

SAF-RC-001 Industrial Hygiene Sampling FINAL DATA

NO DISTRIBUTION REQUIRED

COMMENTS:

SDG 051-4739-01 SAF-RC-001

Rad only X Chem only Rad & Chem

X Complete Partial

300 Area 334A Bldg

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Cover Page



Report Identification Number: 05I-4739-01
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 J451
Payroll#: 72520

Sample Information

Table with 6 columns: Sample Date, Customer Sample Number, Laboratory Sample Number, Method, Analytical Batch Identification, Sample Matrix. Contains 3 rows of sample data.

I certify that this electronic image and all hardcopies produced from this image accurately represent the data and are in compliance with the contract specific requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package narrative. Release, by submission through email, the data contained in this electronic image and the computer-readable EDD (as applicable), has been authorized by the laboratory Manager or the Manager's designee.

Name: Lisa M. Reid
Title: Chemist
Date: November 18, 2005

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General Set Information: There are 9 samples in set 05I-4743-01, 4 samples in set 05I-4744-01 and 9 samples in set 05I-4704-01 which were analyzed for Be on MCE filter. There are 4 samples in set 05I-4738 and 3 samples in set 05I-4739-01 which were analyzed for cadmium and beryllium on MCE filter. 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 10 mL of 1:1 (v/v) nitric acid. Samples were digested in a hot block set at 110°C (with a thermometer reading of 96°C) for 40 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 and lead recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of $\pm 10\%$.

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 Limit of Quantitation (LOQ) 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 Limit of Quantitation (LOQ) of 0.1 ug/sample.

Method Blank Analysis: Beryllium was found in the two media blank samples above the above the LOQ at 0.015 ug/sample and 0.013 ug/sample. No cadmium was found in the media blank sample above the Contract Required Detection Limit (CRDL).

Dilution(s): NA.

Laboratory Control Sample and Duplicate Analysis: Two Laboratory Control Samples (LCSs) and two Laboratory Control Sample Duplicates (LCSDs) were prepared and analyzed with the sample batch. The LCS results for both beryllium and cadmium were within the control limit of $\pm 20\%$. The Relative Percent Differences (RPD) between the LCSs and the LCSDs were within the control limit of 20%.

Replicate Analysis: Two samples in this batch were replicated. The RPDs between the samples and the replicates were 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 ($\mu\text{g/sample}$) = (A) x (B) x (C)

Where:

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

B = Concentration factor from sample preparation

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

Sample

C = Dilution performed at time of analysis

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

Miscellaneous Comments: None.

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Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium $\mu\text{g}/\text{sample}$		Beryllium $\mu\text{g}/\text{m}^3$		Air Volume L
J10JP0	05I44463	17 Nov 2005	<0.01	U	**		0.00
J10JP1	05I44464	17 Nov 2005	<0.01	U	**		0.00
J10JP2	05I44465	17 Nov 2005	<0.01	U	<0.014		701.
Limit of Detection (LOD)			0.01				
Required Detection Limit (RDL)							

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Cadmium $\mu\text{g}/\text{sample}$		Cadmium $\mu\text{g}/\text{m}^3$	
J10JP0	05I44463	17 Nov 2005	<0.1	U	**	
J10JP1	05I44464	17 Nov 2005	<0.1	U	**	
J10JP2	05I44465	17 Nov 2005	0.31		0.44	
Limit of Detection (LOD)			0.1			
Required Detection Limit (RDL)						

U - Parameter not detected above LOD.

J - Parameter between LOD and RDL.



QC Summary Page

Report Identification Number: 05I-4739-01
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 Laboratory Identification Number: DCHM
 SAF: RC-001 / R33400 J451
 Payroll#: 72520

Batch ID: G05BJ014

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-238339-1	MB	Beryllium	µg/sample	0.015	NA	NA	NA	NA
BL-238339-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
QC-238339-1	LCS	Beryllium	µg/sample	10.6	NA	10.0	106.	NA
QC-238339-1	LCS	Cadmium	µg/sample	32.8	NA	30.0	109.	NA
QD-238339-1	LCSD	Beryllium	µg/sample	10.7	10.6	10.0	107.	0.914
QD-238339-1	LCSD	Cadmium	µg/sample	33.0	32.8	30.0	110.	0.694
BL-238339-2	MB	Beryllium	µg/sample	0.013	NA	NA	NA	NA
BL-238339-2	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
QC-238339-2	LCS	Beryllium	µg/sample	10.7	NA	10.0	107.	NA
QC-238339-2	LCS	Cadmium	µg/sample	33.1	NA	30.0	110.	NA
QD-238339-2	LCSD	Beryllium	µg/sample	10.8	10.7	10.0	108.	1.12
QD-238339-2	LCSD	Cadmium	µg/sample	33.3	33.1	30.0	111.	0.768

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



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05-479701

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST											
Collector: <u>CJ Williams</u>		Company Contact: <u>Denise A. Pitts and Henry W. Ruby</u>			Telephone No.: <u>531-1229</u>		Project Coordinator: <u>Joan H. Kessler</u>		Data Turnaround: <u>24 hr 5</u>		
Payroll #: <u>72520</u>		Sampling Location: <u>300 amu / 334A B106</u>		SPECIAL INSTRUCTIONS: <u>All relevant COAs must be provided: R33400 J451</u>			SAF No.: <u>RC-001</u>				
Type of Sample: <u>Be person</u>				ANALYSIS METHOD (SPECIFIC): <u>N105H 7300</u>			Method of Shipment: <u>Federal Express</u>				
Shipped To: <u>Datachem Salt Lake City UT</u>		Wipe Sample Media: <u>Ghost</u> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Other					Bill of Lading/Air Bill No.: <u>8541933756 05</u>				
POSSIBLE SAMPLE HAZARD/REMARKS: <u>cd/be</u>		MATRIX: <u>W/A</u>		Preservation (i.e., cooling required, etc.):		No	No	No	No	No	ND
Special Handling and/or Storage:		A - AIR	W1 - WIPE	X - OTHER							
SAMPLE ANALYSIS											
SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area (cm ²)	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold	Cadmium	
J10JP0	A	11-15-05	Blanks	CJW 11-15-05			X			X	CJW 11-15-05
J10JP1	A	↓	Blanks				X			X	
J10JP2	A	11-15-05	701				X			X	
							X			X	

WCH-SH-302 (08/29/2005)

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960 West Levoy Drive
Salt Lake City, Utah 84123-2547

Phone: (801) 266-7700
FAX: (801) 268-9992

Web Page: www.datachem.com
E-mail: lab@datachem.com

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

J10JPO

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
SIGN / PRINT NAMES / USE MILITARY TIME			
Received By/Serial	DATE / TIME	Received By/Serial	DATE / TIME
<i>Anthony Williams / A Williams</i>	11-15-05 / 1600	3746 Bldg cm16 delid cabinet	11-15-05 / 1600
<i>Patrick Vichit</i>	11-16-05 1430	<i>David St John</i>	11/16/05 1430
<i>David St John</i>	11/16/05 1500	<i>Fed Ex</i>	
<i>Fed Ex</i>		<i>Michael Edwards</i>	11/16/05
<i>Michael Edwards</i>	11/16/05		
LABORATORY SECTION	Received By	Title	DATE / TIME
	<i>Michael Edwards</i>		11/16/05

REVIEWED BY: _____ DATE: _____
PRINT/SIGN NAME