Enclosure I

EPA Level III ADR Outliers

Quality Control
Outlier Reports

SDG P404394

(No Qualifications)

Quality Control
Outlier Reports

SDG P404353

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 4040496 **Analysis Method :** 300.0 Br **Analysis Date :** 04/21/2004

Preparation Batch : 4040496 **Preparation Type :** Gen Prep **Preparation Date :** 04/20/2004

Lab Reporting Batch : P404353 **Lab ID:** SAL-PET

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
0415KCTP110FMSD	4040496-MSD1	AQ	Bromide		24	30.00	75.00	125.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
0415KCTP102F	P404353-23
0415KCTP106F	P404353-24
0415KCTP110F	P404353-25

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Project Number and Name: ***4087030007.010204 - Fort Ord - OU CTP Pilot Study-1***

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 4D19027 **Analysis Method :** 300.0 NO3 **Analysis Date :** 04/13/2004

Preparation Batch : 4D19027 **Preparation Type :** Gen Prep **Preparation Date :** 04/13/2004

Lab Reporting Batch : P404353 **Lab ID:** SAL-MOR

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
0415KCTP119FMS	4D19027-MS1	AQ	Nitrate as N	48.9		30.00	75.00	125.00	20.00
0415KCTP119FMSD	4D19027-MSD1		Nitrate as N	48.7		30.00	75.00	125.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
0415KCTP102F	P404353-23
0415KCTP106F	P404353-24
0415KCTP110F	P404353-25
0415KCTP113F	P404353-26
0415KCTP119F	P404353-28
0415KCTP124F	P404353-29
0415KCTP125D	P404353-30
0415KCTP128F	P404353-31
0415KCTP132F	P404353-32
0415KCTP137F	P404353-33

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 4D21017 **Analysis Method :** 300.0 NO2 **Analysis Date :** 04/15/2004

Preparation Batch : 4D21017 **Preparation Type :** Gen Prep **Preparation Date :** 04/15/2004

Lab Reporting Batch : P404353 **Lab ID:** SAL-MOR

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
0415KCTP119FMS	4D21017-MS1	AQ	Nitrite as N	55.5		30.00	75.00	125.00	20.00
0415KCTP119FMSD	4D21017-MSD1		Nitrite as N	55.7		30.00	75.00	125.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
0415KCTP102F	P404353-23
0415KCTP106F	P404353-24
0415KCTP110F	P404353-25
0415KCTP113F	P404353-26
0415KCTP119F	P404353-28
0415KCTP124F	P404353-29
0415KCTP125D	P404353-30
0415KCTP128F	P404353-31
0415KCTP132F	P404353-32
0415KCTP137F	P404353-33

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 4D21018 **Analysis Method :** 300.0 NO2 **Analysis Date :** 04/15/2004

Preparation Batch : 4D21018 **Preparation Type :** Gen Prep **Preparation Date :** 04/15/2004

Lab Reporting Batch : P404353 **Lab ID:** SAL-MOR

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
0415KCTP117FMS	4D21018-MS1	AQ	Nitrite as N	60.3		30.00	75.00	125.00	20.00
0415KCTP117FMSD	4D21018-MSD1		Nitrite as N	61		30.00	75.00	125.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
0415KCTP117F	P404353-27

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

Matrix Spike / Matrix Spike Duplicate Recovery and RPD Outlier Report

Method Batch : 4D21019 **Analysis Method :** 300.0 NO3 **Analysis Date :** 04/13/2004

Preparation Batch : 4D21019 **Preparation Type :** Gen Prep **Preparation Date :** 04/13/2004

Lab Reporting Batch : P404353 **Lab ID:** SAL-MOR

Client Sample ID	Lab Sample ID	Matrix	Analyte Name	Reported *		Project Limits (Percent)			
				Percent Recovery	RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
0415KCTP117FMS	4D21019-MS1	AQ	Nitrate as N	47.4		30.00	75.00	125.00	20.00
0415KCTP117FMSD	4D21019-MSD1		Nitrate as N	47.2		30.00	75.00	125.00	20.00

Associated Samples: All samples in Method Batch

Client Sample ID	Lab Sample ID
0415KCTP117F	P404353-27

* Only those Percent Recovery and/or RPD values outside project limits are listed in this report.
** Metal are also assessed against an upper rejection point of 150 percent for waters and 200 percent for soils and sediments

QC Outlier Report: Holding Times

Lab Report Batch: P404353

Lab ID: SAL-MOR

					Actual Holding Time			Criteria				Reported Dates (and Times)		
Client Sample ID	Lab Sample ID	Analysis Method	Matrix	Prep Method	Coll To Prep	Prep To Ana	Coll To Ana	Coll To Prep	Prep To Ana	Coll To Ana	Unit of Meas	Collection Date	Preparation Date	Analysis Date
0415KCTP102F	P404353-23	300.0 NO2	AQ	Gen Prep			83.5			48	Hours	04/12/2004 09:35	04/15/2004 16:36	04/15/2004 21:05
0415KCTP106F	P404353-24	300.0 NO2	AQ	Gen Prep			83.9			48	Hours	04/12/2004 10:10	04/15/2004 16:36	04/15/2004 22:01
0415KCTP110F	P404353-25	300.0 NO2	AQ	Gen Prep			81.0			48	Hours	04/12/2004 10:50	04/15/2004 16:36	04/15/2004 19:49
0415KCTP113F	P404353-26	300.0 NO2	AQ	Gen Prep			81.8			48	Hours	04/12/2004 11:34	04/15/2004 16:36	04/15/2004 21:23
0415KCTP117F	P404353-27	300.0 NO2	AQ	Gen Prep			83.1			48	Hours	04/12/2004 12:10	04/15/2004 16:48	04/15/2004 23:16
0415KCTP117FMS	4D21018-MS1	300.0 NO2	AQ	Gen Prep			83.4			48	Hours	04/12/2004 12:10	04/15/2004 16:48	04/15/2004 23:35
0415KCTP117FMSD	4D21018-MSD1	300.0 NO2	AQ	Gen Prep			83.6			48	Hours	04/12/2004 12:10	04/15/2004 16:48	04/15/2004 23:44
0415KCTP119F	P404353-28	300.0 NO2	AQ	Gen Prep			78.6			48	Hours	04/12/2004 12:35	04/15/2004 16:36	04/15/2004 19:12
0415KCTP119FMS	4D21017-MS1	300.0 NO2	AQ	Gen Prep			78.9			48	Hours	04/12/2004 12:35	04/15/2004 16:36	04/15/2004 19:30
0415KCTP119FMSD	4D21017-MSD1	300.0 NO2	AQ	Gen Prep			79.1			48	Hours	04/12/2004 12:35	04/15/2004 16:36	04/15/2004 19:40
0415KCTP124F	P404353-29	300.0 NO2	AQ	Gen Prep			80.5			48	Hours	04/12/2004 13:10	04/15/2004 16:36	04/15/2004 21:42
0415KCTP125D	P404353-30	300.0 NO2	AQ	Gen Prep			81.2			48	Hours	04/12/2004 13:10	04/15/2004 16:36	04/15/2004 22:20
0415KCTP128F	P404353-31	300.0 NO2	AQ	Gen Prep			78.3			48	Hours	04/12/2004 13:48	04/15/2004 16:36	04/15/2004 20:08
0415KCTP132F	P404353-32	300.0 NO2	AQ	Gen Prep			80.6			48	Hours	04/12/2004 14:20	04/15/2004 16:36	04/15/2004 22:57
0415KCTP137F	P404353-33	300.0 NO2	AQ	Gen Prep			77.5			48	Hours	04/12/2004 14:57	04/15/2004 16:36	04/15/2004 20:27

QC Outlier Report: Field Duplicates (Non-qualified Outliers)

Lab Report Batch: P404353 **Lab ID:** SAL-PET

			Field Sample				Field Sample Duplicate						
Analysis Method	Matrix	Analyte Name	Client Sample ID	Ana Type	Result	Lab Qualifier	Client Sample Duplicate ID	Ana Type	Result	Lab Qualifier	RPD Dup* (%)	RPD Criteria (%)	Result Units
6010B	AQ	Iron	0415KCTP124F	RES	86000		0415KCTP125D	RES	16000		137.3	50	ug/l
CALC	AQ	Ferric Iron		RES	86000			RES	16000		137.3	50	ug/l

Note: Outlier report also includes analytes detected in one sample but not in the related sample, i.e., analyte was detected in the field sample but not in the field duplicate sample, or vice versa. In this case, RPD value assigned to the field duplicate sample is 200.

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

MACTEC
5341 Old Redwood Highway, Suite 300
Petaluma, CA 94954
ATTN: Ms. Debbie Leibensberger

June 10, 2004

OV CTP Pilot Study

SUBJECT: ~~Fort Ord Basewide, 2Q 2004,~~ Data Validation

Dear Ms. Leibensberger

Enclosed is the final validation report for the fraction listed below. This SDG was received on May 28, 2004. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 12023:

SDG #	**Fraction**
P404394	Volatiles

The data validation was performed under EPA Level IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- USACE Environmental Data Quality Management Program Specifications, USACE District, Version 1.08
- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999

Please feel free to contact us if you have any questions.

Sincerely,

Stacey A. Swenson
Operations Manager/Senior Chemist

Attachment 1

RTC

LDC #12023 (MACTEC-Petaluma, CA / Fort Ord Basewide, 1Q 2004)

Project#:MEC07030377, P.O.#55596 00131

LDC	SDG#	DATE REC'D	DATE DUE	VOA (8260B)																															
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	P404394	5-28-04	6-9-04	3	0																														
Total	TH			3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS/MSD, and DUPs

Fort Ord Basewide, 2Q 2004
Data Validation Reports
LDC# 12023

Volatiles

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Fort Ord Basewide, 2Q 2004

Collection Date: April 13, 2004

LDC Report Date: June 10, 2004

Matrix: Water

Parameters: Volatiles

Validation Level: EPA Level IV

Laboratory: Sequoia Analytical

Sample Delivery Group (SDG): P404394

Sample Identification

0415KCTP139F
0415KCTP140F
0415KCTP141F

Introduction

This data review covers 3 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows the HLA Chemical Data Quality Management Plan (CDQMP), Former Fort Ord Complex, Monterey County, California, July 22, 1997.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

The following are definitions of the data qualifiers:

J+ Data are qualified as estimated, with a high bias likely to occur. False positives or false negatives are unlikely to have been reported.

