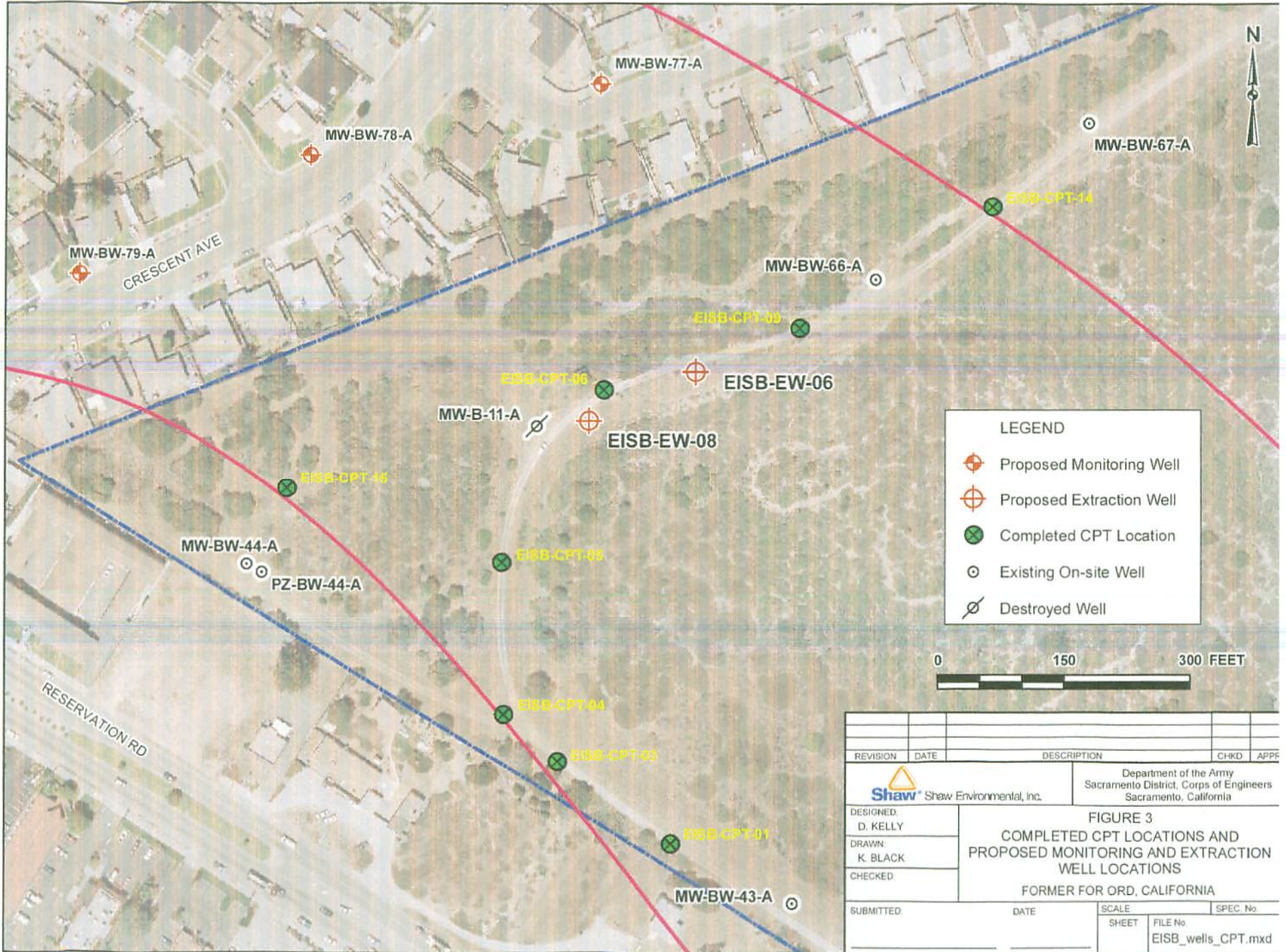
Status

Enhanced In Situ Bioremediation Pilot Study Operable Unit Carbon Tetrachloride Plume

January 10, 2006¹
Presented by: David Kelly

Pre-Design Investigation

- Pre-Design Investigation Work Plan
 - Comments received from DTSC.
 - Response to comments will be provided and comments will be addressed in subsequent reports/plans.
- CPT completed at eight locations with limited data collected due to refusal
- Two EISB pilot study extraction wells installed to collect additional data
 - Installed by sonic drilling methods with continuous core collected for logging.
 - Groundwater grab samples collected after well development.
- Eight off-site monitoring wells installed
 - Installed by hollow stem auger drilling methods.
 - Continuous core collected at three locations for logging.
 - Groundwater grab sample collected after well development and PDB samples collected to evaluate stratification.




