Enclosure I

EPA Level III ADR Outliers

Quality Control Outlier Reports

SDG P404394

(No Qualifications)

Quality Control Outlier Reports

SDG P404353

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				Reporte	d *	Proje	ct Limits	(Percer	nt)
	Lab Sample ID	Matrix	Analyte Name	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: Al	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

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				Reported *	Project Limits (Percent)			
	Lab Sample ID	Matrix	Analyte Name	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: Al	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

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				Reported *	Project Limits (Percent)			
	Lab Sample ID	Matrix	Analyte Name	Percent Recovery RPD	Rejection Point**	Lower Limit	Upper Limit	RPD
0415KCTP119FMS	415KCTP119FMS 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: Al	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

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

				Reported *	Project Limits (Percent)				
Client Sample ID Lab Sample II		Matrix	Analyte Name	Percent Recovery 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

ADR 6.1

Report Date: 6/10/2004 10:34

^{*} 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

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				Reported *	Project Limits (Percent)			
	Lab Sample ID	Matrix	Analyte Name	Percent Recovery RPD	Rejection Point**	Lower Limit	Upper	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

ADR 6.1

Report Date: 6/10/2004 10:34

^{*} 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)			
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
	P404353-23 P404353-24 P404353-25 P404353-26 P404353-27 4D21018-MSD1 P404353-28 4D21017-MSD1 P404353-29 P404353-30 P404353-31 P404353-32	Lab Sample ID Method P404353-23 300.0 NO2 P404353-24 300.0 NO2 P404353-25 300.0 NO2 P404353-26 300.0 NO2 P404353-27 300.0 NO2 4D21018-MS1 300.0 NO2 4D21018-MSD1 300.0 NO2 P404353-28 300.0 NO2 4D21017-MS1 300.0 NO2 4D21017-MSD1 300.0 NO2 P404353-29 300.0 NO2 P404353-30 300.0 NO2 P404353-31 300.0 NO2 P404353-32 300.0 NO2	Lab Sample ID Method Matrix P404353-23 300.0 NO2 AQ P404353-24 300.0 NO2 AQ P404353-25 300.0 NO2 AQ P404353-26 300.0 NO2 AQ P404353-27 300.0 NO2 AQ 4D21018-MS1 300.0 NO2 AQ 4D21018-MSD1 300.0 NO2 AQ 4D21017-MS1 300.0 NO2 AQ 4D21017-MSD1 300.0 NO2 AQ P404353-29 300.0 NO2 AQ P404353-30 300.0 NO2 AQ P404353-31 300.0 NO2 AQ P404353-32 300.0 NO2 AQ	Lab Sample ID Method Matrix Method P404353-23 300.0 NO2 AQ Gen Prep P404353-24 300.0 NO2 AQ Gen Prep P404353-25 300.0 NO2 AQ Gen Prep P404353-26 300.0 NO2 AQ Gen Prep P404353-27 300.0 NO2 AQ Gen Prep 4D21018-MS1 300.0 NO2 AQ Gen Prep 4D21018-MSD1 300.0 NO2 AQ Gen Prep P404353-28 300.0 NO2 AQ Gen Prep 4D21017-MS1 300.0 NO2 AQ Gen Prep 4D21017-MSD1 300.0 NO2 AQ Gen Prep P404353-29 300.0 NO2 AQ Gen Prep P404353-30 300.0 NO2 AQ Gen Prep P404353-31 300.0 NO2 AQ Gen Prep P404353-32 300.0 NO2 AQ Gen Prep	Lab Sample ID Analysis Method Matrix Prep Method Coll To	Lab Sample ID Analysis Method Prep Method Coll To To Ana Prep To Ana P404353-23 300.0 NO2 AQ Gen Prep Gen Prep P404353-24 300.0 NO2 AQ Gen Prep Gen Prep P404353-25 300.0 NO2 AQ Gen Prep Gen Prep P404353-26 300.0 NO2 AQ Gen Prep Gen Prep P404353-27 300.0 NO2 AQ Gen Prep Gen Prep P4021018-MSD1 300.0 NO2 AQ Gen Prep Gen Prep P404353-28 300.0 NO2 AQ Gen Prep Gen Prep P4021017-MSD1 300.0 NO2 AQ Gen Prep Gen Prep P404353-29 300.0 NO2 AQ Gen Prep Gen Prep P404353-30 300.0 NO2 AQ Gen Prep Gen Prep P404353-31 300.0 NO2 AQ Gen Prep P404353-32 300.0 NO2 AQ Gen Prep	Lab Sample ID Analysis Method Matrix Prep Method Coll To To To To To Ana Prep Ana Coll To To To Ana P404353-23 300.0 NO2 AQ Gen Prep 83.5 P404353-24 300.0 NO2 AQ Gen Prep 83.9 P404353-25 300.0 NO2 AQ Gen Prep 81.0 P404353-26 300.0 NO2 AQ Gen Prep 81.8 P404353-27 300.0 NO2 AQ Gen Prep 83.4 4D21018-MS1 300.0 NO2 AQ Gen Prep 83.6 P404353-28 300.0 NO2 AQ Gen Prep 78.6 4D21017-MS1 300.0 NO2 AQ Gen Prep 78.9 4D21017-MSD1 300.0 NO2 AQ Gen Prep 80.5 P404353-29 300.0 NO2 AQ Gen Prep 81.2 P404353-31 300.0 NO2 AQ Gen Prep 81.2 P404353-32 300.0 NO2 AQ Gen Prep 80.6	Lab Sample ID Analysis Method Matrix Prep Method Coll To	Lab Sample ID Analysis Method Matrix Prep To To To Ana Coll To To To To To Ana Coll To To To To To To To Ana Prep To To To To To Ana P404353-23 300.0 NO2 AQ Gen Prep 83.5	Lab Sample ID Analysis Method Matrix Prep Method Coll To To To Ana Prep To To To To To To To To Ana Coll To Ana Prep To To To To To To To To Ana Prep To To To To To To To Ana Prep To To To To To To To Ana Prep To To To To To To Ana Prep To To To To Ana Prep To To To To Ana Prep To To To To To To To To Ana Prep To To To To To To To Ana Prep To To To To To To To To Ana Prep To To To To To To To Ana Prep To To To To To To To Ana Prep To To To To To To To Ana Prep To To To To To To To To Ana Prep To To To Ana Prep To To To Ana Prep To To To To Ana Prep To To To To Ana Prep To To To To Anal Prep To To To To Anal Prep To To To To Anal Prep To	Lab Sample ID Analysis Method Matrix Prep To	Lab Sample ID Analysis Method Matrix Prep Method Coll To To To To Ana Coll To To To Ana Prep To Ana Coll On To Ana Unit Of Ana Collection Date P404353-23 300.0 NO2 AQ Gen Prep 83.5 48 Hours 04/12/2004 09:35 P404353-24 300.0 NO2 AQ Gen Prep 83.9 48 Hours 04/12/2004 10:10 P404353-25 300.0 NO2 AQ Gen Prep 81.8 48 Hours 04/12/2004 10:50 P404353-26 300.0 NO2 AQ Gen Prep 83.1 48 Hours 04/12/2004 12:10 4D21018-MS1 300.0 NO2 AQ Gen Prep 83.4 48 Hours 04/12/2004 12:10 4D21018-MSD1 300.0 NO2 AQ Gen Prep 83.6 48 Hours 04/12/2004 12:35 4D21017-MS1 300.0 NO2 AQ Gen Prep 78.6 48 Hours 04/12/2004 12:35 4D21017-MSD1 300.0 NO2 AQ Gen Prep 79.1 48 Hours <td>Lab Sample ID Analysis Method Watrix Prep To To</td>	Lab Sample ID Analysis Method Watrix Prep To

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

Lab Report Batch: P404353

Lab ID: SAL-PET

Analysis Method Matrix Analyte Name		Field Sample				Field Sample Duplicate							
	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.

Project Number and Name:

4087030007.010204 - Fort Ord - OU CTP Pilot Study-1



LABORATORY DATA CONSULTANTS, INC.

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

MACTEC

June 10, 2004

5341 Old Redwood Highway, Suite 300

Petaluma, CA 94954

ATTN: Ms. Debbie Leibensberger Polor Shedy

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.

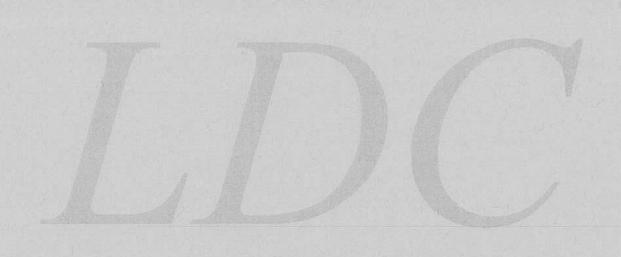
Stacey A. wenson

Operations Manager/Senior Chemist

					4		mar	226	~ //		OT!		/	1.0	barrens I	$\overline{}$				-		AND SHOW	4507	4	21		41		40.07		Allegges		Acceptance /	ALMASS /	Assessed	AND COMME	Consequent
	RTC				LI)C	#17	202	3 (1	MAG	Sit	±C-/	Per	alu	ma	, C/	\ / /	For	t O	ra r	3as	sew	iae	, 1	Q Z	.004	ł)	Pr	rojec	ct#:ME	EC07	0303	,77, F	#.O. ^د	5559	16 00°	131
LDC	SDG#	DATE REC'D	DATE DUE	V((82	OA (60B)	-																		en a													
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
Α	P404394	5-28-04	6-9-04	3	0.	-					'				<u> </u>																<u> '</u>		—		\bot	<u> </u>	4
		+							-		-			\vdash				\vdash	\vdash	\square		\vdash	\square	\vdash			\vdash				\vdash						+
		 		+		\vdash	\vdash	\vdash	\vdash		$\vdash \vdash$	\Box		\vdash	\square		\Box	\Box	\exists							\vdash				-					\Box		
						12.00			\Box'																												
												\square'						\Box	\Box																		
											'																			'	'		'		'		4
		<u> </u>		<u> </u>	4	+	-	\bot	<u>—</u>		<u>—</u> ′	\vdash	<u> </u>		-		\sqcup	\sqcup		\sqcup	-		\square			<u> </u>	-			-	<u> -</u> '			\vdash	\vdash	-	+
-				+-'		\vdash	\vdash	\vdash	+'		-			\vdash	\vdash		\vdash	\vdash	H			\vdash	H			\vdash					\vdash				\vdash		
		+-		+	H	\vdash			\vdash		$\vdash \vdash$			\vdash	\Box		\Box	\sqcap	\vdash	\Box			\square	\square		H	\vdash			\vdash	\vdash				\vdash		-
																	\Box	\Box																			
										37																							12.4				100
						₩'		$igspace^{\prime}$	<u> </u>		<u> </u>	igspace	<u> </u>		\vdash	\sqcup	\square	\sqcup		\sqcup	-				_	<u> </u>	<u> </u>		\vdash		<u> '</u>		<u> </u>		<u>—</u>	-	-
		+		-	\vdash	\vdash	\vdash		\vdash	-	 '	\vdash					\square	\vdash	Н	\square		\vdash	\square						-		-						
		+		+	H	H	\vdash		\vdash	+	\vdash							\vdash	\rightarrow					\vdash			—	-		-	-						
				+	\vdash	\square			\Box	\Box	\vdash			\Box'	\Box			\Box	\square	\Box														H			Ħ
			_																																		
						igspace	\square'		\bot	<u> </u>	<u></u>	\square'			— '			\sqcup								₩'		'		'	<u> </u>				'	_	
				<u>—</u>	\sqcup	\vdash	\square'	\square'	<u>—</u> '	<u> </u>	<u>—</u> ′	\vdash	<u> </u>	\sqcup	\vdash	\sqcup	\square	\vdash	\square		-	\vdash	\vdash			4	-				-		-	-	-	<u> </u>	
		-		+-'	\vdash	\vdash	\vdash	\vdash	-	\vdash	\vdash	\vdash				\vdash		\vdash	H	\vdash	H	-		\vdash		\vdash			_			\vdash	\vdash	\vdash	\vdash	-	
		-		+-'	+	\vdash	\vdash	\vdash	\vdash	\vdash	\vdash			\vdash			\Box	\vdash	\vdash		\square		\Box	\vdash	\vdash	-				—	\vdash		\vdash		\vdash		
				 							\vdash			\vdash	\square			\Box	\square										10						\vdash		
																													27								
																													7								
									\square'																					<u> </u>	'		'	<u></u>	<u> </u>		1
		1		d '		('	1 7	1 '	1 '	'	1 '	1 '		1	('	()	1 1	(-1)	()		('	1 1	1 '	1				\perp			1		'	1_'			

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	Р

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	Р	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

	Da	te:⊿	111	104
	Pag	30.7	∕of_	
	Review	er:_	9	
2nd	Review	er:_		\subseteq

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	
٧.	Blanks	A	
VI.	Surrogate spikes	4	
VII.	Matrix spike/Matrix spike duplicates	N	None/P
VIII.	Laboratory control samples	A	105/0
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	1	
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

vallu	ateu Sampies.					
1	0415KCTP139F ₩	11	4040438-84	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 #: /2023A/ SDG #: 1404394 Page: / of 3
Reviewer: 9
2nd Reviewer: ____

Method: Volatiles (EPA SW 846 Method 8260B)

Validation Area	Yes	No	NA	Findings/Comments
j. Technical holding times				1
All technical holding times were met.	/			
Cooler temperature criteria was met.	/			
II: GC/MS Instrument performance check				T
Were the BFB performance results reviewed and found to be within the specified criteria?	1			
Were all samples analyzed within the 12 hour clock criteria?				
III. Initial calibration				1
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?	1			
Was a curve fit used for evaluation? If Yes, what was the acceptance criteria used?		/	<u></u>	
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				1
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			1	·
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.		1		
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?		1		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?				

