

# SAF-RC-001 Industrial Hygiene Sampling FINAL DATA

**NO DISTRIBUTION REQUIRED**

**COMMENTS:**

SDG 06I-0257-01 SAF-RC-001  
Rad only  Chem only Rad & Chem  
X Complete Partial

**300 Area 334 Bldg**

**RECEIVED**  
MAR 29 2006  
**EDMC**



# Cover Page

Report Identification Number: 06I-0257-01  
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 / R33400J452  
Payroll#: 0636267



### Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
16 Jan 2006	J10WX9	06I02040	NMAM 7300M	G060R00K	MCE
16 Jan 2006	J10WY0	06I02041	NMAM 7300M	G060R00K	MCE
16 Jan 2006	J10WY3	06I02042	NMAM 7300M	G060R00K	MCE
16 Jan 2006	J10WY1	06I02043	NMAM 7300M	G060R00K	MCE
16 Jan 2006	J10WY2	06I02044	NMAM 7300M	G060R00K	MCE
16 Jan 2006	J10WY6	06I02045	NMAM 7300M	G060R00K	MCE
16 Jan 2006	J10WY5	06I02046	NMAM 7300M	G060R00K	MCE

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: Joanna C. Sanchez  
Title: Chemist  
Date: January 25, 2006



## Case Narrative Page

Page 2 of 8

Report Identification Number: 06I-0257-01  
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 / R33400J452  
Payroll#: 0636267

**General Set Information:** There are 7 samples in set 06I-0257-01 and 8 samples in set 06I-0258-01 which were analyzed for beryllium, lead and cadmium 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 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, 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 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 0.08 ug/sample. No lead results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 2. ug/sample.

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

**Dilution(s):** NA.

**Laboratory Control Sample and Duplicate Analysis:** One Laboratory Control Sample (LCS) and one Laboratory Control Sample Duplicate (LCSD) were prepared and analyzed with the sample batch. The LCS result was within the control limit of +/- 20%. The Relative Percent Differences (RPD) between the LCS and the LCSD was within the control limit of 20%.

**Replicate Analysis:** One sample was replicated with this analysis run. The RPD between the sample and the replicate 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:** None.



# Report Page

Report Identification Number: 06I-0257-01  
 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 / R33400J452  
 Payroll#: 0636267

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium $\mu\text{g}/\text{sample}$	Beryllium $\mu\text{g}/\text{m}^3$	Air Volume L
J10WX9	06I02040	25 Jan 2006	<0.01 U	**	**
J10WY0	06I02041	25 Jan 2006	<0.01 U	**	**
J10WY3	06I02042	25 Jan 2006	<0.01 U	<0.0013 U	7429.
J10WY1	06I02043	25 Jan 2006	<0.01 U	<0.0014 U	7309.
J10WY2	06I02044	25 Jan 2006	<0.01 U	<0.0013 U	7475.
J10WY6	06I02045	25 Jan 2006	<0.01 U	<0.0049 U	2032.
J10WY5	06I02046	25 Jan 2006	<0.01 U	<0.0060 U	1663.
Limit of Detection (LOD)			0.01		
Required Detection Limit (RDL)					

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Lead $\mu\text{g}/\text{sample}$	Lead $\mu\text{g}/\text{m}^3$	Cadmium $\mu\text{g}/\text{sample}$
J10WX9	06I02040	25 Jan 2006	<2. U	**	<0.08 U
J10WY0	06I02041	25 Jan 2006	<2. U	**	<0.08 U
J10WY3	06I02042	25 Jan 2006	<2. U	<0.27 U	<0.08 U
J10WY1	06I02043	25 Jan 2006	<2. U	<0.27 U	<0.08 U
J10WY2	06I02044	25 Jan 2006	<2. U	<0.27 U	<0.08 U
J10WY6	06I02045	25 Jan 2006	<2. U	<0.98 U	<0.08 U
J10WY5	06I02046	25 Jan 2006	<2. U	<1.2 U	<0.08 U
Limit of Detection (LOD)			2.		0.08
Required Detection Limit (RDL)					

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Cadmium $\mu\text{g}/\text{m}^3$
J10WX9	06I02040	25 Jan 2006	**
J10WY0	06I02041	25 Jan 2006	**
J10WY3	06I02042	25 Jan 2006	<0.011 U
J10WY1	06I02043	25 Jan 2006	<0.011 U



# Report Page

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Cadmium $\mu\text{g}/\text{m}^3$	
J10WY2	06I02044	25 Jan 2006	<0.011	U
J10WY6	06I02045	25 Jan 2006	<0.039	U
J10WY5	06I02046	25 Jan 2006	<0.048	U
Limit of Detection (LOD)				
Required Detection Limit (RDL)				

U - Parameter not detected above LOD.

