

**SAF-RC-006**  
**100-N Ancillary Facilities & 190-DR**  
**Other Solid Sampling for ERDF Waste**  
**Designation**  
**FINAL DATA PACKAGE**

**COMPLETE COPY OF DATA PACKAGE TO:**

Tom Edmundson

X5-50

KW 3/2/09  
INITIAL/DATE

**COMMENTS:**

**SDG 09-A-0968**

**SAF-RC-006**

Rad only

Chem only

Rad & Chem

Complete

Partial

**Waste Site(s): 109-N Roof Sampling**

**RECEIVED**  
MAR 19 2009  
**EDMC**

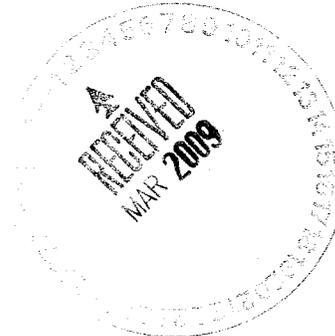


**ALS Laboratory Group**  
ANALYTICAL CHEMISTRY & TESTING SERVICES



Submitted To: Joan Kessner  
Washington Closure Hanford  
2620 Fermi Avenue, MSIN H4-21  
Richland, WA 99354

Test Report  
Page 1 of 2  
3/2/09



**REFERENCE DATA:**

Client Sample No.: J18JT3 through J18JT9  
P.O. No.: Not Available  
Sample Location: 109-N-Roof Sampling  
Sample Type: Bulk  
Method Reference: EPA-600/R-93/116  
DCL Set ID No.: 09-A-0968  
DCL Sample ID No.: 09-05092 through 09-05098  
Sample Receipt Date: 2/27/09  
Analysis Date: 3/2/09

We certify that the following samples were prepared and analyzed by Polarized Light Microscopy for asbestos and other fibrous constituents using EPA-600/R-93/116. The samples were acceptable upon receipt except where noted. The samples were examined under a stereomicroscope in a laboratory fume hood for general composition and phase separation. If needed, portions of the sample were removed and ground with a mortar and pestle before being mounted on a glass microscope slide. Mountings of representative portions of the material are prepared in one or more appropriate refractive index liquids (1.550, 1.605, 1.680) and examined by Polarized Light Microscopy\*. Estimates of concentration are made on an area basis. The results of the analysis apply only to the materials analyzed and are summarized on the attached bulk asbestos analysis data sheets. ALS DataChem Laboratories will dispose of all bulk samples after 60 days unless other arrangements are made.

Shawn Smythe  
Analyst

Anna Marie Ristich  
Reviewer

\*Floor tiles, decorative paints, joint compounds, and cement materials require additional treatment in order to evaluate the concentration of small asbestos fibers bound in the material. Some samples may contain fibers that are not visible by PLM and can only be detected by electron microscopy techniques. Floor tiles are analyzed as homogeneous materials if insufficient mastic is present or if phases have been cross contaminated.

ALS DataChem Laboratories NVLAP Lab ID: 101917. Laboratory accreditation by the National Institute of Standards and Technology does not in any way constitute approval or endorsement by NVLAP, NIST, or any agency of the federal government.



**ALS DataChem Laboratories  
Polarized Light Microscopy  
Asbestos Analytical Report**

Client: Washington Closure Hanford  
Location: 109-N-Roof Sampling

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Client Sample ID: J18JT6  
DCL Sample ID: 09-05095

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**Macroscopic Examination**

Accepted/Rejected: Accepted  
Homogeneity: Layered  
Inseparable  
Color: Yellow/Black  
Texture: Spngy/Resns  
Description: Material  
Analysis: PLM

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**Asbestiform Minerals**

% Chrysotile:  
% Amosite:  
% Crocidolite:  
% Tremolite - Actinolite:  
% Anthophyllite:  
% Total Asbestos: ND

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**Other Materials**

% Cellulose:  
% Fiberglass:  
% Other Fibers:  
  
% Resin/Binder:  $>3 \leq 5$   
% Non Fibrous:  $>90 \leq 100$

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ND = None Detected Trace = <1%

Special Prep Procedures: None. Sample numbers J18JT3, J18JT4, J18JT5, J18JT7, J18JT8 and J18JT9 were prepared by gravimetric reduction.

\*Notes: P. O. #: Not Available.

  
Shawn Smythe  
Microscopist

All values are in area percent by visual estimate. The Federal Register Vol. 55 No. 224 Tuesday Nov. 20 1990 Rules and Regulations states "... If the asbestos content is estimated to be less than 10% by a method other than point counting,... (the analysis) be repeated using the point counting technique by PLM." Any of the above samples can be reanalyzed by point counting at the client's request.

Wherever possible, separate phases are analyzed and reported individually.