J- Data are qualified as estimated, with a low bias likely to occur. False positives or false negatives are unlikely to have been reported.

J Data are qualified as estimated; it is not possible to assess the direction of the potential bias. False positives or false negatives are unlikely to have been reported.

R Data are qualified as rejected. There is a significant potential for the reporting of false negatives or false positives.

U Data are qualified as non-detected, because the analyte was observed in an associated laboratory or field blank.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% .

Initial calibration verification (ICV) percent differences (%D) were less than or equal to 25.0% for all compounds.

All of the continuing calibration RRF values were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

No field blanks were identified in this SDG.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
All samples in SDG P404394	All TCL compounds	No MS/MSD associated with these samples.	MS/MSD required.	None	P

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

All target compound identifications were within validation criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria.

XIII. Tentatively Identified Compounds (TICs)

Tentatively identified compounds were not reported by the laboratory.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

Fort Ord Basewide, 2Q 2004
Volatiles - Data Qualification Summary - SDG P404394

SDG	Sample	Compound	Flag	A or P	Reason
P404394	0415KCTP139F 0415KCTP140F 0415KCTP141F	All TCL compounds	None	P	Matrix spike/Matrix spike duplicates

Fort Ord Basewide, 2Q 2004
Volatiles - Laboratory Blank Data Qualification Summary - SDG P404394

No Sample Data Qualified in this SDG

Fort Ord Basewide, 2Q 2004
Volatiles - Field Blank Data Qualification Summary - SDG P404394

No Sample Data Qualified in this SDG

LDC #: 12023A1
SDG #: P404394
Laboratory: Sequoia Analytical

VALIDATION COMPLETENESS WORKSHEET
Level IV

Date: 6/1/04
Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/13/04
II.	GC/MS Instrument performance check	A	
III.	Initial calibration	A	
IV.	Continuing calibration	A	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	None/P
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	A	
XI.	Target compound identification	A	
XII.	Compound quantitation/CRQLs	A	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	A	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	N	
XVII.	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples:

1	0415KCTP139F W	11	4040438-BK1	21		31	
2	0415KCTP140F	12		22		32	
3	0415KCTP141F	13		23		33	
4		14		24		34	
5		15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

LDC #: 12023A1
SDG #: 0404394

VALIDATION FINDINGS CHECKLIST

Reviewer: QA
2nd Reviewer:

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Were the BFB performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
III. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		✓		
Did the initial calibration meet the curve fit acceptance criteria?			✓	
Were all percent relative standard deviations (%RSD) $\leq$ 30% and relative response factors (RRF) $\geq$ 0.05?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) and relative response factors (RRF) within method criteria for all CCCs and SPCCs?	✓			
Were all percent differences (%D) $\leq$ 25% and relative response factors (RRF) $\geq$ 0.05?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
VI. Surrogate spikes				
Were all surrogate %R within QC limits?	✓			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.		✓		
Was a MS/MSD analyzed every 20 samples of each matrix?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	

Validation Area	Yes	No	NA	Findings/Comments
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per analytical batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Internal standards				
Were internal standard area counts within -50% or +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XI. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XII. Compound quantitation/CRQLs				
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Tentatively identified compounds (TICs)				
Were the major ions (> 10 percent relative intensity) in the reference spectrum evaluated in sample spectrum?			✓	
Were relative intensities of the major ions within ± 20% between the sample and the reference spectra?			✓	
Did the raw data indicate that the laboratory performed a library search for all required peaks in the chromatograms (samples and blanks)?		✓		
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XVI. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target compounds were detected in the field duplicates.			✓	

Validation Area	Yes	No	NA	Findings/Comments
XVII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target compounds were detected in the field blanks.			✓	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	S. Trichloroethene	KK. Trichlorofluoromethane	CCC. tert-Butylbenzene	UUU. 1,2-Dichlorotetrafluoroethane
B. Bromomethane	T. Dibromochloromethane	LL. Methyl-tert-butyl ether	DDD. 1,2,4-Trimethylbenzene	VVV. 4-Ethyltoluene
C. Vinyl choride**	U. 1,1,2-Trichloroethane	MM. 1,2-Dibromo-3-chloropropane	EEE. sec-Butylbenzene	WWW. Ethanol
D. Chloroethane	V. Benzene	NN. Methyl ethyl ketone	FFF. 1,3-Dichlorobenzene	XXX. Di-isopropyl ether
E. Methylene chloride	W. trans-1,3-Dichloropropene	OO. 2,2-Dichloropropane	GGG. p-Isopropyltoluene	YYY. tert-Butanol
F. Acetone	X. Bromoform*	PP. Bromochloromethane	HHH. 1,4-Dichlorobenzene	ZZZ. tert-Butyl alcohol
G. Carbon disulfide	Y. 4-Methyl-2-pentanone	QQ. 1,1-Dichloropropene	III. n-Butylbenzene	AAAA. Ethyl tert-butyl ether
H. 1,1-Dichloroethene**	Z. 2-Hexanone	RR. Dibromomethane	JJJ. 1,2-Dichlorobenzene	BBBB. tert-Amyl methyl ether
I. 1,1-Dichloroethane*	AA. Tetrachloroethene	SS. 1,3-Dichloropropane	KKK. 1,2,4-Trichlorobenzene	CCCC.1-Chlorohexane
J. 1,2-Dichloroethene, total	BB. 1,1,2,2-Tetrachloroethane*	TT. 1,2-Dibromoethane	LLL. Hexachlorobutadiene	DDDD. Isopropyl alcohol
K. Chloroform**	CC. Toluene**	UU. 1,1,1,2-Tetrachloroethane	MMM. Naphthalene	EEEE. Acetonitrile
L. 1,2-Dichloroethane	DD. Chlorobenzene*	VV. Isopropylbenzene	NNN. 1,2,3-Trichlorobenzene	FFFF. Acrolein
M. 2-Butanone	EE. Ethylbenzene**	WW. Bromobenzene	OOO. 1,3,5-Trichlorobenzene	GGGG. Acrylonitrile
N. 1,1,1-Trichloroethane	FF. Styrene	XX. 1,2,3-Trichloropropane	PPP. trans-1,2-Dichloroethene	HHHH. 1,4-Dioxane
O. Carbon tetrachloride	GG. Xylenes, total	YY. n-Propylbenzene	QQQ. cis-1,2-Dichloroethene	IIII. Isobutyl alcohol
P. Bromodichloromethane	HH. Vinyl acetate	ZZ. 2-Chlorotoluene	RRR. m,p-Xylenes	JJJJ. Methacrylonitrile
Q. 1,2-Dichloropropane**	II. 2-Chloroethylvinyl ether	AAA. 1,3,5-Trimethylbenzene	SSS. o-Xylene	KKKK. Propionitrile
R. cis-1,3-Dichloropropene	JJ. Dichlorodifluoromethane	BBB. 4-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	LLLL.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 12023A1
SDG #: 440394

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

RRF = $(A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs
X = Mean of the RRFs

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported RRF (10 std)	Recalculated RRF (10 std)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported %RSD	Recalculated %RSD
1	10AL	3/4 23/5/04	Methylene chloride (1st internal standard)	0.38752	0.38752	0.38369	0.38369	3.87783	3.8778
			~~Trichlorethene~~ (2nd internal standard)	0.30288	0.30288	0.29436	0.29436	2.78283	2.7826
			Toluene (3rd internal standard)						
2			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
3			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						
4			Methylene chloride (1st internal standard)						
			Trichlorethene (2nd internal standard)						
			Toluene (3rd internal standard)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 12023A1
SDG #: p404394

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: 2

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	3V1384	4/19/04	Methylene chloride (1st internal standard)	0.38369	0.42660	0.42660	11.2	11.2
			~~Trichlorethene~~ O (2nd internal standard)	0.29436	0.29896	0.29896	1.6	1.6
			Toluene (3rd internal standard)					
2			Methylene chloride (1st internal standard)					
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
3			Methylene chloride (1st internal standard)					
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
4			Methylene chloride (1st internal standard)					
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8	6	6.27497	104	104	0
Bromofluorobenzene	↓	6.23926	104	104	↓
1,2-Dichloroethane-d4	↓	5.73124	96	96	↓
Dibromofluoromethane	↓	6.44824	108	108	↓

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Toluene-d8					
Bromofluorobenzene					
1,2-Dichloroethane-d4					
Dibromofluoromethane					

LDC #: B023A1
SDG #: 404394

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample Results Verification

Reviewer: 9
2nd Reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratoy control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA Where: SSC = Spiked sample concentration; SA = Spike added

RPD = I LCS - LCSD I * 2/(LCS + LCSD) LCS = Laboraotry control sample percent recovery LCSD = Laboratory control sample duplicate percent recovery

LCS ID: 4040438 - BS1/BSD1

Compound	Spike Added (µg/L)		Spiked Sample Concentration (µg/L)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
~~1,1-Dichloroethene~~ 0	5	5	5.21	5.12	104	104	102	102	2	2
Trichloroethene K	1	1	5.87	5.45	117	117	109	109	*7	7
Benzene										
Toluene										
~~Chlorobenzene~~										

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 12023A1
SDG #: P4043 94

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: 9
2nd reviewer: V

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

(Y) N N/A Were all reported results recalculated and verified for all level IV samples?