VALIDATION FINDINGS CHECKLIST

LDC #: 1202381 SDG #: P4043-94 Page: 2 of 3
Reviewer: 4
2nd Reviewer: 4

Validation Area	Yes	No	NA	Findings/Comments
VIII. Laboratory control samples				
Was an LCS analyzed for this SDG?	1			
Was an LCS analyzed per analytical batch?	1			
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?	1	21 8		
Were retention times within \pm 30 seconds of the associated calibration standard?				
XI. Target compound identification				
Were relative retention times (RRT's) within \pm 0.06 RRT units of the standard?	1			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	1			
Were chromatogram peaks verified and accounted for?				
XII. Compound quantitation/CRGLs			1	
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 \pm 20% between the sample and the reference spectra?			1	. 7
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			Г	
System performance was found to be acceptable.	/			
XV: Overall assessment of data				
Overall assessment of data was found to be acceptable.				
XVI: Field duplicates			г	Г
Field duplicate pairs were identified in this SDG.		1		
Target compounds were detected in the field duplicates.	-		/	

LDC #: 12023A1 SDG #: P404394

VALIDATION FINDINGS CHECKLIST

Page: 3 of 3
Reviewer: 9
2nd Reviewer:

Validation Area	Yes	No	NA	FindIngs/Comments
XVII. Field blanks				
Field blanks were identified in this SDG.		/	0.3	
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		
3. 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. Tetrachloroethane		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 #:_	12023A/
SDG #:	P404394

VALIDATION FINDINGS WORKSHEET **Initial Calibration Calculation Verification**

	Page:_	
	Reviewer:_	7
2nd	Reviewer:_	1

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:

 $RRF = (A_x)(C_y)/(A_y)(C_x)$ average RRF = sum of the RRFs/number of standards %RSD = 100 * (S/X)

 $A_x =$ Area of compound,

A_{is} = Area of associated internal standard

 C_{\star} = Concentration of compound, S = Standard deviation of the RRFs C_k = Concentration of internal standard

X = Mean of the RRFs

				Reported	Recalculated	Reported	Recalculated	Reported	Recalculated
#	# Standard ID	Calibration Date	Compound (Reference Internal Standard)	RRF (/0 std)	RRF (/ Ø std)	Average RRF (initial)	Average RRF (initial)	%RSD	%RSD
1	10AL	3/4	Methylene chloride (1st internal standard)	0.38752	0.38752	0.38369	0.38369	3.87783	3.8778
	10/1-	3/423/5/04	Trichlorethene (2nd internal standard)	0.30288	0.30288	0.38369	0.29436	2.28283	2.2826
		,	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)		V V				
4			Methylene chloride (1st internal standard)		- 1		1		
			Trichlorethene (2nd internal standard)			Te lis			
			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 #: <u>/2a23A/</u> SDG #: <u>p4u4394</u>

VALIDATION FINDINGS WORKSHEET Continuing Calibration Results Verification

Page:_	
Reviewer:	9-
2nd Reviewer:	1

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 = $(A_y)(C_h)/(A_h)(C_y)$

Where: ave. RRF = initial calibration average RRF

RRF = continuing calibration RRF

 A_x = Area of compound, A_a = Area of associated internal standard C_x = Concentration of compound, C_b = Concentration of internal standard

					Reported	Recalculated	Reported	Recalculated
#	Standard ID	Calibration Date	Compound (Reference internal Standard)	Average RRF (initial)	RRF (CC)	RRF (CC)	%D	%D
1	341384	11.91.1	Methylene chloride (1st internal standard)	0.38369	0.42660	0.42660	11.	11.2
	01100	4/19/04	Trichlorethene (2nd internal standard)	0.29436	0.29896	0.42660	1-6	1.6
			Toluene (3rd internal standard)			<u> </u>		
2			Methylene chloride (1st internal standard)					
			Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
3			Methylene chloride (1st internal standard)					
		1	Trichlorethene (2nd internal standard)					
			Toluene (3rd internal standard)					
4			Methylene chloride (1st internal standard)					
			Trichlorethene (2nd internal standard)		A			
			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.

LDC #: 12023A1 SDG #: 1404394

Surrogate Results Verification

Page	/01_/
Reviewer:_	4
2nd reviewer:_	1

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:___/

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference	
Toluene-d8	6	6.27497	104	104	0	
Bromofluorobenzene	1	6.23926	104	104	1	
1,2-Dichloroethane-d4		5.73124	96	96		
Dibromofluoromethane		6.448 >4	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					L

Sample ID:_

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

Sample ID:_____

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

LDC #: 100-	23A/
SDG #: #4	04394

VALIDATION FINDINGS WORKSHEET **Laboratory Control Sample Results Verification**

	Page:_	_/of_/_
	Reviewer:_	9
2nd	Reviewer:	\sim

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

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory 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

	Spike Spiked Sample		LCS		LCSD		LCS/LCSD			
Compound	()	Added Concentration (Mac)		Percent Recovery		Percent Recovery		RPD		
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene	5	5	احبى	5.12	104	104	102	102	2	2
Trichloroethere /	U	1	5.87	5.45	117	117	109	109	\$ 7	7
Benzene										
Tolyene										
Chilorobenzene										
									d M	
and the second second	-									
								(6)		
A				+:						

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.

VALIDATION FINDINGS WORKSHEET Sample Calculation Verification

Page:_	
Reviewer:	9
2nd reviewer:	

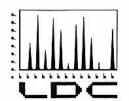
METHOD: GC/MS VOA (EPA SW 846 Method 8260B)

Were all reported results recalculated and verified for all level IV samples?

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

Conce	ntratio	$on = \frac{(A_s)(I_s)(DF)}{(A_{ts})(RRF)(V_o)(\%S)}$	Example:
A _x	=	Area of the characteristic ion (EICP) for the compound to be measured	Sample I.D,:
A_{is}	= 1	Area of the characteristic ion (EICP) for the specific internal standard	
l _s	=	Amount of internal standard added in nanograms (ng)	Conc. = $(8^{23}63)(5)($
RRF	=	Relative response factor of the calibration standard.	21343/12
Vo	=	Volume or weight of sample pruged in milliliters (ml) or grams (g).	= 4.48 Ma
Df	=	Dilution factor.	
%S	=	Percent solids, applicable to soils and solid matrices	

#	Sample ID	Compound	Reported Concentration ()	Calculated Concentration	Qualification
					Qualification
-					
-					
_					
	38 (0)			a literatura	
	III			8	
		"			
				2 37	
M					



LABORATORY DATA CONSULTANTS, INC.

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

MACTEC

July 26, 2004

5341 Old Redwood Highway, Suite 300

Petaluma, CA 94954

ATTN: Ms. Debbie Leibensberger

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

Project Manager/Senior Chemist

			-1-2171.1	H. De						- 6				At	tach	men	t 1		Attachment 1 LDC #12206 (MACTEC-Petaluma, CA / Fort Ord OU CTP Pilot Study) Job# 408703007-																		
	SEWING.			L	_DC	`#'	122	06	(MA	CT	EC	-Pe	eta	lum	ıa,	CA	Fo	rt (Ord	Ol	J C	TP	Pil	ot	Stu	ıdy	/)						lob#	408	70300)7-0 ⁻	1020
DC	SDG#	DATE REC'D	DATE DUE		3r (0.0)																																
Matrix	c: Water/Soil		TRH, Set	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	w
Α	P404612	7-15-04	7-29-04	2	0																																
H						<u>e</u>																		T													
																										- A											
																									61												
																				0																-	
																								1												1	
																							9							K							
																													P		4 P					+	
																				K																	
otal	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	0	0	0

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.
- P 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

VALIDATION COMPLETENESS WORKSHEET

Level III

SDG #:_	P404612	
Laborato	ry: Sequoia An	alytical

Date: 7/20/04
Page:of
Reviewer: μη
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
1.	Technical holding times	Á	Sampling dates: 41>+1 • +
IIa.	Initial calibration	A	
IIb.	Calibration verification	A	
Ш.	Blanks	A	
IV	Matrix Spike/Matrix Spike Duplicates	A	MS/MSD
ν	Duplicates	N	
VI.	Laboratory control samples	A	Les .
VII.	Sample result verification	N	
VIII.	Overall assessment of data	A	
IX.	Field duplicates	μ	
х	Field blanks	N	

Note:

A = Acceptable

N = Not provided/applicable SW = See worksheet

ND = No compounds detected

R = Rinsate

FB = Field blank

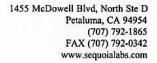
D = Duplicate

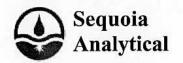
TB = Trip blank EB = Equipment blank

Validated Samples:

_	182				
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	

lotes:	





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

P404612 Reported: 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 R	eceived:	04/28/04 0	8:50							
Bromide 0416GCTP003F (P404612-02) Water	9.5 Sampled: 04/24/	1.0 04 15:25 R	mg/l eceived:	1 04/28/04 0	4050086 8 :50	05/04/04	05/04/04	EPA 300.0				
Bromide	10	1.0	mg/l	1	4050086	05/04/04	05/04/04	EPA 300.0				



LABORATORY DATA CONSULTANTS, INC.

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

MACTEC

August 4, 2004

5341 Old Redwood Highway, Suite 300

Petaluma, CA 94954

ATTN: Ms. Debbie Leibensberger

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

Rei Geng

Project Manager/Senior Chemist

														_		chme	_																		_	
	RTC			170	LD	C #	122	287	(M)	4C7	ΓEC	-Pe	eta	lum	a,	CA	/ Fo	ort	Orc	10	U C	TE	3io	Stu	ıdy	20	04)				Pro	oject	#: 40	8703	0006	010
.DC	SDG#	DATE REC'D	DATE DUE		OA 60B)																															
atrix:	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
Α	P406097	08/02/04	08/16/04	36	0																														- 24	
																								97												
																								.s												
								ż.																												
	-0																																			
al	В			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

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 (r²) 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:

	Concentra		
Compound	0422KCTP149F	0422KCTP150D	RPD (Limits)
Carbon tetrachloride	3.7	3.8	3 (≤50)
Chloroform	0.39	0.37	5 (≤50)

	Concentra		
Compound	0422KCTP175F	0422KCTP176D	RPD (Limits)
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

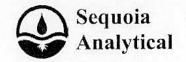
No Sample Data Qualified in this SDG

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

No Sample Data Qualified in this SDG

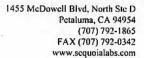
Fort Ord OU-C Bio Pilot Study Volatiles - Field Blank Data Qualification Summary - SDG P406097

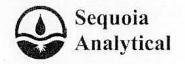
No Sample Data Qualified in this SDG



Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP146F (P406097-01) Water	Sampleo	1: 06/02/04	07:53 Recei	ved: 06	/03/04 14:0	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	**	319	"	0.00			
Chloromethane	ND	0.25	0.50	.0	."	**	920	3.00	9.1	
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	Sampleo	1: 06/02/04	07:58 Recei	ved: 06	/03/04 14:0	00		10		
Carbon tetrachloride	ND	0.25	0.50	ug/l	j	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	ND	0.25	0.50	*	"	"	n			
Chloromethane	ND	0.25	0.50	•		,,	n	11	. 0	
Methylene chloride	ND	2.5	5.0	н		- #	n —		= nc	
Surrogate: Dibromofluoromethane		115%	65-135				. "	8#6	"	
Surrogate: 1,2-Dichloroethane-d4		111%	65-135			"			".	
Surrogate: Toluene-d8		118%	65-135				- "		" -	
Surrogate: 4-Bromofluorobenzene		108 %	65-135				3396	- 10	n	
0422KCTP148F (P406097-03) Water	Sample	1: 06/02/04	08:08 Recei	ved: 06	/03/04 14:0	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		= 3000	,,	- 00		n:	J
Chloromethane	ND	0.25	0.50					2000	ů,	
Methylene chloride	ND	2.5	5.0	3.002	20.0	'n			e.	
Surrogate: Dibromofluoromethane		112%	65-135				•		"	
Surrogate: 1,2-Dichloroethane-d4		114%	65-135	Ď		"	•	"	"	
Surrogate: Toluene-d8		115%	65-135			- "			,,	
Surrogate: 4-Bromofluorobenzene		109 %	65-135			*			"	
TOWNS THE PROPERTY OF THE PROP										





Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0422KCTP149F (P406097-04) Water	Sample	d: 06/02/04 (8:11 Recei	ved: 06	/03/04 14:0	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			"		٠.	- "	
Chloromethane	ND	0.25	0.50		100	'n	11	••		340 8
Methylene chloride	ND	2.5	5.0	n	200	**		-11	"	
Surrogate: Dibromofluoromethane		115 %	65-135				"	ė, ve z	"	
Surrogate: 1,2-Dichloroethane-d4		112 %	65-135			"			*	
Surrogate: Toluene-d8	22	112%	65-135			,,,	n	OM6	;,	
Surrogate: 4-Bromofluorobenzene		108 %	65-135			"	n.	(1 98)	"	
0422KCTP150D (P406097-05) Water	Sample	d: 06/02/04 (8:11 Recei	ved: 06	/03/04 14:0	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		99			**	0.	1
Chloromethane	ND	0.25	0.50		37			THE STATE OF THE S		
Methylene chloride	ND	2.5	5.0	•			•	**	**	2
Surrogate: Dibromofluoromethane		112 %	65-135			,	"	,,	, ,	
Surrogate: 1,2-Dichloroethane-d4		114%	65-135			"	.,	•	,,	
Surrogate: Toluene-d8		112%	65-135				и	•	·	
Surrogate: 4-Bromofluorobenzene		108 %	65-135		14	*	**	•		
0422KCTP151F (P406097-06) Water	Sample	d: 06/02/04 0	8:15 Recei	ved: 06	/03/04 14:0	10				
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	n	н		100	10		
Surrogate: Dibromofluoromethane		114%	65-135			"		"	"	
Surrogate: 1,2-Dichloroethane-d4		110%	65-135			"	300	"	"	
Surrogate: Toluene-d8		110%	65-135			. "		300	"	
Surrogate: 4-Bromofluorobenzene		108 %	65-135			"	W.		900	



