0100809

SAF-RC-040
300 Area D4 Waste Characterization Sampling - Other Solid
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

No Distribution Required KW 11/21/11
INITIAL/DATE

COMMENTS:

SDG DC1111460 SAF RC-040

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Sample Location/Waste Site: 308 Floor Tile

RECEIVED
JAN 13 2012
EDMC

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

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

RECEIVED
NOV 2011

REFERENCE DATA	**Asbestos in Bulk Building Material**
Sample Type:	Bulk
Method Reference:	EPA/600/R-93/116
Client Sample Nos.:	J1MWJ9 through J1MWK4
Sample Location:	308 Floor Tile
PO No.:	Not Available
ALS Work Order No.:	DC1111460
ALS Sample Nos.:	1111460-01 through 1111460-06
Sample Receipt Date:	11/18/2011
Preparation Date:	11/18/2011
Analysis Date:	11/18/2011

We certify that the samples indicated on the following data sheet(s) were analyzed by Transmission Electron Microscopy (TEM) using the method, EPA/600/R-93/116, for determining the amount and type of asbestos present in bulk building materials. After an initial examination by stereomicroscope and/or polarized light microscopy, representative portions of the samples were ground with a mortar and pestle, suspended in acetone or other solvents, then mounted on a TEM grid for analysis. Analysis was performed on an FEI Tecnai Spirit Twin TEM with EDAX Genesis System. Selected area electron diffraction (SAED) patterns and EDXA spectra were used to determine fiber species. Estimates of asbestos concentration are made on an area basis. Representative EDXA spectra of asbestos types detected are included. Results apply only to portions of samples analyzed and are tabulated on the following data sheet(s). ALS Laboratory Group Environmental Division (Cincinnati) will dispose of bulk samples after 60 days unless other arrangements are made.

Pamela Johnson
Analyst

Anna Marie Ristich
Section Manager

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ALS Laboratory Group
4388 Glendale-Milford Road, Cincinnati, Ohio 45242
Phone (513) 733 5336 Fax (513) 733 5347 www.alsenviro.com
A Campbell Brothers Limited Company

CLIENT: Washington Closure Hanford
SAMPLE LOCATION: 308 Floor Tile

ANALYSIS DATA

EDXA Resolution:	130.73 eV	Magnification:	9,700 X
Accelerating Voltage:	100 keV	Calibration Constant:	1 cm = 1.02 µm

SAMPLE ID					
Client Sample No.:	J1MWJ9	J1MWK0	J1MWK1	J1MWK2	J1MWK3
ALS Sample No.:	1111460-01	1111460-02	1111460-03	1111460-04	1111460-05
MACROSCOPIC EXAMINATION					
Accepted/Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
Homogeneity	Homog.	Homog.	Homog.	Homog.	Homog.
Color	Tan	Tan	Tan	Tan	Tan
Texture	Compact	Compact	Compact	Compact	Compact
Description	Tile	Tile	Tile	Tile	Tile
ASBESTIFORM MINERALS					
% Chrysotile	>10≤20	>10≤20	>10≤20	>10≤20	>1≤3
% Amosite	ND	ND	ND	ND	ND
% Crocidolite	ND	ND	ND	ND	ND
% Tremolite - Actinolite	ND	ND	ND	ND	ND
% Anthophyllite	ND	ND	ND	ND	ND
% TOTAL ASBESTOS	**>10≤20**	**>10≤20**	**>10≤20**	**>10≤20**	**>1≤3**

NOTES: *ND = None Detected* *TRACE = <1%*

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Analyst

Anna Marie Ristich
Section Manager

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CLIENT: Washington Closure Hanford
SAMPLE LOCATION: 308 Floor Tile

ANALYSIS DATA

EDXA Resolution:	130.73 eV	Magnification:	9,700 X
Accelerating Voltage:	100 keV	Calibration Constant:	1 cm = 1.02 μm

SAMPLE ID

Client Sample No.:	J1MWK4
ALS Sample No.:	1111460-06

MACROSCOPIC EXAMINATION

Accepted/Rejected	Accepted
Homogeneity	Homog.
Color	Gray
Texture	Compact
Description	Tile

