

0069422

SAF-RC-001
Industrial Hygiene Sampling
FINAL DATA

NO DISTRIBUTION REQUIRED

COMMENTS:

SDG 06I-0670-01 SAF-RC-001

Rad only Chem only Rad & Chem

X Complete Partial

334 Trench

RECEIVED
APR 28 2006

EDMC



Cover Page

Report Identification Number: 06I-0670-01
Subcontract Number: 0000X-BO-G0058-B-Mod#4
Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby
Laboratory Identification Number: DCHM
SAF#: RC-001 /R33400 J452
Payroll#: 73974



Sample Information

Table with 6 columns: Sample Date, Customer Sample Number, Laboratory Sample Number, Method, Analytical Batch Identification, Sample Matrix. Contains 4 rows of sample data.

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Name: Joanna C. Sanchez
Title: Chemist
Date: February 22, 2006



Case Narrative Page

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General Set Information: There are 4 samples in set 06I-0669-01, 4 samples in set 06I-0670-01, 56 samples in set 06I-0671-02, 4 samples in set 06I-0719-01, 4 samples in set 06I-0720-01 and 19 samples in set 06I-0721-01 which were analyzed for cadmium, lead and beryllium on Ghost Wipe. No problems were encountered with the receipt of these samples and no contact with the CTR was required.

Method Summary: Samples were transferred to 50 ml centrifuge tubes and digested in the presence of 5 mL of nitric acid and 5 mL of ASTM Type II water. Samples were digested in a hot block set at 110°C for 60 minutes. Samples were then diluted to a 25 mL volume with ASTM Type II Water. Samples were shaken and delivered for ICP analysis.

Sample Preparation: All samples were prepared in accordance with DCL SOP "IH-AN-021" and NIOSH method NMAM 7300 modified for hot block digestion.

Holding Times: The holding times were met for both sample preparation and analysis.

Instrument Calibration: Instrument calibration was performed in accordance with NIOSH method NMAM 7300.

Initial and Continuing Calibration Verification Analysis: Beryllium, cadmium and lead recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of +/- 10%.

Initial and Continuing Calibration Blank Analysis: No beryllium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Contract Required Detection Limits (CRDL) of 0.01 ug/sample. No cadmium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Contract Required Detection Limits (CRDL) of 0.07 ug/sample. No lead results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Contract Required Detection Limits (CRDL) of 2. ug/sample.

Method Blank Analysis: No beryllium, cadmium or lead was found in any of the media blank samples above the Contract Required Detection Limit (CRDL).

Dilution(s): Samples 06I05696 and 06I05341 were diluted twofold for cadmium because of interference. Samples 06I05321, 06I05328, 06I05349, 06I05708, 06I05705, 06I05709 and 06I05697 were diluted fivefold for cadmium because of interference. Samples 06I05287, 06I05695, 06I05699, 06I05703, 06I05706 and 06I05707 were diluted tenfold for cadmium because of interference. Sample 06I05322 was diluted fifty fold for cadmium because of interference. The reporting limits should be raised accordingly.

Laboratory Control Sample and Duplicate Analysis: Six Laboratory Control Samples (LCSs) and six Laboratory Control Sample Duplicates (LCSDs) were prepared and analyzed with the sample batch. The LCS results were within the control limits of +/- 20%. The Relative Percent Difference (RPD) between the LCSs and the LCSDs were within the control limit of 20%.

Replicate Analysis: Ten samples in this batch were replicated. The RPD between the samples and the replicates was within the control limit of 20%. If the result of the sample or replicate is below the CRDL, replicate analysis is negligible.

Flagging Codes: None

Nonconformance/Corrective Action Report (NC/CAR): N/A

Sample Calculation: The final results are calculated by the following equation:
Final result for aqueous samples ($\mu\text{g}/\text{sample}$) = (A) x (B) x (C)

Where:

A = Analyte concentration from instrument determination ($\mu\text{g}/\text{L}$)

B = Concentration factor from sample preparation

= $\frac{\text{Final Volume of Digestate (L)}}{\text{Sample}}$

C = Dilution performed at time of analysis

Example Calculation: $(1 \mu\text{g}/\text{L}) \times (0.025 \text{ L}/\text{sample}) \times (1) = 0.025 \mu\text{g}/\text{sample}$

Miscellaneous Comments: The LOQ for sample 06I04583 for cadmium is 0.6 because of interference.