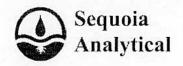
Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP152F (P406097-07) Water	Sampled	i: 06/02/04 0	8:44 Rece	ived: 06	/03/04 14:0	00				
Carbon tetrachloride	5.3	0.25	0.50	ug/l	J	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	"	n			"		
Surrogate: Dibromofluoromethane		110%	65-13	5		3,000	(n)	n	"	
Surrogate: 1,2-Dichloroethane-d4		110%	65-13	5		"	***	*	"	
Surrogate: Toluene-d8		112%	65-13	5		"	iii.	**	"	
Surrogate: 4-Bromofluorobenzene		110%	65-13	5		"	"	**	"	
0422KCTP153F (P406097-08) Water	Sampled	: 06/02/04 0	8:47 Rece	ived: 06	/03/04 14:0	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	.11		36	100	n.		
Chloromethane	ND	0.25	0.50		.0				an:	
Methylene chloride	ND	2.5	5.0	100	n		3903	3.00	н	
Surrogate: Dibromofluoromethane		109 %	65-13	5		"		- "	"	
Surrogate: 1,2-Dichloroethane-d4		112%	65-13	5			•	"	"	
Surrogate: Toluene-d8		112%	65-13	5				"	"	
Surrogate: 4-Bromofluorobenzene		111%	65-13	5		,,	•	**	"	
0422KCTP154F (P406097-09) Water	Sampled	: 06/02/04 0	8:50 Rece	ived: 06	/03/04 14:0)0				
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		n		•	**		
Methylene chloride	ND	2.5	5,0				•		•	
Surrogate: Dibromofluoromethane		109 %	65-13	5		u	ŝ n z	**	"	
Surrogate: 1,2-Dichloroethane-d4		110%	65-13	5		u	n	"	re .	
Surrogate: Toluene-d8		114%	65-13	5		u		100	"	
Surrogate: 4-Bromofluorobenzene		109 %	65-13	5		u	"	,,,	"	



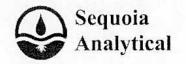
Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0422KCTP155F (P406097-10) Water	Sampled:	06/02/04 (09:03 Recei	ved: 06	/03/04 14:0	00				
Carbon tetrachloride	8.2	0.25	0.50	ug/l	ı	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	1.1	0.25	0.50	**		0.06	"		17. 200.4	
Chloromethane	ND	0.25	0.50			7.90			(9.0	
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 Recei	ved: 06	/03/04 14:0	00			11	
Carbon tetrachloride	8.6	0.25	0.50	ug/l	Ĺ	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	"	ü			"	n'	
Surrogate: Dibromofluoromethane		111%	65-135				3H -	"	***	
Surrogate: 1,2-Dichloroethane-d4		111%	65-135			0	<i>n</i>		"	
Surrogate: Toluene-d8		113 %	65-135			0	n	"	: #	
Surrogate: 4-Bromofluorobenzene		110%	65-135			"	900		(# 3 53	
0422KCTP157F (P406097-12) Water	Sampled:	06/02/04	09:09 Recei	ved: 06	/03/04 14:0	00			1	
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		nc	300	n	30	300	
Chloromethane	ND	0.25	0.50		26	200	20	"		
Methylene chloride	ND	2.5	5.0			п.			,	
Surrogate: Dibromofluoromethane		110%	65-135			"	,,	"	•	
Surrogate: 1,2-Dichloroethane-d4		111%	65-135			"	•	н	•	
Surrogate: Toluene-d8		113 %	65-135			"	*	tr .		
Surrogate: 4-Bromofluorobenzene		110%	65-135			"	,,	"	•	



Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

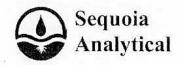
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	4	Notes
0422KCTP158F (P406097-13) Water	48444	1: 06/02/04 0						,			
	CHARLES WAS A SECTION	A		and the same of th		X	06100101	06410404	PD 4 00 (0D	4	
Carbon tetrachloride Chloroform	8.1 0.78	0.25	0.50 0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B		
Chloromethane	0.78 ND	0.25 0.25	0.50		**				 X		
Methylene chloride	ND	2.5	5.0				•		n.		
Surrogate: Dibromofluoromethane		108 %	65-13	5		, n			"		
Surrogate: 1,2-Dichloroethane-d4		110%	65-13				"	n	*		
Surrogate: Toluene-d8		112%	65-13			н	.,	n	:		
Surrogate: 4-Bromofluorobenzene		110%	65-13	7,00		n		n.			
0422KCTP159F (P406097-14) Water	Sample	d: 06/02/04 0	9:21 Rece	ived: 06	/03/04 14:0	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	n	300	31					
Chloromethane	ND	0.25	0.50	n	_0.0		n		V. 16		
Methylene chloride	ND	2.5	5.0	900	00/2		3003	(100)).			
Surrogate: Dibromofluoromethane		111%	65-13	5						10	
Surrogate: 1,2-Dichloroethane-d4		113 %	65-13	5		"			"		
Surrogate: Toluene-d8		113 %	65-13	5		- "	- 0	•	,,		
Surrogate: 4-Bromofluorobenzene		111 %	65-13	5		"	•		n.		
0422KCTP160F (P406097-15) Water	Sample	d: 06/02/04 0	9:24 Rece	ived: 06	/03/04 14:0	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	**	n,		•	11			
Methylene chloride	ND	2.5	5.0	11.	36				•		
Surrogate: Dibromofluoromethane		111%	65-13	5		**		•	H.		
Surrogate: 1,2-Dichloroethane-d4		112%	65-13	5		<i>n</i>	2012				
Surrogate: Toluene-d8		111%	65-13	5		"		•	**		
Surrogate: 4-Bromofluorobenzene		110%	65-13	5		u	n		ii.		



Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP161F (P406097-16) Water	Sampled	: 06/02/04	09:34 Recei	ved: 06	/03/04 14:0)0				
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			•			n	
Methylene chloride	ND	2.5	5.0	n	"		"			
Surrogate: Dibromofluoromethane		110%	65-135	i			"	"	"	
Surrogate: 1,2-Dichloroethane-d4		111%	65-135			н	**	: n :	"	
Surrogate: Toluene-d8		112%	65-135	ī		,,	•	3.40	"	
Surrogate: 4-Bromofluorobenzene		110%	65-135	i		n			"	
0422KCTP162F (P406097-17) Water	Sampled	: 06/02/04	09:37 Recei	ved: 06	/03/04 14:0)0				
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	H.		3002	700	•	"	
Chloromethane	ŅD	0.25	0.50	392	.00	300	0.000		"	
Methylene chloride	ND	2.5	5.0	1000		***	30.00		<i>n</i> .	
Surrogate: Dibromofluoromethane		112%	65-135	i			"	,,	•	
Surrogate: 1,2-Dichloroethane-d4		112%	65-135	ī			•		,,	
Surrogate: Toluene-d8		112%	65-135				"	•	,	
Surrogate: 4-Bromofluorobenzene		109 %	65-135			•	•	"	*	
0422KCTP163F (P406097-18) Water	Sampled	: 06/02/04	09:40 Recei	ved: 06	/03/04 14:0)0				
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		•	ii ii	n		**	
Chloromethane	ND	0.25	0.50		•	n		•	•	
Methylene chloride	ND	2.5	5.0		w.	,,	.9	•	ij	
Surrogate: Dibromofluoromethane	10	110%	65-135	i				n	"	
Surrogate: 1,2-Dichloroethane-d4		112%	65-135	ī		•	n	n	"	
Surrogate: Toluene-d8		112%	65-135	ī		"		n	"	
Surrogate: 4-Bromofluorobenzene		110%	65-135	ī		"	n	n.	"	

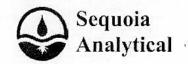




Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

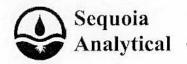
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0422KCTP164F (P406097-19) Water	Sampleo	1: 06/02/04 0	9:48 Rece	ived: 06	/03/04 14:0	00				
Carbon tetrachloride	7.5	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	0.
Chloroform	1.1	0.25	0.50			**	•		11	39
Chloromethane	ND	0.25	0.50		**	,,	"	**		.*
Methylene chloride	ND	2.5	5.0	10	н	"	"			
Surrogate: Dibromofluoromethane		109 %	65-135	7		. 11	W	116	"	
Surrogate: 1,2-Dichloroethane-d4		112%	65-135	5		(#1)	. 11) n c	*	
Surrogate: Toluene-d8		112%	65-135	5		in.	(30)	n	7	
Surrogate: 4-Bromofluorobenzene		111%	65-135	5		"		n	·n	
0422KCTP165F (P406097-20) Water	Sample	1: 06/02/04 0	9:51 Recei	ved: 06	/03/04 14:0	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	н		н	n	n	165	
Chloromethane	ND	0.25	0.50	n.	, m	**		140	n	
Methylene chloride	ND	2.5	5.0		**	**	980		100	as .
Surrogate: Dibromofluoromethane		108 %	65-135	i		"	"		" .	
Surrogate: 1,2-Dichloroethane-d4		113 %	65-135	ī			•	"	"	
Surrogate: Toluene-d8		112%	65-135	ī		,,	•	"	,,	
Surrogate: 4-Bromofluorobenzene		111%	65-135	ī		**	•	*	"	5
0422KCTP166F (P406097-21) Water	Sample	1: 06/02/04 0	9:54 Recei	ved: 06	/03/04 14:0	10				
Carbon tetrachloride	7.9	0.25	0.50	ug/l	ì	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	1.1	0.25	0.50	**	,	•	**		•	
Chloromethane	ND	0.25	0.50	11		*	**			
Methylene chloride	ND	2.5	5.0	и	31	H	"	ii.		religione a proper
Surrogate: Dibromofluoromethane		111%	65-135	ī		"	и	n.		
Surrogate: 1,2-Dichloroethane-d4		112%	65-135	ī		"	н			
Surrogate: Toluene-d8		112%	65-135	ī		. "				
Surrogate: 4-Bromofluorobenzene		110%	65-135			"	*		H	





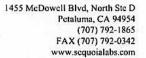
Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

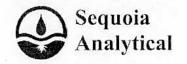
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0422KCTP167F (P406097-22) Water	Sample	1: 06/02/04	10:04 Rece	eived: 06	/03/04 14:0	00				
Carbon tetrachloride	9.4	0.25	0.50	ug/l	í	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	1.1	0.25	0.50		70	**	•	tt		
Chloromethane	ND	0.25	0.50	.11	31	**	n	ir		
Methylene chloride	ND	2.5	5.0	."	39	u	10	п	н	
Surrogate: Dibromofluoromethane		113 %	65-13	5		"	,,			*******
Surrogate: 1,2-Dichloroethane-d4		112%	65-13	5		"	"	•	n	
Surrogate: Toluene-d8		113 %	65-13	5		,,	,,	"		
Surrogate: 4-Bromofluorobenzene		111%	65-13	5		,,	,,	•	292	
0422KCTP168F (P406097-23) Water	Sample	1: 06/02/04	10:08 Rece	ived: 06	/03/04 14:0	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		•	it	n			
Methylene chloride	ND	2.5	5.0				'n	•	n	
Surrogate: Dibromofluoromethane		110 %	65-13	5		"	**		,,	
Surrogate: 1,2-Dichloroethane-d4		111%	65-13	5		"		11		
Surrogate: Toluene-d8		112%	65-13	5		"		,,	,,	
Surrogate: 4-Bromofluorobenzene		109 %	65-13	5		*	W		,,	
0422KCTP169F (P406097-24) Water	Sample	1: 06/02/04 1	0:12 Rece	ived: 06	/03/04 14:0	10				
Carbon tetrachloride	8.3	0.25	0.50	ug/l	Ī	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	1.0	0.25	0.50	n	*	Tr.	m	"	"	
Chloromethane	ND	0.25	0.50		n	HE	m	'n		
Methylene chloride	ND	2.5	5.0	**	TT.	. W	**		м	
Surrogate: Dibromofluoromethane		108 %	65-13	5		"		"		
Surrogate: 1,2-Dichloroethane-d4		110 %	65-13	5		"	,	"		
Surrogate: Toluene-d8	Į.	112 %	65-13	5		**	,,	,,		
Surrogate: 4-Bromofluorobenzene		110 %	65-13	5		"		"		



Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP170F (P406097-25) Water	Sampled	1: 06/02/04 1	0:24 Rece	ived: 06	/03/04 14:0)0				
Carbon tetrachloride	11	0.25	0.50	ug/l	ı	4060225	06/09/04	06/10/04	EPA 8260B	-
Chloroform	1.2	0.25	0.50	11	•	•	•	"		
Chloromethane	ND	0.25	0.50		n	•		•	2	
Methylene chloride	ND	2.5	5.0		"	- in-	,	"	•	
Surrogate: Dibromofluoromethane		110%	65-13.	5		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		111%	65-13.	5		"	"	*		
Surrogate: Toluene-d8		111%	65-13.	5		"		"	"	
Surrogate: 4-Bromofluorobenzene		110 %	65-13.	5		0.00%	"	"	<i>,</i> 1	
0422KCTP171F (P406097-26) Water	Sampled	1: 06/02/04 1	0:27 Rece	ived: 06	/03/04 14:0	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	'n.		300		0.00		
Chloromethane	ND	0.25	0.50		8(4)		•	- 10	,,	
Methylene chloride	ND	2.5	5.0					10		
Surrogate: Dibromofluoromethane		110%	65-13.	5			•		*	
Surrogate: 1,2-Dichloroethane-d4		112%	65-13.	5		**	•	•	n	
Surrogate: Toluene-d8		111%	65-13.	5		,,	Ü	•	•	
Surrogate: 4-Bromofluorobenzene		109 %	65-13.	5		**	•	•	n	
0422KCTP172F (P406097-27) Water	Sampled	1: 06/02/04 1	0:30 Rece	ived: 06	/03/04 14:0	0				
Carbon tetrachloride	11	0.25	0.50	ug/l	1.0	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	1.2	0.25	0.50	н		11	**	"	u.	
Chloromethane	ND	0.25	0.50	**	"		•	•	Ü	
Methylene chloride	ND	2.5	5.0			•	•		•	
Surrogate: Dibromofluoromethane		114%	65-13	5		"	н	n	"	
Surrogate: 1,2-Dichloroethane-d4		111%	65-13.	5			u	n,	**	
Surrogate: Toluene-d8		112 %	65-13.	5		"	n n	n	. "	
Surrogate: 4-Bromofluorobenzene		109 %	65-13.	5			u =	**		

