



ICF Consulting / Laboratory Data Consultants

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MEMORANDUM

TO: Chris Lichens, Remedial Project Manager
Site Cleanup Section 4, SFD-7-4

THROUGH: Rose Fong, ESAT Task Order Project Officer (TOPO)
Quality Assurance (QA) Program, PMD-3

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

ESAT Contract No.: 68-W-01-028
Technical Direction Form No.: 00905072

DATE: March 3, 2006

SUBJECT: Review of Analytical Data, **Tier 2**

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

Site:	Omega Chem OU2 ACE
Site Account No.:	09 BC LA02
CERCLIS ID No.:	CAD042245001
Case No.:	Not Provided
SDG Nos.:	G4L010311, G4L020335, G4L040125, G4L040206, G4L070405, G4L080479, and G4L090480
Laboratory:	STL Sacramento
Analysis:	N-Nitrosodimethylamine and 1,2,3-Trichloropropane
Samples:	25 Water Samples (see Case Summary)
Collection Date:	December 9, 2004
Reviewer:	Santiago Lee, ESAT/Laboratory Data Consultants (LDC)

This report has been reviewed by the EPA TOPO 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 2

Case No.: Not Provided
SDG Nos.: G4L010311, G4L020335, G4L040125, G4L040206, G4L070405, G4L080479, and G4L090480
Site: Omega Chem OU2 ACE
Laboratory: STL Sacramento
Reviewer: Santiago Lee, ESAT/LDC
Date: March 3, 2006

I. CASE SUMMARY

Sample Information

Samples: SDG G4L010311 = OC2-00-W-2-78, OC2-0W7-W-5-79, OC2-MW4B-W-0-80, and OC2-MW4A-W-0-81
SDG G4L020335 = OC2-OW6-W-0-82, OC2-0W1A-W-0-83, OC2-MW1B-W-3-84, and OC2-MW3-W-0-85
SDG G4L040125 = OC2-0W5-W-0-86, OC2-0W5-W-1-87, OC2-MW8B-W-0-88, and OC2-MW2-W-0-89
SDG G4L040206 = OC2-0W8-W-0-91
SDG G4L070405 = OC2-MW4A-W-0-92, OC2-MW4B-W-0-93, OC2-MW4B-W-1-94, OC2-MW4C-W-0-95, OC2-00-W-2-96, and OC2-MW5A-W-0-97
SDG G4L080479 = OC2-MW4A-W-0-98, OC2-MW1B-W-0-99, OC2-MW6-W-0-100, OC2-MW9B-W-0-101, OC2-MW7A-W-0-102, and OC2-MW7A-W-1-103
SDG G4L090480 = OC2-MW10A-W-0-104, OC2-MW3A-W-0-105, and OC2-MW2A-W-1-106

Concentration and Matrix: Low Concentration Water
Analysis: N-Nitrosodimethylamine (NDMA) and 1,2,3-Trichloropropane (1,2,3-TCP)
Method: USEPA Method 1625, Semivolatile Organic Compounds by Isotope Dilution GCMS
Collection Date: November 30, 2004 through December 8, 2004
Sample Receipt Date: December 1 through 9, 2004
Extraction Date: December 3, 7, 9, 13, and 22, 2004
Analysis Date: December 4, 8, 9, 16, 17, and 29, 2004

Field QC

Field Blanks (FB): Not Provided
Equipment Blanks (EB): Not Provided
Background Samples (BG): Not Provided
Field Duplicates (D1): Not Provided

Laboratory QC

Method Blanks & Associated Samples:
G4L030000-287: OC2-00-W-2-78, OC2-OW7-W-5-79, OC2-OW4B-W-0-80, and OC2-OW4A-W-0-81; OC2-OW6-W-0-82, OC2-OW1A-W-0-83, OC2-OW1B-W-3-84, and OC2-OW3-W-0-85
G4L070000-381: OC2-OW5-W-0-86, OC2-OW5-W-1-87, OC2-OW8B-W-0-88, and OC2-OW2-W-0-89; OC2-OW8-W-0-91
G4L090000-214: OC2-MW4A-W-0-92, OC2-MW4B-W-0-93, OC2-MW4B-W-1-94, OC2-MW4C-W-0-95, OC2-00-W-2-

96, and OC2-MW5A-W-0-97
G41130000-402: 1,2,3-TCP for OC2-MW4A-W-0-98, OC2-MW1B-W-0-99, OC2-MW6-W-0-100, OC2-MW9B-W-0-101, OC2-MW7A-W-0-102, and OC2-MW7A-W-1-103; OC2-MW10A-W-0-104, OC2-MW3A-W-0-105, and OC2-MW2A-W-1-106
G41220000-371: NDMA for OC2-MW4A-W-0-98, OC2-MW1B-W-0-99, OC2-MW6-W-0-100, OC2-MW9B-W-0-101, OC2-MW7A-W-0-102, and OC2-MW7A-W-1-103; OC2-MW10A-W-0-104, OC2-MW3A-W-0-105, and OC2-MW2A-W-1-106

Tables

1B: Data Qualifier Definitions for Organic Data Review

Sampling Issues

None.

Additional Comments

As directed by the EPA TOPO, a Tier 2 review was performed (Tier 3-level review minus inspection of raw data and verification of results by independent calculation). Table 1A is not required.