Submitted To: Joan Kessner  
Washington Closure Hanford  
2620 Fermi Avenue, MSIN H4-21  
Richland, WA 99354

Test Report  
Page 1 of 3  
3/2/09

**REFERENCE DATA:**

Client Sample No.: J18JT3 through J18JT9  
P.O. No.: Not Available  
Sample Location: 109-N-Roof Sampling  
Sample Type: Bulk  
Method Reference: EPA/600/R-93/116, ELAP 198.1 (modified),  
PLM Analysis with Gravimetric Reduction  
DCL Set ID No.: 09-A-0968  
DCL Sample ID No.: 09-05092 through 09-05098  
Sample Receipt Date: 2/27/09  
Preparation Date: 2/27/09 through 3/2/09  
Analysis Date: 3/2/09

We certify that the samples indicated on the following data sheet(s) were prepared by gravimetric reduction and analyzed by Polarized Light Microscopy (PLM) for asbestos using a modification of the method, EPA/600/R-93/116, ELAP 198.1, Chatfield Method, for determining the amount and type of asbestos present in bulk building materials. The samples were acceptable upon receipt except where noted.

The samples were examined under a stereomicroscope for general composition and phase separation. Coarse, non-asbestos materials that cannot be pulverized, such as pebbles or metal foils, were separated from the portion analyzed. Other non-asbestos material was removed by ashing in a muffle furnace and/or dissolution in hydrochloric acid. Sample weights were tracked through each step in the reduction. Mountings of representative portions of the final residue were prepared in one or more refractive index liquids (1.550, 1.605, 1.680) and examined by Polarized Light Microscopy\*. Estimates of concentration are made on an area basis. The results of the analysis apply only to the materials analyzed and are summarized on the attached PLM Asbestos Analysis Data Sheets.

\* Some samples may contain fibers that are not visible by PLM and can only be discovered by electron microscopy techniques. Floor tiles are analyzed as homogeneous materials if insufficient mastic is present or if phases have been cross contaminated.

DataChem Laboratories NVLAP Lab ID: 101917. Laboratory accreditation by the National Institute of Standards and Technology does not in any way constitute approval or endorsement by NVLAP, NIST, or any agency of the federal government.

Samples will be disposed of after 60 days unless instructed otherwise.

  
Shawn Smythe  
Analyst

  
Anna Marie Ristich  
Reviewer



**DataChem Laboratories Analytical Report  
PLM Bulk Asbestos Analysis using Gravimetric Reduction**

Client: Washington Closure Hanford  
Location: 109-N-Roof Sampling  
Set ID: 09-A-0968

<b>SAMPLE IDENTIFICATION</b>					
Client ID:	J18JT3	J18JT4	J18JT5	J18JT7	J18JT8
DCL ID:	09-05092	09-05093	09-05094	09-05096	09-05097
<b>SAMPLE DESCRIPTION</b>					
Homogeneity:	Homog.	Homog.	Homog.	Homog.	Homog.
Color:	Black	Black	Black	Black	Black
Texture:	Resinous	Resinous	Resinous	Resinous	Resinous
Description:	Roofing	Roofing	Roofing	Roofing	Roofing
<b>SAMPLE PREP</b>					
Starting Weight (g):	2.4060	1.7859	2.0935	1.1668	0.6763
Residue Weight (g):	0.5087	0.1758	0.0938	0.0246	0.0180
Weight Percent Residue:	21.14	9.84	4.48	2.11	2.66
<b>PERCENT ASBESTOS DETECTED IN RESIDUE</b>					
Chrysotile:	0	70	60	40	0
Grunerite:	0	0	0	0	0
Crocidolite:	0	0	0	0	0
Actinolite-Tremolite:	0	0	0	0	0
Anthophyllite:	0	0	0	0	0
<b>TOTAL IN RESIDUE</b>	ND	70.0	60.0	40.0	ND
<b>ASBESTOS PERCENT IN SAMPLE</b>					
	ND	6.9	2.7	0.8	ND

ND = None Detected

TRACE = <1%

\*Notes: P. O. #: Not Available.

Shawn Smythe  
Analyst

Anna Marie Ristich  
Reviewer



**DataChem Laboratories Analytical Report  
PLM Bulk Asbestos Analysis using Gravimetric Reduction**

Client: Washington Closure Hanford  
Location: 109-N-Roof Sampling  
Set ID: 09-A-0968

<b>SAMPLE IDENTIFICATION</b>	
Client ID:	J18JT9
DCL ID:	09-05098
<b>SAMPLE DESCRIPTION</b>	
Homogeneity:	Homog.
Color:	Black
Texture:	Resinous
Description:	Roofing
<b>SAMPLE PREP</b>	
Starting Weight (g):	0.6199
Residue Weight (g):	0.0163
Weight Percent Residue:	2.63
<b>PERCENT ASBESTOS DETECTED IN RESIDUE</b>	
Chrysotile:	0.2
Grunerite:	0
Crocidolite:	0
Actinolite-Tremolite:	0
Anthophyllite:	0
<b>TOTAL IN RESIDUE</b>	0.2
<b>ASBESTOS PERCENT IN SAMPLE</b>	
	0.01

ND = None Detected

TRACE = <1%

\*Notes: P. O. #: Not Available.

