0076479

SAF-RC-040
300 Area D&D Waste Characterization Sampling - Other Solid
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Tim Lee L1-07 KW 3/10/08
INITIAL/DATE

COMMENTS:

SDG 08I-0291-01 SAF-RC-040

Rad only X Chem only Rad & Chem

X Complete Partial

Sample Location/Waste Site: 308 Door Insulation

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MAR 18 2008
EDMC

Cover

RECEIVED
MAR 2008

Report Identification Number: 08I-0291-01
Subcontract Number: 000X-B0-G0058-B-MOD# 14
Name of Industrial Hygienist: Gwen Whatley / Ilene Strong / Garrett Knutson / Bra[illegible]auver
Laboratory Identification Number: DCHM
SAF#: RC-040 / 308 Door Insulation
Payroll#:

Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
14 Feb 2008	J16B25	08I01841	NIOSH 9002	G081T00K	BULK

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Name: Peter P. Steen
Title: Chemist
Date: March 03, 2008

Case Narrative

Report Identification Number: 08I-0291-01
Subcontract Number: 000X-B0-G0058-B-MOD# 14
Name of Industrial Hygienist: Gwen Whatley / Ilene Strong / Garrett Knutson / Brain Fauver
Laboratory Identification Number: DCHM
SAF#: RC-040 / 308 Door Insulation
Payroll#:

General Set Information: There was one sample in set 08I-0291-01 and one sample in set 08I-0293-01 which were analyzed for asbestos in bulk material. No problems were encountered with the receipt of these samples.

Method Summary: All samples were examined for homogeneity. Non-homogeneous samples were ground to ensure homogeneity. Distinct layers were analyzed separately. The samples were prepared and examined for asbestos fibers utilizing the procedures outlined in NIOSH method 9002 (4th edition). A polarizing light microscope equipped with a 10x and a 16x eyepiece was used for the analysis. The area percentage of asbestos was estimated microscopically by a visual estimation of the fibers with a length-to-width aspect ratio of 3:1 or greater. If present, asbestos identities were confirmed with the appropriate refractive index oils applying dispersion staining techniques.

Sample Preparation: All samples were prepared in accordance with NIOSH method 9002 (4th edition).

Initial and Continuing Calibration Verification Analysis: N/A

Initial and Continuing Calibration Blank Analysis: N/A

Method Blank Analysis: N/A

Dilution(s): N/A.

Laboratory Control Sample and Duplicate Analysis: One Laboratory Control Sample (LCS) was prepared and analyzed with the sample batch. The results were within the control limit of +/- one reporting range.

Replicate Analysis: One sample was replicated with this analysis run.

Flagging Codes: None

Nonconformance/Corrective Action Report (NC/CAR): N/A

Case Narrative

Sample Calculation: Sample results are reported by a visual estimation of the area percentage of asbestos. If necessary, a gravimetric ashing procedure may be used to remove certain non-asbestos material from the sample; a percentage calculation is used to correct for the removal of the non-asbestos material.

Miscellaneous Comments:

08I01841: Gray, fibrous/corrugated wrap insulation.
08I01845: Tan, fibrous/chunky insulation material.

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Results

Report Identification Number: 08I-0291-01
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Name of Industrial Hygienist: Gwen Whatley / Ilene Strong / Garrett Knutson / Brain Fauver
Laboratory Identification Number: DCHM
SAF#: RC-040 / 308 Door Insulation
Payroll#:

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Chrysotile % Asbestos		Amosite % Asbestos		Crocidolite % Asbestos	
J16B25	08I01841	29 Feb 2008	50-<60		ND	U	ND	U
Limit of Detection (LOD)			1		1		1	
Required Detection Limit (RDL)								

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Actinolite/Tremolite % Asbestos		Anthophyllite % Asbestos	
J16B25	08I01841	29 Feb 2008	ND	U	ND	U
Limit of Detection (LOD)			1		1	
Required Detection Limit (RDL)						

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

QC Summary

Report Identification Number: 08I-0291-01
Subcontract Number: 000X-B0-G0058-B-MOD# 14
Name of Industrial Hygienist: Gwen Whatley / Ilene Strong / Garrett Knutson / Brain Fauver
Laboratory Identification Number: DCHM
SAF: RC-040 / 308 d\Door Insulation
Payroll#:

Batch ID: G081T00K

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
QC 1001090	BULK	AMOSITE	%	3-<5		7		

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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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-040-345	Page 1 of 1
Collector: Cynthia Williams	Company Contact: TA Lee; Telephone No.: 627-8639	Project Coordinator: KESSNER, JH	Price Code: 9K; Data Turnaround: 7 Days
Project Designation: 300 Area D&D Waste Characterization Sampling - Other Sol	Sampling Location: 308 Door Insulation	SAF No.: RC-040	
Ice Chest No.	Field Logbook No.: EL-1603-2; COA	Method of Shipment: Fed Ex OSE-0291/01	
Shipped To: DataChem Laboratories - Salt Lake City	Offsite Property No.: NA	Bill of Lading/Air Bill No.: NA	