J - Parameter between LOD and RDL.



# QC Summary Page

Report Identification Number: 06I-0257-01  
 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 / R33400J452  
 Payroll#: 0636267

Batch ID: G060R00K

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-240323-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-240323-1	MB	Lead	µg/sample	ND	NA	NA	NA	NA
BL-240323-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
QC-240323-1	LCS	Beryllium	µg/sample	10.6	NA	10.0	106.	NA
QC-240323-1	LCS	Lead	µg/sample	102.	NA	100.	102.	NA
QC-240323-1	LCS	Cadmium	µg/sample	32.9	NA	30.0	110.	NA
QD-240323-1	LCSD	Beryllium	µg/sample	10.7	10.6	10.0	107.	1.33
QD-240323-1	LCSD	Lead	µg/sample	104.	102.	100.	104.	2.10
QD-240323-1	LCSD	Cadmium	µg/sample	33.6	32.9	30.0	112.	1.91

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

$LCS, LCSD \text{ Percent Rec.} = (\text{Result} / \text{Target}) * 100.0$   
 $MS, MSD \text{ Percent Rec.} = ((\text{Result} - \text{Parent}) / \text{Target}) * 100.0$

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

01-16-06

### CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

<b>Collector:</b> John Peoples <b>Payroll #:</b> 0636262 <b>Type of Sample:</b> Be Head/Cd <b>Shipped To:</b> Data Chem <b>Salt Label</b>		<b>Company Contact:</b> Denise A. Pitts and Henry W. Ruby <b>Shipping Location:</b> 01-16-06 <b>Wipe Sample (Check):</b> <input checked="" type="checkbox"/> Chest <input type="checkbox"/> No <input type="checkbox"/> Other <i>J. Lang</i>		<b>Telephone No.:</b> 531-1229 <b>SPECIAL INSTRUCTIONS:</b> All relevant COAs must be provided: R334005452 <b>ANALYSIS METHOD (SPECIFIC):</b>		<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> 8541 9337 5351		<b>Data Turnaround:</b> 24hr															
<b>POSSIBLE SAMPLE HAZARD/MARKS:</b> Special Handling and/or Storage:		<b>MATRIX:</b> A - AIR W1 - WIPE X - OTHER		<b>Preservation (i.e., cooling required, etc.):</b>		<b>Asbestos Airborne:</b> No		<b>Lead Airborne:</b> No		<b>Beryllium Airborne:</b> No		<b>Beryllium Wipe:</b> No		<b>Mold:</b> No		<b>Lead Wipe:</b> No		<b>Cd Wipe:</b> No		<b>Cd Airborne:</b> No			
SAMPLE ANALYSIS		SAMPLE DATE		VOLUME (L or ml)		Comments		Asbestos Airborne		Lead Airborne		Beryllium Airborne		Beryllium Wipe		Mold		Lead Wipe		Cd Wipe		Cd Airborne	
J10W19	A	01-16-06	NA	Blank				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J10W10			NA	Blank				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J10W13			7429					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J10W11			7309					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J10W12			7475					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J10W16			2032					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
J10W15	A	01-16-06	11663					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
			01-16-06					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Page \_\_\_ of \_\_\_

WCH-SH-302 (06/29/2005)





### CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: <i>John Peoples</i>	Company Contact Denise A. Pitts and Henry W. Ruby	Telephone No. 531-1229	Project Coordinator Joan H. Kessner	Data Turnaround
Payroll #: <i>0636262</i>	Sampling Location <i>JP 01.16.06</i>	SPECIAL INSTRUCTIONS All relevant COAs must be provided: <i>R334005452</i>		SAF No. RC-001 <i>24hr</i>
Type of Sample: <i>Be/lead/cd</i>	Wipe Sample Media: Ghost <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Other <i>01.16.06</i>	ANALYSIS METHOD (SPECIFIC):		Method of Shipment <i>Federal Express</i>
Shipped To: <i>Keta Chem Salt Lake</i>				Bill of Lading/Air Bill No. <i>8541 9337 5351</i>

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

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 (cm <sup>2</sup> )	Comments								
J10WX9	A	01.16.06	NA	Blank		X	X					X
J10WY0			NA	Blank		X	X					X
J10WY3			7429			X	X					X
J10WY1			7309			X	X					X
J10WY2			7475			X	X					X
J10WY6			2032			X	X					X
J10WY5	A	<del>01.16.06</del> <del>01.16.06</del> 01.16.06	1663			X	X					X
						X	X					X

COPY  
 FIELD SAMPLE COPY  
 01.16.06

