

**Fort Ord OU CT Bio Pilot Study  
Data Validation Reports  
LDC# 11183**

Volatiles

*LDC*

**Laboratory Data Consultants, Inc.  
Data Validation Report**

**Project/Site Name:** Fort Ord OU CT Bio Pilot Study  
**Collection Date:** October 31, 2003  
**LDC Report Date:** December 2, 2003  
**Matrix:** Water  
**Parameters:** Volatiles  
**Validation Level:** EPA Level III  
**Laboratory:** Sequoia Analytical

**Sample Delivery Group (SDG):** P311018

**Sample Identification**

0344MOCT240F	0344MOCT262F
0344MOCT241F	0344MOCT264F
0344MOCT242F	0344MOCT265F
0344MOCT243F	0344MOCT266F
0344MOCT244F	0344MOCT267F
0344MOCT245F	0344MOCT268F
0344MOCT246F	0344MOCT269F
0344MOCT247F	0344MOCT272F
0344MOCT248F	0344MOCT273F
0344MOCT249F	
0344MOCT250F	
0344MOCT251F	
0344MOCT253F	
0344MOCT254F	
0344MOCT255F	
0344MOCT256F	
0344MOCT257F	
0344MOCT258F	
0344MOCT260F	
0344MOCT261F	

## Introduction

This data review covers 29 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260B for Volatiles.

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 Organic Data Review (October 1999) 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 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 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 15.0% for each individual compound and less than or equal to 30.0% for calibration check compounds (CCCs).

In the case where %RSD was greater than 15.0%, the laboratory used a calibration curve to evaluate the compound. All coefficients of determination ( $r^2$ ) were greater than or equal to 0.990 .

For the purposes of technical evaluation, all compounds were evaluated against the 30.0% (%RSD) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

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.

Percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within the method criteria of less than or equal to 20.0% for calibration check compounds (CCCs).

For the purposes of technical evaluation, all compounds were evaluated against the 25.0% (%D) National Functional Guideline criteria. Unless noted above, all compounds were within the validation criteria.

The initial calibration verification (ICV) percent differences (%D) were less within the QC limits.

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.

## **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 were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

## **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**

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**

No field duplicates were identified in this SDG.

## **XVII. Field Blanks**

No field blanks were identified in this SDG.

**Fort Ord OU CT Bio Pilot Study  
Volatiles - Data Qualification Summary - SDG P311018**

No Sample Data Qualified in this SDG

**Fort Ord OU CT Bio Pilot Study  
Volatiles - Laboratory Blank Data Qualification Summary - SDG P311018**

No Sample Data Qualified in this SDG



LDC #: 11183B1  
 SDG #: P311018  
 Laboratory: Sequoia Analytical

**VALIDATION COMPLETENESS WORKSHEET**  
 Level III

Date: 12/2/03  
 Page: 1 of 1  
 Reviewer: 9  
 2nd Reviewer: \_\_\_\_\_

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

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

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: <u>10/31/03</u>
II.	GC/MS Instrument performance check	N	
III.	Initial calibration	A	<u>70 RSD. Y<sup>2</sup></u>
IV.	Continuing calibration	A	<u>70 D &amp; 1 CV</u>
V.	Blanks	A	
VI.	Surrogate spikes	A	
VII.	Matrix spike/Matrix spike duplicates	N	<u>direct spiked</u>
VIII.	Laboratory control samples	A	<u>LC 5/0</u>
IX.	Regional Quality Assurance and Quality Control	N	
X.	Internal standards	N	
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	N	
XVII.	Field blanks	N	

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

Validated Samples: M1 HDS

1	0344MOCT240F	11	0344MOCT250F	21	0344MOCT262F	31	<u>3510271 - Bk 1</u>
2	0344MOCT241F	12	0344MOCT251F	22	0344MOCT264F	32	<u>3510290 - Bk 1</u>
3	0344MOCT242F	13	0344MOCT253F	23	0344MOCT265F	33	
4	0344MOCT243F	14	0344MOCT254F	24	0344MOCT266F	34	
5	0344MOCT244F	15	0344MOCT255F	25	0344MOCT267F	35	
6	0344MOCT245F	16	0344MOCT256F	26	0344MOCT268F	36	
7	0344MOCT246F	17	0344MOCT257F	27	0344MOCT269F	37	
8	0344MOCT247F	18	0344MOCT258F	28	0344MOCT272F	38	
9	0344MOCT248F	19	0344MOCT260F	29	0344MOCT273F	39	
10	0344MOCT249F	20	0344MOCT261F	30		40	