



**ICF Consulting / 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 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.: 00905058 Amendment 2

DATE: November 8, 2005

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.:	34502
SDG No.:	MY21E2
Laboratory:	CompuChem (LIBRTY)
Analysis:	CLP Dissolved Metals and Dissolved Molybdenum by ICP-MS and Dissolved Mercury
Samples:	13 Groundwater Samples (see Case Summary)
Collection Date:	August 31, September 2, 6 and 7, 2005
Reviewer:	Stan Kott, ESAT/Laboratory Data Consultants

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

cc: Edward Messer, CLP PO USEPA Region 4  
Steve Remaley, CLP PO USEPA Region 9

CLP PO:  FYI  Action

SAMPLING ISSUES:  Yes  No



## Data Validation Report

Case No.: 34502  
SDG No.: MY21E2  
Site: Alhambra  
Laboratory: CompuChem (LIBRTY)  
Reviewer: Stan Kott, ESAT/LDC  
Date: November 8, 2005

### I. CASE SUMMARY

#### Sample Information

Samples: MY21E1, MY21E2, MY21E3, MY21E5 through  
MY21E9, and MY21F0 through MY21F4  
Concentration and Matrix: Low Concentration Groundwater  
Analysis: CLP Dissolved Metals and Dissolved Molybdenum by  
ICP-MS and Dissolved Mercury  
SOW: ILM05.3 and Modification Reference Number 1256.0  
Collection Date: August 31, September 2, 6 and 7, 2005  
Sample Receipt Date: September 1, 3, 7 and 8, 2005  
Preparation Date: September 9, 2005  
Analysis Date: September 12 and 22, 2005

#### Field QC

Field Blanks (FB): Not Provided  
Equipment Blanks (EB): MY21E2, MY21E7, MY21F0, and MY21F4  
Background Samples (BG): Not Provided  
Field Duplicates (D1): MY21F2 and MY21F3

#### Laboratory QC

Method Blanks & Associated Samples: PBW and samples listed above  
Matrix Spike: MY21F1S  
Duplicates: MY21F1D  
ICP Serial Dilution: MY21F1L

Analysis: CLP Dissolved Metals and Dissolved Molybdenum by  
ICP-MS and Dissolved Mercury

<u>Analyte</u>	<u>Sample Preparation and Digestion Date</u>	<u>Analysis Date</u>
CLP ICP-MS Metals and Molybdenum	September 9, 2005	September 22, 2005
Mercury	September 9, 2005	September 12, 2005
Percent Solids	Not Applicable	Not Applicable

#### CLP PO Action

None.

### Sampling Issues

1. The results for antimony, copper, and zinc in several samples are qualified and estimated high (J+) because of equipment blank contamination. The reported results for antimony and zinc in equipment blank samples MY21E2, MY21E7, and MY21F4 exceed the contract required quantitation limit (CRQL) of 2.0 µg/L. The reported result copper in equipment blank sample MY21F4 exceeds the CRQL of 2.0 µg/L.
2. The Traffic Report/Chain of Custody (TR/COC) record form did not specify a sample to be used for laboratory quality control (QC). The laboratory selected sample MY21F1 for laboratory QC analysis. The effect on data quality is not known.
3. The cooler containing samples MY21E9, MY21F0, and MY21F1 arrived at the laboratory with a temperature of 8.8°C. This temperature exceeds the temperature of 4°± 2°C specified in the Statement of Work (SOW). Since the water samples were preserved to a pH less than 2, no adverse effect on the quality of the data is expected.

### Additional Comments

Several CLP forms in the data package required correction. These corrected forms were requested from the laboratory but have not been received to date. Data quality is not likely to be affected and this report is considered final. Refer to the attached telephone record log (TRL) for details.

The samples of this SDG were analyzed for CLP Dissolved Metals plus dissolved molybdenum by ICP-MS under Modified Analysis Request (MAR), Modification Reference Number 1256.0. Dissolved mercury was analyzed by the CLP cold vapor atomic absorption method.

Analytical results are listed in Table 1A with qualifications. Definitions of data qualifiers used in Table 1A are listed in Table 1B.

This report was prepared in accordance with the following documents:

- X Region 9 Standard Operating Procedure 906, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Inorganic Data Packages*;
- X *Request for Quote for Modified Analysis* (SOW flexibility clause), Modification Reference Number: 1256.0, Title: MS061505, August 23, 2005;
- X *USEPA Contract Laboratory Program Statement of Work For Inorganic Analysis Multi-Media, Multi-Concentration* ILM05.3, March 2004; and
- X *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 2004.

## II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

	<u>Parameter</u>	<u>Acceptable</u>	<u>Comment</u>
1.	Data Completeness	Yes	
2.	Sample Preservation and Holding Times	Yes	
3.	Calibration	Yes	
	a. Initial		
	b. Initial and Continuing Calibration Verification		
	c. CRQL Check Standard (CRI)		
	d. ICP-MS Tuning Analysis		
4.	Blanks	No	B,C
5.	ICP Interference Check Sample (ICS)	Yes	
6.	Laboratory Control Sample (LCS)	Yes	
7.	Duplicate Sample Analysis	Yes	
8.	Matrix Spike Sample Analysis	Yes	
9.	ICP Serial Dilution Analysis	Yes	
10.	ICP-MS Internal Standards	N/A	
11.	Field Duplicate Sample Analysis	Yes	
12.	Sample Quantitation	Yes	A
13.	Overall Assessment	Yes	

N/A = Not Applicable

## III. VALIDITY AND COMMENTS

- A. Results above the method detection limit (MDL) but below the CRQL (denoted with an "L" qualifier) are estimated and flagged "J" in Table 1A.