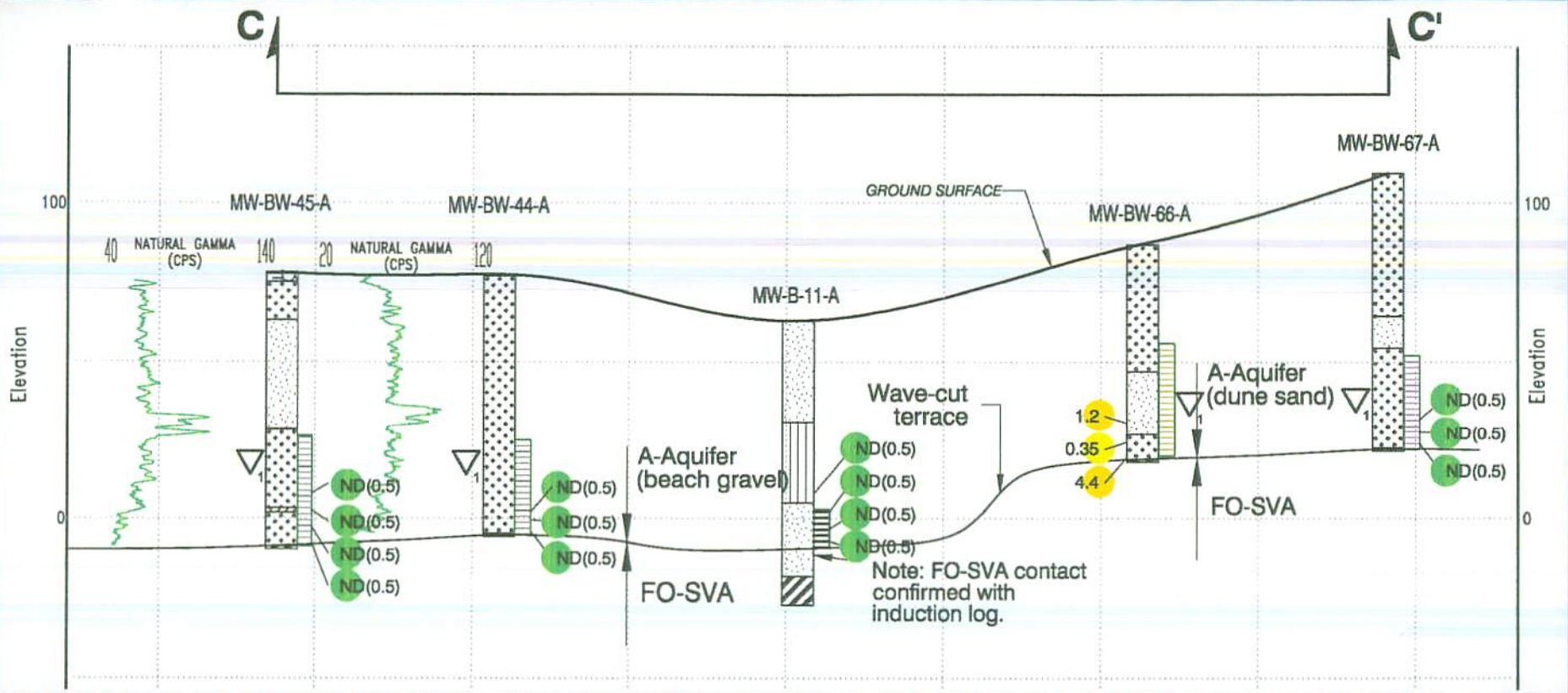
LEGEND

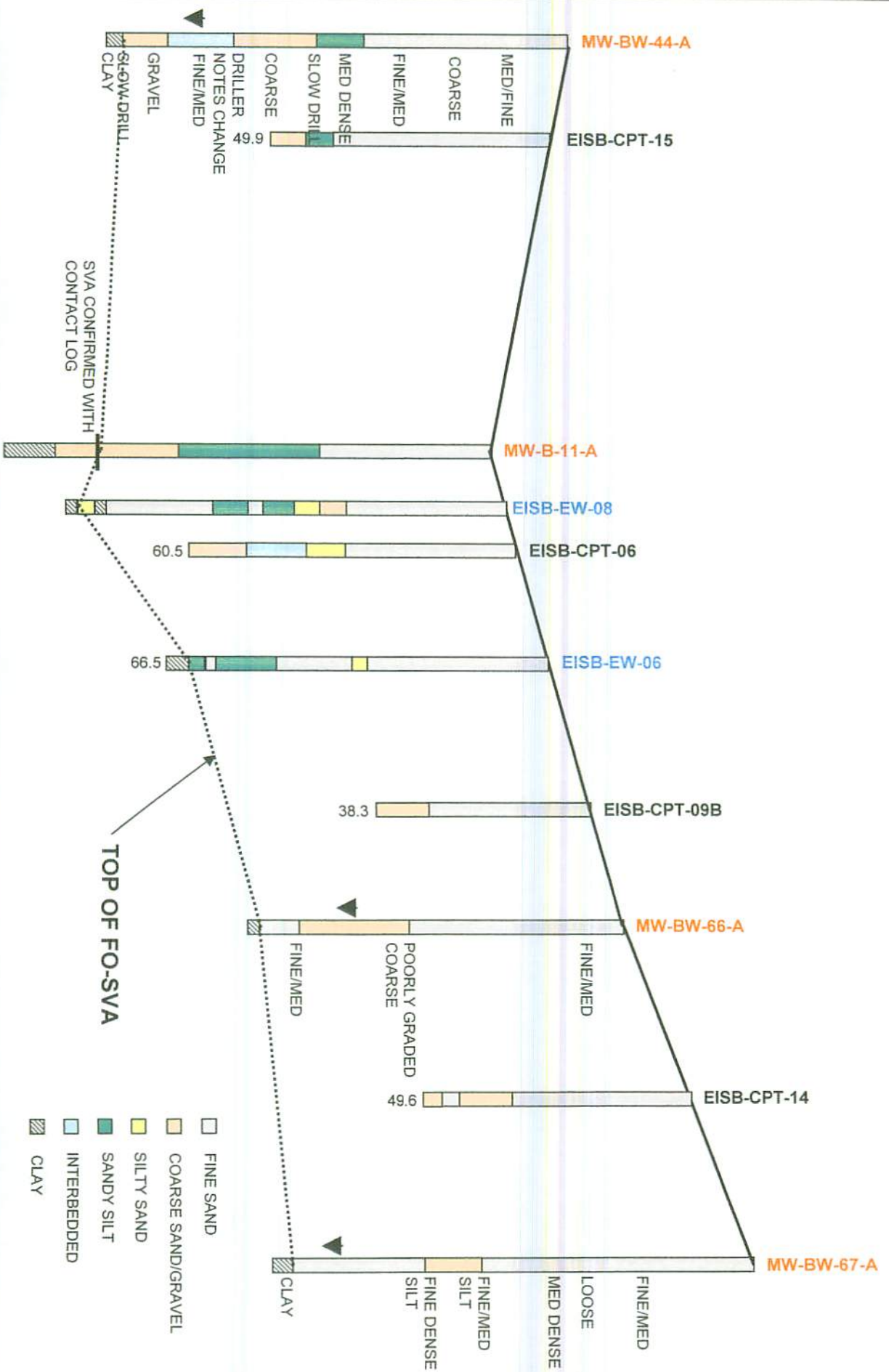
-  Proposed Monitoring Well
-  Proposed Extraction Well
-  Completed CPT Location
-  Existing On-site Well
-  Destroyed Well



REVISION	DATE	DESCRIPTION	CHKD	APPR

 Shaw Environmental, Inc.		Department of the Army Sacramento District, Corps of Engineers Sacramento, California		
DESIGNED: D. KELLY	FIGURE 3 COMPLETED CPT LOCATIONS AND PROPOSED MONITORING AND EXTRACTION WELL LOCATIONS FORMER FOR ORD, CALIFORNIA			
DRAWN: K. BLACK				
CHECKED:				
SUBMITTED:	DATE:	SCALE: SHEET	FILE No. EISB_wells_CPT.mxd	SPEC. No.







LEGEND

- Proposed Monitoring Well (8)
- Existing Monitoring Well
- 3.3/4.8 Carbon Tetrachloride Concentration (µg/L)
March 2004/Maximum

Marina

Former Fort Ord

REVISION	DATE	DESCRIPTION	CHKD	APPR
		Department of the Army Sacramento District, Corps of Engineers Sacramento, California		
DESIGNED: D. KELLY	FIGURE 3 PROPOSED MONITORING WELL LOCATION MAP FORMER FOR ORD, CALIFORNIA			
DRAWN: K. BLACK				
CHECKED:				
SUBMITTED:	DATE	SCALE	SHEET	SPEC. No.
		FILE No.		
		Marina_wells2.mxd		