ASBESTIFORM MINERALS

% Chrysotile	>1≤3
% Amosite	ND
% Crocidolite	ND
% Tremolite - Actinolite	ND
% Anthophyllite	ND
% TOTAL ASBESTOS	**>1≤3**

NOTES: *ND = None Detected* *TRACE = <1%*

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Analyst

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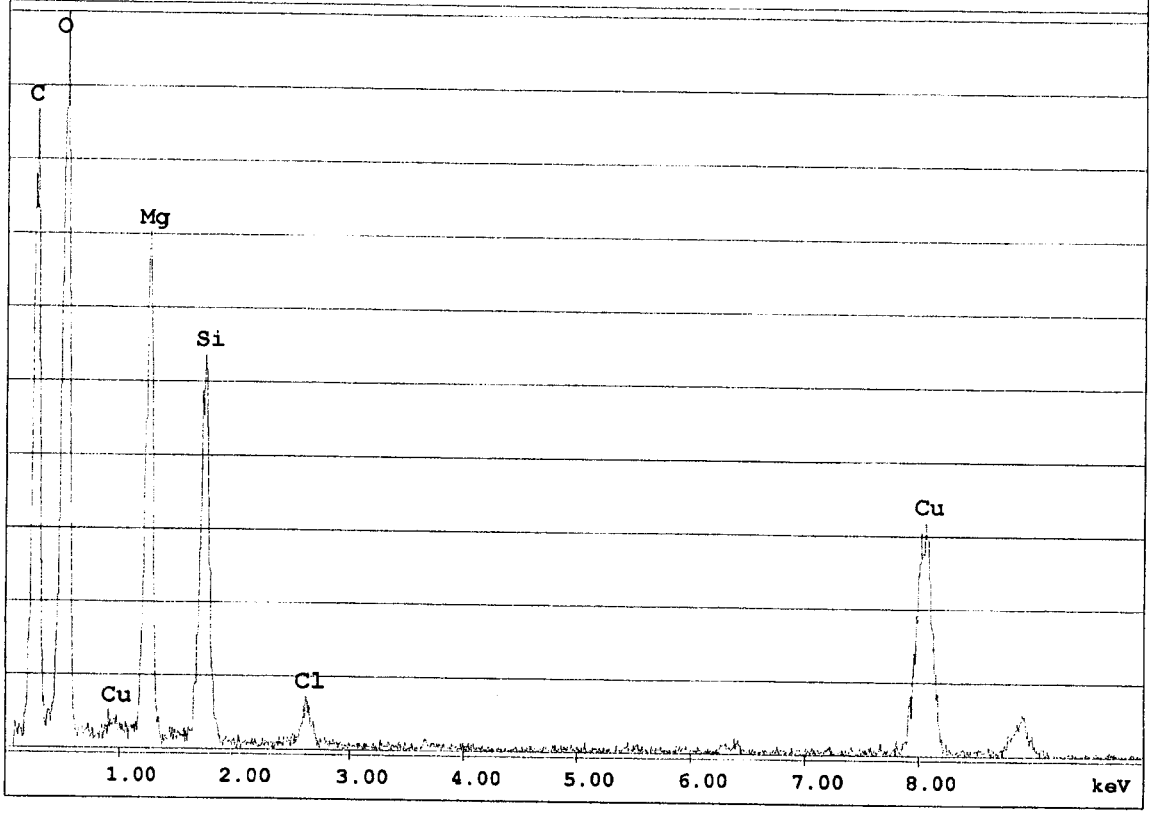
c:\edax32\genesis\genspc.spc