POSSIBLE SAMPLE HAZARDS/REMARKS
Radioactivity, Beryllium

Special Handling and/or Storage

Preservation	None	None									
Type of Container	G/P	G/P									
No. of Container(s)	1	1									
Volume	5g	5g									
SAMPLE ANALYSIS	Asbestos-BULK-EPA	RCF GEA Shipping Source (1)									

Sample No.	Matrix *	Sample Date	Sample Time									
J16B25 OSE-0154	OTHER SOLID	2-14-08	1400	X	X							

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: Cynthia Williams/Cynthia Williams; Date/Time: 0945 2-19-08	Received By/Stored In: TA Lee; Date/Time: 0945 2-19-08	Transferred from COC# RC-040-345 RCF	S=Soil; SE=Sediment; SO=Solid; Sl=Sludge; W=Water; O=Oil; A=Air; DS=Drum Solids; DL=Drum Liquids; T=Tissue; Wi=Wipe; L=Liquid; Ve=Vegetation; X=Other
Relinquished By/Removed From: TA Lee; Date/Time: 2-25-08/0950	Received By/Stored In: MSTankouch; Date/Time: 0950 2/25/08		
Relinquished By/Removed From: MSTankouch; Date/Time: 1500 2/25/08	Received By/Stored In: DHL; Date/Time:		
Relinquished By/Removed From: DHL; Date/Time:	Received By/Stored In: [illegible]; Date/Time: 2/28/08/855		
Relinquished By/Removed From: [illegible]; Date/Time: 2/28/08/855	Received By/Stored In:		
Relinquished By/Removed From:	Received By/Stored In:		

LABORATORY SECTION	Received By: [illegible]	Title	Date/Time: 2/28/08/855
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

DataChem Laboratories, Inc.
WA-DC-002 Revision 2
Revised: May 10, 2002
Page 8 of 14

Appendix 10.2
Client/Shipper's Notification of Sample Radioactivity
THIS INFORMATION MUST BE FAXED TO DCL AT (801) 268-9992 FOR APPROVAL PRIOR TO SHIPMENT.

Sample Origin Information
Company: WCH
Site/Location: 308/300 Area
Address:
Contact: Jean Kessner

DataChem Laboratories, Inc.

Page 1 of 1

CLIENT/SHIPPERS NOTIFICATION OF SAMPLE RADIOACTIVITY

In order to properly assign precautions to be taken during the preparation and analysis of potentially radioactive laboratory samples, we require information related to sample matrix, isotopic composition and activity concentration prior to processing samples. Please complete this form and include it with each shipment.

Determined by *(please check)*:
☐ Process knowledge ☐ Analytical data (attached) ☐ No screening data available, screening aliquot provided

Item No.	Field Sample ID Number	Radiological Activity (pCi/g) Alpha	Beta/Gamma	Principal Isotope(s)	Sample Matrix
1	RCF19114/1J16B25	<20	<20	Ra-226	Simulation for PLM
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

02/25/08

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Radiological Counting Facility

Analysis Report for RCF19114
J16B25 SAF:RC-040 300PS/ 308 Bldg Door Insulation

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19114
Sample Description	: J16B25 SAF:RC-040 300PS/ 308 Bldg Door Insulation
Sample Type	: Non Standard Geo
Unit	:
Sample Point	
Sample Size	: 1.000E+00 units
Facility	: Default
Sample Taken On	: 2/14/2008 2:00:00PM
Acquisition Started	: 2/19/2008 10:42:34AM
Procedure	: Non Standard Geometry
Operator	: RCT
Detector Name	: BEGEINSP
Geometry	: Non Standard Geo
Live Time	: 3600.0 seconds
Real Time	: 3600.3 seconds
Dead Time	: 0.01 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/15/2008
Efficiency Calibration Used Done On	: 12/6/2007
Efficiency Calibration Description	: Non-Standard Geometry 12-6-2007
Sample Number	: 17436

Qualitative Only
Non-Standard Geometry

Calibrations for determining sample activity are geometry-specific. This sample does not conform to one of the currently calibrated geometries. Reported activities may differ from the acutal sample activity for this reason.

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/unit)	Wt mean Activity Uncertainty	Comments
RA-226d	0.347	1.48E+01	7.61E+00	

Analysis Report for RCF19114

J16B25 SAF:RC-040 300PS/ 308 Bldg Door Insulation

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 2/19/2008 11:42:43AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty

All peaks were identified.