(Y) N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
RRF	=	Relative response factor of the calibration standard.
V_o	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).
Df	=	Dilution factor.
%S	=	Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. 1 , 0 :

Conc. = $\frac{(8363)(5)(1)}{(31459)(0.2943)(\quad)(\quad)}$

= 4.46 ug/L

#	Sample ID	Compound	Reported Concentration ( )	Calculated Concentration ( )	Qualification

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

MACTEC
5341 Old Redwood Highway, Suite 300
Petaluma, CA 94954
ATTN: Ms. Debbie Leibensberger

July 26, 2004

SUBJECT: Fort Ord OU CTP Pilot Study, Data Validation

Dear Ms. Leibensberger

Enclosed is the final validation report for the fraction listed below. This SDG was received on July 15, 2004. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 12206:

SDG #	Fraction
P404612	Bromide

The data validation was performed under EPA Level III guidelines. The analyses were validated using the following documents, as applicable to each method:

- USACE Environmental Data Quality Management Program Specifications, USACE District, Version 1.08
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, February 1994

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng

Pei Geng
Project Manager/Senior Chemist

Attachment 1

LDC #12206 (MACTEC-Petaluma, CA / Fort Ord OU CTP Pilot Study)

Job# 408703007-010204

LDC	SDG#	DATE REC'D	DATE DUE	Br (300.0)																															
Matrix: Water/Soil				W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	P404612	7-15-04	7-29-04	2	0																														
Total	LS			2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS/MSD, and DUPs

Fort Ord OU CTP Pilot Study
Data Validation Reports
LDC# 12206

Bromide

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Fort Ord OU CT Bio Pilot Study

Collection Date: April 24, 2004

LDC Report Date: July 21, 2004

Matrix: Water

Parameters: Bromide

Validation Level: EPA Level III

Laboratory: Sequoia Analytical

Sample Delivery Group (SDG): P404612

Sample Identification

0416GCTP002F
0416GCTP003F
0416GCTP003FMS
0416GCTP003FMSD

Introduction

This data review covers 4 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 300.0 for Bromide.

The review follows a the USACE Environmental Data Quality Management Program Specifications, USACE Sacramento District (Version 1.08) and a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the methods stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

J+ Data are qualified as estimated, with a high bias likely to occur. False positives or false negatives are unlikely to have been reported.

J- Data are qualified as estimated, with a low bias likely to occur. False positives or false negatives are unlikely to have been reported.

J Data are qualified as estimated; it is not possible to assess the direction of the potential bias. False positives or false negatives are unlikely to have been reported.

R Data are qualified as rejected. There is a significant potential for the reporting of false negatives or false positives.

U Data are qualified as non-detected, because the analyte was observed in an associated laboratory or field blank.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration of each method were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met for each method.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the method blanks.

IV. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Duplicates

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

VI. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

VII. Sample Result Verification

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags are summarized at the end of this report.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

Fort Ord OU CT Bio Pilot Study
Bromide - Data Qualification Summary - SDG P404612

No Sample Data Qualified in this SDG

Fort Ord OU CT Bio Pilot Study
Bromide - Laboratory Blank Data Qualification Summary - SDG P404612

No Sample Data Qualified in this SDG

LDC #: 12206A6

SDG #: P404612

Laboratory: Sequoia Analytical

VALIDATION COMPLETENESS WORKSHEET

Level III

Date: 7/20/04

Page: 1 of 1

Reviewer: MH

2nd Reviewer:

METHOD: (Analyte) Bromide (EPA Method 300.0)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 4/21-4
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
III.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	A	MS/MSD
V	Duplicates	N	
VI.	Laboratory control samples	A	LCS
VII.	Sample result verification	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	N	
X	Field blanks	N	

Note: A = Acceptable
N = Not provided/applicable
SW = See worksheet
ND = No compounds detected
R = Rinsate
FB = Field blank
D = Duplicate
TB = Trip blank
EB = Equipment blank

Validated Samples: 02

1	0416GCTP002F	11		21		31	
2	0416GCTP003F	12		22		32	
3	0416GCTP003FMS	13		23		33	
4	0416GCTP003FMSD	14		24		34	
5	MB	15		25		35	
6		16		26		36	
7		17		27		37	
8		18		28		38	
9		19		29		39	
10		20		30		40	

Notes:

Sequoia Analytical

1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project: Fort Ord - OU CTP Pilot Study-1	P404612
5341 Old Redwood Highway, Suite 300	Project Number: 4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager: Mike Taraszki	05/13/04 13:57

Anions by EPA Method 300.0

Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0416GCTP002F (P404612-01) Water	**Sampled: 04/24/04 14:45 Received: 04/28/04 08:50**								
Bromide	**9.5**	1.0	mg/l	1	4050086	05/04/04	05/04/04	EPA 300.0	
0416GCTP003F (P404612-02) Water	**Sampled: 04/24/04 15:25 Received: 04/28/04 08:50**								
Bromide	**10**	1.0	mg/l	1	4050086	05/04/04	05/04/04	EPA 300.0	

7/02/04

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

MACTEC
5341 Old Redwood Highway, Suite 300
Petaluma, CA 94954
ATTN: Ms. Debbie Leibensberger

August 4, 2004

SUBJECT: Fort Ord OU CT Bio Study 2004, Data Validation

Dear Ms. Leibensberger

Enclosed is the final validation report for the fraction listed below. This SDG was received on August 2, 2004. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 12287:

SDG #	Fraction
P406097	Volatiles

The data validation was performed under EPA Level III guidelines. The analyses were validated using the following documents, as applicable to each method:

- USACE Environmental Data Quality Management Program Specifications, USACE District, Version 1.08
- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng

Pei Geng
Project Manager/Senior Chemist

Attachment 1

RTC **LDC #12287 (MACTEC-Petaluma, CA / Fort Ord OU CT Bio Study 2004)** Project#: 4087030006 01030?

LDC	SDG#	DATE REC'D	DATE DUE	VOA (8260B)																																	
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	P406097	08/02/04	08/16/04	36	0																																
Total	B			36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS/MSD, and DUPs

12287ST.wpd

Fort Ord OU-C Bio Pilot Study
Data Validation Reports
LDC# 12287

Volatiles

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Fort Ord OU-C Bio Pilot Study

Collection Date: June 2, 2004

LDC Report Date: August 3, 2004

Matrix: Water

Parameters: Volatiles

Validation Level: EPA Level III

Laboratory: Sequoia Analytical

Sample Delivery Group (SDG): P406097

Sample Identification

0422KCTP146F	0422KCTP166F
0422KCTP147F	0422KCTP167F
0422KCTP148F	0422KCTP168F
0422KCTP149F	0422KCTP169F
0422KCTP150D	0422KCTP170F
0422KCTP151F	0422KCTP171F
0422KCTP152F	0422KCTP172F
0422KCTP153F	0422KCTP173F
0422KCTP154F	0422KCTP173FRE
0422KCTP155F	0422KCTP174F
0422KCTP156F	0422KCTP174FRE
0422KCTP157F	0422KCTP175F
0422KCTP158F	0422KCTP175FRE
0422KCTP159F	0422KCTP176D
0422KCTP160F	0422KCTP177A
0422KCTP161F	0422KCTP177ARE
0422KCTP162F	
0422KCTP163F	
0422KCTP164F	
0422KCTP165F	

Introduction

This data review covers 36 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows the HLA Chemical Data Quality Management Plan (CDQMP), Former Fort Ord Complex, Monterey County, California, July 22, 1997.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

J+ Data are qualified as estimated, with a high bias likely to occur. False positives or false negatives are unlikely to have been reported.

J- Data are qualified as estimated, with a low bias likely to occur. False positives or false negatives are unlikely to have been reported.

J Data are qualified as estimated; it is not possible to assess the direction of the potential bias. False positives or false negatives are unlikely to have been reported.

R Data are qualified as rejected. There is a significant potential for the reporting of false negatives or false positives.

U Data are qualified as non-detected, because the analyte was observed in an associated laboratory or field blank.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check was not reviewed for Level III.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for selected compounds.

A curve fit, based on the initial calibration, was established for quantitation for selected compounds. The coefficient of determination (r^2) was greater than or equal to 0.990 .

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% .

Initial calibration verification (ICV) percent differences (%D) were within the QC limits for all compounds.

All of the continuing calibration RRF values were within method and validation criteria.

The continuing calibration RRF values of the initial calibration verification (ICV) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Samples 0422KCTP177A and 0422KCTP177ARE were identified as trip blanks. No volatile contaminants were found in these blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there was insufficient sample volume for analysis of the matrix spike and matrix spike duplicate.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

Samples 0422KCTP149F and 0422KCTP150D and samples 0422KCTP175F and 0422KCTP176D were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)
	0422KCTP149F	0422KCTP150D	
Carbon tetrachloride	3.7	3.8	3 (≤50)
Chloroform	0.39	0.37	5 (≤50)

Compound	Concentration (ug/L)		RPD (Limits)
	0422KCTP175F	0422KCTP176D	
Carbon tetrachloride	5.7	5.8	2 (≤50)
Chloroform	0.67	0.67	0 (≤50)

Fort Ord OU-C Bio Pilot Study
Volatiles - Data Qualification Summary - SDG P406097

No Sample Data Qualified in this SDG

Fort Ord OU-C Bio Pilot Study
Volatiles - Laboratory Blank Data Qualification Summary - SDG P406097

No Sample Data Qualified in this SDG

Fort Ord OU-C Bio Pilot Study
Volatiles - Field Blank Data Qualification Summary - SDG P406097

No Sample Data Qualified in this SDG

Sequoia Analytical

1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.scquoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP146F (P406097-01) Water	**Sampled: 06/02/04 07:53 Received: 06/03/04 14:00**									
Carbon tetrachloride	ND	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*118 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	
0422KCTP147F (P406097-02) Water	**Sampled: 06/02/04 07:58 Received: 06/03/04 14:00**									
Carbon tetrachloride	ND	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*115 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*118 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*65-135*			"	"	"	"	
0422KCTP148F (P406097-03) Water	**Sampled: 06/02/04 08:08 Received: 06/03/04 14:00**									
Carbon tetrachloride	**4.3**	0.25	0.50	ug/l	1	4060164	06/07/04	06/08/04	EPA 8260B	
Chloroform	**0.40**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*114 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*115 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	