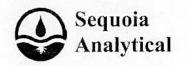




Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

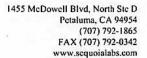
Analyte	Result	. MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0422KCTP173F (P406097-28) Water	Sample	d: 06/02/04	10:38 Recei	ved: 06	/03/04 14:0	0				
Carbon tetrachloride	3.2	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	0.25	0.25	0.50	n.	30	.m:	.0	ec.,	"	11 5
Chloromethane	ND	0.25	0.50		(300)		10.	95	39	***
Methylene chloride	ND	2.5	5.0	, m		"				
Surrogate: Dibromofluoromethane		111%	65-135			."	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		111%	65-135				•	•	"	
Surrogate: Toluene-d8		112 %	65-135			.11	"	"	'n	
Surrogate: 4-Bromofluorobenzene		109 %	65-135				"	"	,,	
0422KCTP173F (P406097-28RE1) Wa	ACTION TO THE OWNER.		2/04 10:38 F	7.0000010000000000000000000000000000000	1: 06/03/04		06114101	0.411.510.4		
Carbon disulfide	ND	1.4	10	ug/l		4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		97 %	65-135			и	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		113 %	65-135			n	"	"	"	
Surrogate: Toluene-d8		95 %	65-135			**	"	n	"	è
Surroguie. Tomene-ao		95 70	05-155							
Surrogate: 4-Bromofluorobenzene		100 %	65-135			'n	"			*
	Sample	100 %			/03/04 14:0				,	¥
Surrogate: 4-Bromofluorobenzene	Sample	100 %	65-135		/03/04 14:0		06/11/04	06/11/04	EPA 8260B	•
Surrogate: 4-Bromofluorobenzene 0422KCTP174F (P406097-29) Water	200000	100 % d: 06/02/04	65-135 10:41 Recei	ved: 06	/03/04 14:0	10				•
Surrogate: 4-Bromofluorobenzene 0422KCTP174F (P406097-29) Water Carbon tetrachloride	5.7	100 % d: 06/02/04 0.25	65-135 10:41 Recei 0.50	ved: 06	1	4060285	06/11/04	06/11/04	EPA 8260B	
Surrogate: 4-Bromofluorobenzene 0422KCTP174F (P406097-29) Water Carbon tetrachloride Chloroform	5.7 0.54	100 % d: 06/02/04 0.25 0.25	65-135 10:41 Recei 0.50 0.50	ved: 06 ug/l "	1	4060285 "	06/11/04	06/11/04	EPA 8260B	
Surrogate: 4-Bromofluorobenzene 0422KCTP174F (P406097-29) Water Carbon tetrachloride Chloroform Chloromethane	5.7 0.54 ND	100 % d: 06/02/04 0.25 0.25 0.25	65-135 10:41 Recei 0.50 0.50 0.50	ved: 06 ug/l "	1	4060285 "	06/11/04	06/11/04	EPA 8260B	
Surrogate: 4-Bromofluorobenzene 0422KCTP174F (P406097-29) Water Carbon tetrachloride Chloroform Chloromethane Methylene chloride	5.7 0.54 ND	0.25 0.25 0.25 0.25 2.5	65-135 10:41 Recei 0.50 0.50 0.50 5.0	ved: 06 ug/l " "	1	4060285	06/11/04	06/11/04	EPA 8260B	,
Surrogate: 4-Bromofluorobenzene 0422KCTP174F (P406097-29) Water Carbon tetrachloride Chloroform Chloromethane Methylene chloride Surrogate: Dibromofluoromethane	5.7 0.54 ND	100 % d: 06/02/04 0.25 0.25 0.25 2.5 113 %	0.50 0.50 0.50 0.50 5.0 65-135	ved: 06 ug/l "	1	4060285	06/11/04	06/11/04	EPA 8260B	

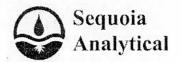




Project:Fort Ord - OU CTP Pilot Study-I Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP174F (P406097-29RE1) Wa	ater Sam	pled: 06/02	2/04 10:41	Received	1: 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 %	65-1	35			**	,,	,,	
Surrogate: 1,2-Dichloroethane-d4		122 %	65-1	35		•	"	"	•	
Surrogate: Toluene-d8		93 %	65-1	35		"	"	"		
Surrogate: 4-Bromofluorobenzene		103 %	65-1	35		"		"	•	
0422KCTP175F (P406097-30) Water	Sampled	: 06/02/04	10:44 Rec	eived: 06	/03/04 14:0	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	"	u	"	•	"	**	
Chloromethane	ND	0.25	0.50	"	•	•	•	"	"	
Methylene chloride	ND	2.5	5.0						H	
Surrogate: Dibromofluoromethane	34	112 %	65-1	35		,,,	"	"	n	
Surrogate: 1,2-Dichloroethane-d4	60	115%	65-1	35		"	"	"	и	
Surrogate: Toluene-d8		113%	65-1	35		"	*	W	n	
Surrogate: 4-Bromofluorobenzene		108 %	65-1	35		"	"	"	"	
0422KCTP175F (P406097-30RE1) Wa	ater Sam	pled: 06/02	2/04 10:44	Received	1: 06/03/04	14:00				
Carbon disulfide	ND	1.4	10	ug/l	ı	4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		103 %	65-1	35		"	"	"	(n)	
Surrogate: 1,2-Dichloroethane-d4		122 %	65-1	35		"	"	n		
Surrogate: Toluene-d8		93 %	65-1	35		"	"	n		
Surrogate: 4-Bromofluorobenzene		102 %	65-1	35		"	n	n	•	
0422KCTP176D (P406097-31) Water	Sampled	1: 06/02/04	10:44 Red	eived: 06	/03/04 14:0	00				
Carbon tetrachloride	5.8	0.25	0.50	ug/l	ľ	4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	0.67	0.25	0.50		***	Sec. 2	**	H.	**	
Chloromethane	ND	0.25	0.50		900			**	**	
Methylene chloride	ND	2.5	5.0						н	
Surrogate: Dibromofluoromethane		109 %	65-1	35		"		•	"	
Surrogate: 1,2-Dichloroethane-d4		111%	65-1	35		"	,,	"	,,	
Surrogate: Toluene-d8		111%	65-1	35		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	65-1	35		"	•		•	





Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0422KCTP177A (P406097-32) Water	Sampl	ed: 06/02/04	11:00 Rece	ived: 06	/03/04 14:	00	11 - 17 - 17 - 17 - 17 - 17 - 17 - 17 -			
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	**	7.95	3.993	#			3
Chloromethane	ND	0.25	0.50	**			"	**	•	50
Methylene chloride	ND	2.5	5.0	"	•		"		•	
Surrogate: Dibromofluoromethane		112 %	65-13.	5		N	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		112%	65-13.	5		"	n	"	,,	
Surrogate: Toluene-d8		112%	65-13.	5			n	"	ű,	
Surrogate: 4-Bromofluorobenzene		109 %	65-13.	5		"	<i>30</i>	n	"	
0422KCTP177A (P406097-32RE1) Wa	iter S	ampled: 06/02	2/04 11:00	Receive	1: 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 %	65-13.	5		n	"	"	,,	
Surrogate: 1,2-Dichloroethane-d4		119 %	65-13.	5			"	ï	u	
Surrogate: Toluene-d8		95 %	65-13.	5		"	"	n		
Surrogate: 4-Bromofluorobenzene		101 %	65-13.	5				"	**	

VALIDATION COMPLETENESS WORKSHEET LDC #: 12287A1 P406097 SDG #:_

Level III

	Date:8/3/64
	Page: 1 of /
	Reviewer: 🔀
2nd	Reviewer:

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

Laboratory: Sequoia Analytical

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
1.	Technical holding times	A	Sampling dates: 6/2/01
II.	GC/MS Instrument performance check	N	Not ugd up here (u)
III.	Initial calibration	A	% RS9 12
IV.	Continuing calibration / I CV	A	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	insufficient sample
VIII.	Laboratory control samples	A.	LC5/9
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	Not used by lend 111
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	Å	
XVI.	Field duplicates	SW	D= 4+5, 32+34 32+34a
XVII.	Field blanks	No	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:

3	0422KCTP146F	112	0422KCTP156F	212	0422KCTP166F	314	0422KCTP174FRE
23	0422KCTP147F	122	0422KCTP157F	22 2	0422KCTP167F	323	0422KCTP175F
31	0422KCTP148F	132	0422KCTP158F	23	0422KCTP168F	33 4	0422KCTP175FRE
1 1	0422KCTP149F	142	0422KCTP159F	242	0422KCTP169F	343	0422KCTP176D
5 1 6	0422KCTP150D	152	0422KCTP160F	252	0422KCTP170F	353	0422KCTP177A
3 (0422KCTP151F	16 ²	0422KCTP161F	26	0422KCTP171F	36	0422KCTP177ARE
, 2	0422KCTP152F	172	0422KCTP162F	273	0422KCTP172F	37	4060164 BLK
37	0422KCTP153F	18	0422KCTP163F	283	0422KCTP173F	38	4060225BLK
97	0422KCTP154F	19	0422KCTP164F	294	0422KCTP173FRE	393	4060285BLK
107	0422KCTP155F	207	0422KCTP165F	303	0422KCTP174F	404	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
3. 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
. 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	мммм.
1,2-Dichloroethane	FF. Styrene	ZZ. 2-Chlorotoluene	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	NNN.
4. 2-Butanone	GG. Xylenes, total	AAA. 1,3,5-Trimethylbenzene	UUU. 1,2-Dichlorotetrafluoroethane	0000.
N. 1,1,1-Trichloroethane	HH. Vinyl acetate	8BB. 4-Chlorotoluene	VVV. 4-Ethyltoluene	PPPP.
D. 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.
0. 1,2-Dichloropropane**	KK. Trichlorofluoromethane	EEE. sec-Butylbenzene	YYY, tert-Butanol	SSSS.
. cis-1,3-Dichloropropene	LL. Methyl-tert-butyl ether	FFF. 1,3-Dichlorobenzene	ZZZ. tert-Butyl alcohol	тттт.
. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	υυυυ.
. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	ww.

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

LDC #:	12207A
SDG #:	12207A1

VALIDATION FINDINGS WORKSHEET Field Duplicates

Page:	1 of /
Reviewer:	St
2nd reviewer:	

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

N N/A Y N N/A

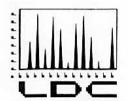
Were field duplicate pairs identified in this SDG? Were target compounds detected in the field duplicate pairs?

	Concentration			
Compound	4	5	RPD ≤50	
D	3.7	3.8	3	
k	0.39	7.37	5	
			9	

	Concentration		
Compound	32	34	RPD ≤5
δ	5.7	5.8	. 2
K	0.67	0.67	0

	Concentration ()	
Compound		RPD

	Concentration ()			
Compound		RPD		



LABORATORY DATA CONSULTANTS, INC.

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

MACTEC

September 7, 2004

5341 Old Redwood Highway, Suite 300

Petaluma, CA 94954

ATTN: Ms. Debbie Leibensberger

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 Le	evel IIIz		Med	LD	C #	123	84	(M/	4C	ΓEC	P-P	eta	lum	ıa,	CA	/ F	ort	Ord	0	U C	T E	3io	Stı	ıdy	20	04)				Pr	oject	#: 40	8703	0006	010	301
LDC	SDG#	DATE REC'D	DATE DUE	V(DA 50B)	(60°	e	Meth Eth Eth	ane	C	O ₂ 75)	(30	3r 0.0)	(30	333	(30		(41	5.1)	Fe (HAT	CH)	(35															
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
Α	P407297	08/20/04	09/03/04	35	0			12		12		12			0	12	0	12	0	12	0	12	0														
		TENEST.	THEIL				T																	1818													
	Pur Cive	11.2													8			W.												in i							
	Min Fill																la.																	10			
	C. Present																	0.0																			
			PT TO												a.					10,1																	
						11															U.S.																
1140	emple an																																				
40.																																					
													190								08								î li								
									28																												
																												_							_		_
																																_				_	
								_												2.1					_				la l								
																																					_
																																			-		
						_																						-			OA.	-			_	_	_
																		Yo.						_													
																																					_
						_																															_
				_																												-			-		-
																										_		_				H					
						-															_																
						-												1.7			_	-															_
														120				10-11 10-9-61									21	_							_		_
																		100																		-	_
																			4-1-10-													_ (1					_
																								_											_		_
																																				Well A	_
																																				0	
Total	В		-1	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	14

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 0428KCTP224F 0428KCTP205F 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.
- Pata 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 0428KCTP201F 0428KCTP203F 0428KCTP204F 0428KCTP204F 0428KCTP205F 0428KCTP206F 0428KCTP206F 0428KCTP206F 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	Reported	Modified Final
	TIC (RT in minutes)	Concentration	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 0428KCTP214F 0428KCTP219F 0428KCTP220F 0428KCTP220F	Acetone	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects)	Р

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:

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

	Concentration (ug/L)		
Compound	0428KCTP208F	0428KCTP208D	RPD (Limits)
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

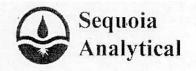
SDG	Sample	Analyte	Flag	A or P	Reason
P407297	0428KCTP193F 0428KCTP195F 0428KCTP199F 0428KCTP199D 0428KCTP202F 0428KCTP205F 0428KCTP208F 0428KCTP219F 0428KCTP213F 0428KCTP213F 0428KCTP214F 0428KCTP219F 0428KCTP219F 0428KCTP220F 0428KCTP220F	Acetone	J (all detects)	P	Compound quantitation and CRQLs

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	Α	

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

No Sample Data Qualified in this SDG

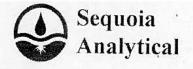


Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P407297 Reported: 07/30/04 10:39

