

SAF-RC-190

100N Field Remediation – Soil In-Process

FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21

KW 4/12/11
INITIAL/DATE

COMMENTS:

SDG D1109059 SAF-RC-190

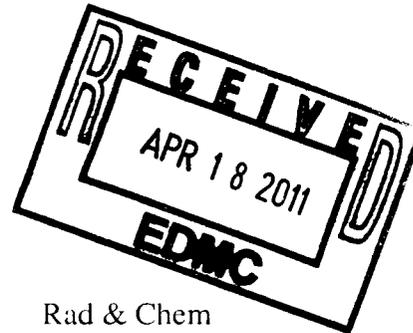
Rad only

Chem only

Rad & Chem

Complete

Partial



Sample Location: 100-N-18



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Cover



Report Identification Number: D1109059
 Subcontract Number: S003827A00
 Name of Industrial Hygienist: Gwen Whatley / Debbie Gothard / Ken Way
 Laboratory Identification Number: DCHM RC-190-037
 SAF#: ~~RC-001~~ / RC-190-037
 Sample Receipt Date: 03/31/2011

Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
03/29/2011	J1FHW9	1109059001	NIOSH 9002	64524	Bulk
03/29/2011	J1FHX2	1109059002	NIOSH 9002	64524	Bulk
03/29/2011	J1FHX3	1109059003	NIOSH 9002	64524	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: April 08, 2011



Case Narrative

Report Identification Number: D1109059
Subcontract Number: S003827A00
Name of Industrial Hygienist: Gwen Whatley / Debbie Gothard / Ken Way
Laboratory Identification Number: DCHM
SAF#: RC-001 / RC-190-037
Sample Receipt Date: 03/31/2011

General Workorder Information: There are three samples in workorder 1109059, three samples in workorder 1109060, one sample in workorder 1109165, one sample in workorder 1109167, and four samples in workorder 1109168 which were analyzed for asbestos 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 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 batch.

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 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:

- 1109059001: Brown, granular soil.
- 1109059002: Brown, granular soil.
- 1109059003: Brown, granular soil.
- 1109060001: Brown, granular soil.
- 1109060002: Brown, granular soil.
- 1109060003: Brown, granular soil.
- 1109165001: Brown, granular soil.
- 1109167001: Brown, granular soil.
- 1109168001: Brown, granular soil.
- 1109168002: Brown, granular soil.
- 1109168003: Brown, granular soil.
- 1109168004: Brown, granular soil.



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Results

Report Identification Number: D1109059
 Subcontract Number: S003827A00
 Name of Industrial Hygienist: Gwen Whatley / Debbie Gothard / Ken Way
 Laboratory Identification Number: DCHM
 SAF#: RC-001 / RC-190-037
 Sample Receipt Date: 03/31/2011

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Chrysotile %		Amosite %		Crocidolite %	
J1FHW9	1109059001	04/08/2011	<1	U	<1	U	<1	U
J1FHX2	1109059002	04/08/2011	<1	U	<1	U	<1	U
J1FHX3	1109059003	04/08/2011	<1	U	<1	U	<1	U
Required Detection Limit (RDL)			1		1		1	

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Actinolite/Tremolite %		Anthophyllite %	
J1FHW9	1109059001	04/08/2011	<1	U	<1	U
J1FHX2	1109059002	04/08/2011	<1	U	<1	U
J1FHX3	1109059003	04/08/2011	<1	U	<1	U
Required Detection Limit (RDL)			1		1	

U - Parameter not detected above LOD
 J - Parameter between LOD and RDL
 ** - Not provided or unable to calculate
 NA - Not Applicable



QC Summary

Report Identification Number: D1109059
 Subcontract Number: S003827A00
 Name of Industrial Hygienist: Gwen Whatley / Debbie Gothard / Ken Way
 Laboratory Identification Number: DCHM
 SAF: RC-001 / RC-190-037
 Sample Receipt Date: 03/31/2011

Batch ID: 64524

QC Sample ID	QC Type	Analyte	Units	Result	Target
QC10788	LCS	Amosite	%	ND	ND
QC10788	LCSD	Amosite	%	ND	ND
QC10788	LCS	Chrysotile	%	20	30
QC10788	LCSD	Chrysotile	%	30	30

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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COC

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1109059

16/1/81

..		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-190-037		Page 1 of 1	
Collector BC Koelling		Company Contact Joan Kessler		Telephone No. 375-4688		Project Coordinator KESSNER, JH	
Project Designation 100N Field Remediation - Soil In-Process		Sampling Location 100-N-18		SAF No. RC-190		Price Code 8L	
Field Chest No. 615-1172		Field Notebook No. EL-16522		COA R1NXXY900		Method of Shipment Fed Ex	
Shipped To East America Petroleum (444) 415-51 POSSIBLE SAMPLE HAZARDSPREMARKS None WAB 3-29-11		Offsite Property No. NA		Bill of Lading/Air Bill No. See Spec 3/29/11 WAB		Date/Time 3/29/11 16:20	
Special Handling and/or Storage None WAB 3-29-11		Preservation None		Type of Container GP		No. of Container(s) 1	
		Volume 60ml		Asbestos Bulk - NIOSH 9002			
SAMPLE ANALYSIS							
Sample No.	Matrix *	Sample Date	Sample Time				Matrix *
J1FHV9	SOIL	3/29/11	1006	✓			RCF
J1FHX2	SOIL	3/29/11	1015	✓			27430
J1FHX3	SOIL	3/29/11	1030	✓			✓

CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			
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3/30/2011 7:57:56AM

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Analysis Report for RCF27430
J1FHW6 SAF:RC-190 100NFR/100-N-18

Non-Rg

GAMMA SPECTRUM ANALYSIS

Sample Identification : RCF27430
 Sample Description : J1FHW6 SAF:RC-190 100NFR/100-N-18
 Sample Type : Non Standard Geometry
 Sample Size : 8.700E+01 grams
 Facility : Default
 Sample Taken On : 3/29/2011 10:00:00AM
 Acquisition Started : 3/30/2011 6:57:39AM
 Procedure : Non Standard Geometry
 Operator : RCT
 Detector Name : GEA2703
 Geometry : Non Standard Geometry
 Live Time : 3600.0 seconds
 Real Time : 3601.1 seconds
 Dead Time : 0.03 %
 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 : 2/2/2011
 Efficiency Calibration Used Done On : 2/2/2011
 Efficiency Calibration Description : GEA2703 NSTD EC 020211 SN82751A-238
 Sample Number : 13034

"Qualitative Only"

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.994	1.32E+01	2.24E+00	
TH-232d	0.494	4.45E-01	1.19E-01	



2011-03-31-1109059-03

Project Shipment Specific Client/Shipper's Notification of Sample Radioactivity

Please complete this form and include it with each shipment.

Sample Number/RCF Number:

RCF 27430 (see attached COC)

Shipment Date: _____

All samples shipped in this cooler have been screened for radioactivity. All samples have activity less than:

Total Activity	Gross Alpha Activity	Gross Beta/Gamma Activity
<1500 pCi/g	<500 pCi/sample	<1000 pCi/sample

I certify that the samples shipped to DataChem are below the criteria above.

WCH Signature:

Sam J. Koozme

Date: 3/20/11

Any samples in the shipment which have activity above the levels specified above require DataChem approval prior to shipment in accordance with the DataChem SOP WA-DC-002.

DataChem Nuclear Material License UT 1800237

This release has been authorized by Robert P. Di Rienzo, DataChem Radiation Safety Officer on December 6, 2007.