  
Shawn Smythe  
Analyst

  
Anna Marie Ristich  
Reviewer

07-H-0768

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-006-201		Page 1 of 4																																																													
Collector C. Buckenberger		Company Contact Mike Stankovich		Telephone No. 430-7142		Project Coordinator KESSNER, JH		Price Code 9K      Data Turnaround																																																													
Project Designation 100-N Ancillary Facilities & 190-DR Other Solid Sampling f		Sampling Location 109-N Roof Sampling		SAF No. RC-006		<del>7 Days</del> RUSH FEB 25-09																																																															
Ice Chest No. FED EX BOX		Field Logbook No. EL-1516-14		COA RD4MXX2F00		Method of Shipment FED EX																																																															
Shipped To DataChem Laboratories - Cincinnati		Offsite Property No. A090146		Bill of Lading/Air Bill No. SEE OSPC																																																																	
POSSIBLE SAMPLE HAZARDS/REMARKS PACM		Preservation		None																																																																	
Special Handling and/or Storage N/A		Type of Container		G/P																																																																	
		No. of Container(s)		1																																																																	
		Volume		5g																																																																	
		Asbestos-BULK-EPA																																																																			
SAMPLE ANALYSIS																																																																					
<table border="1"> <thead> <tr> <th>Sample No.</th> <th>Matrix *</th> <th>Sample Date</th> <th>Sample Time</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>05092 J18JT3</td> <td>OTHER SOLID</td> <td>2-25-09</td> <td>13:30</td> <td>8</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>05093 J18JT4</td> <td>OTHER SOLID</td> <td>2-25-09</td> <td>13:35</td> <td>8</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>05094 J18JT5</td> <td>OTHER SOLID</td> <td>2-25-09</td> <td>13:40</td> <td>8</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>05095 J18JT6</td> <td>OTHER SOLID</td> <td>2-25-09</td> <td>13:45</td> <td>8</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>05096 J18JT7</td> <td>OTHER SOLID</td> <td>2-25-09</td> <td>13:50</td> <td>8</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										Sample No.	Matrix *	Sample Date	Sample Time							05092 J18JT3	OTHER SOLID	2-25-09	13:30	8						05093 J18JT4	OTHER SOLID	2-25-09	13:35	8						05094 J18JT5	OTHER SOLID	2-25-09	13:40	8						05095 J18JT6	OTHER SOLID	2-25-09	13:45	8						05096 J18JT7	OTHER SOLID	2-25-09	13:50	8					
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Sign/Print Names					RUSH																																																																
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		Matrix *																																																													
C. Buckenberger		2-25-09 14:10		MTR m Stankovich		2/23/09		S=Soil SE=Sediment SO=Solid SI=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other																																																													
MTR m Stankovich		FEB 25 2009 1000/30		1000/30		FEB 25 2009																																																															
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LABORATORY SECTION		Received By		Title		Date/Time																																																															
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time																																																															

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lib.

09-H-0968

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-006-201		Page 2 of 4	
Collector C. Buckenberger		Company Contact Mike Stankovich		Telephone No. 430-7142		Project Coordinator KESSNER, JH		Price Code 9K Data Turnaround	
Project Designation 100-N Ancillary Facilities & 190-DR Other Solid Sampling f		Sampling Location 109-N Roof Sampling		SAF No. RC-006		<b>7 Days</b> <i>RUSH 2/25/09</i>			
Ice Chest No. <i>FED EX BOX</i>		Field Logbook No. EL-1516-14		COA RD4MXX2F00					
Shipped To DataChem Laboratories - Cincinnati		Offsite Property No. <i>A090196</i>		Bill of Lading/Air Bill No. SEE OSPC					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>PACM</i>			Preservation	None					
Special Handling and/or Storage <i>N/A</i>			Type of Container	G/P					
			No. of Container(s)	1					
			Volume	5g					
SAMPLE ANALYSIS				Asbestos-BULK-EPA					
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J18JT8</i>	OTHER SOLID	<i>2-25-09</i>	<i>13:55</i>	<i>X</i>					
<i>J18JT9</i>	OTHER SOLID	<i>2-25-09</i>	<i>14:00</i>	<i>X</i>					
<i>J18JV0 CB 2-25-09</i>	OTHER SOLID								
<i>J18JV1 CB 2-25-09</i>	OTHER SOLID								
<i>J18JV2 CB 2-25-09</i>	OTHER SOLID								
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		RUSH  Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.	
<i>C. Buckenberger</i>		<i>2-25-09 14:10</i>		<i>M. Stankovich</i>		<i>2/25/09 14:10</i>			
<i>M. Stankovich</i>		<i>15:45</i>		<i>1060/3C</i>		<i>FEB 25 2009 15:45</i>			
<i>1060 3C / J.E. Bernhart</i>		<i>2-26-09 08:00</i>		<i>J.E. Bernhart</i>		<i>2-26-09 08:00</i>			
<i>J.E. Bernhart</i>		<i>2-26-09 08:15</i>		<i>FED EX</i>					
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		Matrix * S=Soil SE=Sediment SO=Solid SL=Sludge W = Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue Wt=Wipe L=Liquid V=Vegetation X=Other	
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Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
LABORATORY SECTION		Received By		Title		Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time			

97-  
05097  
35098