

# SAF-RC-001 Industrial Hygiene Sampling FINAL DATA

**NO DISTRIBUTION REQUIRED**

**COMMENTS:**

SDG \_\_\_\_\_ 05I-4737-01 \_\_\_\_\_ SAF-RC-001

Rad only     Chem only    Rad & Chem

Complete                      Partial

**300 Area 334A Bldg**

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Report Identification Number: 05I-4737-01  
 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**

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
15 Nov 2005	J10JT0	05I44455	NMAM 7300M	G05BJ011	G WIPE
15 Nov 2005	J10JT1	05I44456	NMAM 7300M	G05BJ011	G WIPE
15 Nov 2005	J10FX3	05I44457	NMAM 7300M	G05BJ011	G WIPE
15 Nov 2005	J10FX4	05I44458	NMAM 7300M	G05BJ011	G WIPE

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

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**General Set Information:** There are 4 samples in set 05I-4736-01 and 4 samples in set 05I-4737-01 for a total of 8 samples. The samples were analyzed for cadmium 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 and cadmium 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 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 0.1 ug/sample.

**Method Blank Analysis:** No beryllium or cadmium 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:** One Laboratory Control Sample (LCS) and one Laboratory Control Sample Duplicate (LCSD) were prepared and analyzed with the sample batch.

The LCS results were within the control limits of  $\pm 20\%$ . The Relative Percent Differences (RPDs) between the LCSs and the LCSDs were within the control limit of 20%.

**Replicate Analysis:** One sample in this batch was 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 ( $\mu\text{g}/\text{sample}$ ) = (A) x (B) x (C)

Where:

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

B = Concentration factor from sample preparation

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

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.

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Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium µg/sample		Cadmium µg/sample	
J10JT0	05I44455	17 Nov 2005	<0.01	U	0.27	
J10JT1	05I44456	17 Nov 2005	<0.01	U	0.11	
J10FX3	05I44457	17 Nov 2005	<0.01	U	<0.1	U
J10FX4	05I44458	17 Nov 2005	<0.01	U	<0.1	U
Limit of Detection (LOD)			0.01		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-4737-01  
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 SAF: RC-001 / R33400 J451  
 Payroll#: 72520

Batch ID: G05BJ011

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-238337-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-238337-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
QC-238337-1	LCS	Beryllium	µg/sample	11.0	NA	10.0	110.	NA
QC-238337-1	LCS	Cadmium	µg/sample	32.5	NA	30.0	108.	NA
QD-238337-1	LCSD	Beryllium	µg/sample	11.2	11.0	10.0	112.	2.36
QD-238337-1	LCSD	Cadmium	µg/sample	33.4	32.5	30.0	111.	2.50

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. =  $(\text{Result} / \text{Target}) * 100.0$

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

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

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

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



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

J105T0

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
SIGN / PRINT NAMES / USE MILITARY TIME			
Received By/Sign	DATE / TIME	Received By/Sign	DATE / TIME
CJ Williams <i>Cynthia Williams</i>	11-15-05 / 1100	3746 B106 Rm 116 locked cabinet	11-15-05 / 1100
Pat Avert / Patrick Vichit	11-16-05 1430	David Sr John <i>David Sr John</i>	11/16/05 1430
David Sr John <i>David Sr John</i>	11/16/05 1500	Fedex	
Fedex		<i>M. Brockford</i>	11/16/05
Metals inc	11/16/05		
LABORATORY SECTION	Received By <i>M. Brockford</i>	Title	DATE / TIME 11/16/05

REVIEWED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
PRINT/SIGN NAME