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

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP193F (P407297-01) Water	Samp	led: 07/13/04	08:00 Rece	ived: 07	/15/04 08:	55				
Acetone	110	J 1.9	10	ug/l	ī	4070471	07/24/04	07/24/04	EPA 8260B	Е
Carbon tetrachloride	ND	0.25	0.50	"			ı			
Chloroform	ND	0.25	0.50	"		•	и			398
Chloromethane	ND	0.25	0.50	•		ď	"	30.7		
Methylene chloride	ND	2.5	5.0	"					u.	
Surrogate: Dibromofluoromethane		103 %	65-13	5		. "	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		106 %	65-13	5		"	"	"		
Surrogate: Toluene-d8		96 %	65-13	5				"	**	
Surrogate: 4-Bromofluorobenzene		91 %	65-13	5			"			
0428KCTP194F (P407297-02) Water	Samp	led: 07/13/04	08:04 Rece	ived: 07	/15/04 08:5	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		900			н		
Chloroform	ND	0.25	0.50	H.	.00	n n		н	n.	
Chloromethane	ND	0.25	0.50		0.0	. 10	"	н	: " '-,	
Methylene chloride	ND	2.5	5.0	Ħ	90.2	n.	*	۳.	Icceptal	le_
Surrogate: Dibromofluoromethane		110 %	65-13	5		W		"		
Surrogate: 1,2-Dichloroethane-d4		110%	65-13	5			n	,		
Surrogate: Toluene-d8		96 %	65-13	5					"	
Surrogate: 4-Bromofluorobenzene		94 %	65-13	5			•	,,		
0428KCTP195F (P407297-03) Water	Samp	led: 07/13/04	08:13 Rece	ived: 07	/15/04 08:5	55				
Acetone	150	J 1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	Е
Carbon tetrachloride	4.5	0.25	0.50	п	"	•				
Chloroform	0.40	0.25	0.50		**		"			J
Chloromethane	ND	0.25	0.50			•	**	"	"	
Methylene chloride	ND	2.5	5.0	,	"	. "	n	n	n	
Surrogate: Dibromofluoromethane		104 %	65-13	5		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		109 %	65-13	5		"	"	"	,,	
Surrogate: Toluene-d8		94 %	65-13	5		•	"	,,	"	
Surrogate: 4-Bromofluorobenzene		92 %	65-13	5		**	"	"	"	

R 82604



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	Note
0428KCTP196F (P407297-04) Water	Sampled	07/13/04	08:15 Rece	ived: 07	/15/04 08::	55				
Acetone	77	1.9	10	ug/l	i	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	4.2	0.25	0.50	•	11	н	11		"	
Chloroform	0.42	0.25	0.50				.11	11		
Chloromethane	ND	0.25	0.50				.00	н ,		
Methylene chloride	ND	2.5	5.0			380	n		u	
Surrogate: Dibromofluoromethane		111%	65-13.	5		"	n	n	"	
Surrogate: 1,2-Dichloroethane-d4		116%	65-13.	5		"		,,	,,	
Surrogate: Toluene-d8		91%	65-13.	5			,,	"	"	
Surrogate: 4-Bromofluorobenzene		92 %	65-13.	5		,,	"	,,	,,	
0428KCTP197F (P407297-05) Water	Sampled:	07/13/04	08:17 Rece	ived: 07	/15/04 08:5	55				
Acetone	68	1.9	10	ug/l	E -	4070471	07/24/04	07/25/04	EPA 8260B	-
Carbon tetrachloride	2.0	0.25	0.50	11		"	"	"	LI A 8200B	
Chloroform	0.25	0.25	0.50				H			J
Chloromethane	' ND	0.25	0.50						11	,
Methylene chloride	ND	2.5	5.0	1111	"					
Surrogate: Dibromofluoromethane		107 %	65-135	5		"	,		,,	
Surrogate: 1,2-Dichloroethane-d4		110%	65-135	5		"	"	,,	,,	
Surrogate: Toluene-d8		92 %	65-135	5		,,		,,		
Surrogate: 4-Bromofluorobenzene		93 %	65-135	5			"	"	,,	
0428KCTP198F (P407297-06) Water	Sampled:	07/13/04	08:28 Recei	ived: 07/	15/04 08:5	5				
Acetone	97	1.9	10	ug/l		4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	4.8	0.25	0.50	"		"	"	"	# #	
Chloroform	0.87	0.25	0.50			n.				
Chloromethane	ND	0.25	0.50	н						
Methylene chloride	ND	2.5	5.0				.0		*	
Surrogate: Dibromofluoromethane		107 %	65-135			"	,,	n n	,	
Surrogate: 1,2-Dichloroethane-d4		108 %	65-135			"	"	"	,,	
Surrogate: Toluene-d8		95 %	65-135				"	,,	,,	
Surrogate: 4-Bromofluorobenzene		87 %	65-135			,,	727	,,	. ,,	

Acceptable

8 7265Y



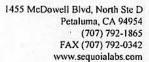


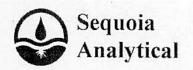
Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P407297 Reported: 07/30/04 10:39

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

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0428KCTP199F (P407297-07) Water	Sampl	led: 07/13/04	08:30 Rece	ived: 07	/15/04 08:	55		8		3
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	"	"	"	"	n	n.	
Surrogate: Dibromofluoromethane		111%	65-13	5		"	" "	n	"	
Surrogate: 1,2-Dichloroethane-d4		118 %	65-13	5		"	"		•	
Surrogate: Toluene-d8		94 %	65-13	5		"		" :	"	
Surrogate: 4-Bromofluorobenzene		90 %	65-13	5		"	"	"	"	
0428KCTP199D (P407297-08) Water	Samp	led: 07/13/04	08:33 Rec	eived: 07	/15/04 08:	55				
Acetone	120	J 1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	Е
Carbon tetrachloride	NĎ	0.25	0.50	н		"	"	n	n	
Chloroform	ND	0.25	0.50		.0					
Chloromethane	ND	0.25	0.50	н	o.	**	n .	, a		
Methylene chloride	ND	2.5	5.0	. 11	a	11	u		н	
Surrogate: Dibromofluoromethane		112 %	65-13	5		**	"	"	n.	
Surrogate: 1,2-Dichloroethane-d4		116%	65-13	5		"	"		n .	
Surrogate: Toluene-d8		96 %	65-13	5		"	"	"		
Surrogate: 4-Bromofluorobenzene		89 %	65-13	5		"	"	"	"	
0428KCTP200F (P407297-09) Water	Sampl	led: 07/13/04	08:36 Rece	ived: 07	/15/04 08:5	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	"						٢,
Methylene chloride	ND	2.5	5.0		•		"	"	Accepta	ble
Surrogate: Dibromofluoromethane		110 %	65-13	5					,, 1	
Surrogate: 1,2-Dichloroethane-d4		115 %	65-13	5		"	"		"	
Surrogate: Toluene-d8		96 %	65-13	5		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89 %	65-13	5		"	"			

be break 38





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
0428KCTP201F (P407297-10) Water	Sampl	ed: 07/13/04 0	8:50 Rece	ived: 07	/15/04 08:	55				A.515-44A.5
Acetone	82	1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	11	0.25	0.50	11		X 6 0/2	U			
Chloroform	1.3	0.25	0.50					4.0		
Chloromethane	ND	0.25	0.50			n				- 51
Methylene chloride	ND	2.5	5.0					,	Acceptable	e
Surrogate: Dibromofluoromethane		114%	65-13	5			"	"	" \	
Surrogate: 1,2-Dichloroethane-d4		123 %	65-13	5		"	"	"	, "	
Surrogate: Toluene-d8		93 %	65-13	5				"	"	
Surrogate: 4-Bromofluorobenzene		89 %	65-13	5		"	,,	"	"	
0428KCTP202F (P407297-11) Water	Sampl	ed: 07/13/04 0	8:53 Rece	ived: 07	/15/04 08:5	55				
Acetone	190	J 1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	Е
Carbon tetrachloride	10	0.25	0.50	n		"				
Chloroform	1.4	0.25	0.50		"		"			
Chloromethane	ND	0.25	0.50		н		11	S n .		
Methylene chloride	ND	2.5	5.0		"		"	**		
Surrogate: Dibromofluoromethane		116%	65-13.	5		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		124 %	65-13.	5		W.:	"	"	"	
Surrogate: Toluene-d8		96 %	65-13.	5		n	n	"		
Surrogate: 4-Bromofluorobenzene		90 %	65-13.	5		"	,	,,	. ,	
0428KCTP203F (P407297-12) Water	Sampl	ed: 07/13/04 0	8:56 Rece	ived: 07	/15/04 08:5	55				
Acetone	51	U 1.9	10	ug/l	112	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	11	0.25	0.50	"		11	n	n	,	
Chloroform	1.4	0.25	0.50	H		W		n	n	
Chloromethane	ND	0.25	0.50	**	200					
Methylene chloride	ND	2.5	5.0	11	11	. "	H		Acceptat	ole
Surrogate: Dibromofluoromethane		115 %	65-13.	5		n_	,,	"	,,)	
Surrogate: 1,2-Dichloroethane-d4		122 %	65-13.	5		"	"	"	•	
Surrogate: Toluene-d8		97 %	65-13.	5		"		"		
Surrogate: 4-Bromofluorobenzene		88 %	65-13.				"	"	n	

NC 82604





Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki

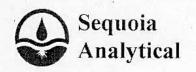
P407297 Reported: 07/30/04 10:39

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

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0428KCTP204F (P407297-13) Water	Sampled	: 07/13/04	09:08 Rece	ived: 07	/15/04 08::	55				
Acetone	83	1.9	10	ug/l	i	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	9.2	0.25	0.50	u	"	"		п,	11	
Chloroform	1.6	0.25	0.50			**	•			
Chloromethane	ND	0.25	0.50							
Methylene chloride	ND	2.5	5.0			•	H	, ,	Acce etable	
Surrogate: Dibromofluoromethane		116%	65-13.	5		"	"	"		-0.00
Surrogate: 1,2-Dichloroethane-d4		122 %	65-13.	5		"	10		,,	
Surrogate: Toluene-d8		98 %	65-13.	5		"	"	m in	"	
Surrogate: 4-Bromofluorobenzene 🐪 🦂		89 %	65-13.	5		**	n	"	"	
0428KCTP205F (P407297-14) Water	Sampled	1: 07/13/04	09:11 Rece	ived: 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		н		"			
Chloroform	1.9	0.25	0.50	н	::00:	.0	11		m .	
Chloromethane	ND	0.25	0.50	н	310	.11	n	n,	H.	
Methylene chloride	ND	2.5	5.0	"			11	EU :	П	
Surrogate: Dibromofluoromethane		118%	65-13:	ī		***	"	11	"	
Surrogate: 1,2-Dichloroethane-d4		128 %	65-13:	ī		**	11	n		
Surrogate: Toluene-d8		95 %	65-13	7		"	"	"		
Surrogate: 4-Bromofluorobenzene		91%	65-13:				"	"	,,	
0428KCTP206F (P407297-15) Water	Sampled	1: 07/13/04	09:14 Rece	ved: 07	/15/04 08:5	55				
Acetone	99	1.9	10	ug/l	L	4070471	07/24/04	07/25/04	EPA 8260B	
Carbon tetrachloride	0.91	0.25	0.50	"	n	11	"	"		
Chloroform	3.6	0.25	0.50			"	· ·	•	11	
Chloromethane	ND	0.25	0.50		**					
Methylene chloride	ND	2.5	5.0	.11	n		- "		Acceptab	لع
Surrogate: Dibromofluoromethane		120 %	65-13	2		,,	"	,,	" 1,	
Surrogate: 1,2-Dichloroethane-d4		129 %	65-13:	ī		"	"	"	•	
Surrogate: Toluene-d8		91%	65-13	1		"	"			
Surrogate: 4-Bromofluorobenzene		89 %	65-13:	-		"	W	**	"	

pe 82604





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	MDI	Reporting		Dilati					00037477118
Analyte	Kesuit	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0428KCTP207F (P407297-16) Water	Sampl	led: 07/13/04	09:25 Rece	ived: 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	,	"	·		*	n .	
Chloroform	1.6	0.25	0.50		"	"		,"		
Chloromethane	ND	0.25	0.50	"	11	"		(9)		
Methylene chloride	ND	2.5	5.0	"	11	, н			Accepta	He
Surrogate: Dibromofluoromethane		120 %	65-13:	5		' "	,,	"	"]	II G
Surrogate: 1,2-Dichloroethane-d4		132 %	65-133	5		,,,	"	n	. "	
Surrogate: Toluene-d8		95 %	65-13:	5		"	"	"	,,	
Surrogate: 4-Bromofluorobenzene		87 %	65-13	5		"				
0428KCTP208F (P407297-17) Water	Sampl	ed: 07/13/04	09:28 Rece	ived: 07	/15/04 08:5	55				
Acetone	140	J 1.9	10	ug/l	1	4070471	07/24/04	07/25/04	EPA 8260B	Е
Carbon tetrachloride	9.5	0.25	0.50	"	.0		n	11	. "	
Chloroform	1.7	0.25	0.50	н	111					
Chloromethane	ND	0.25	0.50				- (0)			
Methylene chloride	ND	2.5	5.0	"		,		n	= , '	
Surrogate: Dibromofluoromethane		122 %	65-133	i		"	n	,,	"	
Surrogate: 1,2-Dichloroethane-d4		134 %	65-135			"	"	"	"	
Surrogate: Toluene-d8		97 %	65-135			*	"	"	"	
Surrogate: 4-Bromofluorobenzene		88 %	65-135						"	
0428KCTP208D (P407297-18) Water	Samp	led: 07/13/04	09:28 Rece	ived: 07	/15/04 08:5	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		11					
Chloroform	1.2	0.25	0.50	9	"	н	11			
Chloromethane	ND	0.25	0.50	•	•			"		
Methylene chloride	ND	2.5	5.0		•	. "			Acceptal	ble
Surrogate: Dibromofluoromethane		100 %	65-135			"	.,	"	, 1,	
Surrogate: 1,2-Dichloroethane-d4		104 %	65-135			"	•	"	"	
Surrogate: Toluene-d8		105 %	65-135	_		n.		n	"	
Surrogate: 4-Bromofluorobenzene		104 %	65-135	ī		n	•	'n	"	