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Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP149F (P406097-04) Water	**Sampled: 06/02/04 08:11 Received: 06/03/04 14:00**									
Carbon tetrachloride	**3.7**	0.25	0.50	ug/l	1	4060164	06/07/04	06/08/04	EPA 8260B	
Chloroform	**0.39**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*115 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*65-135*			"	"	"	"	
0422KCTP150D (P406097-05) Water	**Sampled: 06/02/04 08:11 Received: 06/03/04 14:00**									
Carbon tetrachloride	**3.8**	0.25	0.50	ug/l	1	4060164	06/07/04	06/08/04	EPA 8260B	
Chloroform	**0.37**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*114 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*65-135*			"	"	"	"	
0422KCTP151F (P406097-06) Water	**Sampled: 06/02/04 08:15 Received: 06/03/04 14:00**									
Carbon tetrachloride	**2.0**	0.25	0.50	ug/l	1	4060164	06/07/04	06/08/04	EPA 8260B	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*110 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*65-135*			"	"	"	"	

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Petaluma, CA 94954
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MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP152F (P406097-07) Water	**Sampled: 06/02/04 08:44 Received: 06/03/04 14:00**									
Carbon tetrachloride	**5.3**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.88**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	
0422KCTP153F (P406097-08) Water	**Sampled: 06/02/04 08:47 Received: 06/03/04 14:00**									
Carbon tetrachloride	ND	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.3**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*65-135*			"	"	"	"	
0422KCTP154F (P406097-09) Water	**Sampled: 06/02/04 08:50 Received: 06/03/04 14:00**									
Carbon tetrachloride	ND	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.2**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*114 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	

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Petaluma, CA 94954
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MACTEC E&C - Petaluma 5341 Old Redwood Highway, Suite 300 Petaluma CA, 94954	Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki	P406097 **Reported:** 06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP155F (P406097-10) Water	**Sampled: 06/02/04 09:03 Received: 06/03/04 14:00**									
Carbon tetrachloride	**8.2**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	
0422KCTP156F (P406097-11) Water	**Sampled: 06/02/04 09:06 Received: 06/03/04 14:00**									
Carbon tetrachloride	**8.6**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	
0422KCTP157F (P406097-12) Water	**Sampled: 06/02/04 09:09 Received: 06/03/04 14:00**									
Carbon tetrachloride	**8.6**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	

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Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
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MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP158F (P406097-13) Water	**Sampled: 06/02/04 09:18 Received: 06/03/04 14:00**									
Carbon tetrachloride	**8.1**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.78**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	
0422KCTP159F (P406097-14) Water	**Sampled: 06/02/04 09:21 Received: 06/03/04 14:00**									
Carbon tetrachloride	**8.2**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.82**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*113 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*65-135*			"	"	"	"	
0422KCTP160F (P406097-15) Water	**Sampled: 06/02/04 09:24 Received: 06/03/04 14:00**									
Carbon tetrachloride	**7.9**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.81**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*111 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	

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MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP161F (P406097-16) Water	**Sampled: 06/02/04 09:34 Received: 06/03/04 14:00**									
Carbon tetrachloride	**7.1**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.92**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	
0422KCTP162F (P406097-17) Water	**Sampled: 06/02/04 09:37 Received: 06/03/04 14:00**									
Carbon tetrachloride	**7.2**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.92**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	
0422KCTP163F (P406097-18) Water	**Sampled: 06/02/04 09:40 Received: 06/03/04 14:00**									
Carbon tetrachloride	**6.1**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.74**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	

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5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP164F (P406097-19) Water	**Sampled: 06/02/04 09:48 Received: 06/03/04 14:00**									
Carbon tetrachloride	**7.5**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*65-135*			"	"	"	"	
0422KCTP165F (P406097-20) Water	**Sampled: 06/02/04 09:51 Received: 06/03/04 14:00**									
Carbon tetrachloride	**7.9**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*113 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*65-135*			"	"	"	"	
0422KCTP166F (P406097-21) Water	**Sampled: 06/02/04 09:54 Received: 06/03/04 14:00**									
Carbon tetrachloride	**7.9**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	

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Petaluma, CA 94954
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5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP167F (P406097-22) Water	**Sampled: 06/02/04 10:04 Received: 06/03/04 14:00**									
Carbon tetrachloride	**9.4**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*113 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*65-135*			"	"	"	"	
0422KCTP168F (P406097-23) Water	**Sampled: 06/02/04 10:08 Received: 06/03/04 14:00**									
Carbon tetrachloride	**9.1**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.2**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	
0422KCTP169F (P406097-24) Water	**Sampled: 06/02/04 10:12 Received: 06/03/04 14:00**									
Carbon tetrachloride	**8.3**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.0**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	

Sequoia Analytical

1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.scquoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP170F (P406097-25) Water	**Sampled: 06/02/04 10:24 Received: 06/03/04 14:00**									
Carbon tetrachloride	**11**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.2**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*111 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	
0422KCTP171F (P406097-26) Water	**Sampled: 06/02/04 10:27 Received: 06/03/04 14:00**									
Carbon tetrachloride	**11**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.3**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*111 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	
0422KCTP172F (P406097-27) Water	**Sampled: 06/02/04 10:30 Received: 06/03/04 14:00**									
Carbon tetrachloride	**11**	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	**1.2**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	

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MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP173F (P406097-28) Water	**Sampled: 06/02/04 10:38**	**Received: 06/03/04 14:00**								
Carbon tetrachloride	**3.2**	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	**0.25**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	
0422KCTP173F (P406097-28RE1) Water	**Sampled: 06/02/04 10:38**	**Received: 06/03/04 14:00**								
Carbon disulfide	ND	1.4	10	ug/l	1	4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		*97 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*113 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*95 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*	*65-135*			"	"	"	"	
0422KCTP174F (P406097-29) Water	**Sampled: 06/02/04 10:41**	**Received: 06/03/04 14:00**								
Carbon tetrachloride	**5.7**	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	**0.54**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*113 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-I	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP174F (P406097-29RE1) Water Sampled: 06/02/04 10:41 Received: 06/03/04 14:00										
Carbon disulfide	ND	1.4	10	ug/l	1	4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		*103 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*122 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*93 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*65-135*			"	"	"	"	
0422KCTP175F (P406097-30) Water Sampled: 06/02/04 10:44 Received: 06/03/04 14:00										
Carbon tetrachloride	**5.7**	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	**0.67**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*115 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*65-135*			"	"	"	"	
0422KCTP175F (P406097-30RE1) Water Sampled: 06/02/04 10:44 Received: 06/03/04 14:00										
Carbon disulfide	ND	1.4	10	ug/l	1	4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		*103 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*122 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*93 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*65-135*			"	"	"	"	
0422KCTP176D (P406097-31) Water Sampled: 06/02/04 10:44 Received: 06/03/04 14:00										
Carbon tetrachloride	**5.8**	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	**0.67**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*111 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	

Sequoia Analytical

1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP177A (P406097-32) Water Sampled: 06/02/04 11:00 Received: 06/03/04 14:00										
Carbon tetrachloride	ND	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	
0422KCTP177A (P406097-32RE1) Water Sampled: 06/02/04 11:00 Received: 06/03/04 14:00										
Carbon disulfide	ND	1.4	10	ug/l	1	4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		*102 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*119 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*95 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*65-135*			"	"	"	"	

LDC #: 12287A1 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/3/04
SDG #: P406097 Level III Page: 1 of 1
Laboratory: Sequoia Analytical Reviewer: JC
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/2/04
II.	GC/MS Instrument performance check	N	Not req'd by level III
III.	Initial calibration	A	%RSD ≤ 20
IV.	Continuing calibration / ICV	A	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	insufficient sample
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	Not req'd by level III
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 4+5, 32+34, ~~33+34~~
XVII.	Field blanks	ND	TB = 35, 36

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: All HSO's

1 3	0422KCTP146F	11 2	0422KCTP156F	21 2	0422KCTP166F	31 4	0422KCTP174FRE
2 3	0422KCTP147F	12 2	0422KCTP157F	22 2	0422KCTP167F	32 3	0422KCTP175F
3 1	0422KCTP148F	13 2	0422KCTP158F	23 2	0422KCTP168F	33 4	0422KCTP175FRE
4 1	0422KCTP149F	14 2	0422KCTP159F	24 2	0422KCTP169F	34 3	0422KCTP176D
5 1	0422KCTP150D	15 2	0422KCTP160F	25 2	0422KCTP170F	35 3	0422KCTP177A
6 1	0422KCTP151F	16 2	0422KCTP161F	26 2	0422KCTP171F	36 4	0422KCTP177ARE
7 2	0422KCTP152F	17 2	0422KCTP162F	27 3	0422KCTP172F	37 1	4060164BLK
8 2	0422KCTP153F	18 2	0422KCTP163F	28 3	0422KCTP173F	38 2	4060225BLK
9 2	0422KCTP154F	19 2	0422KCTP164F	29 4	0422KCTP173FRE	39 3	4060285BLK
10 2	0422KCTP155F	20 2	0422KCTP165F	30 3	0422KCTP174F	40 4	4060347BLK

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL.
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM.
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 12257A1
SDG #: P406097

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: SK
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

(Y) N N/A Were field duplicate pairs identified in this SDG?
(Y) N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (ug/L)		RPD ≤50
	4	5	
O	3.7	3.8	3
K	0.39	0.37	5

Compound	Concentration (ug/L)		RPD ≤50
	32	34	
O	5.7	5.8	2
K	0.67	0.67	0

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

MACTEC
5341 Old Redwood Highway, Suite 300
Petaluma, CA 94954
ATTN: Ms. Debbie Leibensberger

September 7, 2004

SUBJECT: Fort Ord OU CT Bio Study 2004, Data Validation

Dear Ms. Leibensberger

Enclosed are the final validation reports for the fractions listed below. This SDG was received on August 20, 2004. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 12384:

SDG #	Fraction
P407297	Volatiles, Iron, Wet Chemistry, Methane-Ethane-Ethene, Carbon Dioxide