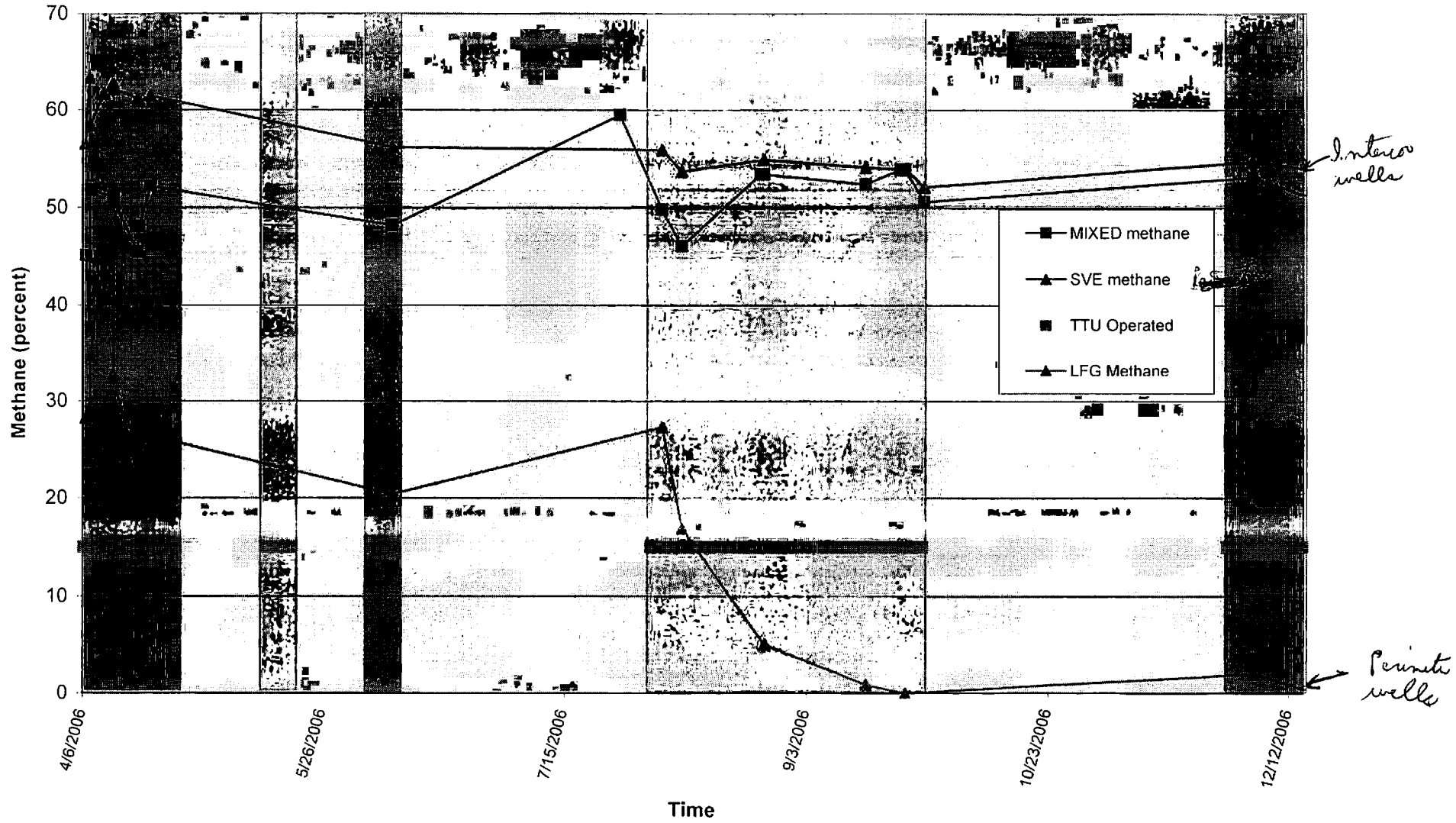


Reference: Mactec Engineering and Consulting, Inc., 2006

EISB Pilot Study

- Preliminary Schedule
 - Work Plan (incorporate data from pre-design investigation)
 - Preliminary Draft to USACE for review – January/February 2007
 - Draft to Agencies for Review – March 2007
 - Final – May/June 2007
 - Well/System Construction – June through July 2007
 - Substrate Injection – August through November 2007
 - Groundwater Monitoring – December 2007 through June 2008.

