0073617

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

COMPLETE COPY OF DATA PACKAGE TO:

Mike Stankovich L1-01 KW 7/31/07
INITIAL/DATE

COMMENTS:

SDG 07I-1429-01 **SAF-RC-040**

Rad only X Chem only Rad & Chem

X Complete Partial

Sample Location/Waste Site: 3720 In-Process Demo

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AUG 09 2007
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JUL 2007

Report Identification Number: 07I-1429-01
Subcontract Number: 0000X-BO-G0058-B-Mod#14
Name of Industrial Hygienist: Gwen Whatley / Garrett Knutson / William Brasker/ Robert Brounstern/ Brian Fauver / Ilene Strong
Laboratory Identification Number: DCHM
SAF#: RC-040-318/ A070183
Payroll#:

Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
19 Jul 2007	J15BW5	07I09525	DCL	G076R002	BULK

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: Peter P. Steen
Title: Chemist
Date: July 25, 2007

Case Narrative

Report Identification Number:	07I-1429-01
Subcontract Number:	0000X-BO-G0058-B-Mod#14
Name of Industrial Hygienist:	Gwen Whatley / Garrett Knutson / William Brasker/ Robert Brounstern/ Brian Fauver / Ilene Strong
Laboratory Identification Number:	DCHM
SAF#:	RC-040-318/ A070183
Payroll#:	

General Set Information: There was one sample in set 07I-1429-01 which was analyzed for cellulose in bulk material. No problems were encountered with the receipt of this sample.

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 cellulose fibers utilizing DCL methodology. A polarizing light microscope equipped with a 10x and a 16x eyepiece was used for the analysis. The area percentage of cellulose was estimated microscopically by a visual estimation of the fibers.

Sample Preparation: A portion of the sample was transferred to an aluminum weighing dish and dried on a warming tray for several hours. A small portion of the dried sample was placed in 1.55 refractive index oil and examined using the polarized light microscope. The remainder of the dried sample was ashed in a muffle furnace at 485 °C for approximately 30 minutes.

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: N/A

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

Flagging Codes: None

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

Sample Calculation: Sample results are reported by a visual estimation of the area percentage of cellulose. The percentage of cellulose in the sample was estimated to be 95% cellulose. A gravimetric ashing procedure was used to remove cellulose material from the sample; a percentage calculation is used to

determine the percentage of cellulose material in the sample. The ashing procedure resulted in a reported value of 94% cellulose material in the sample.

Miscellaneous Comments:

07I09525: Brown, fibrous cellulose-based material.

Results

Report Identification Number: 07I-1429-01
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Name of Industrial Hygienist: Gwen Whatley / Garrett Knutson / William Brasker/ Robert Brounstern/ Brian Fauver / Ilene Strong
Laboratory Identification Number: DCHM
SAF#: RC-040-318/ A070183
Payroll#:

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Cellulose %
J15BW5	07I09525	25 Jul 2007	94
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

Report Identification Number: 07I-1429-01
Subcontract Number: 0000X-BO-G0058-B-Mod#14
Name of Industrial Hygienist: Gwen Whatley / Garrett Knutson / William Brasker/ Robert Brounstern/ Brian Fauver / Ilene Strong
Laboratory Identification Number: DCHM
SAF: RC-040-318/ A070183
Payroll#:

Batch ID: G076R002

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
No QC Required	N/A	N/A	N/A	N/A		N/A	N/A	N/A

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-040-318	Page 1 of 1
Collector: S. Morris	Company Contact: Tim Lee; Telephone No.: 627-8639	Project Coordinator: KESSNER, JH	Price Code: 9K; Data Turnaround: 24 Hours
Project Designation: 300 Area D&D Waste Characterization Sampling - Other Soli	Sampling Location: 3720 - In process Demo	SAF No.: RC-040	
Ice Chest No.: CH2M HILL - 007	Field Logbook No.: EL-1603-2; COA: R372001000	Method of Shipment: ~~Gov't Vehicle/Hand Delivered~~ FED EX DAS 7/23/07	
Shipped To: Data Chem Utah; ~~Radiological Counting Facility~~	Offsite Property No.: ~~NA~~ A070183 DAS 7/23/07	Bill of Lading/Air Bill No.: ~~NA~~ SEE OSPC DAS 7/23/07	

POSSIBLE SAMPLE HAZARDS/REMARKS
Radioactive, Be

Special Handling and/or Storage
RUSH

Preservation	None				None	None	07F-1429-01				
Type of Container	G/P				P	P					
No. of Container(s)	1				1	~~2~~					
Volume	500mL				500mL	500mL					
SAMPLE ANALYSIS	RCF SEA Shipping Screen X 7/23/07				(1) MCLOSKEY	(2)					

Sample No.	Matrix *	Sample Date	Sample Time										
J15BW5	OTHER SOLID	7-19-07	1450	X	18142	148g		X	X				
07I19525													