The data validation was performed under EPA Level III guidelines. The analyses were validated using the following documents, as applicable to each method:

- USACE Environmental Data Quality Management Program Specifications, USACE District, Version 1.08
- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999
- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, February 1994

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
Project Manager/Senior Chemist

Attachment 1

RTC Level IIIz

LDC #12384 (MACTEC-Petaluma, CA / Fort Ord OU CT Bio Study 2004)

Project#: 4087030006 010301

LDC	SDG#	DATE REC'D	DATE DUE	VOA (8260B)		Fe (6010B)		Methane Ethane Ethene		CO_2 (175)		Br (300.0)		SO_4 (300.0)		NO_3-N NO_2-N (300.0)		TOC (415.1)		Fe II (HATCH)		Fe III (3500)															
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	P407297	08/20/04	09/03/04	35	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0														
Total	B			35	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS/MSD, and DUPs

Fort Ord OU CT Bio Study
Data Validation Reports
LDC# 12384

Volatiles

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Fort Ord OU CT Bio Study 2004

Collection Date: July 14, 2004

LDC Report Date: August 24, 2004

Matrix: Water

Parameters: Volatiles

Validation Level: EPA Level III

Laboratory: Sequoia Analytical

Sample Delivery Group (SDG): P407297

Sample Identification

0428KCTP193F	0428KCTP211F
0428KCTP194F	0428KCTP212F
0428KCTP195F	0428KCTP213F
0428KCTP196F	0428KCTP214F
0428KCTP197F	0428KCTP215F
0428KCTP198F	0428KCTP216F
0428KCTP199F	0428KCTP217F
0428KCTP199D	0428KCTP218F
0428KCTP200F	0428KCTP219F
0428KCTP201F	0428KCTP220F
0428KCTP202F	0428KCTP221F
0428KCTP203F	0428KCTP222F
0428KCTP204F	0428KCTP223F
0428KCTP205F	0428KCTP224F
0428KCTP206F	0428KCTP225A
0428KCTP207F	
0428KCTP208F	
0428KCTP208D	
0428KCTP209F	
0428KCTP210F	

Introduction

This data review covers 35 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows the HLA Chemical Data Quality Management Plan (CDQMP), Former Fort Ord Complex, Monterey County, California, July 22, 1997.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

J+ Data are qualified as estimated, with a high bias likely to occur. False positives or false negatives are unlikely to have been reported.

J- Data are qualified as estimated, with a low bias likely to occur. False positives or false negatives are unlikely to have been reported.

J Data are qualified as estimated; it is not possible to assess the direction of the potential bias. False positives or false negatives are unlikely to have been reported.

R Data are qualified as rejected. There is a significant potential for the reporting of false negatives or false positives.

U Data are qualified as non-detected, because the analyte was observed in an associated laboratory or field blank.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check was not reviewed for Level III.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all compounds.

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% .

Initial calibration verification (ICV) percent differences (%D) were within the QC limits for all compounds.

All of the continuing calibration RRF values were within method and validation criteria.

The continuing calibration RRF values of the initial calibration verification (ICV) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
4070471BLK	7/24/04	Acetone	5.36 ug/L	0428KCTP193F 0428KCTP194F 0428KCTP195F 0428KCTP196F 0428KCTP197F 0428KCTP198F 0428KCTP199F 0428KCTP199D 0428KCTP200F 0428KCTP201F 0428KCTP202F 0428KCTP203F 0428KCTP204F 0428KCTP205F 0428KCTP206F 0428KCTP207F 0428KCTP208F

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
0428KCTP203F	Acetone	51 ug/L	51U ug/L

Sample 0428KCTP225A was identified as a trip blank. No volatile contaminants were found in this blank.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there was insufficient sample volume for analysis of the matrix spike and matrix spike duplicate.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
0428KCTP193F 0428KCTP195F 0428KCTP199F 0428KCTP199D 0428KCTP202F 0428KCTP205F 0428KCTP208F 0428KCTP209F 0428KCTP212F 0428KCTP213F 0428KCTP214F 0428KCTP219F 0428KCTP220F 0428KCTP223F	Acetone	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects)	P

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

Samples 0428KCTP199F and 0428KCTP199D and samples 0428KCTP208F and 0428KCTP208D were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)
	0428KCTP199F	0428KCTP199D	
Acetone	110	120	9 (≤50)

Compound	Concentration (ug/L)		RPD (Limits)
	0428KCTP208F	0428KCTP208D	
Acetone	140	89	44 (≤50)
Carbon tetrachloride	9.5	6.2	42 (≤50)
Chloroform	1.7	1.2	34 (≤50)

Fort Ord OU CT Bio Study 2004
Volatiles - Data Qualification Summary - SDG P407297

SDG	Sample	Analyte	Flag	A or P	Reason
P407297	0428KCTP193F 0428KCTP195F 0428KCTP199F 0428KCTP199D 0428KCTP202F 0428KCTP205F 0428KCTP208F 0428KCTP209F 0428KCTP212F 0428KCTP213F 0428KCTP214F 0428KCTP219F 0428KCTP220F 0428KCTP223F	Acetone	J (all detects)	P	Compound quantitation and CRQLs

Fort Ord OU CT Bio Study 2004
Volatiles - Laboratory Blank Data Qualification Summary - SDG P407297

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
P407297	0428KCTP203F	Acetone	51U ug/L	A

Fort Ord OU CT Bio Study 2004
Volatiles - Field Blank Data Qualification Summary - SDG P407297

No Sample Data Qualified in this SDG

Sequoia Analytical

1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P407297
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	07/30/04 10:39

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP193F (P407297-01) Water	**Sampled: 07/13/04 08:00**		**Received: 07/15/04 08:55**							
Acetone	**110** J	1.9	10	ug/l	1	4070471	07/24/04	07/24/04	EPA 8260B	E
Carbon tetrachloride	ND	0.25	0.50	"	"	"	"	"	"	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*96 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*91 %*	*65-135*			"	"	"	"	
0428KCTP194F (P407297-02) Water	**Sampled: 07/13/04 08:04**		**Received: 07/15/04 08:55**							
Acetone	**96**	1.9	10	ug/l	1	4070471	07/24/04	07/24/04	EPA 8260B	
Carbon tetrachloride	ND	0.25	0.50	"	"	"	"	"	"	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	Acceptable
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*96 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*94 %*	*65-135*			"	"	"	"	
0428KCTP195F (P407297-03) Water	**Sampled: 07/13/04 08:13**		**Received: 07/15/04 08:55**							
Acetone	**150** J	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	E
Carbon tetrachloride	**4.5**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**0.40**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*104 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*109 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*94 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*92 %*	*65-135*			"	"	"	"	

SW 8260B

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma 5341 Old Redwood Highway, Suite 300 Petaluma CA, 94954	Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki	P407297 **Reported:** 07/30/04 10:39

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP196F (P407297-04) Water	**Sampled: 07/13/04 08:15 Received: 07/15/04 08:55**									
Acetone	**77**	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	**4.2**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**0.42**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*116 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*91 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*92 %*	*65-135*			"	"	"	"	
0428KCTP197F (P407297-05) Water	**Sampled: 07/13/04 08:17 Received: 07/15/04 08:55**									
Acetone	**68**	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	**2.0**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**0.25**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*92 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93 %*	*65-135*			"	"	"	"	
0428KCTP198F (P407297-06) Water	**Sampled: 07/13/04 08:28 Received: 07/15/04 08:55**									
Acetone	**97**	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	**4.8**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**0.87**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*95 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*87 %*	*65-135*			"	"	"	"	

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8260B

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P407297
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	07/30/04 10:39

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP199F (P407297-07) Water	**Sampled: 07/13/04 08:30 Received: 07/15/04 08:55**									
Acetone	**110** J	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	E
Carbon tetrachloride	ND	0.25	0.50	"	"	"	"	"	"	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*118 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*94 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*90 %*	*65-135*			"	"	"	"	
0428KCTP199D (P407297-08) Water	**Sampled: 07/13/04 08:33 Received: 07/15/04 08:55**									
Acetone	**120** J	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	E
Carbon tetrachloride	ND	0.25	0.50	"	"	"	"	"	"	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*116 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*96 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89 %*	*65-135*			"	"	"	"	
0428KCTP200F (P407297-09) Water	**Sampled: 07/13/04 08:36 Received: 07/15/04 08:55**									
Acetone	**68**	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	ND	0.25	0.50	"	"	"	"	"	"	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	Acceptable
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*115 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*96 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89 %*	*65-135*			"	"	"	"	

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P407297
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	07/30/04 10:39

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP201F (P407297-10) Water	**Sampled: 07/13/04 08:50**		**Received: 07/15/04 08:55**							
Acetone	**82**	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	**11**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.3**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*123 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*93 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89 %*	*65-135*			"	"	"	"	
0428KCTP202F (P407297-11) Water	**Sampled: 07/13/04 08:53**		**Received: 07/15/04 08:55**							
Acetone	**190** J	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	E
Carbon tetrachloride	**10**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.4**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*116 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*124 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*96 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*90 %*	*65-135*			"	"	"	"	
0428KCTP203F (P407297-12) Water	**Sampled: 07/13/04 08:56**		**Received: 07/15/04 08:55**							
Acetone	**51** U	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	**11**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.4**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*115 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*122 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*97 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88 %*	*65-135*			"	"	"	"	

Acceptable

Acceptable

8/30/04

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma 5341 Old Redwood Highway, Suite 300 Petaluma CA, 94954	Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki	P407297 **Reported:** 07/30/04 10:39

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP204F (P407297-13) Water	**Sampled: 07/13/04 09:08**		**Received: 07/15/04 08:55**							
Acetone	**83**	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	**9.2**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.6**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*116 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*122 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*98 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89 %*	*65-135*			"	"	"	"	
0428KCTP205F (P407297-14) Water	**Sampled: 07/13/04 09:11**		**Received: 07/15/04 08:55**							
Acetone	**120**	J 1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	E
Carbon tetrachloride	**10**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.9**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*118 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*128 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*95 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*91 %*	*65-135*			"	"	"	"	
0428KCTP206F (P407297-15) Water	**Sampled: 07/13/04 09:14**		**Received: 07/15/04 08:55**							
Acetone	**99**	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	**0.91**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**3.6**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*120 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*129 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*91 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89 %*	*65-135*			"	"	"	"	