Methane, Total VOCs, Vinyl Chloride vs. Time Thermal Treatment Unit



Methane Concentration vs. Time

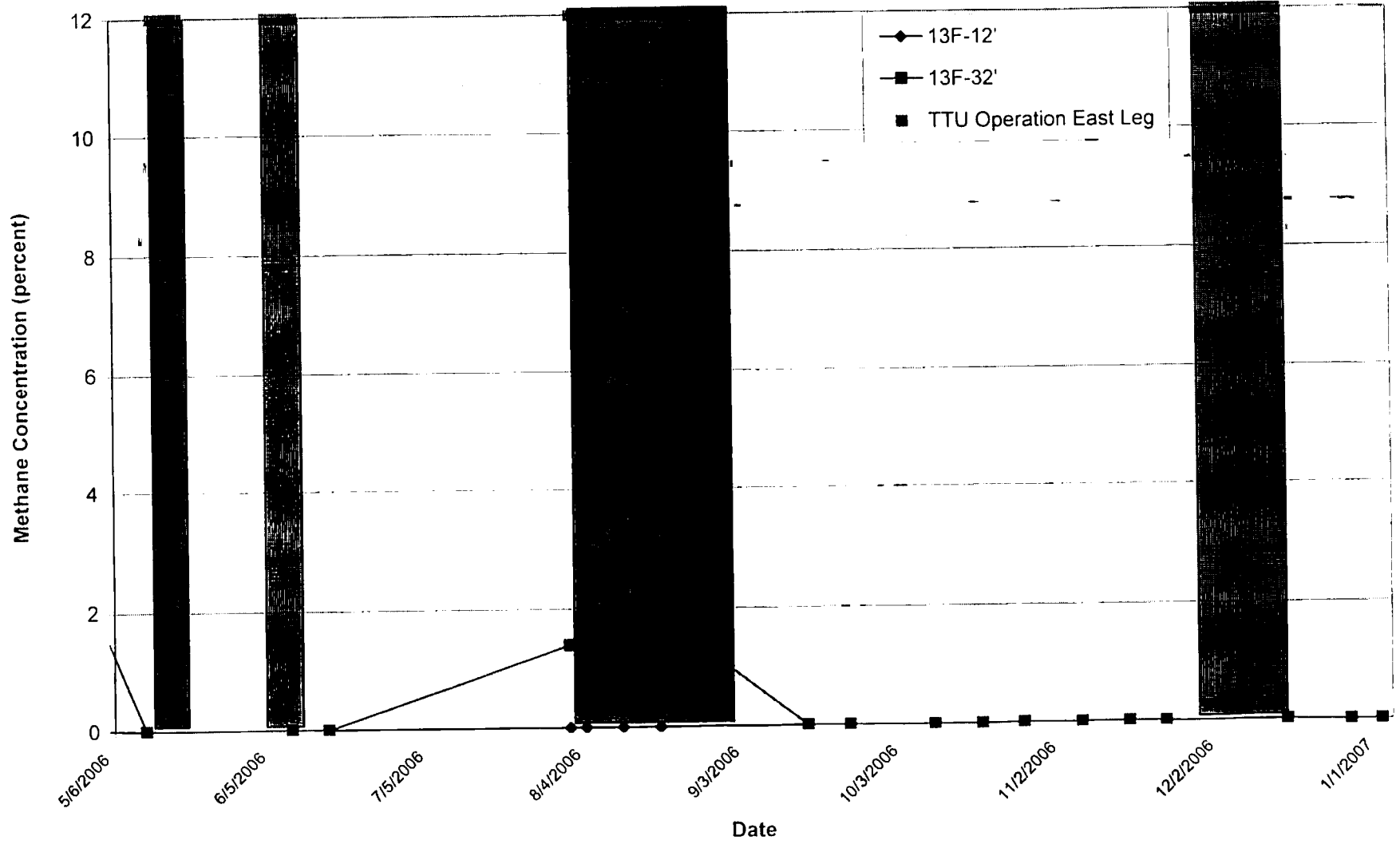
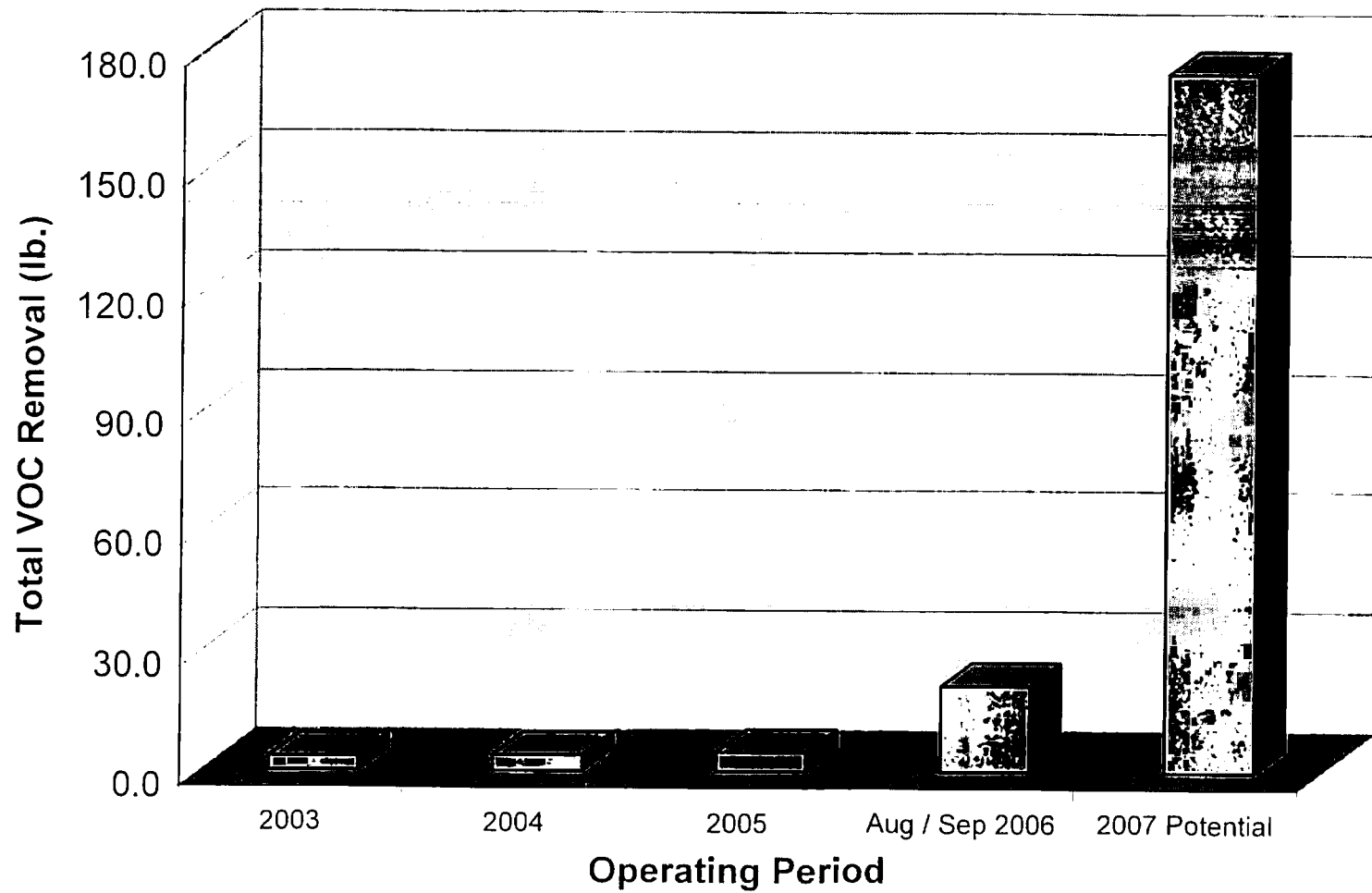


