



**ICF International / Laboratory Data Consultants**

Environmental Services Assistance Team, Region 9  
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MEMORANDUM

TO: Lisa Hanusiak, Remedial Project Manager  
Site Cleanup Section 3, SFD-7-3

THROUGH: Rose Fong, ESAT Task Order Manager (TOM)  
Quality Assurance (QA) Program, MTS-3

FROM: Doug Lindelof, Data Review Task Manager  
Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: EP-W-06-041  
Technical Direction Form No.: 00105050 Amendment 1

DATE: April 2, 2007

SUBJECT: Review of Analytical Data, Tier 3

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:	Alhambra
Site Account No.:	09 ES LA01
CERCLIS ID No.:	CAD980818579
Case No.:	Not Provided
SDG No.:	05-4961
Laboratory:	Applied Physics & Chemistry Laboratory (APCL)
Analysis:	1,2,3-Trichloropropane (1,2,3-TCP) and n-Nitrosodimethylamine (NDMA)
Samples:	4 Water Samples (see Case Summary)
Collection Date:	December 2, 2005
Reviewer:	Nanny Estrada, ESAT/Laboratory Data Consultants (LDC)

This report has been reviewed by the EPA TOM for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

SAMPLING ISSUES:  Yes     No



## Data Validation Report – Tier 3

Case No.: Not Provided  
SDG No.: 05-4961  
Site: Alhambra  
Laboratory: APCL  
Reviewer: Nanny Estrada, ESAT/LDC  
Date: April 2, 2007

### I. CASE SUMMARY

#### Sample Information

Samples: Y2941, Y2943, Y2944, and Y2945  
Concentration and Matrix: Low Concentration Water  
Analysis: 1,2,3-TCP (GC) and NDMA (GC/MS/MS CI)  
SOW: EPA Methods 504.1 and 1625 Modified  
Collection Date: December 2, 2005  
Sample Receipt Date: December 2, 2005  
Extraction Date: December 5, 2005  
Analysis Date: December 5 and 13, 2005

#### Field QC

Field Blanks (FB): Y2945  
Trip Blanks (TB): Not Provided  
Equipment Blanks (EB): Not Provided  
Background Samples (BG): Not Provided  
Field Duplicates (D1): Y2943 and Y2944

#### Laboratory QC

Method Blanks & Associated Samples:  
05G3575MB01: (1,2,3-TCP) All samples, Y2941MS, Y2941MSD  
05G3577MB1A: (NDMA) All samples, Y2941MS, Y2941MSD

#### Tables

1B: Data Qualifier Definitions for Organic Data Review

#### Sampling Issues

1. Detected results for 1,2,3-trichloropropane in samples Y2941, Y2943, and Y2944 are qualified as nondetected and estimated (U,J) due to a field blank contamination (see Comment B).
2. Signature and Date/Time blocks for AReceived by@ were not completed on the Chain of Custody (see attached COC).

#### Additional Comments

The recovery for surrogate 1,3-dibromopropane in sample Y2943 (229%) exceeded the laboratory QC limit of 54-139% but the associated sample result was not qualified because it was a nondetect.

For the NDMA analysis, decafluorotriphenylphosphine (DFTPP) was not analyzed. Since NDMA is analyzed by the chemical ionization (CI) technique, no adverse effect is expected.

This report was prepared in accordance with the following documents:

- X ESAT Region 9 Standard Operating Procedure 901, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Volatile and Semivolatile Data Packages*;
- X ESAT Region 9 Standard Operating Procedure 902, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Pesticide/PCB Data Packages*;
- X EPA Method 504.1, *1,2-Dibromoethane (EDB), 1,2-Dibromo-3-chloro-propane (DBCP), and 1,2,3-Trichloropropane (123TCP) in Water by Microextraction and Gas Chromatography*, Revision 1.1, 1995;
- X EPA Method 1625C, *Semivolatile Organic Compounds by Isotope dilution GC/MS*, June 1989; and
- X *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

	<u>Parameter</u>	<u>Acceptable</u>	<u>Comment</u>
1.	Holding Time/Preservation	Yes	
2.	GC/MS and GC Performance	Yes	
3.	Initial Calibration	Yes	
4.	Continuing Calibration	Yes	
5.	Laboratory Blanks	Yes	
6.	Field Blanks	No	B
7.	Surrogate (Method 504.1)	Yes	
8.	Labeled Compound (Method 1625)	No	D
9.	Matrix Spike/Matrix Spike Duplicates	Yes	
10.	Laboratory Control Samples/Duplicates	Yes	
11.	Internal Standard	Yes	
12.	Compound Identification	Yes	
13.	Compound Quantitation	No	A, C
14.	System Performance	Yes	
15.	Field Duplicate Sample Analysis	Yes	

N/A = Not Applicable

### III. VALIDITY AND COMMENTS

A. The following detected result is qualified as estimated and should be flagged AJ@.

X 1,2,3-Trichloropropane in field blank Y2945 (below the practical quantitation limit)

X NDMA in samples Y2941 and Y2943 (below the practical quantitation limit)

*Results below the practical quantitation limits (PQLs) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.*

B. The following results are qualified as nondetected and estimated due to a field blank contamination and should be flagged AU,J@.

X 1,2,3-Trichloropropane in samples Y2941, Y2943, and Y2944

1,2,3-Trichloropropane was found in field blank Y2945 at a concentration of 0.004 ug/L. Results for the samples listed above are considered nondetected and estimated (U,J) and quantitation limits have been raised according to the blank qualification rules presented below.

No positive results are reported unless the concentration of the compound in the sample exceeds 5 times the amount in any associated blank. If the sample result is greater than the PQL, the quantitation limit is raised to the sample result and reported as nondetected. If the sample result is less than the PQL, the result is reported as nondetected at the PQL.

*A field blank is clean water prepared as a sample in the field by the sampler and shipped to the laboratory with the samples. A field blank is intended to detect contaminants that may have been introduced in the field, although any laboratory introduced contamination will be present. Contaminants that are found in the field blank which are absent in the laboratory method blank could be indicative of a field QC problem, a deficiency in the bottle preparation procedure, a difference in preparation of the laboratory and field blanks, or other indeterminate error.*

C. The laboratory reported an NDMA sample practical quantitation limit (PQL) of 0.002 ug/L and NDMA detected results of 0.0009 ug/L for sample Y2941 and 0.001 ug/L for sample Y2943. However, signal to noise (S/N) ratios are only 4 and 5 for Y2941 and Y2943, respectively, and areas are only 346 and 360 for concentrations of 0.0009 ug/L and 0.001 ug/L, respectively (see attached quantitation reports, p. 1075 and 1078 in data package). Furthermore, the area for low standard of the initial calibration is only 602 (see attached quantitation report, p. 1095 in data package). In the reviewer's professional judgment, the sample PQL should be raised to 0.02 ug/L. Non-detected sample results should be reported as 0.02U.

D. The laboratory did not spike the samples and method blanks with a labeled

compound (i.e., surrogate; see Method 1625C Sections 6.8, 10.2.1.3, and 10.2.3.2 and Figure 4). Consequently, the extraction efficiency (surrogate recovery) for NDMA cannot be evaluated. The NDMA-d6 spiked by the laboratory was used as an internal standard.

## TABLE 1B

### DATA QUALIFIER DEFINITIONS FOR ORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared according to the document, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," October 1999.

- U The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- L Indicates results which fall below the Contract Required Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.