Acceptable

Acceptable

SR 8260/

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P407297
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	07/30/04 10:39

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP207F (P407297-16) Water	**Sampled: 07/13/04 09:25**		**Received: 07/15/04 08:55**							
Acetone	**90**	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	**8.8**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.6**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	Acceptable
Surrogate: Dibromofluoromethane		*120 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*132 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*95 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*87 %*	*65-135*			"	"	"	"	
0428KCTP208F (P407297-17) Water	**Sampled: 07/13/04 09:28**		**Received: 07/15/04 08:55**							
Acetone	**140** J	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	E
Carbon tetrachloride	**9.5**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.7**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*122 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*134 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*97 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88 %*	*65-135*			"	"	"	"	
0428KCTP208D (P407297-18) Water	**Sampled: 07/13/04 09:28**		**Received: 07/15/04 08:55**							
Acetone	**89**	1.9	10	ug/l	1	4070539	07/27/04	07/27/04	EPA 8260B	
Carbon tetrachloride	**6.2**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.2**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	Acceptable
Surrogate: Dibromofluoromethane		*100 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*105 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*65-135*			"	"	"	"	

SC 82604

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
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MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P407297
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	07/30/04 10:39

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP209F (P407297-19) Water	**Sampled: 07/13/04 09:31 Received: 07/15/04 08:55**									
Acetone	**210** J	1.9	10	ug/l	1	4070539	07/27/04	07/27/04	EPA 8260B	E
Carbon tetrachloride	**0.27**	0.25	0.50	"	"	"	"	"	"	J
Chloroform	**1.0**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*100 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*	*65-135*			"	"	"	"	
0428KCTP210F (P407297-20) Water	**Sampled: 07/13/04 09:55 Received: 07/15/04 08:55**									
Acetone	**53**	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	
Carbon tetrachloride	**7.2**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**0.95**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	Acceptable
Surrogate: Dibromofluoromethane		*98 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*104 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*65-135*			"	"	"	"	
0428KCTP211F (P407297-21) Water	**Sampled: 07/13/04 09:58 Received: 07/15/04 08:55**									
Acetone	**93**	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	
Carbon tetrachloride	**7.8**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.0**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	Acceptable
Surrogate: Dibromofluoromethane		*101 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*105 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*	*65-135*			"	"	"	"	

SW 8260A

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P407297
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	07/30/04 10:39

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP212F (P407297-22) Water	**Sampled: 07/13/04 10:00**	**Received: 07/15/04 08:55**								
Acetone	**130** J	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	E
Carbon tetrachloride	**8.0**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*99 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*65-135*			"	"	"	"	
0428KCTP213F (P407297-23) Water	**Sampled: 07/13/04 10:15**	**Received: 07/15/04 08:55**								
Acetone	**130** J	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	E
Carbon tetrachloride	**8.3**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.0**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*99 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*104 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*	*65-135*			"	"	"	"	
0428KCTP214F (P407297-24) Water	**Sampled: 07/13/04 10:18**	**Received: 07/15/04 08:55**								
Acetone	**110** J	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	E
Carbon tetrachloride	**8.1**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.0**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*100 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*104 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*	*65-135*			"	"	"	"	

* 8260C

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
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MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P407297
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	07/30/04 10:39

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP215F (P407297-25) Water	**Sampled: 07/13/04 10:21**		**Received: 07/15/04 08:55**							
Acetone	**66**	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	
Carbon tetrachloride	**7.7**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**0.93**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*100 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*104 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*	*65-135*			"	"	"	"	
0428KCTP216F (P407297-26) Water	**Sampled: 07/13/04 10:26**		**Received: 07/15/04 08:55**							
Acetone	**72**	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	
Carbon tetrachloride	**9.9**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*65-135*			"	"	"	"	
0428KCTP217F (P407297-27) Water	**Sampled: 07/13/04 10:28**		**Received: 07/15/04 08:55**							
Acetone	**54**	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	
Carbon tetrachloride	**9.4**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.2**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*100 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*105 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*	*65-135*			"	"	"	"	

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma 5341 Old Redwood Highway, Suite 300 Petaluma CA, 94954	Project:Fort Ord - OU CTP Pilot Study-I Project Number:4087030007.010204 Project Manager:Mike Taraszki	P407297 **Reported:** 07/30/04 10:39

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP218F (P407297-28) Water	**Sampled: 07/13/04 10:31**		**Received: 07/15/04 08:55**							
Acetone	**63**	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	
Carbon tetrachloride	**9.6**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**1.2**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*65-135*			"	"	"	"	
0428KCTP219F (P407297-29) Water	**Sampled: 07/13/04 10:41**		**Received: 07/15/04 08:55**							
Acetone	**220** J	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	E
Carbon tetrachloride	**2.5**	0.25	0.50	"	"	"	"	"	"	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*105 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*104 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*	*65-135*			"	"	"	"	
0428KCTP220F (P407297-30) Water	**Sampled: 07/13/04 10:44**		**Received: 07/15/04 08:55**							
Acetone	**120** J	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	E
Carbon tetrachloride	**3.7**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**0.28**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*65-135*			"	"	"	"	

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SL 8260

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P407297
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	07/30/04 10:39

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP221F (P407297-31) Water	**Sampled: 07/13/04 10:47**		**Received: 07/15/04 08:55**							
Acetone	**80**	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	
Carbon tetrachloride	**2.9**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**0.36**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	Acceptable
Surrogate: Dibromofluoromethane		*100 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*105 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*104 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*65-135*			"	"	"	"	
0428KCTP222F (P407297-32) Water	**Sampled: 07/13/04 10:58**		**Received: 07/15/04 08:55**							
Acetone	**74**	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	
Carbon tetrachloride	**4.0**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**0.37**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	Acceptable
Surrogate: Dibromofluoromethane		*99 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*107 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*65-135*			"	"	"	"	
0428KCTP223F (P407297-33) Water	**Sampled: 07/13/04 11:03**		**Received: 07/15/04 08:55**							
Acetone	**350** J	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	E
Carbon tetrachloride	**4.8**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**0.48**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*100 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*108 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*104 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*65-135*			"	"	"	"	

sp 8/6/04

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P407297
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	07/30/04 10:39

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP224F (P407297-34) Water	**Sampled: 07/13/04 11:05 Received: 07/15/04 08:55**									
Acetone	**12**	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	
Carbon tetrachloride	**3.4**	0.25	0.50	"	"	"	"	"	"	
Chloroform	**0.37**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*104 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*65-135*			"	"	"	"	
0428KCTP225A (P407297-35) Water	**Sampled: 07/13/04 11:12 Received: 07/15/04 08:55**									
Acetone	ND	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	
Carbon tetrachloride	ND	0.25	0.50	"	"	"	"	"	"	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*100 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*65-135*			"	"	"	"	

Acceptable

8/26/04

LDC #: 12384A1 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/23/04

SDG #: P407297 Level III Page: 1 of 2

Laboratory: Sequoia Analytical Reviewer: JE

2nd Reviewer: CT

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

(F, O, K, A, E)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7/14/04
II.	GC/MS Instrument performance check	N	not reviewed for Level III
III.	Initial calibration	A	
IV.	Continuing calibration	A	
V.	Blanks	SW A~~SW~~	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	insufficient sample
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	not reviewed for Level III
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	SW	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D= 7+8, 17+18
XVII.	Field blanks	ND	TB= 35

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: All #'s

1 1	0428KCTP193F	11 1	0428KCTP202F	21 2	0428KCTP211F	31 2	0428KCTP221F
2 1	0428KCTP194F	12 1	0428KCTP203F	22 2	0428KCTP212F	32 2	0428KCTP222F
3 1	0428KCTP195F	13 1	0428KCTP204F	23 2	0428KCTP213F	33 2	0428KCTP223F
4 1	0428KCTP196F	14 1	0428KCTP205F	24 2	0428KCTP214F	34 2	0428KCTP224F
5 1	0428KCTP197F	15 1	0428KCTP206F	25 2	0428KCTP215F	35 2	0428KCTP225A
6 1	0428KCTP198F	16 1	0428KCTP207F	26 2	0428KCTP216F	36 1	4070471BLK
7 1	0428KCTP199F	17 1	0428KCTP208F	27 2	0428KCTP217F	37 2	4070517BLK
8 1	0428KCTP199D	18 3	0428KCTP208D	28 2	0428KCTP218F	38 3	4070539BLK
9 1	0428KCTP200F	19 3	0428KCTP209F	29 2	0428KCTP219F	39	
10 1	0428KCTP201F	20 2	0428KCTP210F	30 2	0428KCTP220F	40	

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl choride**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL.
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM.
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 12384A1
SDG #: P407297

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer: SK
2nd Reviewer: d

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 7/24/04
Conc. units: ug/L
Associated Samples: 1-17

Compound	Blank ID	Sample Identification								
	4070471BLK	12		1-11, 13-17						
Methylene chloride										
Acetone	5.36	51/U		>10x						
CRQL										

Blank analysis date:
Conc. units:
Associated Samples:

Compound	Blank ID	Sample Identification								
Methylene chloride										
Acetone										
CRQL										

All results were qualified using the criteria stated below except those circled.

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, Carbon disulfide and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 12384A1
SDG #: P407297

VALIDATION FINDINGS WORKSHEET
Compound Quantitation and CRQLs

Reviewer: SK
2nd Reviewer: Q

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?