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: TA Lee	7-19-07 / 1515	Received By/Stored In: K Eliason / KE	7-19-07 / 1515
Relinquished By/Removed From: K Eliason / KE	7-23-07 / 0845	Received By/Stored In: TA Lee	7-23-07 / 845
Relinquished By/Removed From: TA Lee	7-23-07 / 1015	Received By/Stored In: [illegible]	7/23/07 1015
Relinquished By/Removed From: [illegible]	7/23/07 1145	Received By/Stored In: FED EX	
Relinquished By/Removed From: [illegible]		Received By/Stored In: [illegible]	7/24/07
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS
(1) aluminum (silica) magnamate of diatomaceous earth. (Doc Randy Potter)
(2) TPH

RUSH

Matrix *: 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; V=Vegetation; X=Other

LABORATORY SECTION	Received By: [illegible]	Title	Date/Time: 7/24/07
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Radiological Counting Facility

Analysis Report for RCF18142
J15BW5 SAF:RC-040 300PS/3720 BLDG INPROCESS DEMO

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF18142
Sample Description	: J15BW5 SAF:RC-040 300PS/3720 BLDG INPROCESS DEMO
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 1.480E+02 grams
Facility	: Default
Sample Taken On	: 7/19/2007 2:50:00PM
Acquisition Started	: 7/19/2007 3:20:25PM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: BEGE
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.1 seconds
Dead Time	: 0.00 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 40 - 4096
Peak Area Range (in channels)	: 40 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 8/21/2006
Efficiency Calibration Used Done On	: 4/4/2007
Efficiency Calibration Description	: Efficiency calibration 50 ml pill box Bege
Sample Number	: 13976

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments

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Analysis Report for RCF18142

J15BW5 SAF:RC-040 300PS/3720 BLDG INPROCESS DEMO

? = 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

No peak search results available for nuclide analysis.

NUCLIDE MDA REPORT

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

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
K-40	1460.83	10.67	5.85E-01	1.22E+00	1.22E+00
CO-60	1173.24	99.90	1.29E-02	8.45E-02	8.45E-02
	1332.50	99.98	1.26E-02		9.91E-02
NB-94	702.63	99.81	1.57E-02	6.36E-02	6.36E-02
	871.10	99.89	-1.25E-02		6.37E-02
AG-108m	433.94	90.50	2.66E-02	4.01E-02	4.01E-02
	614.28	89.80	2.90E-02		6.33E-02
	722.94	90.80	-2.29E-02		6.00E-02
CS-137	661.66	85.21	1.55E-02	6.23E-02	6.23E-02
EU-152	121.78	28.40	9.45E-04	5.80E-02	5.80E-02
	344.29	26.60	-3.08E-02		1.10E-01
	964.11	14.50	2.05E-01		5.58E-01
	1408.00	20.80	2.08E-01		4.56E-01
EU-154	123.10	40.50	1.87E-02	4.17E-02	4.17E-02
	723.36	19.70	-1.10E-01		2.77E-01
	873.23	11.45	-3.81E-01		5.26E-01
	1004.78	17.90	5.87E-02		4.74E-01
	1274.54	35.50	-2.32E-02		2.75E-01
EU-155	86.54	34.00	2.72E-03	3.82E-02	3.82E-02
	105.31	20.60	6.25E-03		6.72E-02
PB-212	74.81	10.50	-4.43E-02	8.38E-02	1.42E-01
	77.11	17.70	3.84E-02		8.38E-02
	87.19	6.27	-4.28E-02		2.02E-01
RA-226d	186.11	3.28	1.99E-01	9.36E-02	6.06E-01
	241.92	7.46	7.62E-02		3.83E-01
	295.09	19.20	-1.81E-02		1.36E-01
	351.87	37.10	7.44E-02		9.36E-02
	609.31	46.10	1.59E-01		1.36E-01
	1120.27	15.00	2.12E-01		5.98E-01
	1764.49	15.90	2.29E-01		5.38E-01
TH-232d	238.58	43.60	8.35E-03	6.38E-02	6.38E-02
	338.42	12.40	-1.79E-02		7.44E-01
	583.02	30.87	5.08E-02		1.63E-01
	911.16	29.00	-1.75E-01		2.32E-01

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Analysis Report for RCF18142

J15BW5 SAF:RC-040 300PS/3720 BLDG INPROCESS DEMO

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	968.97	17.40	2.50E-01		4.96E-01
U-235	143.79	10.50	-1.91E-02	3.71E-02	1.76E-01
	163.38	4.70	-2.52E-01		3.81E-01
	185.74	53.00	1.58E-03		3.71E-02
	205.33	4.70	-3.06E-01		3.95E-01
U-238d	63.29	3.80	-1.24E-01	2.50E-01	3.04E-01
	92.56	5.41	1.41E-01		2.50E-01
AM-241	59.54	35.70	2.27E-02	3.52E-02	3.52E-02
CM-243	99.52	14.40	2.12E-02	5.83E-02	8.93E-02
	103.73	23.00	-1.25E-02		5.83E-02
	116.93	8.32	5.40E-02		1.96E-01
	228.19	10.56	-4.44E-02		1.99E-01
	277.60	14.00	3.09E-02		1.88E-01
CM-245	99.52	21.10	1.45E-02	3.99E-02	6.10E-02
	103.73	33.60	-8.53E-03		3.99E-02
	116.93	12.20	3.68E-02		1.33E-01
	174.94	9.50	1.64E-02		1.96E-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

Reviewed and Approved:

Edward J Traucoso / [signature] / 7/20/07
(print/sign/date)

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