Label:1111460 01 Chrysotile

kV:100.0 X Tilt:35.0 Y Tilt:0.0 Det Type:SUTW+ Res:132 Amp.T:100.0

FS : 423 Lsec : 23 18-Nov-2011 11:51:50



c:\edax32\genesis\genspc.spc

Label:1111460 02 Chrysotile

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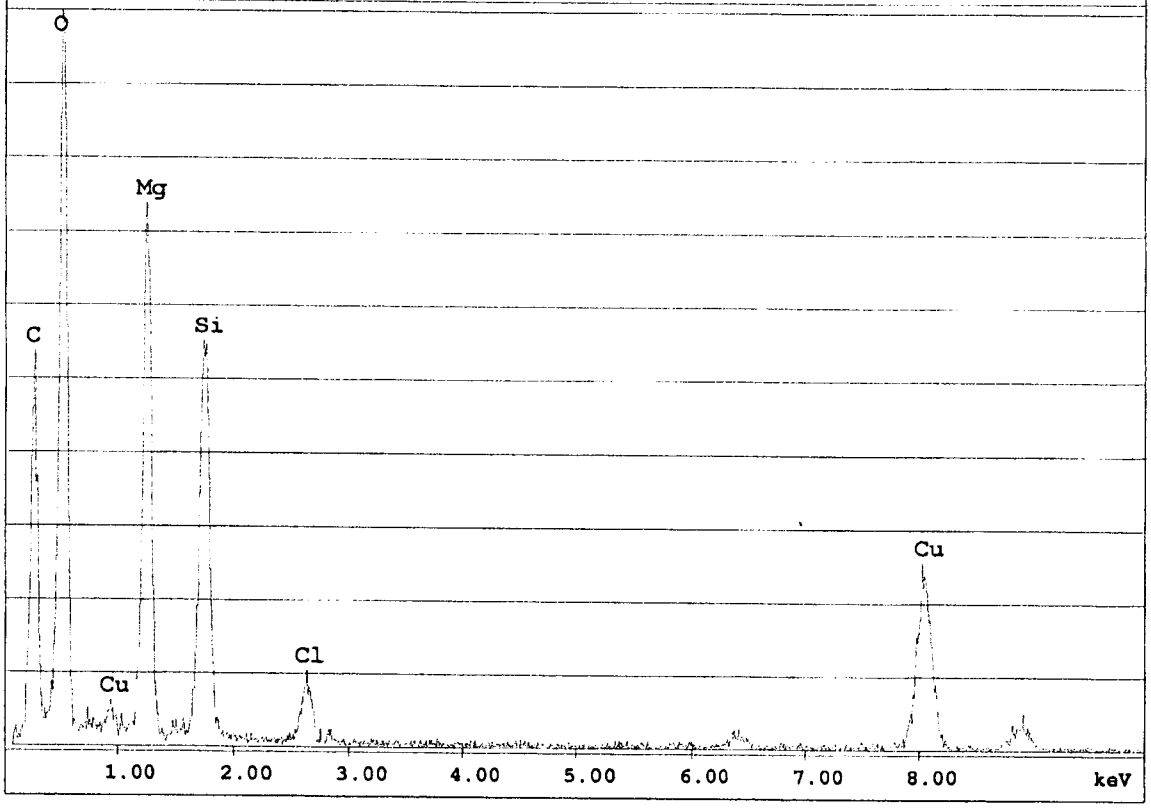
FS : 482 Lsec : 14 18-Nov-2011 11:58:25