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
NP = No Peak
UK = Unknown
Errors quoted at 2.000 sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/units)	Nuclide MDA (pCi/units)	Line MDA (pCi/units)
K-40	1460.83	10.67	4.10E+01	1.39E+02	1.39E+02
CO-60	1173.24	99.90	-3.94E-01	1.04E+01	1.28E+01
	1332.50	99.98	-9.94E+00		1.04E+01
NB-94	702.63	99.81	-7.32E+00	7.30E+00	7.30E+00
	871.10	99.89	7.13E-01		8.06E+00
AG-108m	433.94	90.50	1.39E+00	5.73E+00	5.73E+00
	614.28	89.80	-3.08E+00		1.11E+01
	722.94	90.80	-1.32E+00		9.10E+00
CS-137	661.66	85.21	-3.15E+00	9.11E+00	9.11E+00
EU-152	40.12	38.40	2.43E+00	5.21E+00	5.21E+00
	45.38	11.10	7.65E+00		1.81E+01
	121.78	28.40	-2.51E+00		6.84E+00
	244.69	7.51	2.71E+01		5.43E+01
	344.29	26.60	1.39E+00		1.66E+01
	411.12	2.23	2.55E+01		2.22E+02
	443.89	2.80	1.58E+02		2.16E+02
	778.92	12.98	-4.44E+01		5.45E+01
	867.38	4.21	5.62E+01		2.16E+02
	964.11	14.50	6.47E+00		5.78E+01
	1085.89	9.94	4.20E+01		1.00E+02

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Analysis Report for RCF19114

J16B25 SAF:RC-040 300PS/ 308 Bldg Door Insulation

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/units)	Nuclide MDA (pCi/units)	Line MDA (pCi/units)
		1089.71		1.71	-7.00E+01		6.08E+02
		1112.07		13.60	-6.39E+01		7.54E+01
		1212.93		1.40	-6.03E+01		8.94E+02
		1299.16		1.63	-1.03E+01		7.17E+02
		1408.00		20.80	3.66E+00		6.62E+01
	EU-154	123.10		40.50	3.44E-01	4.76E+00	4.76E+00
		723.36		19.70	-1.19E+00		4.20E+01
		873.23		11.45	-3.75E+01		6.53E+01
		1004.78		17.90	-9.10E+00		5.49E+01
		1274.54		35.50	7.78E+00		3.23E+01
	EU-155	86.54		34.00	2.66E+00	5.23E+00	5.23E+00
		105.31		20.60	6.28E-01		7.09E+00
	PB-212	74.81		10.50	-1.96E+00	1.37E+01	2.06E+01
		77.11		17.70	1.84E+01		1.37E+01
		87.19		6.27	-5.87E+00		2.74E+01
+	RA-226d	186.11		3.28	-6.10E+01	1.55E+01	8.41E+01
		241.92		7.46	9.54E+00		5.24E+01
		295.09		19.20	1.20E+01		2.60E+01
		351.87	*	37.10	1.12E+01		1.55E+01
		609.31	*	46.10	2.04E+01		1.79E+01
		1120.27		15.00	3.00E+01		8.93E+01
		1764.49		15.90	6.63E+01		1.20E+02
	TH-232d	238.58		43.60	-1.66E+01	7.89E+00	7.89E+00
		338.42		12.40	1.48E+01		3.64E+01
		583.02		30.87	1.13E+01		2.40E+01
		911.16		29.00	2.76E+00		3.49E+01
		968.97		17.40	-2.29E+01		4.63E+01
	U-235	143.79		10.50	6.11E+00	5.14E+00	2.30E+01
		163.38		4.70	2.21E+01		5.89E+01
		185.74		53.00	-4.22E+00		5.14E+00
		205.33		4.70	-1.87E+01		6.18E+01
	U-238d	63.29		3.80	5.58E+01	3.00E+01	5.06E+01
		92.56		5.41	-1.01E+01		3.00E+01
	AM-241	59.54		35.70	-4.69E+00	4.10E+00	4.10E+00
	CM-243	99.52		14.40	-5.87E+00	6.54E+00	8.91E+00
		103.73		23.00	-1.43E+00		6.54E+00
		116.93		8.32	-5.87E+00		2.34E+01
		228.19		10.56	8.21E+00		3.19E+01
		277.60		14.00	1.29E+01		2.82E+01
	CM-245	99.52		21.10	-4.00E+00	4.48E+00	6.08E+00
		103.73		33.60	-9.82E-01		4.48E+00
		116.93		12.20	-4.00E+00		1.60E+01
		174.94		9.50	1.63E+01		3.22E+01

\+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
^ = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

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Analysis Report for RCF19114

J16B25 SAF:RC-040 300PS/ 308 Bldg Door Insulation

Reviewed and Approved: Edward J Travers / [signature] / 2/19/08
(print/sign/date)

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