Figure 7: Total VOC Mass Removals



HGL AGENDA

Fort Ord HTW BCT Meeting
1:00 PM, January 10, 2006
Monterey, California

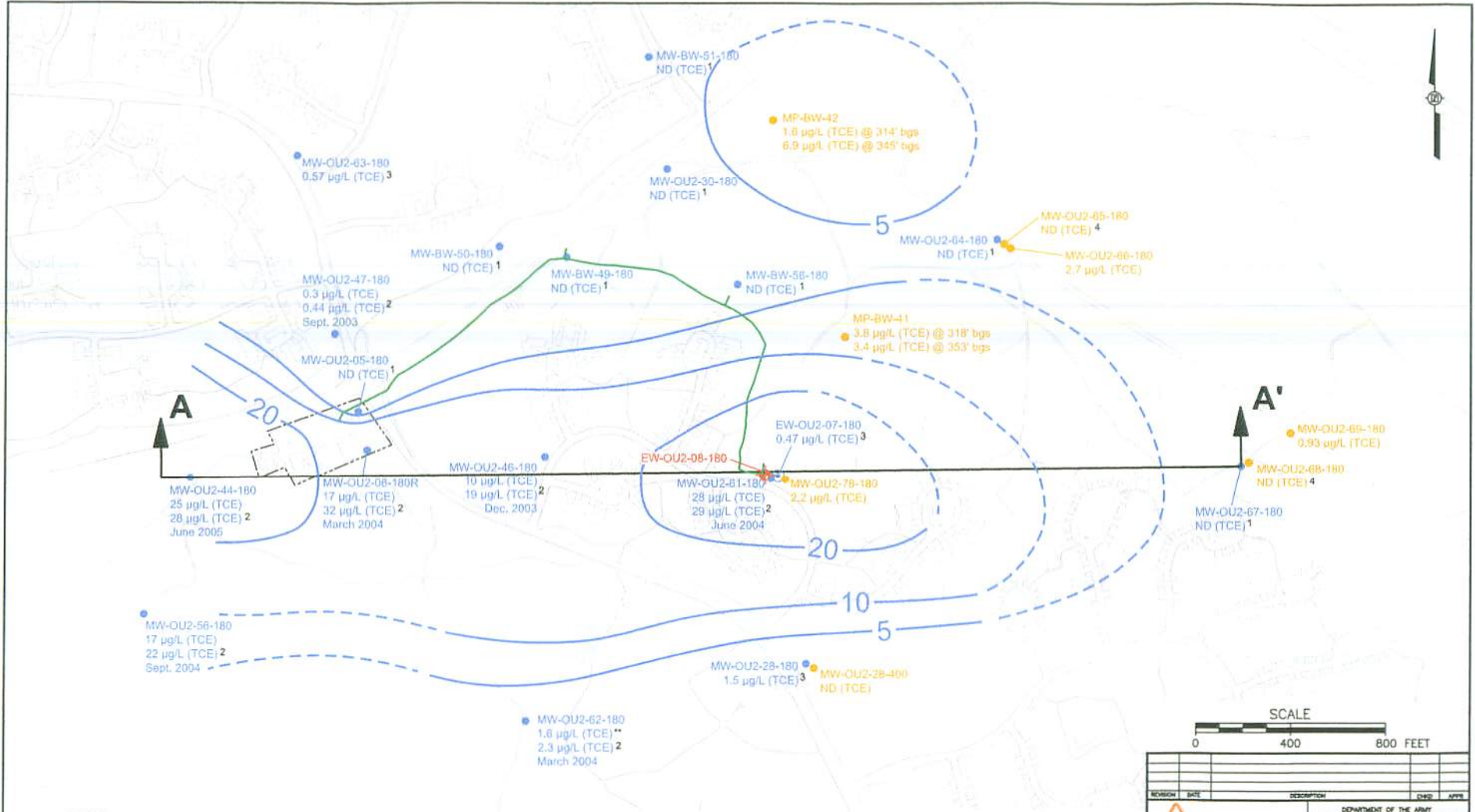
1. Groundwater Remediation Project Update
 - HCPP System operation update.
 - Rebound Evaluation – evaluation period extended as per letter
2. Quarterly LTM
 - Draft 2nd and 3rd Quarter 2006 LTM reports currently in progress. Draft 2nd Quarter submitted by end of January.
 - Received 4th Quarter 2006 data and submitted it for validation.
3. FFA Schedule
 - See attached FFA Schedule
 - ESD versus ROD Amendment Decision