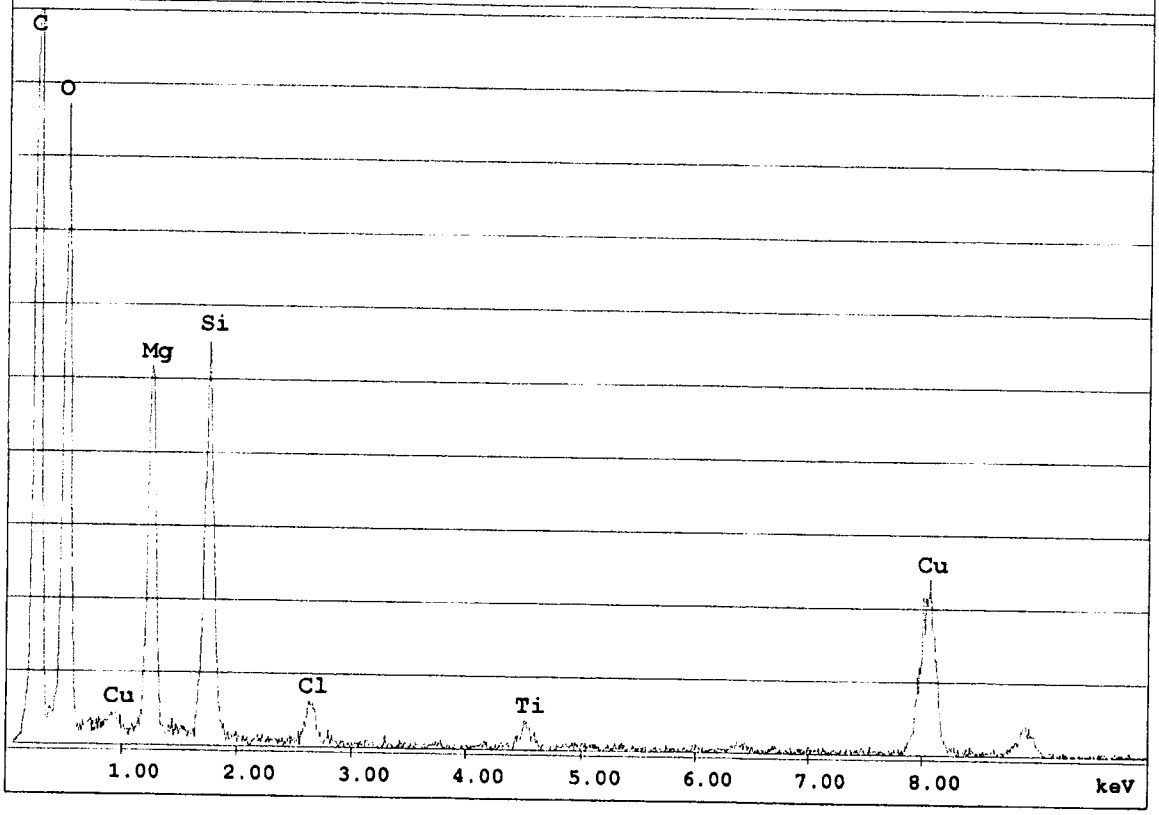


c:\edax32\genesis\genspc.spc

Label:1111460 03 Chrysotile

kV:100.0 X Tilt:35.0 Y Tilt:0.0 Det Type:SUTW+ Res:132 Amp.T:100.0

FS : 600 Lsec : 16 18-Nov-2011 12:03:29

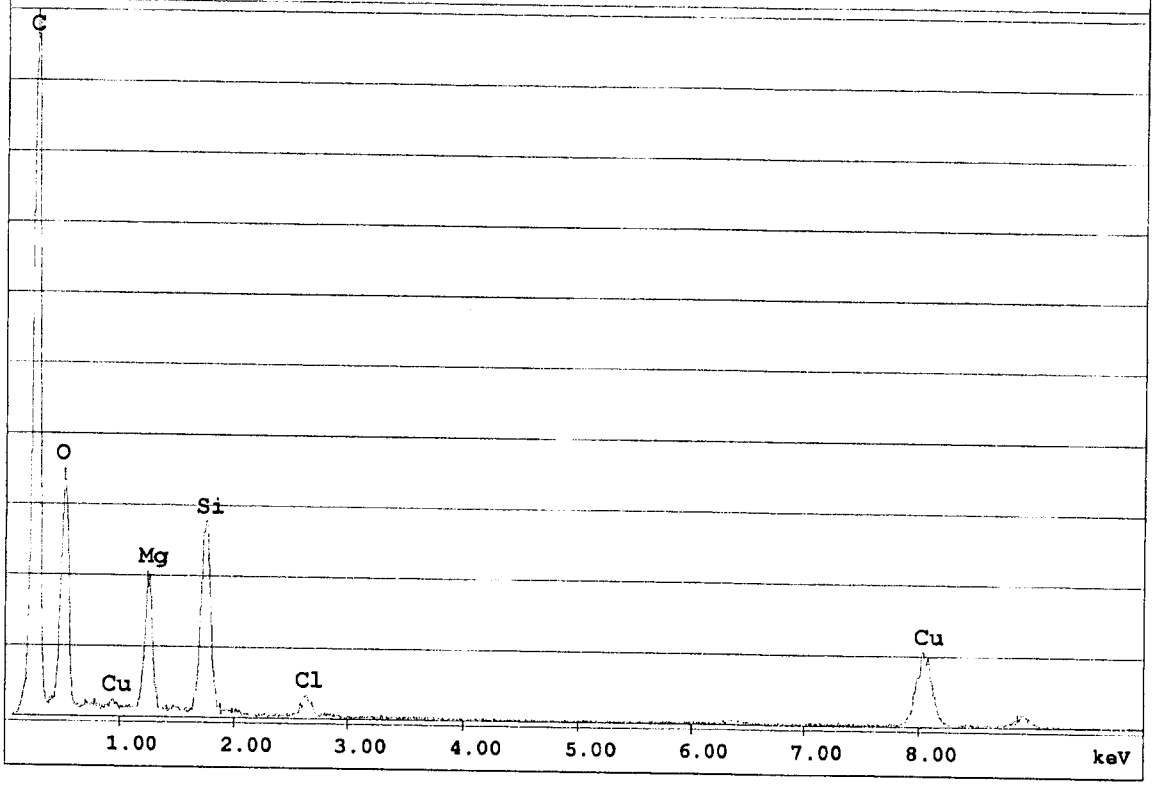


C:\Documents and Settings\TEM EDAX\My Documents\2011 Sample Data\BULK\1111460 WCH\1111460 04 Chrysotile.spc

