SAF-RC-001
Industrial Hygiene Sampling
FINAL DATA

NO DISTRIBUTION REQUIRED

COMMENTS:

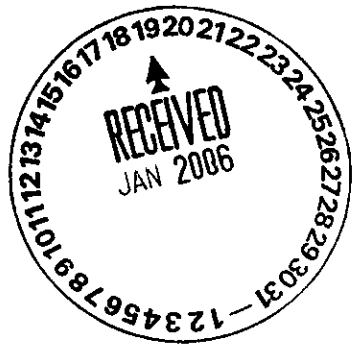
SDG 06I-0181-01 SAF-RC-001

Rad only X Chem only Rad & Chem

X Complete Partial

300 Area 303M Bldg

Cover Page



Report Identification Number: 06I-0181-01
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 / R303M0 J451
Payroll#: 73513

Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
16 Jan 2006	J10X43	06I01515	NMAM 7300M	G060K00J	MCE
16 Jan 2006	J10X44	06I01516	NMAM 7300M	G060K00J	MCE
16 Jan 2006	J10X45	06I01517	NMAM 7300M	G060K00J	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: Lisa M. Reid
Title: Chemist
Date: January 19, 2006

Case Narrative Page

Report Identification Number:	06I-0181-01
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 / R303M0 J451
Payroll#:	73513

General Set Information: There are 4 samples in set 06I-0180-01 and 3 samples in set 06I-0181-01 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 1. 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.

Case Narrative Page

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 (µg/sample) = (A) x (B) x (C)

Where:

A = Analyte concentration from instrument determination (µg/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 µg/L) x (0.025 L/sample) x (1) = 0.025 µg/sample

Miscellaneous Comments: None.

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Report Page

Report Identification Number: 06I-0181-01
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 / R303M0 J451
Payroll#: 73513

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium µg/sample		Beryllium µg/m³		Air Volume L	
J10X43	06I01515	18 Jan 2006	<0.01	U	**		0.00	
J10X44	06I01516	18 Jan 2006	<0.01	U	**		0.00	
J10X45	06I01517	18 Jan 2006	<0.01	U	<0.012	U	854.	
Limit of Detection (LOD)			0.01					
Required Detection Limit (RDL)								

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Lead µg/sample		Lead µg/m³		Cadmium µg/sample	
J10X43	06I01515	18 Jan 2006	<1.	U	**		<0.07	U
J10X44	06I01516	18 Jan 2006	<1.	U	**		<0.07	U
J10X45	06I01517	18 Jan 2006	<1.	U	<1.2	U	<0.07	U
Limit of Detection (LOD)			1.				0.07	
Required Detection Limit (RDL)								

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Cadmium µg/m³	
J10X43	06I01515	18 Jan 2006	**	
J10X44	06I01516	18 Jan 2006	**	
J10X45	06I01517	18 Jan 2006	<0.082	U
Limit of Detection (LOD)				
Required Detection Limit (RDL)				

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

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QC Summary Page

Report Identification Number: 06I-0181-01
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 / R303M0 J451
Payroll#: 73513

Batch ID: G060K00J

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-240170-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-240170-1	MB	Lead	µg/sample	ND	NA	NA	NA	NA
BL-240170-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
QC-240170-1	LCS	Beryllium	µg/sample	10.6	NA	10.0	106.	NA
QC-240170-1	LCS	Lead	µg/sample	105.	NA	100.	105.	NA
QC-240170-1	LCS	Cadmium	µg/sample	32.9	NA	30.0	110.	NA
QD-240170-1	LCSD	Beryllium	µg/sample	10.5	10.6	10.0	105.	0.644
QD-240170-1	LCSD	Lead	µg/sample	105.	105.	100.	105.	0.297
QD-240170-1	LCSD	Cadmium	µg/sample	32.5	32.9	30.0	108.	1.24

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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DATA CHEM LABORATORIES

COC Page

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Washington Closure Hanford

DET - 01/81-01,02

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: Vita D Jones	Company Contact: Denise A. Pitts and Henry W. Ruby	Telephone No.: 531-1229	Project Coordinator: Joan H. Kessner
Payroll #: 73513	Sampling Location: 300 Area 303M Building	SPECIAL INSTRUCTIONS All relevant COAs must be provided: R303M0 J451	SAF No.: RC-001
Type of Sample: wipes & airborne	Wipe Sample Media: Ghost ☒ Yes ☐ No Other	ANALYSIS METHOD (SPECIFIC): NIOSH 7300	Method of Shipment: FED EX
Shipped To: Datachem Salt Lake City			Bill of Lading/Air Bill No.: 8541 9337 5330
POSSIBLE SAMPLE HAZARD/REMARKS: Be, Pb, Cd	MATRIX: A - AIR, WI - WIPE, X - OTHER	Preservation (i.e., cooling required, etc.)	Data Turnaround: 24
Special Handling and/or Storage: na			