Report Page

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 Payroll#: 73974

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium µg/sample		Cadmium µg/sample		Lead µg/sample	
J115K3	06I05291	17 Feb 2006	<0.01	U	<0.07	U	<2.	U
J115K4	06I05292	17 Feb 2006	<0.01	U	<0.07	U	<2.	U
J115K5	06I05293	17 Feb 2006	<0.01	U	<0.07	U	<2.	U
J115K6	06I05294	17 Feb 2006	<0.01	U	<0.07	U	<2.	U
Limit of Detection (LOD)			0.01		0.07		2.	
Required Detection Limit (RDL)								

U - Parameter not detected above LOD.
 J - Parameter between LOD and RDL.



QC Summary Page

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 SAF: RC-001 /R33400 J452
 Payroll#: 73974

Batch ID: G061H03H

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-241415-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-241415-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
BL-241415-1	MB	Lead	µg/sample	ND	NA	NA	NA	NA
QC-241415-1	LCS	Beryllium	µg/sample	11.3	NA	10.0	113.	NA
QC-241415-1	LCS	Cadmium	µg/sample	32.0	NA	30.0	107.	NA
QC-241415-1	LCS	Lead	µg/sample	97.0	NA	100.	97.0	NA
QD-241415-1	LCSD	Beryllium	µg/sample	11.5	11.3	10.0	115.	2.16
QD-241415-1	LCSD	Cadmium	µg/sample	31.6	32.0	30.0	105.	0.965
QD-241415-1	LCSD	Lead	µg/sample	97.8	97.0	100.	97.8	0.828
BL-241416-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-241416-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
BL-241416-1	MB	Lead	µg/sample	ND	NA	NA	NA	NA
QC-241416-1	LCS	Beryllium	µg/sample	11.3	NA	10.0	113.	NA
QC-241416-1	LCS	Cadmium	µg/sample	31.5	NA	30.0	105.	NA
QC-241416-1	LCS	Lead	µg/sample	97.7	NA	100.	97.7	NA
QD-241416-1	LCSD	Beryllium	µg/sample	11.5	11.3	10.0	115.	1.95
QD-241416-1	LCSD	Cadmium	µg/sample	31.9	31.5	30.0	106.	1.31
QD-241416-1	LCSD	Lead	µg/sample	97.4	97.7	100.	97.4	0.312
BL-241418-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-241418-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
BL-241418-1	MB	Lead	µg/sample	ND	NA	NA	NA	NA
QC-241418-1	LCS	Beryllium	µg/sample	11.3	NA	10.0	113.	NA
QC-241418-1	LCS	Cadmium	µg/sample	32.0	NA	30.0	107.	NA
QC-241418-1	LCS	Lead	µg/sample	100.	NA	100.	100.	NA
QD-241418-1	LCSD	Beryllium	µg/sample	11.3	11.3	10.0	113.	0.212
QD-241418-1	LCSD	Cadmium	µg/sample	31.9	32.0	30.0	106.	0.114
QD-241418-1	LCSD	Lead	µg/sample	99.8	100.	100.	99.8	0.381
BL-241418-2	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-241418-2	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA



QC Summary Page

BL-241418-2	MB	Lead	µg/sample	ND	NA	NA	NA	NA
QC-241418-2	LCS	Beryllium	µg/sample	11.3	NA	10.0	113.	NA
QC-241418-2	LCS	Cadmium	µg/sample	31.1	NA	30.0	104.	NA
QC-241418-2	LCS	Lead	µg/sample	97.7	NA	100.	97.7	NA
QD-241418-2	LCSD	Beryllium	µg/sample	11.2	11.3	10.0	112.	0.188
QD-241418-2	LCSD	Cadmium	µg/sample	32.1	31.1	30.0	107.	3.13
QD-241418-2	LCSD	Lead	µg/sample	99.8	97.7	100.	99.8	2.09

- MB - Method Blank
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- LD - Laboratory Duplicate

- NA - Not Applicable
- ND - Parameter not detected above LOD

LCS, LCSD Percent Rec. = (Result / Target) * 100.0
 MS, MSD Percent Rec. = ((Result - Parent) / Target) * 100.0

