

AMEC Earth & Environmental
550 South Wadsworth Boulevard
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No. of Analyses 2

Analysis/Method Metals by 6010B/6020/7471A

Reviewer's Signature _____

Case Narrative

Deficiencies

2. Out of Scope Analyses

3. Analyses Not Conducted

4. Missing Hardcopy Deliverables

5. Incorrect Hardcopy Deliverables

6. Deviations from Analysis

Protocol, e.g.,

Holding Times

GC/MS Tune/Inst. Performance

Calibration

Method blanks

Surrogates

Matrix Spike/Dup LCS

Field QC

Internal Standard Performance

Compound Identification

Quantitation

System Performance

Qualifications were assigned for the following:

-- blank contamination

-- MS/MSD outliers

-- blank spike outliers

COMMENTS^b

^a Subcontracted analytical laboratory is not meeting contract and/or method requirements.

^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.



DATA VALIDATION REPORT

Topanga Fire Ash Samples

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IOJ1120

Prepared by

AMEC—Denver Operations
355 South Teller Street, Suite 300
Lakewood, Colorado 80226

1. INTRODUCTION

Task Order Title:	Topanga Fire Ash Samples
Contract Task Order #:	313150010
SDG#:	IOJ1120
Project Manager:	P. Costa
Matrix:	Solid
Analysis:	Metals
QC Level:	Level IV
No. of Samples:	2
No. of Reanalyses/Dilutions:	0
Reviewer:	E. Wessling
Date of Review:	December 7, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the *AMEC Data Validation Procedure for Levels III and IV ICP Metals* (DVP-5, Rev. 2), *SW-846 Methods 6010B for ICP-AES and 7471A for Mercury (Manual Cold-Vapor Technique)*, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review* (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

DATA VALIDATION REPORT

Project: Topanga Fire
SDG No.: IOJ1120
Analysis: METALS

Table 1. Sample identification

Client ID	EPA ID	Laboratory ID	Matrix	COC Method
SMM-1-Soil	WL022	IOJ1120-01	Soil	6010/6020/7471
SMM-1-Ash	WL023	IOJ1120-02	Ash	6010/6020/7471

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

Samples in this SDG was received at the laboratory above the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$, at 15°C ; however, as the samples were not volatile in nature, no qualifications were required. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the samples and analyses presented in this SDG. No sample qualifications were required.

2.1.3 Holding Times

The dates of collection recorded on the COC and the dates of analyses recorded in the raw data, documented that the sample analyses were performed within the specified holding times of six months for the ICP and ICP/MS metals and 28-days for mercury. No qualifications were required.

2.2 ICP-MS TUNING

The ICP-MS met the method specified tune criteria; therefore, no qualifications were required for ICP-MS tuning.

2.3 CALIBRATION

The ICV results showed acceptable recoveries, 90-110% for ICP and ICP/MS metals and 80-120% for mercury. The laboratory analyzed reporting limit check standards in association with this SDG and all recoveries were acceptable. No qualifications were required.

2.4 BLANKS

The method blank and CCB results were nondetects at the reporting limit or were significantly below the sample detects so as not to result in qualification of the data with the exception of selenium in the CCB. Selenium was qualified as an estimated nondetect, "UJ." No further qualifications were required.

2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were included in the raw data for the ICP and ICP/MS analyses. The recoveries were within the control limits and no qualifications were required.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The ICP LCS samples, ICP/MS LCS samples, and mercury LCS samples as reported on the LCS on the summary forms and in the raw data were within the laboratory-established control limits with the exception of silver in the blank spike with a recovery of 30.2%. Silver was qualified as an estimated detect or nondetect, "J or UJ," in the site samples. No further qualifications were required.

2.7 LABORATORY DUPLICATES

MS/MSD analyses were performed on sample WL022. All RPDs were within control limits. No qualification was required.

2.8 MATRIX SPIKE

MS/MSD analyses were performed on WL022. Antimony and silver were recovered below control limits. Detects and nondetects for antimony and silver were qualified as estimated, "J or UJ," for all site samples. No further qualification was required.

2.9 FURNACE ATOMIC ABSORPTION QC

Furnace atomic absorption was not utilized for the analyses of these samples; therefore, furnace atomic absorption QC is not applicable.

2.10 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the samples in this SDG; therefore, no assessment was made with respect to this criterion.

2.11 INTERNAL STANDARDS PERFORMANCE

For the target compounds analyzed by ICP/MS, the ICP/MS internal standards were within established control limits. No qualifications were required.

2.12 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the samples in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. No further qualifications were required.

2.13 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples.

2.13.1 Field Blanks and Equipment Rinsates

The samples in this SDG had no associated field QC samples. No qualifications were required.

2.13.2 Field Duplicates

There were no field duplicate analyses performed in association with the site samples.