Method specific quality control (QC) limits are used to evaluate the quality of data. For QC where the method does not specify limits, the laboratory QC limits are used.

This report was prepared in accordance with the following documents:

- X USEPA Office of Water, *Method 1625C: Semivolatile Organic Compounds by Isotope Dilution GCMS*, June 1989;
- X ESAT Region 9 Standard Operating Procedure 901, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Volatile and Semivolatile Data Packages*; 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	No	A
2.	GC/MS Tune/GC Performance	Yes	
3.	Initial Calibration	Yes	
4.	Continuing Calibration	Yes	
5.	Laboratory Blanks	No	B
6.	Field Blanks	N/A	
7.	Matrix Spike/Matrix Spike Duplicates	N/A	
8.	Laboratory Control Samples/Duplicates	Yes	
9.	Internal Standards/Surrogates	No	C
10.	Compound Identification	Yes	
11.	Compound Quantitation	Yes	
12.	System Performance	Yes	
13.	Field Duplicate Sample Analysis	N/A	

N/A = Not Applicable

III. VALIDITY AND COMMENTS

A. Results for the following analyte are qualified as estimated (J) due to holding time problems.

- NDMA in samples OC2-MW4A-W-0-98, OC2-MW1B-W-0-99, OC2-MW6-W-0-100, OC2-MW9B-W-0-101, OC2-MW7A-W-0-102, OC2-MW7A-W-1-103, OC2-MW10A-W-0-104, OC2-MW3A-W-0-105, and OC2-MW2A-W-1-106

The samples listed above were collected on December 7 and 8, 2004 and extracted on December 22, 2004, which exceeded the 7-day method-specific holding time. Since the results are nondetected, false negatives may exist.

B. The following result is qualified as nondetected and estimated (U,J) due to a method blank contamination.

X NDMA in sample OC2-MW2A-W-0-106

NDMA was found in method blank G4L220000-371 at a concentration of 18 ng/L. The result for sample OC2-MW2A-W-0-106 (4.3 ug/L) is considered nondetected and estimated (U,J) and the quantitation limit has been raised according to 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 the associated blank. If the sample result is greater than the CRQL, the quantitation limit is raised to the sample result and

reported as nondetected. If the sample result is less than the CRQL, the result is reported as nondetected at the CRQL.

A laboratory method blank is laboratory reagent water or baked sand analyzed with all reagents, deuterated monitoring compounds, and internal standards and carried through the same sample preparation and analytical procedures as the field samples. The laboratory method blank is used to determine the level of contamination introduced by the laboratory during analysis.

C. Results for the following analyte are qualified as estimated (J) due to internal standard/surrogate recovery outside QC limits.

X NDMA in samples OC2-OW4B-W-0-80, OC2-OW4A-W-0-81, OC2-OW6-W-0-82, OC2-OW1A-W-0-83, OC2-OW1B-W-3-84, OC2-OW3-W-0-85, OC2-OW5-W-0-86, OC2-OW5-W-1-87, OC2-OW8B-W-0-88, OC2-OW2-W-0-89, OC2-OW8-W-0-91, OC2-MW4A-W-0-92, OC2-MW4B-W-0-93, OC2-MW4B-W-1-94, OC2-MW4C-W-0-95, OC2-00-W-2-96, OC2-MW5A-W-0-97, and OC2-MW3A-W-0-105 and method blanks G4L030000-287, G4L070000-381, and G4L090000-214

Internal standard/surrogate recoveries fell below the QC limits as shown below.

<u>Sample</u>	<u>Internal Standard</u>	<u>% Recovery</u>	<u>QC Limits</u>
OC2-OW4B-W-0-80	NDMA-d6	20	25 - 150
OC2-OW4A-W-0-81	NDMA-d6	7	25 - 150
OC2-OW6-W-0-82	NDMA-d6	18	25 - 150
OC2-OW1B-W-0-83	NDMA-d6	20	25 - 150
OC2-OW1B-W-3-84	NDMA-d6	17	25 - 150
OC2-OW3-W-0-85	NDMA-d6	16	25 - 150
OC2-OW5-W-0-86	NDMA-d6	22	25 - 150
OC2-OW5-W-1-87	NDMA-d6	18	25 - 150
OC2-OW8B-W-0-88	NDMA-d6	21	25 - 150
OC2-OW2-W-0-89	NDMA-d6	24	25 - 150
OC2-OW8-W-0-91	NDMA-d6	23	25 - 150
OC2-MW4A-W-0-92	NDMA-d6	15	25 - 150
OC2-MW4B-W-0-93	NDMA-d6	15	25 - 150
OC2-MW4B-W-1-94	NDMA-d6	14	25 - 150
OC2-MW4C-W-0-95	NDMA-d6	18	25 - 150
OC2-00-W-2-96	NDMA-d6	14	25 - 150
OC2-MW4A-W-0-97	NDMA-d6	20	25 - 150
OC2-MW3A-W-0-105	NDMA-d6	11	25 - 150
G4L030000-287	NDMA-d6	3.3	25 - 150
G4L070000-381	NDMA-d6	21	25 - 150
G4L090000-214	NDMA-d6	15	25 - 150

Results for the affected analytes are considered quantitatively questionable. Where sample results are nondetected, false negatives may exist.

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.