EW-OU2-07-180

- 50 feet of screen from 210 to 260 feet bgs
- 112 gpm with 50% of screen exposed
- Specific capacity is 4.52 gpm/foot
- Samples show TCE @ < 1.1 µg/L and Toluene @ < 5.6 µg/L
- Included in quarterly sampling
- Screened portion may be too deep
- Elevated TCE located within the upper portion of Upper 180 Aquifer (screened portion of EW-OU2-07-180)
- No pump installed

EW-OU2-08-180

- 40 feet of screen from 175 to 215 feet bgs
- 90 gpm with 50% of screen exposed
- Captures easternmost portion of Upper 180 Foot Aquifer
- Specific capacity is 5.7 gpm/foot
- Grab samples showed 2.5 µg/L TCE
- PDS bag samples showed < 0.81 µg/L TCE
- PDS bag samples from MW-OU2-61-180 and MW-OU2-46-18 showed 12 µg/L TCE
- 15hp pump @ 85gpm installed



LEGEND

- MONITORING OBSERVATION WELL (MW); UPPER 180-FT. AQUIFER
- ⊙ EXTRACTION WELL (EW); UPPER 180-FT. AQUIFER
- MONITORING OBSERVATION WELL (MW); DEEPER AQUIFERS
- ⊕ NEW SHALLOW EXTRACTION WELL LOCATION

— TCE ISOCONCENTRATION CONTOUR (µg/L) IN UPPER 180-FT. AQUIFER BASED ON HIGHEST CONCENTRATIONS; DASHED WHERE INFERRED

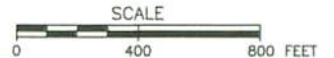
ND = NOT DETECTED BELOW DETECTION LIMIT OF 0.50 µg/L
 ** SAMPLE COLLECTED JUNE 21, 2005
 5 µg/L IS THE UPPER 180-FT. AQUIFER REMEDIATION GOAL FOR TCE