LCS, LCSD Relative Percent Diff. = ((|LCS - LCSD|) / ((LCS + LCSD)/2.0)) * 100.
 MS, MSD Relative Percent Diff. = ((|MS - MSD|) / ((MS + MSD)/2.0)) * 100.
 LD Relative Percent Diff. = ((|Parent - LD|) / ((Parent + LD)/2.0)) * 100

02-067001

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: DM Driggers		Company Contact: Dence A. Pitts and Henry W. Ruby		Project Coordinator: Joan H. Keenan		Date Turnaround: STD	
Payroll #: 13974		Telephone No.: 531-1229		SAF No.: RC-001			
Type of Sample: Be, Cd, Pb		SPECIAL INSTRUCTIONS: All relevant COAs must be provided. # 33400-J452		Method of Shipment: Fed Ex			
Shipped To: Data Chem		SPECIAL ANALYSIS METHOD (SPECIFIC): Niosh 7300		Bill of Lading/Air Bill No.: 8544 9435 4807			
POSSIBLE SAMPLE HAZARD/REMARKS: Utah		Preservation (i.e., cooling required, etc.):		No			
Special Handling and/or Storage: NA		MATRIX: A - AIR, W1 - WIPE, X - OTHER		Asbestos Airborne		No	
		VOLUME (L or Area) (Dg. and)		Lead Airborne		No	
		SAMPLE DATE		Lead Wipe		No	
		2-15-06		Mold		No	
		↓		Beryllium Wipe		No	
		↓		Beryllium Airborne		No	
		↓		Cadmium Wipe		No	
		↓		Cadmium Airborne		No	
		↓		Chromium Wipe		No	
		↓		Chromium Airborne		No	
		↓		Copper Wipe		No	
		↓		Copper Airborne		No	
		↓		Iron Wipe		No	
		↓		Iron Airborne		No	
		↓		Manganese Wipe		No	
		↓		Manganese Airborne		No	
		↓		Nickel Wipe		No	
		↓		Nickel Airborne		No	
		↓		Silver Wipe		No	
		↓		Silver Airborne		No	
		↓		Zinc Wipe		No	
		↓		Zinc Airborne		No	

WCH-SH-202 (08/29/2005)

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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: DM Driggers	Company Contact Denise A. Pitts and Henry W. Ruby	Telephone No. 531-1229	Project Coordinator Joan H. Kessner	Data Turnaround STD
Payroll #: 73974	Sampling Location 334 trench	SPECIAL INSTRUCTIONS All relevant COAs must be provided: R 33400-J452		SAF No. RC-001
Type of Sample: Be, Cd, Pb		ANALYSIS METHOD (SPECIFIC): Niosh 7300		Method of Shipment Fed Ex
Shipped To: Data Chem	Wipe Sample Media: Ghost <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Other _____	Bill of Lading/Air Bill No. 8544 9435 4807		
Shipped To: Utah				

POSSIBLE SAMPLE HAZARD/REMARKS Be, Cd, Pb	MATRIX A - AIR WI - WIPE X - OTHER	Preservation (i.e., cooling required, etc.)	No							
Special Handling and/or Storage NA										

SAMPLE ANALYSIS					Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold	Lead Wipe	Cd Wipe	Cd Airborne	DP
SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area <u>100</u> cm ²	Comments									
J115K3	WI	2-15-06	X	NA			X			X	X	2-15-06	2-15-06
J115K4	↓	↓	X	NA			X			X	X		
J115K5	↓	↓	NA	blank			X			X	X		
J115K6	WI	2-15-06	NA	blank			X			X	X		2-15-06
					FIELD SAMPLE COPY								
					COPY								

Enter on line below the first Sample Number from Page One:

J115K3

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
SIGN / PRINT NAMES / USE MILITARY TIME			
Relinquished By/Stored	DATE / TIME	Received By/Stored:	DATE / TIME
DMD Supp / DM Driggers	2-15-06 / 1238	3146 Locked Cabinet room 16	2-15-06 / 1238
Locked cabinet bldg 3146 Rm #16			
Gold Mall Goldie Malhan	2-15-06 / 14:50	RZ Steffler R.J. Steffler	2-15-06 / 1450
RZ Steffler R.J. Steffler	WCH 2-15-06 / 1600	Fed Ex	
LABORATORY SECTION	Received By	Title	DATE / TIME

REVIEWED BY: _____ DATE: _____
 PRINT/SIGN NAME