

**SAF-RC-001**  
**Industrial Hygiene Sampling**  
**FINAL DATA**

**NO DISTRIBUTION REQUIRED**

**COMMENTS:**

SDG 06I-0547-01 SAF-RC-001

Rad only  Chem only  Rad & Chem

X Complete  Partial

**300 Area 334 Bldg**

**RECEIVED**  
APR 24 2006

**EDMC**



# Cover Page



Report Identification Number: 06I-0547-01  
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#: 8C104

### Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
07 Feb 2006	J11454	06I04501	NMAM 7300M	G061801P	G WIPE
07 Feb 2006	J11453	06I04502	NMAM 7300M	G061801P	G WIPE
07 Feb 2006	J11455	06I04503	NMAM 7300M	G061801P	G WIPE
07 Feb 2006	J11456	06I04504	NMAM 7300M	G061801P	G WIPE

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

Report Identification Number: 06I-0547-01  
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#: 8C104

**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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 Laboratory Identification Number: DCHM  
 SAF#: RC-001 / R33400 J452  
 Payroll#: 8C104

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium µg/sample		Cadmium µg/sample		Lead µg/sample	
J11454	06I04501	09 Feb 2006	0.023		0.15		8.5	
J11453	06I04502	09 Feb 2006	<0.02	U	<0.1	U	<3.	U
J11455	06I04503	09 Feb 2006	<0.02	U	<0.1	U	<3.	U
J11456	06I04504	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.



# QC Summary Page

Report Identification Number: 06I-0547-01  
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 Name of Industrial Hygienist: Denise A. Pitts / Henry W. Ruby  
 Laboratory Identification Number: DCHM  
 SAF: RC-001 / R33400 J452  
 Payroll#: 8C104

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

011-1849-d

### CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

<b>Collector:</b> <u>Chela Hughes</u> <b>Payroll #:</b> <u>8014</u> <b>Type of Sample:</b> <u>WIPE</u>		<b>Company Contact:</b> <u>Dorise A. Pitts and Henry W. Ruby</u> <b>Telephone No.:</b> <u>531-1229</u>		<b>Project Coordinator:</b> <u>Joan H. Kessner</u> <b>SAF No.:</b> <u>RC-001</u>		<b>Data Transmittal:</b> <u>Standard</u>						
<b>Sampling Location:</b> <u>300 Area</u> <u>334</u>		<b>SPECIAL INSTRUCTIONS:</b> All relevant COAs must be provided: <u>R33400 J452</u>		<b>Method of Shipment:</b> <u>Federal Express</u> <b>Bill of Lading/Air Bill No.:</b> <u>8544 9435 4759</u>		<b>Analysis Method (Specific):</b> <u>NIOSH 7300</u>						
<b>Shipped To:</b> <u>Data Chem</u> <u>Salt Lake City</u>		<b>Wipe Sample Media:</b> Cloth <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Other <u>N/A</u>		<b>Preservation (i.e. cooling required, etc.):</b>								
<b>POSSIBLE SAMPLE HAZARD/IMPAIRMENTS:</b> <u>Se, Lead, CADMIUM</u> Special Handling and/or Storage:		<b>MATRIX:</b> A - AIR WI - WIPE X - OTHER										
SAMPLE ANALYSIS												
SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Lead Wipe	Mercury	Beryllium Wipe	Cd Wipe	Cd Airborne
J11454	WI	2-7-06	100cm <sup>2</sup>	N/A				X		X	X	
J11453	WI	2-7-06	100cm <sup>2</sup>	N/A				X		X	X	
J11455	WI	2-7-06	N/A	Blank				X		X	X	
J11456	WI	2-7-06	N/A	Blank				X		X	X	
<i>(The remaining rows of the table are crossed out with a large diagonal line.)</i>												

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WCH-SH-202 (REV 2/2005)





### CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: <b>Carla Hughes</b>	Company Contact Denise A. Pitts and Henry W. Ruby	Telephone No. 531-1229	Project Coordinator Joan H. Kessner	Data Turnaround <b>Standard</b>
Payroll #: <b>8C104</b>	Sampling Location <b>300 Area 334</b>	SPECIAL INSTRUCTIONS All relevant COAs must be provided: <b>R33400 J452</b>		SAF No. RC-001
Type of Sample: <b>WIPE</b>		ANALYSIS METHOD (SPECIFIC): <b>NIOSH 7300</b>		Method of Shipment <b>Federal Express.</b>
Shipped To: <b>Data Chem Salt Lake City</b>	Wipe Sample Media: Ghost <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Other <b>N/A</b>			Bill of Lading/Air Bill No. <b>8544 9435 4759</b>

POSSIBLE SAMPLE HAZARD/RISKS <b>Be, Lead, Cadmium</b>	MATRIX A - AIR WI - WIPE X - OTHER	Preservation (i.e., cooling required, etc.)	No							
----------------------------------------------------------	---------------------------------------------	---------------------------------------------	----	----	----	----	----	----	----	----

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 <small>cm<sup>2</sup></small>	Comments								
J11454	WI	2-7-06	100cm <sup>2</sup>	N/A				X		X	X	
J11453	WI	2-7-06	100cm <sup>2</sup>	N/A				X		X	X	
J11455	WI	2-7-06	N/A	Blank				X		X	X	
J11456	WI	2-7-06	N/A	Blank				X		X	X	

COPY

FIELD SAMPLE COPY

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

J11454

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

**SIGN / PRINT NAMES / USE MILITARY TIME**

Released By/Store	DATE / TIME	Received By/Store	DATE / TIME
Carla K. Hughes / Carla Hughes	2-7-06 / 1630	Locked Cabinet 300 Area, 3746 Bldg, Rm 16	2-7-06 / 1630
<del>Chris Schilling</del> Chris Schilling	2-8-06 1430	RZ Steffler R.J. Steffler	2-8-06 / 1430
RZ Steffler R.J. Steffler	WCH 1600 2-8-06	Fed Ex	
Released By/Store	DATE / TIME	Received By/Store	DATE / TIME
Released By/Store	DATE / TIME	Received By/Store	DATE / TIME
Released By/Store	DATE / TIME	Received By/Store	DATE / TIME
Released By/Store	DATE / TIME	Received By/Store	DATE / TIME
Released By/Store	DATE / TIME	Received By/Store	DATE / TIME
Released By/Store	DATE / TIME	Received By/Store	DATE / TIME
Released By/Store	DATE / TIME	Received By/Store	DATE / TIME
Released By/Store	DATE / TIME	Received By/Store	DATE / TIME
LABORATORY SECTION	Received By	Title	DATE / TIME

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

DATE: \_\_\_\_\_

PRINT/SIGN NAME