



**ICF International / Laboratory Data Consultants**

Environmental Services Assistance Team, Region 9  
1337 South 46<sup>th</sup> Street, Building 201, Richmond, CA 94804-4698  
Phone: (510) 412-2300 Fax: (510) 412-2304

**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, PMD-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 12, 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.:	None Provided
SDG No.:	061512
Laboratory:	Applied Physics & Chemistry Laboratory (APCL)
Analysis:	Hexavalent Chromium
Samples:	2 Groundwater Samples (see Case Summary)
Collection Dates:	February 24, 2006
Reviewer:	Stan Kott, ESAT/Laboratory Data Consultants

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

Case No.: None Provided  
SDG No.: 061512  
Site: Alhambra  
Laboratory: Applied Physics & Chemistry Laboratory (APCL)  
Reviewer: Stan Kott, ESAT/LDC  
Date: April 12, 2007

### I. CASE SUMMARY

#### Sample Information

Samples: MY2DY4 and MY2DY6

Concentration and Matrix: Low Concentration Groundwater  
Analysis: Hexavalent Chromium  
SOW: EPA Method 218.6  
Collection Date: February 24, 2006  
Sample Receipt Date: February 24, 2006  
Preparation Date: February 24, 2006  
Analysis Date: February 24, 2006

#### Field QC

Field Blanks (FB): Not Provided  
Equipment Blanks (EB): MY2DY4  
Background Samples (BG): Not Provided  
Field Duplicates (D1): Not Provided

#### Laboratory QC

Method Blanks: MB  
Associated Samples: Samples listed above  
Matrix Spike(MS)/MS Duplicate: MY2DY1MS/ MY2DY1MSD (See Sampling Issues)

Analysis: Hexavalent Chromium

<u>Analyte</u>	<u>Sample Preparation Date</u>	<u>Analysis Date</u>
Hexavalent Chromium	February 24, 2006	February 24, 2006

#### Sampling Issues

The Chain of Custody (COC) record form did not specify a sample to be used for laboratory quality control (QC). As a result, the laboratory selected sample MY2DY1 from SDG 06-1500, which is an equipment blank and not representative of the environmental sample matrix. The effect on data quality is not known.

#### Additional Comments

**As directed by the EPA TOPO, a Tier 3 data review was performed. A Table 1A is not requested.**

The calculated percent difference (%D) for the 5.0 µg/L calibration standard is 23% and exceeds the 10% limit. The 10% limit was derived from the ±10% limit used in method 218.6 to determine the linear dynamic upper range limit. The high %D indicates that the calibration may not be linear at the low end of the curve. Since the analytical method does not require analysis of a reporting limit (RL) standard to confirm linearity of the calibration curve at the 1 µg/L RL, the 3.5 µg/L result for sample MY2DY6 may have a high bias.

The method specifies that sample pH be adjusted to 9.0 to 9.5 prior to analysis; however, there is no method specific requirement to document the sample pH. The pH of the samples could not be evaluated prior to analysis. The effect on data quality is not known.

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 *Methods For The Determination Of Metals In Environmental Samples*, EPA-600/4-91-010, June 1991; and
- X *USEPA Method 218.6, Determination of Dissolved Hexavalent Chromium in Drinking Water, Groundwater, and Industrial Wastewater Effluents by Ion Chromatography*, Revision 3.3, May 1994.

## 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		
4.	Blanks	Yes	
5.	Laboratory Control Sample (LCS)	Yes	
6.	Duplicate Sample Analysis	Yes	
7.	Matrix Spike Sample Analysis	Yes	
8.	Field Duplicate Sample Analysis	N/A	
9.	Sample Quantitation	Yes	
10.	Overall Assessment	Yes	

N/A = Not Applicable

## III. OVERALL ASSESSMENT OF DATA

All method requirements specified in EPA Method 218.6 have been met. Reported results for hexavalent chromium in all of the samples were appropriately and correctly calculated.

## 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.



