



**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, 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 2

DATE: June 28, 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.:	05-4960
Laboratory:	Applied Physics & Chemistry Laboratory (APCL)
Analysis:	Hexavalent Chromium
Samples:	4 Groundwater Samples (see Case Summary)
Collection Dates:	December 2, 2005
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 [X] No



## Data Validation Report

Case No.: None Provided  
SDG No.: 05-4960  
Site: Alhambra  
Laboratory: Applied Physics & Chemistry Laboratory (APCL)  
Reviewer: Stan Kott, ESAT/LDC  
Date: June 28, 2007

### I. CASE SUMMARY

#### Sample Information

Samples: MY2941, MY2943, MY2944, and MY2945

Concentration and Matrix: Low Concentration Groundwater  
Analysis: Hexavalent Chromium  
SOW: EPA Method 218.6  
Collection Date: December 2, 2005  
Sample Receipt Date: December 2, 2005  
Preparation Date: December 2, 2005  
Analysis Date: December 2, 2005

#### Field QC

Field Blanks (FB): MY2945  
Equipment Blanks (EB): Not Provided  
Background Samples (BG): Not Provided  
Field Duplicates (D1): MY2943 and MY2944

#### Laboratory QC

Method Blanks: MBLK  
Associated Samples: Samples listed above  
Matrix Spike(MS)/MS Duplicate: MY2941MS/ MY2941MSD

Analysis: Hexavalent Chromium

<u>Analyte</u>	<u>Sample Preparation Date</u>	<u>Analysis Date</u>
Hexavalent Chromium	December 2, 2005	December 2, 2005

#### Sampling Issues

None.

#### 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 24.2 µg/L result for sample MY2941 may have a high bias.

Although requested from the laboratory, raw data chromatograms for the initial calibration blank, method blank, laboratory control sample (LCS), and LCS duplicate were not provided and could not be evaluated. The results for the samples listed above were obtained from the appropriate reporting forms in the data package. The effect on data quality is not known.

The method specifies the 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 prior to analysis could not be evaluated. 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	Yes	
9.	Sample Quantitation	Yes	
10.	Overall Assessment	Yes	

N/A = Not Applicable

## III. OVERALL ASSESSMENT OF DATA

All of the method requirements specified in USEPA Method 218.6 and available for evaluation have been met. Reported results for hexavalent chromium in all of the samples were appropriate 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.