X 82604



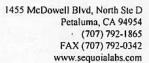


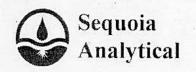
Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P407297 Reported: 07/30/04 10:39

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

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP209F (P407297-19) Water	Sampl	ed: 07/13/04	09:31 Rece	ived: 07	/15/04 08:	55		- 4		*
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					n,	30	
Chloroform	1.0	0.25	0.50	7.00	н	(n)		n		
Chloromethane	ND	0.25	0.50	**		3,00	ii .	и.,	н_	
Methylene chloride	ND	2.5	5.0		"	11	210	n	"	
Surrogate: Dibromofluoromethane	1	100 %	65-13.	5		"	"		- n	
Surrogate: 1,2-Dichloroethane-d4		103 %	65-13.	5		"	,,	"	"	
Surrogate: Toluene-d8		103 %	65-13.	5		"	,,	"	•	
Surrogate: 4-Bromofluorobenzene		105 %	65-13.	5		"	n	"	,,	
0428KCTP210F (P407297-20) Water	Sampl	led: 07/13/04	09:55 Rece	ived: 07	/15/04 08:5	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			n			n	
Chloromethane	ND	0.25	0.50				•	"	. "	
Methylene chloride	ND	2.5	5.0	11		"	•		Accepta	de
Surrogate: Dibromofluoromethane		98 %	65-13.	5			- "	"	, 1	
Surrogate: 1,2-Dichloroethane-d4		103 %	65-13.	5			,,	,,	, ,	
Surrogate: Toluene-d8		104 %	65-13.	5		"	,,	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	65-13.	5			"	**	"	
0428KCTP211F (P407297-21) Water	Sampl	led: 07/13/04	09:58 Rece	ived: 07	/15/04 08:5	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	n	11	,11	n	.0.		
Chloroform	1.0	0.25	0.50			90:1	n	.00	н	
Chloromethane	ND	0.25	0.50	5995	10.	**	и		n .	
Methylene chloride	ND	2.5	5.0	H			11		Accepta	ble
Surrogate: Dibromofluoromethane		101 %	65-13.	5		900	"	11.0	"	
Surrogate: 1,2-Dichloroethane-d4		105 %	65-13.	5			**	"	- H	
Surrogate: Toluene-d8		103 %	65-13.	5		"	"	"		
Surrogate: 4-Bromofluorobenzene		105 %	65-13.	5		"	"		"	

58 82604





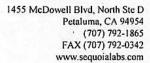
Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki

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
0428KCTP212F (P407297-22) Water	Sample	ed: 07/13/04	10:00 Recei	ved: 07	/15/04 08::	55				
Acetone	130	J 1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	Е
Carbon tetrachloride	8.0	0.25	0.50	. 11						
Chloroform	1.1	0.25	0.50					,"		
Chloromethane	ND	0.25	0.50						- н	
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	Sample	ed: 07/13/04	10:15 Recei	ved: 07	/15/04 08:5	55				
Acetone	130	J 1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	Е
Carbon tetrachloride	8.3	0.25	0.50	11		"	310	"	, "	
Chloroform	1.0	0.25	0.50		,	3113	- 0.		n .	
Chloromethane	ND	0.25	0.50		**	. 11		н		
Methylene chloride	ND	2.5	5.0	11	н	u	n	u	. , ,	
Surrogate: Dibromofluoromethane		99 %	65-135			"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		104 %	65-135			n	"	"	'n	
Surrogate: Toluene-d8		104 %	65-135			,,	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	65-135				"	,	"	
0428KCTP214F (P407297-24) Water	Sample	ed: 07/13/04	10:18 Recei	ved: 07	/15/04 08:5	55				
Acetone	110	J 1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	Е
Carbon tetrachloride	8.1	0.25	0.50	"		н			11	
Chloroform	1.0	0.25	0.50	и		**				
Chloromethane	ND	0.25	0.50			н	н			
Methylene chloride	ND	2.5	5.0	11		. "	n			
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				"	"	"	

A 82604





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
0428KCTP215F (P407297-25) Water	Sample	1: 07/13/04	10:21 Rece	ived: 07	/15/04 08:	55				
Acetone	66	1.9	10	ug/l	Ĭ	4070517	07/27/04	07/27/04	EPA 8260B	
Carbon tetrachloride	7.7	0.25	0.50	"	•			11		
Chloroform	0.93	0.25	0.50	н	"	"	"	,"		
Chloromethane	ND	0.25	0.50			11	"	•		
Methylene chloride	ND	2.5	5.0	*		. "		•		
Surrogate: Dibromofluoromethane		100 %	65-13:	ī	*	٠ ,,	"	"	,	
Surrogate: 1,2-Dichloroethane-d4		106 %	65-13:	5	28		"	"	. "	
Surrogate: Toluene-d8		104 %	65-13	5		n	**	"	,,	
Surrogate: 4-Bromofluorobenzene		105 %	65-133	5			"	"	"	
0428KCTP216F (P407297-26) Water	Sample	1: 07/13/04	10:26 Rece	ived: 07	//15/04 08::	55				
Acetone	72	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	1177
Carbon tetrachloride	9.9	0.25	0.50			30.	31	(A)	3/ 0	
Chloroform	1.1	0.25	0.50		и.	. W . 32	- "	(10)	n.	
Chloromethane	ND	0.25	0.50	303		39	11.	n		
Methylene chloride	ND	2.5	5.0		н	.11		11	m '	
Surrogate: Dibromofluoromethane		101 %	65-13:	5		"	n	"	"	
Surrogate: 1,2-Dichloroethane-d4		106 %	65-135	5		"	\boldsymbol{u} :	n	n	
Surrogate: Toluene-d8		103 %	65-133	5			"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	65-13:	7		,,	7	,,	"	
0428KCTP217F (P407297-27) Water	Sample	d: 07/13/04	10:28 Rece	ived: 07	/15/04 08:	55			6 THE	
Acetone	54	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	- 1
Carbon tetrachloride	9.4	0.25	0.50	u		,,	11		H	
Chloroform	1.2	0.25	0.50			,	**		- "	
Chloromethane	ND	0.25	0.50	н	"		**			- 13
Methylene chloride	ND	2.5	5.0	н	"		"		n	
Surrogate: Dibromofluoromethane		100 %	65-13	5		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		105 %	65-13:	5		"	n	"	"	
Surrogate: Toluene-d8		103 %	65-13:	5		"	"	,,	"	
Surrogate: 4-Bromofluorobenzene		105 %	65-13.	5		"	"	116	"	

Acceptable

X 82804





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	Sample	ed: 07/13/0	4 10:31 Rece	ived: 07	//15/04 08::	55		V		
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	н		H			n	
Chloroform	1.2	0.25	0.50	"		"				
Chloromethane	ND	0.25	0.50	u	n	u				
Methylene chloride	ND	2.5	5.0	u	Ħ	"	"		Accept	ille
Surrogate: Dibromofluoromethane		102 %	65-13	5		.,	,,	"	, , , , , ,	
Surrogate: 1,2-Dichloroethane-d4		104 %	65-13	5		,,	,,	"	,,	
Surrogate: Toluene-d8		103 %	65-13	5		"	"	#	"	
Surrogate: 4-Bromofluorobenzene		104 %	65-13	5		"	"	· n	,,,	
0428KCTP219F (P407297-29) Water	Sample	ed: 07/13/0	4 10:41 Rece	ived: 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	"	"	"	•	11	***	
Chloroform	ND	0.25	0.50				11		.11	
Chloromethane	ND	0.25	0.50	o				m,	.00	
Methylene chloride	ND	2.5	5.0			H	200	10	30.7	
Surrogate: Dibromofluoromethane	W. A. Sandari	101 %	65-13	5		"	,,	"		
Surrogate: 1,2-Dichloroethane-d4		105 %	65-13	5		"	"	**	"	
Surrogate: Toluene-d8		104 %	65-13	5		n	"	,,	"	
Surrogate: 4-Bromofluorobenzene		105 %	65-13	5		. "	"	,,	, ,	
0428KCTP220F (P407297-30) Water	Sample	ed: 07/13/0	4 10:44 Rece	ived: 07	/15/04 08:5	55				
Acetone	120	J 1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	Е
Carbon tetrachloride	3.7	0.25	0.50	"	10		-10	11	н	
Chloroform	0.28	0.25	0.50	11	900	H				J
Chloromethane	ND	0.25	0.50	n	n	H		"		
Methylene chloride	ND	2.5	5.0	n			n			
Surrogate: Dibromofluoromethane		101 %	65-13	5		"	"	"	,,	
Surrogate: 1,2-Dichloroethane-d4		106 %	65-13	5		"	"	"	,,	
Surrogate: Toluene-d8		103 %	65-13	5		"	,,	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	65-13	5		,,			"	

FR 82604



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

			Reporting							
Analyte	Result	MDL	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0428KCTP221F (P407297-31) Water	Sampled:	07/13/04	10:47 Recei	ved: 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	"		н	"		н .	
Chloroform	0.36	0.25	0.50	"				,"	. #	, J
Chloromethane	ND	0.25	0.50	n				:n:		50
Methylene chloride	ND	2.5	5.0	,,		. "	".	.116.	Accepta	ble
Surrogate: Dibromofluoromethane		100 %	65-135				"	"	"	
Surrogate: 1,2-Dichloroethane-d4		105 %	65-135			11	"	H	, 100 P	
Surrogate: Toluene-d8		104 %	65-135			"	"	"		
Surrogate: 4-Bromofluorobenzene		104 %	65-135			"	"	"	,	
0428KCTP222F (P407297-32) Water	Sampled:	07/13/04	10:58 Recei	ved: 07	/15/04 08:5	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	11		"	n			
Chloroform	0.37	0.25	0.50	11	38.6		H		"	J
Chloromethane	ND	0.25	0.50	11						
Methylene chloride	ND	2.5	5.0	N				0	Accep	able
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 Recei	ved: 07	/15/04 08:5	55				
Acetone	350 🎝	1.9	10	ug/l	1	4070517	07/27/04	07/27/04	EPA 8260B	Е
Carbon tetrachloride	4.8	0.25	0.50	. 11	,	"	"			
Chloroform	0.48	0.25	0.50	11	11		11	,		J
Chloromethane	ND	0.25	0.50	n						
Methylene chloride	ND	2.5	5.0	"		. 10	ii		"	
Surrogate: Dibromofluoromethane		100 %	65-135			"	"	,,	,	
Surrogate: 1,2-Dichloroethane-d4		108 %	65-135			"	: 11	"	30	
Surrogate: Toluene-d8		104 %	65-135			".	"	n	n	
Surrogate: 4-Bromofluorobenzene		103 %	65-135			n_	,,	"	"	

SP 8>604



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
0428KCTP224F (P407297-34) Water	Sample	1: 07/13/04	11:05 Recei	ved: 07	/15/04 08::	55		W 40		20
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	n	.00	n	#		•	
Chloroform	0.37	0.25	0.50	*	4	11	н			J
Chloromethane	ND	0.25	0.50	*		H	"		п	
Methylene chloride	ND	2.5	5.0	Ħ	11	- "				
Surrogate: Dibromofluoromethane		101 %	65-135			n	"	,		
Surrogate: 1,2-Dichloroethane-d4		106 %	65-135				"	•		
Surrogate: Toluene-d8		104 %	65-135			"	"			
Surrogate: 4-Bromofluorobenzene ' ·		104 %	65-135			"	n	"		
0428KCTP225A (P407297-35) Water	Sample	d: 07/13/04	11:12 Recei	ved: 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	"	•	"	u		11	
	3.155	0.25	0.50	11		**	- 0		**	
Chloroform ,	, ND	0.25	0.50		2000	255				
Chloroform , Chloromethane	, ND ND	0.25	0.50				• •	Ŷ		
	100 Maria 100 Ma						u '	ų	n - n	
Chloromethane	ND	0.25	0.50							
Chloromethane Methylene chloride	ND	0.25 2.5	0.50 5.0							1
Chloromethane Methylene chloride Surrogate: Dibromofluoromethane	ND	0.25 2.5 100 %	0.50 5.0 65-135			" "		"	"	10

Acceptable

VALIDATION COMPLETENESS WORKSHEET LDC #:_ 12384A1 SDG #:_ P407297

Level III

2nd Reviewer:_

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

Laboratory: Sequoia Analytical

(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
1.	Technical holding times	Δ	Sampling dates: 7/14/04
II.	GC/MS Instrument performance check	N	not reviewed for lavel 11
101.	Initial calibration	Δ	0
IV.	Continuing calibration	4	
V.	Blanks	SW fre	
VI.	Surrogate spikes	4	
VII.	Matrix spike/Matrix spike duplicates	7	insufficient sample
VIII.	Laboratory control samples	A	102/9
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	1	not reviewed for level 111
XI.	Target compound identification	N	0
XII.	Compound quantitation/CRQLs	SW	
XIII.	Tentatively identified compounds (TICs)	N	
XIV.	System performance	N	
XV.	Overall assessment of data	4	
XVI.	Field duplicates	SW	D= 7+8, 17+18
XVII.	Field blanks	No	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: he # 0/>

	Ju th	y0' >					
1	0428KCTP193F	11	0428KCTP202F	212	0428KCTP211F	31 2	0428KCTP221F
2 1	0428KCTP194F	12	0428KCTP203F	22 2	0428KCTP212F	32 2	0428KCTP222F
3 1	0428KCTP195F	13 1	0428KCTP204F	23	0428KCTP213F	332	0428KCTP223F
1 1	0428KCTP196F	14 1	0428KCTP205F	24 2	0428KCTP214F	342	0428KCTP224F
5 1	0428KCTP197F	15 1	0428KCTP206F	25	0428KCTP215F	35 2	0428KCTP225A
3 1	0428KCTP198F	16 '	0428KCTP207F	26 2	0428KCTP216F	36	407047184
, 1	0428KCTP199F	17	0428KCTP208F	272	0428KCTP217F	37 2	4070517BLK
3 1	0428KCTP199D		0428KCTP208D	282	0428KCTP218F	38-3	4010539ELK
9 1	0428KCTP200F	19	0428KCTP209F	29 2	0428KCTP219F	39	
10 1	0428KCTP201F	20 2	0428KCTP210F	302	0428KCTP220F	40	a serie Land

TARGET COMPOUND WORKSHEET

METHOD: VOA (EPA SW 846 Method 8260B)

A. Chloromethane*	U. 1,1,2-Trichloroethane	OO. 2,2-Dichloropropane	III. n-Butylbenzene	Tagget
				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	мммм.
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	0000.
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	ттт.
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	ww.