SAMPLE ANALYSIS													
					No	No	No	No	No	No	No	No	na
SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area ___ cm²	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold	Lead Wipe	Cd Wipe	Cd Airborne	na
J10X43	A	1-16-06	NA	Blank	na	X	X		Hdj DET BKG			X	na
J10X44	A	1-16-06	NA	Blank	na	X	X		1-16-06		16	X	na
J10X45	A	1-16-06	854	Personal	na	X	X				17	X	na
J10RR9	WI	1-16-06	NA	Blank		DET 0.5/14		X	na	X	X	Hdj	
J10WP2	WI	1-16-06	NA	Blank		1-16-06 Hdj	19	X	na	X	X	1-16-06	
J10X05	WI	1-16-06	1000cm²	10% wipe			20	X	na	X	X		
				Hdj									
				1-16-06									

WCH-SH-202 (08/29/2005)

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DATA CHEM LABORATORIES

COC Page

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

J10X43

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

SIGN / PRINT NAMES / USE MILITARY TIME

Relinquished By/Stored	DATE / TIME	Received By/Stored	DATE / TIME
Todd Jones	1500 RJ 1-16-06 1-16-06 1630	3746 Building, Rm 16, locked cabinet	1500 RJ 1-16-06 1-16-06 1630
locked cabinet building 3746 Rm #16 Golda Malhan	01/17/06 1445	RZ Steffler R.J. Stuffl	1-17-06 1445
RZ Steffler R.J. Stuffl	WCH 1-17-06 1530	Fed Ex	
Fed Ex		Meredith Edward	1/17/06 745
Meredith Edward	1/17/06 745		

LABORATORY SECTION	Received By	Title	DATE / TIME
	Meredith Edward		1/17/06 745

REVIEWED BY: _____ DATE: _____

PRINT/SIGN NAME

WCH-SH-202 (08/29/2005)

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: Vetta D Jones	Company Contact: Denise A. Pitts and Henry W. Ruby	Telephone No.: 531-1229	Project Coordinator: Joan H. Kessner	Data Turnaround: 24
Payroll #: 73513	Sampling Location: 300 Area 303M Building	SPECIAL INSTRUCTIONS: All relevant COAs must be provided: R303M0 J451	SAF No.: RC-001	
Type of Sample: wipes & airborne	Wipe Sample Media: Ghost ☒ Yes ☐ No; Other	ANALYSIS METHOD (SPECIFIC): NIOSH 7300	Method of Shipment: FED EX	
Shipped To: Datachem Salt Lake City			Bill of Lading/Air Bill No.: 8541 9337 5433	COPY
POSSIBLE SAMPLE HAZARD/REMARKS: Be, Pb, Cd	MATRIX: A - AIR; WI - WIPE; X - OTHER	Preservation (i.e., cooling required, etc.)		
Special Handling and/or Storage: na				

SAMPLE ANALYSIS														
					No	No	No	No	No	No	No	No	No	na
SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area ____ cm²	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold	Lead Wipe	Cd Wipe	Cd Airborne	na
J10X43	A	1-16-06	NA	Blank	na	X	X		ydj			X	na
J10X44	A	1-16-06	NA	Blank	na	X	X		1-16-06			X	na
J10X45	A	1-16-06	854	Personal	na	X	X					X	na
J10RR9	WI	1-16-06	NA	Blank				X	na	X	X	ydj	
J10WP2	WI	1-16-06	NA	Blank		ydj 1-16-06		X	na	X	X	1-16-06	
J10X05	WI	1-16-06	100cm²	10% wipe				X	na	X	X		
				ydj				FIELD SAMPLE COPY					
				1-16-06									

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

J10X43

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

SIGN / PRINT NAMES / USE MILITARY TIME

Relinquished By/Stored:	DATE / TIME	Received By/Stored:	DATE / TIME
Kitta D Jones	1500 adj 1-16-06 1-16-06 1630	3746 Building, Rm 16, locked cabinet	1500 adj 1-16-06 1-16-06 1630
locked cabinet building 3746 Rm #16 Golden Mab Golda Mahan	01/17/06 1445	RZ Steffler R.J. Steffl	1-17-06 1445
RZ Steffler R.J. Steffl	WCH 1-17-06 1530	Fed Ex	COPY

LABORATORY SECTION	Received By	Title	DATE / TIME

REVIEWED BY: _____ DATE: _____

PRINT/SIGN NAME