Y N N/A Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Sample ID	Finding	Associated Samples	Qualifications
		1, 3, 7, 8, 11, 14, 17	F > calib range		Jdet/P
		19, 22-24, 29, 30			
		33			

Comments: See sample calculation verification worksheet for recalculations

LDC #: 12384A1
SDG #: P407297

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: VL
2nd reviewer: [illegible]

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Y N N/A Were field duplicate pairs identified in this SDG?
Y N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (ug/L)		RPD ≤50
	7	8	
Acetone	110	120	9

Compound	Concentration (ug/L)		RPD ≤50
	17	18	
Acetone	140	89	44
O	9.5	6.2	42
K	1.7	1.2	34

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD

Fort Ord OU CT Bio Study
Data Validation Reports
LDC# 12384

Iron

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Fort Ord OU CT Bio Study 2004

Collection Date: July 14, 2004

LDC Report Date: August 24, 2004

Matrix: Water

Parameters: Iron

Validation Level: EPA Level III

Laboratory: Sequoia Analytical

Sample Delivery Group (SDG): P407297

Sample Identification

0428KCTP226F
0428KCTP227F
0428KCTP228F
0428KCTP229F
0428KCTP230F
0428KCTP231F
0428KCTP232F
0428KCTP233F
0428KCTP234F
0428KCTP235F
0428KCTP235D
0428KCTP236F
0428KCTP226FMS
0428KCTP226FMSD

Introduction

This data review covers 14 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 6010B for Iron.

This review follows the HLA Chemical Data Quality Management Plan (CDQMP), Former Fort Ord Complex, Monterey County, California, July 22, 1997.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from specified protocols or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

J+ Data are qualified as estimated, with a high bias likely to occur. False positives or false negatives are unlikely to have been reported.

J- Data are qualified as estimated, with a low bias likely to occur. False positives or false negatives are unlikely to have been reported.

J Data are qualified as estimated; it is not possible to assess the direction of the potential bias. False positives or false negatives are unlikely to have been reported.

R Data are qualified as rejected. There is a significant potential for the reporting of false negatives or false positives.

U Data are qualified as non-detected, because the analyte was observed in an associated laboratory or field blank.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

LABORATORY DATA CONSULTANTS, INC.
7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

MACTEC
5341 Old Redwood Highway, Suite 300
Petaluma, CA 94954
ATTN: Ms. Debbie Leibensberger

August 4, 2004

SUBJECT: Fort Ord OU CT Bio Study 2004, Data Validation

Dear Ms. Leibensberger

Enclosed is the final validation report for the fraction listed below. This SDG was received on August 2, 2004. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 12287:

SDG #	Fraction
P406097	Volatiles

The data validation was performed under EPA Level III guidelines. The analyses were validated using the following documents, as applicable to each method:

- USACE Environmental Data Quality Management Program Specifications, USACE District, Version 1.08
- USEPA, Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng

Pei Geng
Project Manager/Senior Chemist

Attachment 1

RTC

LDC #12287 (MACTEC-Petaluma, CA / Fort Ord OU CT Bio Study 2004)

Project#: 4087030006 01030

LDC	SDG#	DATE REC'D	DATE DUE	VOA (8260B)																															
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	P406097	08/02/04	08/16/04	36	0																														
Total	B			36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS/MSD, and DUPs

Fort Ord OU-C Bio Pilot Study
Data Validation Reports
LDC# 12287

Volatiles

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Fort Ord OU-C Bio Pilot Study

Collection Date: June 2, 2004

LDC Report Date: August 3, 2004

Matrix: Water

Parameters: Volatiles

Validation Level: EPA Level III

Laboratory: Sequoia Analytical

Sample Delivery Group (SDG): P406097

Sample Identification

0422KCTP146F
0422KCTP147F
0422KCTP148F
0422KCTP149F
0422KCTP150D
0422KCTP151F
0422KCTP152F
0422KCTP153F
0422KCTP154F
0422KCTP155F
0422KCTP156F
0422KCTP157F
0422KCTP158F
0422KCTP159F
0422KCTP160F
0422KCTP161F
0422KCTP162F
0422KCTP163F
0422KCTP164F
0422KCTP165F
0422KCTP166F
0422KCTP167F
0422KCTP168F
0422KCTP169F
0422KCTP170F
0422KCTP171F
0422KCTP172F
0422KCTP173F
0422KCTP173FRE
0422KCTP174F
0422KCTP174FRE
0422KCTP175F
0422KCTP175FRE
0422KCTP176D
0422KCTP177A
0422KCTP177ARE

Introduction

This data review covers 36 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

This review follows the HLA Chemical Data Quality Management Plan (CDQMP), Former Fort Ord Complex, Monterey County, California, July 22, 1997.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

J+ Data are qualified as estimated, with a high bias likely to occur. False positives or false negatives are unlikely to have been reported.

J- Data are qualified as estimated, with a low bias likely to occur. False positives or false negatives are unlikely to have been reported.

J Data are qualified as estimated; it is not possible to assess the direction of the potential bias. False positives or false negatives are unlikely to have been reported.

R Data are qualified as rejected. There is a significant potential for the reporting of false negatives or false positives.

U Data are qualified as non-detected, because the analyte was observed in an associated laboratory or field blank.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance check was not reviewed for Level III.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for selected compounds.

A curve fit, based on the initial calibration, was established for quantitation for selected compounds. The coefficient of determination (r^2) was greater than or equal to 0.990 .

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% .

Initial calibration verification (ICV) percent differences (%D) were within the QC limits for all compounds.

All of the continuing calibration RRF values were within method and validation criteria.

The continuing calibration RRF values of the initial calibration verification (ICV) were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

Samples 0422KCTP177A and 0422KCTP177ARE were identified as trip blanks. No volatile contaminants were found in these blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there was insufficient sample volume for analysis of the matrix spike and matrix spike duplicate.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

Internal standards were not reviewed for Level III.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

Samples 0422KCTP149F and 0422KCTP150D and samples 0422KCTP175F and 0422KCTP176D were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)
	0422KCTP149F	0422KCTP150D	
Carbon tetrachloride	3.7	3.8	3 (≤50)
Chloroform	0.39	0.37	5 (≤50)

Compound	Concentration (ug/L)		RPD (Limits)
	0422KCTP175F	0422KCTP176D	
Carbon tetrachloride	5.7	5.8	2 (≤50)
Chloroform	0.67	0.67	0 (≤50)

Fort Ord OU-C Bio Pilot Study
Volatiles - Data Qualification Summary - SDG P406097

No Sample Data Qualified in this SDG

Fort Ord OU-C Bio Pilot Study
Volatiles - Laboratory Blank Data Qualification Summary - SDG P406097

No Sample Data Qualified in this SDG

Fort Ord OU-C Bio Pilot Study
Volatiles - Field Blank Data Qualification Summary - SDG P406097

No Sample Data Qualified in this SDG

Sequoia Analytical

1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP146F (P406097-01) Water	**Sampled: 06/02/04 07:53 Received: 06/03/04 14:00**									
Carbon tetrachloride	ND	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*118 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	
0422KCTP147F (P406097-02) Water	**Sampled: 06/02/04 07:58 Received: 06/03/04 14:00**									
Carbon tetrachloride	ND	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*115 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*118 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*65-135*			"	"	"	"	
0422KCTP148F (P406097-03) Water	**Sampled: 06/02/04 08:08 Received: 06/03/04 14:00**									
Carbon tetrachloride	**4.3**	0.25	0.50	ug/l	1	4060164	06/07/04	06/08/04	EPA 8260B	
Chloroform	**0.40**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*114 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*115 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	

Sequoia Analytical

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FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP149F (P406097-04) Water	**Sampled: 06/02/04 08:11 Received: 06/03/04 14:00**									
Carbon tetrachloride	**3.7**	0.25	0.50	ug/l	1	4060164	06/07/04	06/08/04	EPA 8260B	
Chloroform	**0.39**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*115 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*65-135*			"	"	"	"	
0422KCTP150D (P406097-05) Water	**Sampled: 06/02/04 08:11 Received: 06/03/04 14:00**									
Carbon tetrachloride	**3.8**	0.25	0.50	ug/l	1	4060164	06/07/04	06/08/04	EPA 8260B	
Chloroform	**0.37**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*114 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*65-135*			"	"	"	"	
0422KCTP151F (P406097-06) Water	**Sampled: 06/02/04 08:15 Received: 06/03/04 14:00**									
Carbon tetrachloride	**2.0**	0.25	0.50	ug/l	1	4060164	06/07/04	06/08/04	EPA 8260B	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*110 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*65-135*			"	"	"	"	

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
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MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP152F (P406097-07) Water	**Sampled: 06/02/04 08:44 Received: 06/03/04 14:00**									
Carbon tetrachloride	**5.3**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.88**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	
0422KCTP153F (P406097-08) Water	**Sampled: 06/02/04 08:47 Received: 06/03/04 14:00**									
Carbon tetrachloride	ND	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.3**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*65-135*			"	"	"	"	
0422KCTP154F (P406097-09) Water	**Sampled: 06/02/04 08:50 Received: 06/03/04 14:00**									
Carbon tetrachloride	ND	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.2**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*114 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	

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Petaluma, CA 94954
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MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP155F (P406097-10) Water	**Sampled: 06/02/04 09:03 Received: 06/03/04 14:00**									
Carbon tetrachloride	**8.2**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	
0422KCTP156F (P406097-11) Water	**Sampled: 06/02/04 09:06 Received: 06/03/04 14:00**									
Carbon tetrachloride	**8.6**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	
0422KCTP157F (P406097-12) Water	**Sampled: 06/02/04 09:09 Received: 06/03/04 14:00**									
Carbon tetrachloride	**8.6**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	