¹ ALL CONCENTRATIONS WITHIN PAST TWO YEARS = ND

² HIGHEST CONCENTRATION OBSERVED WITHIN PAST TWO YEARS; SHOWING SAMPLE DATE

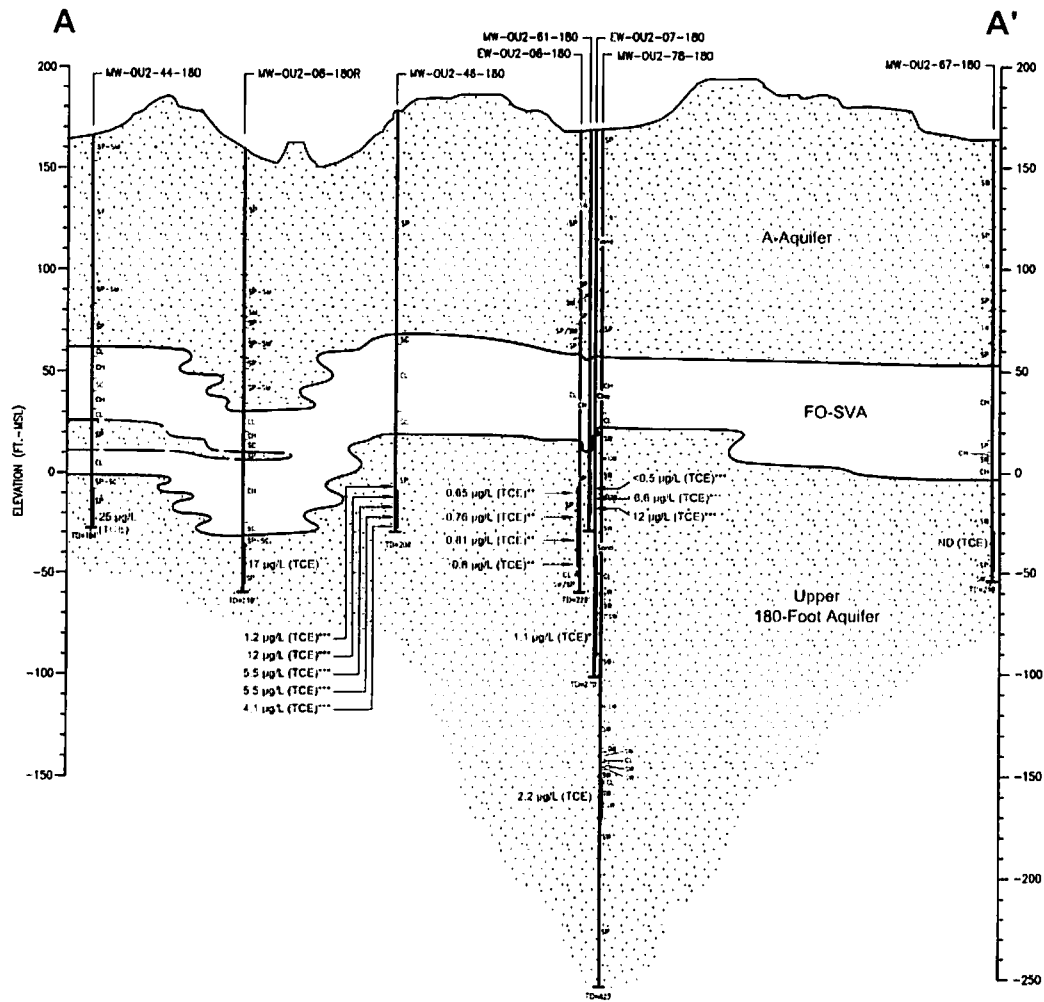
³ HIGHEST CONCENTRATION OBSERVED IS MOST RECENT SAMPLE DATE

⁴ NOT SAMPLED SINCE 2003



REVISION	DATE	DESCRIPTION	DRAWN	APPROVED

		DEPARTMENT OF THE ARMY SACRAMENTO DISTRICT, CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA	
DESIGNED: A. ELLISON	FIGURE 1-3 SEPTEMBER 2005 TCE CONCENTRATIONS AND MAXIMUM CONCENTRATION WITHIN PAST 2 YEARS UPPER 180-FOOT AQUIFER WELLS OU2 GROUNDWATER REMEDY SYSTEM EXPANSION PHASE II FORMER FORT ORD, CALIFORNIA	SUBMITTED:	
DRAWN: K. BLACK		DATE APPROVED:	SCALE:
CHECKED:		SHEET:	FILE No.:
783751SJ-B176rev1		SPEC. No.:	



REVISION	DATE	DESCRIPTION	BY	APPV

Stantec Environmental, Inc.		DEPARTMENT OF THE ARMY SACRAMENTO DISTRICT, CORPS OF ENGINEERS SACRAMENTO, CALIFORNIA	
DESIGNED J. HOSNER	FIGURE 1-2 CROSS SECTION A-A' OUZ GROUNDWATER REMEDIATION SYSTEM EXPANSION PHASE II FORMER FORT ORD, CALIFORNIA		
DRAWN J. BLACK	SUBMITTED	DATE APPROVED	SCALE SHEET
CHECKED	SHEET -	FILE NO. 783751SJ-B177rev1	SPEC. NO.

Former Fort Ord Groundwater Treatment Systems Operational Data December 2006

OU2 GWTP TREATMENT STATISTICS			
OU2 Treatment (Month)	Volume Treated (gallons)	Average Operational Flow (gallons per minute)	Percent of Time Online
December 2006	*15,663,978	352	99
Year to date	328,345,952	N/A	99.6
Grand Total (Since October 1995)	4.228 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
December 2006	5,890,305	223	59
Grand Total (since May 1999)	989,800,427	N/A	95.6

***flows low due to expansion shutdown for one week in conjunction with LFR construction**

Operational Issues:

- 1) On December 4, EW-OU2-02-180 shutdown and failed to operate in automatic mode. Pump operates in hand mode only. Pump scheduled for diagnostic work and PLC programming after the holiday.
- 2) On December 4, exposed INF pipes discovered south of OU2-O7-A, contacted LFR and put safety markers around piping in order to avoid damage.
- 3) On December 4, broken 12" pipe discovered on Abrams. Broken pipeline was identified as the old eastern injection line.
- 4) On December 7, a leak at EW-12-X2-180 was found and 75 gallons were pumped from the vault into barrels and brought to the 2/12 GWTP for treatment. An adjustment was made and the leak was remedied.
- 5) On December 11, CSUMB and Shoppette wells turned off at 1500hrs in coordination of work being done by LFR.
- 6) On December 11, EW-OU2-04-180 turned on to flush expansion line.

- 7) On December 12, EW-OU2-04-180 turned off due to high pressure.
- 8) On December 12, Expansion network off and expansion line pumped out and drained into OU2 berm in coordination with LFR pipeline work.
- 9) On December 13-14, PSI on site to replace level controls, pump, motor and wire in EW-OU2-02-A.
- 10) On December 14, additional leak detection system sensors were fabricated and installed next to the Shoppette extraction wells.
- 11) On December 18, Eastern network wells off 1030-1300hrs during tie in of spool connection at the wye vault. Entire Eastern and expansion wells were started up upon completion of tie in.
- 12) On December 19, Site 2/12 turned off at 0900hrs for removal of GAC repairs to GAC vessel doors.
- 13) On December 20, OU2 GWTP shutdown 0800-1000hrs for work on influent actuated valves.
- 14) On December 20, PSI on site to assist in relay and wire replacement inside CSUMB PLC. CSUMB wells were off 1000-1045hrs.
- 15) On December 21, OU2 GWTP shut down for 45 minutes due to a power outage.
- 16) On December 27, remaining leak detector sensors at Shoppette wells installed.
- 17) On December 28, Backwash tank overflow in northern berm at OU2 caused by rainwater. all water was pulled in by sump pump and added to influent water for treatment.
- 18) On December 28, Reset programming for EW-OU2-02-180 and restarted in automatic mode with no additional problems.