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The Boeing Company-SSFL
 5800 Woolsey Canyon Road
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 Attention: Paul Costa

Project ID: Boeing SSFL-NPDES (ash)
 TAS# MWH-1113
 Report Number: IOJ1120

Sampled: 10/13/05
 Received: 10/14/05

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOJ1120-01 (WL022 - Soil)									
Reporting Units: mg/kg dry									
Antimony	EPA 6020	5J18103	0.030	1.0	0.053	1	10/18/05	10/19/05	M2, J
Arsenic	EPA 6010B	5J18102	0.61	2.0	5.1	1	10/18/05	10/24/05	
Barium	EPA 6010B	5J18102	0.81	1.0	48	1	10/18/05	10/24/05	M1
Beryllium	EPA 6010B	5J18102	0.20	0.51	0.34	1	10/18/05	10/24/05	J
Boron	EPA 6010B	5J18102	1.0	5.1	ND	1	10/18/05	10/24/05	
Cadmium	EPA 6020	5J18103	0.020	0.51	0.072	1	10/18/05	10/19/05	J
Chromium	EPA 6010B	5J18102	0.30	1.0	9.7	1	10/18/05	10/24/05	
Cobalt	EPA 6010B	5J18102	0.30	1.0	3.3	1	10/18/05	10/24/05	
Copper	EPA 6020	5J18103	0.20	1.0	5.6	1	10/18/05	10/19/05	
Iron	EPA 6010B	5J18102	1.5	5.1	11000	1	10/19/05	10/24/05	
Lead	EPA 6020	5J18103	0.020	0.51	5.3	1	10/18/05	10/19/05	
Manganese	EPA 6010B	5J18102	0.81	1.0	190	1	10/19/05	10/24/05	
Mercury	EPA 7471A	5J24081	0.0030	0.020	ND	1	10/24/05	10/24/05	
Nickel	EPA 6010B	5J18102	0.20	2.0	7.8	1	10/18/05	10/24/05	
Selenium	EPA 6020	5J18103	0.20	1.0	0.29	1	10/18/05	10/19/05	B, J
Silver	EPA 6020	5J25083	0.020	0.51	0.029	1	10/25/05	10/27/05	J
Thallium	EPA 6020	5J18103	0.10	0.51	0.18	1	10/18/05	10/19/05	J
Vanadium	EPA 6010B	5J18102	0.30	1.0	18	1	10/18/05	10/24/05	
Zinc	EPA 6010B	5J18102	1.5	5.1	33	1	10/18/05	10/24/05	

Sample ID: IOJ1120-02 (WL023 - Solid)

Reporting Units: mg/kg dry

Antimony	EPA 6020	5J18103	0.031	1.0	0.12	1	10/18/05	10/19/05	J
Arsenic	EPA 6010B	5J18102	0.62	2.1	3.1	1	10/18/05	10/24/05	
Barium	EPA 6010B	5J18102	0.82	1.0	180	1	10/18/05	10/24/05	
Beryllium	EPA 6010B	5J18102	0.21	0.51	0.41	1	10/18/05	10/24/05	J
Boron	EPA 6010B	5J18102	1.0	5.1	77	1	10/18/05	10/24/05	
Cadmium	EPA 6020	5J18103	0.021	0.51	0.65	1	10/18/05	10/19/05	
Chromium	EPA 6010B	5J18102	0.31	1.0	13	1	10/18/05	10/24/05	
Cobalt	EPA 6010B	5J18102	0.31	1.0	3.3	1	10/18/05	10/24/05	
Copper	EPA 6020	5J18103	0.21	1.0	27	1	10/18/05	10/19/05	
Iron	EPA 6010B	5J18102	6.2	21	11000	4	10/19/05	11/01/05	
Lead	EPA 6020	5J18103	0.021	0.51	16	1	10/18/05	10/19/05	
Manganese	EPA 6010B	5J18102	0.82	1.0	270	1	10/19/05	10/24/05	
Mercury	EPA 7471A	5J24081	0.0031	0.021	ND	1	10/24/05	10/24/05	
Nickel	EPA 6010B	5J18102	0.21	2.1	15	1	10/18/05	10/24/05	
Selenium	EPA 6020	5J18103	0.21	1.0	0.63	1	10/18/05	10/19/05	B, J
Silver	EPA 6020	5J26127	0.021	0.51	0.11	1	10/26/05	10/28/05	J
Thallium	EPA 6020	5J18103	0.10	0.51	0.22	1	10/18/05	10/19/05	J
Vanadium	EPA 6010B	5J18102	0.31	1.0	23	1	10/18/05	10/24/05	
Zinc	EPA 6010B	5J18102	1.5	5.1	110	1	10/18/05	10/24/05	

Del Mar Analytical, Irvine
 Michele Harper
 Project Manager

AM 11/25/06
 Rev 1

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 Rev 2

Rev 3
 2/22/06

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