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

LDC #:	1238441
SDG #:	7407297

VALIDATION FINDINGS WORKSHEET **Blanks**

Page:	_of/
Reviewer:	86
nd Reviewer	d

	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".
N N/A	
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: 64 1-17 Associated Samples:

Compound	Blank ID	Sample Identification						
	407047181K	[2	1-11, 13-17	2 - 1 F. F. F. F. F. S. L.				
Methylene chloride								
Acetone	5.36	51/U	7/0x					
	NATIFACIA SE AL			4 . 1				
					THE TOTAL			
CRQL						NEW LINE		

Blank analysis date:_____ Associated Samples: Conc. units:

Compound	Blank ID	Sample Identification						
Methylene chloride								
Acetone								
							The Value Land	
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 #:_	12	38	44	1
LDC #:_ SDG #:_	PL	0	126	12

VALIDATION FINDINGS WORKSHEET Compound Quantitation and CRQLs

	Page:	1 of /
	Reviewer:	SC
2nd	Reviewer:	4

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?

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

#	Date	Sample ID	Finding F > Calleb Tange	Associated Samples	Qualifications
		1,3,7,8,11,14,17	F> calleb range		Jutip
		19, 22-24, 29, 30	0		
		33			
	Page 11 Ear				

Comments:	See sample calculation verification worksheet for recalculations	

LDC #: 12384 SDG #: 74075

VALIDATION FINDINGS WORKSHEET Field Duplicates

Page:	1of /
Reviewer:	N
2nd reviewer:	4

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

YW	N/A
YN	N/A

Were field duplicate pairs identified in this SDG? Were target compounds detected in the field duplicate pairs?

	Concentration	(ne/L)	
Compound	1	8	RPD <50
Aatohe	110	120	٩

Compound	. 17	18	RPD ≤10
		10	HPD -30
Acetone	140	89	나 (
0	9.5	6.2	42
K	1.7	1.2	34

	Concentration	()	
Compound			RPD

	Concentration ()	
Compound		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.

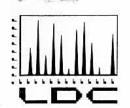
Field duplicates are summarized in Section XIII.

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

August 4, 2004

5341 Old Redwood Highway, Suite 300

Petaluma, CA 94954

ATTN: Ms. Debbie Leibensberger

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

Rei Geny

Project Manager/Senior Chemist

Attachment 1

	RTC				LD	C #	122	287	(M	AC	TEC	P-P	eta	lum	ıa,	CA	/F	ort	Ord	0 1	U C	T E	3io	Stı	ıdy	20	04)				Pr	oject	#: 40	8703	0006	010	30 î
LDC	SDG#	DATE REC'D	DATE DUE	V(OA 60B)																																4
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
Α	P406097	08/02/04	08/16/04																																		
										II V																											
																																					H
																																				1116	
																																					-
														74																							
									18																												
Total	В			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

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 (r²) 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:

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

	Concentra	ation (ug/L)	
Compound	0422KCTP175F	0422KCTP176D	RPD (Limits)
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



Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP146F (P406097-01) Water	Sampled	l: 06/02/04 0	7:53 Recei	ved: 06	/03/04 14:0	00	SELLINE.			
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					ii .		
Surrogate: Dibromofluoromethane		112%	65-135		4					200
Surrogate: 1,2-Dichloroethane-d4		112%	65-135			e.		"	•	
Surrogate: Toluene-d8		118%	65-135			"	"	**		
Surrogate: 4-Bromofluorobenzene		109 %	65-135			"		"	0.00/	
0422KCTP147F (P406097-02) Water	Sampled	1: 06/02/04 0	7:58 Recei	ved: 06	/03/04 14:0	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	ä			30	"	H	
Chloromethane	ND	0.25	0.50						,n	
Methylene chloride	ND	2.5	5.0						.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	1: 06/02/04 0	8:08 Recei	ved: 06	/03/04 14:0	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			11			**	J
Chloromethane	ND	0.25	0.50	"				**	ė.	
Methylene chloride	ND	2.5	5.0	"	•				•	
Surrogate: Dibromofluoromethane		112%	65-135			**	(**)		· # 2	
Surrogate: 1,2-Dichloroethane-d4		114%	65-135			"	**	"		
Surrogate: Toluene-d8		115%	65-135			n			n	
Surrogate: 4-Bromofluorobenzene		109 %	65-135			"			· P	





Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Donald	MDL	Reporting Limit	11-5-	Dilasi	D 1					444000
Analyte	Result	MUL	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method		Note
0422KCTP149F (P406097-04) Water	Sample	d: 06/02/04 0	8:11 Recei	ved: 06	/03/04 14:0	00					
Carbon tetrachloride	3.7	0.25	0.50	ug/l	1	4060164	06/07/04	06/08/04	EPA 8260B	-9	
Chloroform	0.39	0.25	0.50		"	11.					
Chloromethane	ND	0.25	0.50				.01				
Methylene chloride	ND	2.5	5.0	,,					300%		
Surrogate: Dibromofluoromethane		115%	65-135					,			
Surrogate: 1,2-Dichloroethane-d4		112%	65-135	i i					•		
Surrogate: Toluene-d8	34	112%	65-135	ā				,			
Surrogate: 4-Bromofluorobenzene		108 %	65-135			*	,,	•	,,		
0422KCTP150D (P406097-05) Water	Sample	d: 06/02/04 0	8:11 Recei	ved: 06	/03/04 14:0	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	"			"	"			
Chloromethane	ND	0.25	0.50	"				"			
Methylene chloride	ND	2.5	5.0				•	"			
Surrogate: Dibromofluoromethane		112%	65-135			"	30	"		2005	
Surrogate: 1,2-Dichloroethane-d4		114%	65-135			"	30		"		
Surrogate: Toluene-d8		112%	65-135			_ n	n _	"	"		
Surrogate: 4-Bromofluorobenzene		108 %	65-135			#	'n	"	*		
0422KCTP151F (P406097-06) Water	Sample	1: 06/02/04 0	8:15 Recei	ved: 06	/03/04 14:0	0					
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		0	**	"	"			
Chloromethane	ND	0.25	0.50			**	"	n	0		
Methylene chloride	ND	2.5	5.0	"		"		"	э		
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				"	"	"		



Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP152F (P406097-07) Water	Sampled	: 06/02/04	08:44 Recei	ved: 06	/03/04 14:0	00				W. I
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			11	- 10	*	- (n)	
Chloromethane	ND	0.25	0.50				- 0		n :	
Methylene chloride	ND	2.5	5.0		"	10.		11	an a	
Surrogate: Dibromofluoromethane		110%	65-135				•	,,	"	
Surrogate: 1,2-Dichloroethane-d4		110%	65-135				•		(20)	
Surrogate: Toluene-d8		112%	65-135				"			
Surrogate: 4-Bromofluorobenzene		110%	65-135				"	,,		
0422KCTP153F (P406097-08) Water	Sampled	: 06/02/04	08:47 Recei	ved: 06	/03/04 14:0	00				
Carbon tetrachloride	ND	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	197
Chloroform	1.3	0.25	0.50			*	,n			
Chloromethane	ND	0.25	0.50	7		"	"			
Methylene chloride	ND	2.5	5.0	"		"	,,	"		
Surrogate: Dibromofluoromethane		109 %	65-135			n.	n	ŭ		
Surrogate: 1,2-Dichloroethane-d4		112%	65-135			n	- "	"	· · · · · · · · · · · · · · · · · · ·	
Surrogate: Toluene-d8		112 %	65-135			"		"	3 1 4	
Surrogate: 4-Bromofluorobenzene		111%	65-135			n	"	**		
0422KCTP154F (P406097-09) Water	Sampled	: 06/02/04	08:50 Recei	ved: 06	/03/04 14:0	00				
Carbon tetrachloride	ND	0.25	0.50	ug/l		4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	1.2	0.25	0.50	"	- "					
Chloromethane	ND	0.25	0.50	0	16			.00	п	
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			"		"		



Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0422KCTP155F (P406097-10) Water	Sampled:	06/02/04 0	9:03 Rece	ived: 06	/03/04 14:0	00				3.ET
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		•	n				
Chloromethane	ND	0.25	0.50	'n		n	•	17		
Methylene chloride	ND	2.5	5.0		н	n.		11		
Surrogate: Dibromofluoromethane		111%	65-13	5				"	"	
Surrogate: 1,2-Dichloroethane-d4		111%	65-13	5			"		"	
Surrogate: Toluene-d8		113%	65-13	5			"	"		
Surrogate: 4-Bromofluorobenzene		110%	65-13	5		"				
0422KCTP156F (P406097-11) Water	Sampled:	06/02/04 0	9:06 Rece	ived: 06	/03/04 14:0	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		30			3.00		
Chloromethane	ND	0.25	0.50		(0)					
Methylene chloride	ND	2.5	5.0				"			
Surrogate: Dibromofluoromethane		111%	65-13	5		*	ii ii			
Surrogate: 1,2-Dichloroethane-d4		111%	65-13	5		"	"	"		
Surrogate: Toluene-d8		113 %	65-13	5		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110%	65-13	5		"	"	n	"	
0422KCTP157F (P406097-12) Water	Sampled:	06/02/04 0	9:09 Rece	ived: 06	/03/04 14:0	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		"	"	n	"		
Chloromethane	ND	0.25	0.50			"	n			
Methylene chloride	ND	2.5	5.0	"	,	11	n .			
Surrogate: Dibromofluoromethane		110%	65-13	5		: 11 :5		"		
Surrogate: 1,2-Dichloroethane-d4		111%	65-13	5		(#C)	"	"	"	
Surrogate: Toluene-d8		113 %	65-13	5		200	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	65-13	5		. **	"	"	"	

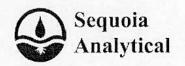




Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP158F (P406097-13) Water	Sample	1: 06/02/04 0	9:18 Rece	eived: 06	/03/04 14:0	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						40/	
Chloromethane	ND	0.25	0.50							
Methylene chloride	ND	2.5	5.0			H			2413	
Surrogate: Dibromofluoromethane		108 %	65-13	5		. "		,,	•	
Surrogate: 1,2-Dichloroethane-d4		110%	65-13	5		,,	,,	,,	•	
Surrogate: Toluene-d8		112%	65-13	5			"	"	*	
Surrogate: 4-Bromofluorobenzene		110%	65-13	5		,,	"	"		
0422KCTP159F (P406097-14) Water	Sample	pled: 06/02/04 09:21 Received: 06/03/04 14:00								
Carbon tetrachloride	8.2	0.25	0.50	ug/l	1 1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	0.82	0.25	0.50	"						
Chloromethane	ND	0.25	0.50	**		•	'n			
Methylene chloride	ND	2.5	5.0	"	"		"		"	
Surrogate: Dibromofluoromethane		111%	65-13	5		"		,,	" .	25
Surrogate: 1,2-Dichloroethane-d4		113 %	65-13	5		*	"	**	n	
Surrogate: Toluene-d8		113 %	65-13	5		"	"	"		
Surrogate: 4-Bromofluorobenzene		111%	65-13	5		"	n	n	- in i	
0422KCTP160F (P406097-15) Water	Sampleo	1: 06/02/04 0	9:24 Rece	ived: 06	/03/04 14:0	00				
Carbon tetrachloride	7.9	0.25	0.50	ug/l	I	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	0.81	0.25	0.50		11				10	
Chloromethane	ND	0.25	0.50		и:	. 10		u		
Methylene chloride	ND	2.5	5.0		п	6.0E				
Surrogate: Dibromofluoromethane		111%	65-13	5		"	"	,,	"	
Surrogate: 1,2-Dichloroethane-d4		112 %	65-13	5			"	"		
Surrogate: Toluene-d8		111%	65-13	5		P. 0	,,	"	"	
Surrogate: 4-Bromofluorobenzene		110%	65-13	5		"			"	





Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

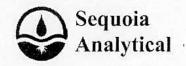
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP161F (P406097-16) Water	Sampled	: 06/02/04	09:34 Rece	ived: 06	/03/04 14:0	00				
Carbon tetrachloride	7.1	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	0.92	0.25	0.50	н		**		.0	n	
Chloromethane	ND	0.25	0.50						13007	
Methylene chloride	ND	2.5	5.0	19		"		2.00	5. 9 .	
Surrogate: Dibromofluoromethane		110%	65-13.	5		,,	"			
Surrogate: 1,2-Dichloroethane-d4		111%	65-13.	5		,	"	,		
Surrogate: Toluene-d8		112%	65-13.	5		,	n	"	•	
Surrogate: 4-Bromofluorobenzene		110%	65-13.	5			H	"		
0422KCTP162F (P406097-17) Water	Sampled	npled: 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	ŅD	0.25	0.50	"	"	"		m c		
Methylene chloride	ND	2.5	5.0		"	"		"	n	
Surrogate: Dibromofluoromethane		112%	65-13.	5		"			"	
Surrogate: 1,2-Dichloroethane-d4		112%	65-13.	5			"	30	"	
Surrogate: Toluene-d8		112%	65-13.	5		"			"	
Surrogate: 4-Bromofluorobenzene		109 %	65-13.	5		n		"	. 11 %	
0422KCTP163F (P406097-18) Water	Sampled	: 06/02/04	09:40 Rece	ived: 06	/03/04 14:0	00				
Carbon tetrachloride	6.1	0.25	0.50	ug/l		4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	.0.74	0.25	0.50		- 30					
Chloromethane	ND	0.25	0.50	н	**					
Methylene chloride	ND	2.5	5.0	, p					(0.5	
Surrogate: Dibromofluoromethane		110%	65-13.	5			"			
Surrogate: 1,2-Dichloroethane-d4		112 %	65-13.	5		**	"	"		
Surrogate: Toluene-d8		112%	65-13.	5		"		"		
Surrogate: 4-Bromofluorobenzene		110%	65-13.	5		"		,,		



