

# SAF-RC-001 Industrial Hygiene Sampling FINAL DATA

**NO DISTRIBUTION REQUIRED**

**COMMENTS:**

SDG 06I-0545-01 SAF-RC-001

Rad only  Chem only  Rad & Chem

X Complete  Partial

**300 Area 311/3712 Site**

**RECEIVED**  
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# Cover Page

Report Identification Number: 06I-0545-01  
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 / R311TF J452  
Payroll#: 8C292



### Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
07 Feb 2006	J11644	06I04493	NMAM 7300M	G061801P	G WIPE
07 Feb 2006	J11643	06I04494	NMAM 7300M	G061801P	G WIPE
07 Feb 2006	J11474	06I04495	NMAM 7300M	G061801P	G WIPE
07 Feb 2006	J11473	06I04496	NMAM 7300M	G061801P	G WIPE

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Name: Lisa M. Reid  
Title: Chemist  
Date: February 13, 2006

Report Identification Number: 06I-0545-01  
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**General Set Information:** There are 4 samples in set 06I-0517-01, 4 samples in set 06I-0518-01, 4 samples in set 06I-0519-01, 4 samples in set 06I-0545-01, 4 samples in set 06I-0546-01 and 4 samples in set 06I-0547-01 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 0.02 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 0.1 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 3. 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):** None.

**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 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:** Four 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:

$$\text{Final result for aqueous samples } (\mu\text{g/sample}) = (A) \times (B) \times (C)$$

Where:

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

B = Concentration factor from sample preparation

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

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



# Report Page

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Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium µg/sample		Cadmium µg/sample		Lead µg/sample	
J11644	06I04493	09 Feb 2006	<0.02	U	<0.1	U	<3.	U
J11643	06I04494	09 Feb 2006	0.093		0.75		5.8	
J11474	06I04495	09 Feb 2006	<0.02	U	<0.1	U	<3.	U
J11473	06I04496	09 Feb 2006	<0.02	U	<0.1	U	<3.	U
Limit of Detection (LOD)			0.02		0.1		3.	
Required Detection Limit (RDL)								

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

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Batch ID: G061801P

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-241165-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-241165-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
BL-241165-1	MB	Lead	µg/sample	ND	NA	NA	NA	NA
QC-241165-1	LCS	Beryllium	µg/sample	11.5	NA	10.0	115.	NA
QC-241165-1	LCS	Cadmium	µg/sample	32.5	NA	30.0	108.	NA
QC-241165-1	LCS	Lead	µg/sample	102.	NA	100.	102.	NA
QD-241165-1	LCSD	Beryllium	µg/sample	11.5	11.5	10.0	115.	0.715
QD-241165-1	LCSD	Cadmium	µg/sample	32.4	32.5	30.0	108.	0.456
QD-241165-1	LCSD	Lead	µg/sample	102.	102.	100.	102.	0.164

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

011.0545.01

### CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

<b>Collector:</b> CBATES <b>Payroll #:</b> 8C292 <b>Type of Sample:</b> Beryllium WIPE <b>Shipped To:</b> DATACHEM SALT LAKE CITY, UT Be, Pb, Cd Special Handling and/or Storage: NA		<b>Company Contact:</b> Denise A. Pitts and Henry W. Ruby <b>Telephone No.:</b> 531-1259 <b>SPECIAL INSTRUCTIONS:</b> All relevant COAs must be provided: RS11TF J7452 ANALYSIS METHOD (SPECIFIC): NIOSH METHOD 7300 Be, Cd, Pb		<b>Project Coordinator:</b> Joan H. Kessner <b>SAF No.:</b> RC-001 <b>Method of Shipment:</b> Federal Express <b>Bill of Lading/Air Bill No.:</b> 8544 9435 4759		<b>Data Transferred:</b> 3day					
<b>Matrix:</b> A - AIR W - WIPE X - OTHER		<b>Preservation (i.e., cooling required, etc.):</b>		<b>Comments:</b>		<b>Comments:</b>					
SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or (g)	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Model	Lead Wipe	Cd Wipe	Pb Airborne
J11644	WI	2-7-06	X	NA	NA	X	X	X	X	X	X
J11643	WI	2-7-06	X	NA	NA	X	X	X	X	X	X
J11474	WI	2-7-06	NA	BLANK	NA	X	X	X	X	X	X
J11473	WI	2-7-06	NA	BLANK	NA	X	X	X	X	X	X

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WCH-SH-302 (10/29/2005)





### CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: <b>CBATES</b>	Company Contact Denise A. Pitts and Henry W. Ruby	Telephone No. 531-1229	Project Coordinator Joan H. Kessner	Data Turnaround  <b>3day</b>
Payroll #: <b>8C292</b>	Sampling Location <b>300 AREA 3M/3712 SITE</b>	SPECIAL INSTRUCTIONS All relevant COAs must be provided: <b>R311TFJ452</b>		SAF No. RC-001
Type of Sample: <b>WIPE</b>	<b>Beryllium LEAD CADMIUM</b>	ANALYSIS METHOD (SPECIFIC): <b>NIOSH METHOD 7300</b>		Method of Shipment <b>Federal Express</b>
Shipped To: <b>DATAHEM SALT LAKE CITY, UT</b>	Wipe Sample Media: Ghost <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Other <b>NA</b>	Bill of Lading/Air Bill No. <b>8544 9435 4759</b>		

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

SAMPLE ANALYSIS					Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold	Lead Wipe	Cd Wipe	Cd Airborne
SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area (100 cm <sup>2</sup> )	Comments								
J11644	WI	2-7-06	X	NA	<b>CB</b> 2-7-06	<b>CB</b> 2-7-06	<b>CB</b> 2-7-06	X		X	X	<b>CB</b> 2-7-06
J11643	WI	2-7-06	X	NA				X		X	X	
J11474	WI	2-7-06	NA	BLANK				X		X	X	
J11473	WI	2-7-06	NA	BLANK				X		X	X	
COPY												
FIELD SAMPLE COPY												

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

J11644

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
SIGN / PRINT NAMES / USE MILITARY TIME			
Relinquished By/Initial	DATE / TIME	Received By/Initial	DATE / TIME
CLIFFORD BATES <i>Clifford Bates</i>	2-7-06 1630	LOCKED DRAWER Rm16 3746 Bldg	2-7-06 1630
Relinquished By/Initial	DATE / TIME	Received By/Initial	DATE / TIME
<del>Chris Schelling</del> Chris Schelling	2-8-06 1430	RZ Steffler R.J. Steffler	2-8-06 / 1430
Relinquished By/Initial	DATE / TIME	Received By/Initial	DATE / TIME
RZ Steffler R.J. Steffler	WCH 2-8-06 / 1600	Fed Ex	
Relinquished By/Initial	DATE / TIME	Received By/Initial	DATE / TIME
Relinquished By/Initial	DATE / TIME	Received By/Initial	DATE / TIME
Relinquished By/Initial	DATE / TIME	Received By/Initial	DATE / TIME
Relinquished By/Initial	DATE / TIME	Received By/Initial	DATE / TIME
Relinquished By/Initial	DATE / TIME	Received By/Initial	DATE / TIME
LABORATORY SECTION	Received By	Title	DATE / TIME

REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

PRINT/SIGN NAME