*Results above the MDL but below the CRQL are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of quantitation.*

- B. The following results are qualified as estimated high and flagged "J+" in Table 1A due to equipment blank contamination.

X Antimony and zinc in samples MY21E1, MY21E3, MY21E5, MY21E6, MY21E8, MY21F2, and MY21F3

The results for samples associated with the equipment blanks that are greater than the MDL are qualified as estimated high (J+) unless the concentration of the analyte in the sample exceeds five times the amount in any associated blank.

The reported results of 2.7 µg/L, 2.1 µg/L, and 2.4 µg/L for antimony and 80.2 µg/L, 76.6 µg/L, and 73.7 µg/L for zinc in equipment blank samples MY21E2, MY21E7, and MY21F4, respectively, exceed the 2.0 µg/L CRQL.

*An equipment blank is reagent water that has been collected as a sample using decontaminated sampling equipment. The intent of an equipment blank is to monitor contamination introduced by the sampling activity, although any laboratory introduced contamination will also be present.*

- C. The following results are reported as non-detected in Table 1A due to low level calibration and equipment blank contamination.

- X Antimony in sample MY21F0
- X Arsenic in samples MY21E9 and MY21F1
- X Chromium in samples MY21E3, MY21E5, and MY21E6
- X Copper in samples MY21E5, MY21E6, MY21E8, MY21F2, and MY21F3
- X Selenium in sample MY21F1

Values for antimony in the preparation blank (0.19 µg/L), initial calibration blank (0.66 µg/L) and in continuing calibration blanks CCB7 (0.35 µg/L) and CCB8 (0.37 µg/L) are greater than the MDL but less than the CRQL. Sample results greater than or equal to the MDL but less than the CRQL are reported as non-detected (U) at the CRQL.

Chromium values of 0.27 µg/L and 0.29 µg/L in equipment blanks MY21E2 and MY21E7, respectively; a copper value of 0.64 µg/L in equipment blank MY21E7; an arsenic value of 0.27 µg/L and a selenium value of 1.1 µg/L in equipment blank MY21F0 are greater than the respective MDLs but less than the CRQLs. Results for samples associated with these equipment blanks that are greater than or equal to the MDL but less than the CRQL are reported as non-detected (U) at the respective CRQLs.

The copper value of 2.2 µg/L in equipment blank MY21F4 is greater than the CRQL. The results for samples associated with these equipment blanks that are greater than or equal to the MDL but less than the CRQL are reported as non-detected (U) at the CRQL.

*A preparation blank is an analytical control that contains distilled or deionized water, or baked sand for solid matrices, and reagents, which is carried through the entire analytical procedure. The preparation blank is used to determine the level of contamination introduced by the laboratory during preparation and analysis.*

*An initial calibration blank (ICB) consists of distilled or deionized water and reagents. It is analyzed at the beginning of each analytical run, immediately after the initial calibration verification (ICV) standard to monitor analyte carry-over.*

*A continuing calibration blank (CCB) consists of distilled or deionized water and reagents. It is analyzed after the continuing calibration verification (CCV) standard, at a frequency of every 10 samples and at the end of the analytical run to monitor analyte carry-over.*

*An equipment blank is reagent water that has been collected as a sample using decontaminated sampling equipment. The intent of an equipment blank is to monitor contamination introduced by the sampling activity, although any laboratory introduced contamination will also be present.*

## TABLE 1B

### DATA QUALIFIER DEFINITIONS FOR INORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared in accordance with the document *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 2004.

- U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
- J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The result is an estimated quantity, but the result may be biased high.
- J- The result is an estimated quantity, but the result may be biased low.
- R The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
- UJ The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.



In Reference to  
Case: 34502 SDG No.: MY21E2

Contract Laboratory Program  
REGIONAL/LABORATORY COMMUNICATION SYSTEM

Telephone Record Log

Date of Call: November 2, 2005

Laboratory Name: CompuChem (LIBRTY)

Lab Contact: Alice Evans or Bob Meierer

Region: 9

Regional Contact: Steve Remaley, CLP PO

ESAT Reviewer: Stan Kott, ESAT/LDC

Call Initiated By:      Laboratory   X   Region

In reference to data for the following sample(s):

SDG No.: MY21E2 all samples

Summary of Questions/issues Discussed:

The following items were noted during the review of this sample delivery group (SDG) data package. Please respond within 4 days as specified in ILM05.3 Statement of Work (SOW), Exhibit B, Section 2, 2.2. Send response and resubmissions to

ICF Consulting, Inc./Laboratory Data Consultants, Inc.,  
Environmental Services Assistance Team, USEPA Region 9 Laboratory  
1337 S. 46th Street, Building 201, Richmond, CA 94804, FAX 510 412-2304.

1. Forms 5 (Matrix Spike), 6 (Duplicates), and 8 (ICP Serial Dilutions) report original sample results for arsenic, copper, lead, manganese, nickel, and selenium that are between the MDL and the CRQL without a "J" qualifier. Please review the data and provide revised forms.
2. Form 15 (ICP-MS Internal Standards Summary) identifies the ICP-MS instrument ID as "V3". This instrument ID differs from the "MS1" ID on Forms 9 (MDL) for ICP-MS and 13 (Analysis Run Log) for ICP-MS. Please review the data and provide revised forms.

Summary of Resolution: To be determined.

\_\_\_\_\_  
Regional Contact Signature

\_\_\_\_\_  
Date of Resolution