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Petaluma, CA 94954
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MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP158F (P406097-13) Water	**Sampled: 06/02/04 09:18 Received: 06/03/04 14:00**									
Carbon tetrachloride	**8.1**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.78**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	
0422KCTP159F (P406097-14) Water	**Sampled: 06/02/04 09:21 Received: 06/03/04 14:00**									
Carbon tetrachloride	**8.2**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.82**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*113 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*65-135*			"	"	"	"	
0422KCTP160F (P406097-15) Water	**Sampled: 06/02/04 09:24 Received: 06/03/04 14:00**									
Carbon tetrachloride	**7.9**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.81**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*111 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
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MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
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Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP161F (P406097-16) Water	**Sampled: 06/02/04 09:34 Received: 06/03/04 14:00**									
Carbon tetrachloride	**7.1**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.92**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	
0422KCTP162F (P406097-17) Water	**Sampled: 06/02/04 09:37 Received: 06/03/04 14:00**									
Carbon tetrachloride	**7.2**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.92**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	
0422KCTP163F (P406097-18) Water	**Sampled: 06/02/04 09:40 Received: 06/03/04 14:00**									
Carbon tetrachloride	**6.1**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**0.74**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP164F (P406097-19) Water	**Sampled: 06/02/04 09:48 Received: 06/03/04 14:00**									
Carbon tetrachloride	**7.5**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*65-135*			"	"	"	"	
0422KCTP165F (P406097-20) Water	**Sampled: 06/02/04 09:51 Received: 06/03/04 14:00**									
Carbon tetrachloride	**7.9**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*113 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*65-135*			"	"	"	"	
0422KCTP166F (P406097-21) Water	**Sampled: 06/02/04 09:54 Received: 06/03/04 14:00**									
Carbon tetrachloride	**7.9**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	

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Petaluma, CA 94954
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MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP167F (P406097-22) Water	**Sampled: 06/02/04 10:04 Received: 06/03/04 14:00**									
Carbon tetrachloride	**9.4**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.1**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*113 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*65-135*			"	"	"	"	
0422KCTP168F (P406097-23) Water	**Sampled: 06/02/04 10:08 Received: 06/03/04 14:00**									
Carbon tetrachloride	**9.1**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.2**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	
0422KCTP169F (P406097-24) Water	**Sampled: 06/02/04 10:12 Received: 06/03/04 14:00**									
Carbon tetrachloride	**8.3**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.0**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*108 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	

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Petaluma, CA 94954
(707) 792-1865
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5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP170F (P406097-25) Water	**Sampled: 06/02/04 10:24 Received: 06/03/04 14:00**									
Carbon tetrachloride	**11**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.2**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*111 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*65-135*			"	"	"	"	
0422KCTP171F (P406097-26) Water	**Sampled: 06/02/04 10:27 Received: 06/03/04 14:00**									
Carbon tetrachloride	**11**	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	**1.3**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*111 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	
0422KCTP172F (P406097-27) Water	**Sampled: 06/02/04 10:30 Received: 06/03/04 14:00**									
Carbon tetrachloride	**11**	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	**1.2**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	

Sequoia Analytical

1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.scquoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP173F (P406097-28) Water	**Sampled: 06/02/04 10:38 Received: 06/03/04 14:00**									
Carbon tetrachloride	**3.2**	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	**0.25**	0.25	0.50	"	"	"	"	"	"	J
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	
0422KCTP173F (P406097-28RE1) Water	**Sampled: 06/02/04 10:38 Received: 06/03/04 14:00**									
Carbon disulfide	ND	1.4	10	ug/l	1	4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		*97 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*113 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*95 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*	*65-135*			"	"	"	"	
0422KCTP174F (P406097-29) Water	**Sampled: 06/02/04 10:41 Received: 06/03/04 14:00**									
Carbon tetrachloride	**5.7**	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	**0.54**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*113 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	

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Petaluma, CA 94954
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FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP174F (P406097-29RE1) Water Sampled: 06/02/04 10:41 Received: 06/03/04 14:00										
Carbon disulfide	ND	1.4	10	ug/l	1	4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		*103 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*122 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*93 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*65-135*			"	"	"	"	
0422KCTP175F (P406097-30) Water Sampled: 06/02/04 10:44 Received: 06/03/04 14:00										
Carbon tetrachloride	**5.7**	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	**0.67**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*115 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*113 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*65-135*			"	"	"	"	
0422KCTP175F (P406097-30RE1) Water Sampled: 06/02/04 10:44 Received: 06/03/04 14:00										
Carbon disulfide	ND	1.4	10	ug/l	1	4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		*103 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*122 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*93 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*65-135*			"	"	"	"	
0422KCTP176D (P406097-31) Water Sampled: 06/02/04 10:44 Received: 06/03/04 14:00										
Carbon tetrachloride	**5.8**	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	**0.67**	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*109 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*111 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	

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1455 McDowell Blvd, North Ste D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342
www.sequoialabs.com

MACTEC E&C - Petaluma	Project:Fort Ord - OU CTP Pilot Study-1	P406097
5341 Old Redwood Highway, Suite 300	Project Number:4087030007.010204	**Reported:**
Petaluma CA, 94954	Project Manager:Mike Taraszki	06/17/04 18:02

Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP177A (P406097-32) Water Sampled: 06/02/04 11:00 Received: 06/03/04 14:00										
Carbon tetrachloride	ND	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	ND	0.25	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.25	0.50	"	"	"	"	"	"	
Methylene chloride	ND	2.5	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*112 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*112 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*65-135*			"	"	"	"	
0422KCTP177A (P406097-32RE1) Water Sampled: 06/02/04 11:00 Received: 06/03/04 14:00										
Carbon disulfide	ND	1.4	10	ug/l	1	4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		*102 %*	*65-135*			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*119 %*	*65-135*			"	"	"	"	
Surrogate: Toluene-d8		*95 %*	*65-135*			"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*65-135*			"	"	"	"	

LDC #: 12287A1 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/3/04
SDG #: P406097 Level III Page: 1 of 1
Laboratory: Sequoia Analytical Reviewer: JC
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 6/2/04
II.	GC/MS Instrument performance check	N	Not req'd by level III
III.	Initial calibration	A	%RSD ≤ 20
IV.	Continuing calibration ICV	A	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	insufficient sample
VIII.	Laboratory control samples	A	LCS/D
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	Not req'd by level III
XI.	Target compound identification	N	
XII.	Compound quantitation/CRQLs	N	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	
XVI.	Field duplicates	SW	D = 4+5, 32+34, 33+34R
XVII.	Field blanks	ND	TB = 35, 36

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank

Validated Samples: All Hso's

1 3	0422KCTP146F	11 2	0422KCTP156F	21 2	0422KCTP166F	31 4	0422KCTP174FRE
2 3	0422KCTP147F	12 2	0422KCTP157F	22 2	0422KCTP167F	32 3	0422KCTP175F
3 1	0422KCTP148F	13 2	0422KCTP158F	23 2	0422KCTP168F	33 4	0422KCTP175FRE
4 1	0422KCTP149F	14 2	0422KCTP159F	24 2	0422KCTP169F	34 3	0422KCTP176D
5 1	0422KCTP150D	15 2	0422KCTP160F	25 2	0422KCTP170F	35 3	0422KCTP177A
6 1	0422KCTP151F	16 2	0422KCTP161F	26 2	0422KCTP171F	36 4	0422KCTP177ARE
7 2	0422KCTP152F	17 2	0422KCTP162F	27 3	0422KCTP172F	37 1	4060164BLK
8 2	0422KCTP153F	18 2	0422KCTP163F	28 3	0422KCTP173F	38 2	4060225BLK
9 2	0422KCTP154F	19 2	0422KCTP164F	29 4	0422KCTP173FRE	39 3	4060285BLK
10 2	0422KCTP155F	20 2	0422KCTP165F	30 3	0422KCTP174F	40 4	4060347BLK

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	CCCC.1-Chlorohexane
B. Bromomethane	V. Benzene	PP. Bromochloromethane	JJJ. 1,2-Dichlorobenzene	DDDD. Isopropyl alcohol
C. Vinyl chorlde**	W. trans-1,3-Dichloropropene	QQ. 1,1-Dichloropropene	KKK. 1,2,4-Trichlorobenzene	EEEE. Acetonitrile
D. Chloroethane	X. Bromoform*	RR. Dibromomethane	LLL. Hexachlorobutadiene	FFFF. Acrolein
E. Methylene chloride	Y. 4-Methyl-2-pentanone	SS. 1,3-Dichloropropane	MMM. Naphthalene	GGGG. Acrylonitrile
F. Acetone	Z. 2-Hexanone	TT. 1,2-Dibromoethane	NNN. 1,2,3-Trichlorobenzene	HHHH. 1,4-Dioxane
G. Carbon disulfide	AA. Tetrachloroethene	UU. 1,1,1,2-Tetrachloroethane	OOO. 1,3,5-Trichlorobenzene	IIII. Isobutyl alcohol
H. 1,1-Dichloroethene**	BB. 1,1,2,2-Tetrachloroethane*	VV. Isopropylbenzene	PPP. trans-1,2-Dichloroethene	JJJJ. Methacrylonitrile
I. 1,1-Dichloroethane*	CC. Toluene**	WW. Bromobenzene	QQQ. cis-1,2-Dichloroethene	KKKK. Propionitrile
J. 1,2-Dichloroethene, total	DD. Chlorobenzene*	XX. 1,2,3-Trichloropropane	RRR. m,p-Xylenes	LLLL.
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	MMMM.
L. 1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNN.
M. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	OOOO.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	BBB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
O. Carbon tetrachloride	II. 2-Chloroethylvinyl ether	CCC. tert-Butylbenzene	WWW. Ethanol	QQQQ.
P. Bromodichloromethane	JJ. Dichlorodifluoromethane	DDD. 1,2,4-Trimethylbenzene	XXX. Di-isopropyl ether	RRRR.
Q. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY. tert-Butanol	SSSS.
R. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	TTTT.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	UUUU.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	VVVV.

* = System performance check compounds (SPCC) for RRF ; ** = Calibration check compounds (CCC) for %RSD.

LDC #: 12257A1
SDG #: P406097

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: SK
2nd reviewer:

METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

(Y) N N/A Were field duplicate pairs identified in this SDG?
(Y) N N/A Were target compounds detected in the field duplicate pairs?

Compound	Concentration (ug/L)		RPD ≤50
	4	5	
O	3.7	3.8	3
K	0.39	0.37	5

Compound	Concentration (ug/L)		RPD ≤50
	32	34	
O	5.7	5.8	2
K	0.67	0.67	0

Compound	Concentration ( )		RPD

Compound	Concentration ( )		RPD