Project:Fort Ord - OU CTP Pilot Study-I Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0422KCTP164F (P406097-19) Water	Sample	d: 06/02/04	09:48 Recei	ved: 06	/03/04 14:0	00				
Carbon tetrachloride	7.5	0.25	0.50	ug/l	W T	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	1.1	0.25	0.50				н			
Chloromethane	ND	0.25	0.50		"	"	n :		2 0	
Methylene chloride	ND	2.5	5.0		**	**	H.		(F)(0)	
Surrogate: Dibromofluoromethane		109 %	65-135			. "	,,			
Surrogate: 1,2-Dichloroethane-d4		112%	65-135			"	,,			
Surrogate: Toluene-d8		112%	65-135	i i		"			"	
Surrogate: 4-Bromofluorobenzene		111%	65-135	Ý.		•				
0422KCTP165F (P406097-20) Water	Sample	d: 06/02/04	09:51 Recei	ved: 06	/03/04 14:0	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	n	, ,		n			
Methylene chloride	ND	2.5	5.0	,	"				"	
Surrogate: Dibromofluoromethane		108 %	65-135	Will see the see that the see		"	**	,,		
Surrogate: 1,2-Dichloroethane-d4		113 %	65-135			"		n	"	
Surrogate: Toluene-d8		112%	65-135					n		
Surrogate: 4-Bromofluorobenzene		111%	65-135			"	"	n		
0422KCTP166F (P406097-21) Water	Sample	d: 06/02/04	09:54 Recei	ved: 06	/03/04 14:0	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	**	**	н	31			
Chloromethane	ND	0.25	0.50	:0	**	n.	n	**	30	
Methylene chloride	ND	2.5	5.0	39	"	.00	30		W.	
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			"		"		





Project:Fort Ord - OU CTP Pilot Study-I Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0422KCTP167F (P406097-22) Water	Sample	d: 06/02/04	10:04 Recei	ved: 06	/03/04 14:0)0				
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	•			n	,,	- 101	
Chloromethane	ND	0.25	0.50		•		***	"		
Methylene chloride	ND	2.5	5.0			•	"	"	11	
Surrogate: Dibromofluoromethane		113 %	65-135				"	,,	,,	
Surrogate: 1,2-Dichloroethane-d4		112 %	65-135				n	,,	"	
Surrogate: Toluene-d8		113 %	65-135			100	"	w	,,	
Surrogate: 4-Bromofluorobenzene		111%	65-135			n	,,	"	•	
0422KCTP168F (P406097-23) Water	Sample	1: 06/02/04 1	10:08 Recei	ved: 06	/03/04 14:0	00				
Carbon tetrachloride	9.1	0.25	0.50	ug/l	ı	4060225	06/09/04	06/10/04	EPA 8260B	
Chloroform	1.2	0.25	0.50			**				
Chloromethane	ND	0.25	0.50		1000	. 11		er e		
Methylene chloride	ND	2.5	5.0	0	(H)	.00		"	0	
Surrogate: Dibromofluoromethane		110%	65-135				"		,,	
Surrogate: 1,2-Dichloroethane-d4		111%	65-135					"	<i>"</i>	
Surrogate: Toluene-d8		112%	65-135				"		n n	
Surrogate: 4-Bromofluorobenzene		109 %	65-135			, w	"	и,	"	
0422KCTP169F (P406097-24) Water	Sample	i: 06/02/04 1	10:12 Recei	ved: 06	03/04 14:0	0				
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	4			•		10,	
Methylene chloride	ND	2.5	5.0		•	n		•		
Surrogate: Dibromofluoromethane		108 %	65-135			n				
Surrogate: 1,2-Dichloroethane-d4		110%	65-135			n	•			
Surrogate: Toluene-d8		112%	65-135				"			
Surrogate: 4-Bromofluorobenzene	1.5	110%	65-135			n	,,		"	





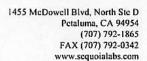
Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

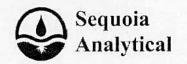
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP170F (P406097-25) Water	Sampled	: 06/02/04	10:24 Rece	ived: 06	/03/04 14:0	00				
Carbon tetrachloride	11	0.25	0.50	ug/l	1	4060225	06/09/04	06/10/04	EPA 8260B	2.22.020
Chloroform	1.2	0.25	0.50				.0			
Chloromethane	ND	0.25	0.50		30					
Methylene chloride	ND	2.5	5.0	W.	.00		(4)	>0.5		
Surrogate: Dibromofluoromethane		110%	65-133	5				•	"	
Surrogate: 1,2-Dichloroethane-d4		111%	65-133	5						
Surrogate: Toluene-d8		111%	65-133	5			•	"	"	
Surrogate: 4-Bromofluorobenzene		110%	65-135	7		,,	"		"	
0422KCTP171F (P406097-26) Water	Sampled	npled: 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	5		"		"	"	
Surrogate: 1,2-Dichloroethane-d4		112%	65-135	5		"	n		,,	
Surrogate: Toluene-d8		111%	65-135	5		"	in:	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	65-135	5				**	"	
0422KCTP172F (P406097-27) Water	Sampled	: 06/02/04 1	10:30 Recei	ived: 06	/03/04 14:0)0				
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		**	"	*	**	n	
Methylene chloride	ND	2.5	5.0	,	**		н	11		
Surrogate: Dibromofluoromethane		114%	65-135	i		.,		"	"	
Surrogate: 1,2-Dichloroethane-d4		111%	65-135	5		"		n ,		
Surrogate: Toluene-d8		112 %	65-135	5		"		.,		
Surrogate: 4-Bromofluorobenzene		109 %	65-135	ī		.,,	H		,"	



Project:Fort Ord - OU CTP Pilot Study-1 Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

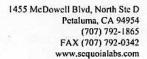
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
0422KCTP173F (P406097-28) Water	Sample	1: 06/02/04 1	0:38 Recei	ved: 06	/03/04 14:0	00	N. S.			
Carbon tetrachloride	3.2	0.25	0.50	ug/l	1	4060285	06/11/04	06/11/04	EPA 8260B	9.0
Chloroform	0.25	0.25	0.50					* .	•	
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		112%	65-135			**	**		'	
Surrogate: 4-Bromofluorobenzene		109 %	65-135				**		"	
0422KCTP173F (P406097-28RE1) Wa	iter San	npled: 06/02	/04 10:38 R	leceive	1: 06/03/04	14:00				
Carbon disulfide	ND	1.4	10	ug/l		4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		97 %	65-135			"	"		"	
Surrogate: 1,2-Dichloroethane-d4		113 %	65-135				n			
Surrogate: Toluene-d8		95 %	65-135			"	"	•		
Surrogate: 4-Bromofluorobenzene		100 %	65-135			"	, m		" .	
0422KCTP174F (P406097-29) Water	Sample	1: 06/02/04 1	0:41 Recei	ved: 06	/03/04 14:0	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	10	30		(100)	H		
Chloromethane	ND	0.25	0.50		200				*	
Methylene chloride	ND	2.5	5.0						и.	
Surrogate: Dibromofluoromethane		113 %	65-135			"	•	n	"	
Surrogate: 1,2-Dichloroethane-d4		112%	65-135					•	"	
Surrogate: Toluene-d8		112 %	65-135			"		•	"	
Surrogate: 4-Bromofluorobenzene		109 %	65-135						20	

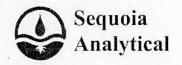




Project:Fort Ord - OU CTP Pilot Study-I Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP174F (P406097-29RE1) W:	ater Sar	npled: 06/02	/04 10:41	Received	1: 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 %	65-13	5			"	,,	•	
Surrogate: 1,2-Dichloroethane-d4		122 %	65-13	5		n	ü	- "		
Surrogate: Toluene-d8		93 %	65-13	5		н	"		"	
Surrogate: 4-Bromofluorobenzene		103 %	65-13	5		"				
0422KCTP175F (P406097-30) Water	Sample	d: 06/02/04 1	0:44 Rece	ived: 06	/03/04 14:0	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		107	n .				
Methylene chloride	ND	2.5	5.0					,,	u .	
Surrogate: Dibromofluoromethane	*	112%	65-13	5		"	"	"		
Surrogate: 1,2-Dichloroethane-d4	180	115%	65-13	5		"			"	
Surrogate: Toluene-d8		113 %	65-13	5		: 11		"	"	
Surrogate: 4-Bromofluorobenzene		108 %	65-13	5			"	"	"	
0422KCTP175F (P406097-30RE1) Wa	ater San	npled: 06/02	/04 10:44	Received	1: 06/03/04	14:00		decomposition and the		
Carbon disulfide	ND	1.4	10	ug/l	1	4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		103 %	65-13	5		"				
Surrogate: 1,2-Dichloroethane-d4		122 %	65-13	5					"	
Surrogate: Toluene-d8		93 %	65-13	5			0.00	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	65-13	5		, n		"	"	
0422KCTP176D (P406097-31) Water	Sample	d: 06/02/04 1	0:44 Rec	eived: 06	/03/04 14:0	00				
Carbon tetrachloride	5.8	0.25	0.50	ug/l		4060285	06/11/04	06/11/04	EPA 8260B	
Chloroform	0.67	0.25	0.50					(20)		
Chloromethane	ND	0.25	0.50							
Methylene chloride	ND	2.5	5.0		"			,		
Surrogate: Dibromofluoromethane		109 %	65-13	5		*	"	"	"	
100m 100m HT-4M(20m) (1.00m)		111%	65-13	5		"	•	"		
Surrogate: 1,2-Dichloroethane-d4										
Surrogate: 1,2-Dichloroethane-d4 Surrogate: Toluene-d8		111%	65-13	5		"		"		





Project:Fort Ord - OU CTP Pilot Study-I Project Number:4087030007.010204 Project Manager:Mike Taraszki P406097 Reported: 06/17/04 18:02

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
0422KCTP177A (P406097-32) Water	Sample	1: 06/02/04	11:00 Rece	ived: 06	/03/04 14:	00	EW.			
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	n		"				740
Chloromethane	ND	0.25	0.50	v		u				
Methylene chloride	ND	2.5	5.0	u			H	**		
Surrogate: Dibromofluoromethane		112%	65-13:	5		N	"	"	,,	
Surrogate: 1,2-Dichloroethane-d4		112 %	65-13.	5		"	"	"	"	
Surrogate: Toluene-d8		112%	65-13.	5		"	"	"	,,	
Surrogate: 4-Bromofluorobenzene		109 %	65-13.	5				"	**	
0422KCTP177A (P406097-32RE1) Wa	iter San	npled: 06/0	2/04 11:00	Receive	d: 06/03/04	14:00				
Carbon disulfide	ND	1.4	10	ug/l		4060347	06/15/04	06/15/04	EPA 8260B	
Surrogate: Dibromofluoromethane		102 %	65-13.	5		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		119%	65-13.	5		"		"	"	
Surrogate: Toluene-d8		95 %	65-13.	5		*	"	"		
Surrogate: 4-Bromofluorobenzene		101%	65-13.	5			"	11:	" .	

VALIDATION COMPLETENESS WORKSHEET LDC #:__ 12287A1 SDG #: P406097

Level III

Date: 8/3/04
Page: 1 of /
Reviewer: 🔀
2nd Reviewer:

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

Laboratory: Sequoia Analytical

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
1.	Technical holding times	A	Sampling dates: 6/2/04
II.	GC/MS Instrument performance check	N	Not used M Lene (U)
III.	Initial calibration	4	1/259 12
IV.	Continuing calibration / I CV	4	
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	insufficient sample
VIII.	Laboratory control samples	A.	LC5/9
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	Not used by fend[1]
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	1 = 4+5, 32 + 34, 32+34a
XVII.	Field blanks	No	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:

	AU 1503						
13	0422KCTP146F	112	0422KCTP156F	212	0422KCTP166F	314	0422KCTP174FRE
23	0422KCTP147F	122	0422KCTP157F	22 2	0422KCTP167F	323	0422KCTP175F
3 1	0422KCTP148F	132	0422KCTP158F	23	0422KCTP168F	33 4	0422KCTP175FRE
4 1	0422KCTP149F	142	0422KCTP159F	242	0422KCTP169F	343	0422KCTP176D
5	0422KCTP150D	152	0422KCTP160F	252	0422KCTP170F	353	0422KCTP177A
6	0422KCTP151F	162	0422KCTP161F	26	0422KCTP171F	36 4	0422KCTP177ARE
7 2	0422KCTP152F	172	0422KCTP162F	273	0422KCTP172F	37	4060164 BLK
82	0422KCTP153F	18	0422KCTP163F	28	0422KCTP173F	382	4060225BLK
92	0422KCTP154F	19	0422KCTP164F	294	0422KCTP173FRE	393	4060285BLK
10	0422KCTP155F	207	0422KCTP165F	30	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	uu.
K. Chloroform**	EE. Ethylbenzene**	YY. n-Propylbenzene	SSS. o-Xylene	мммм.
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	0000.
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	agaa.
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	ттт.
S. Trichloroethene	MM. 1,2-Dibromo-3-chloropropane	GGG. p-Isopropyltoluene	AAAA. Ethyl tert-butyl ether	υσυυ.
T. Dibromochloromethane	NN. Methyl ethyl ketone	HHH. 1,4-Dichlorobenzene	BBBB. tert-Amyl methyl ether	ww.

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

LDC #:_	12257A
SDG #:	P406097

VALIDATION FINDINGS WORKSHEET Field Duplicates

Page:	1 of
Reviewer:	St
2nd reviewer:	

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

M	N	N/A N/A	
V	N	N/A	

Were field duplicate pairs identified in this SDG?
Were target compounds detected in the field duplicate pairs?

	Concentration (WA/L)		
Compound	4	5	RPD ≤50
0	3.7	3.8	3
k	0.39	7.37	5

	Concentration (uglc)		
Compound	32	≥4	RPD ≤5°
0	5.7	5.8	. 2
K	0.67	0.67	0

	Concentration (RPD
Compound		

	Concentration ()		
Compound		RPD	