Label:1111460 04 Chrysotile

kV:100.0 X Tilt:35.0 Y Tilt:0.0 Det Type:SUTW+ Res:132 Amp.T:100.0

FS : 2212 Lsec : 28 18-Nov-2011 12:09:30

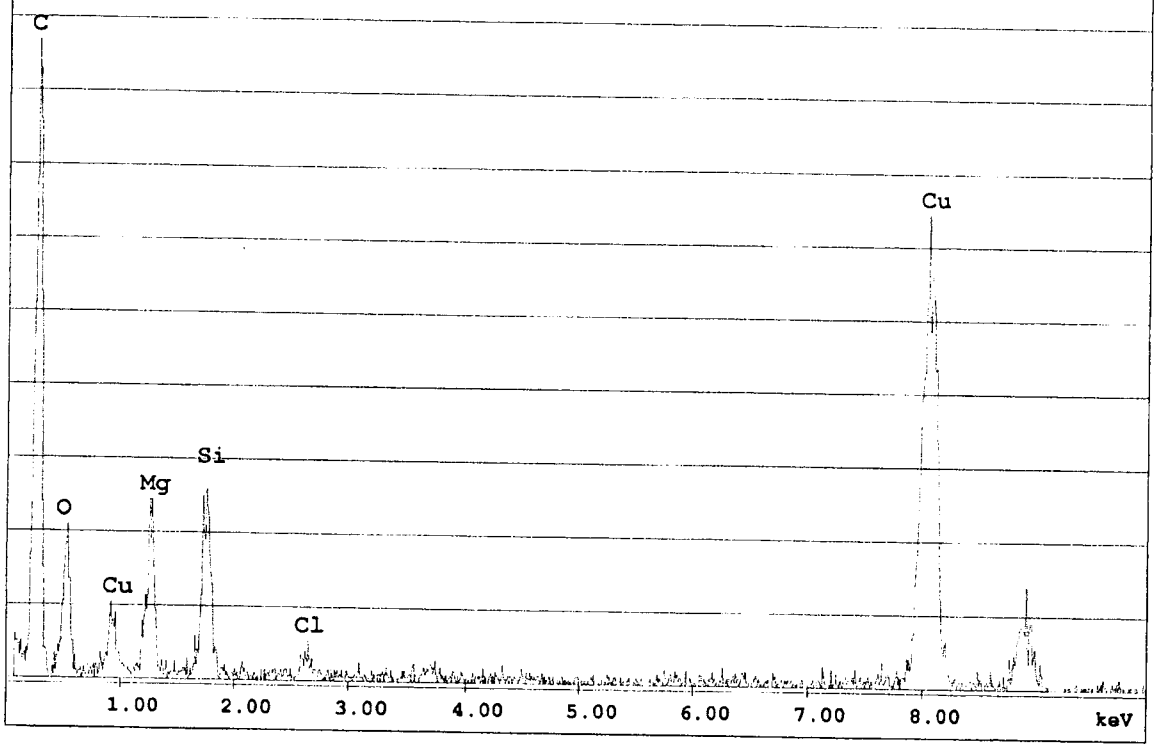


c:\edax32\genesis\genspc.spc

Label:1111460 05 Chrysotile

kV:100.0 X Tilt:35.0 Y Tilt:0.0 Det Type:SUTW+ Res:132 Amp.T:100.0

FS : 200 Lsec : 20 18-Nov-2011 12:14:56

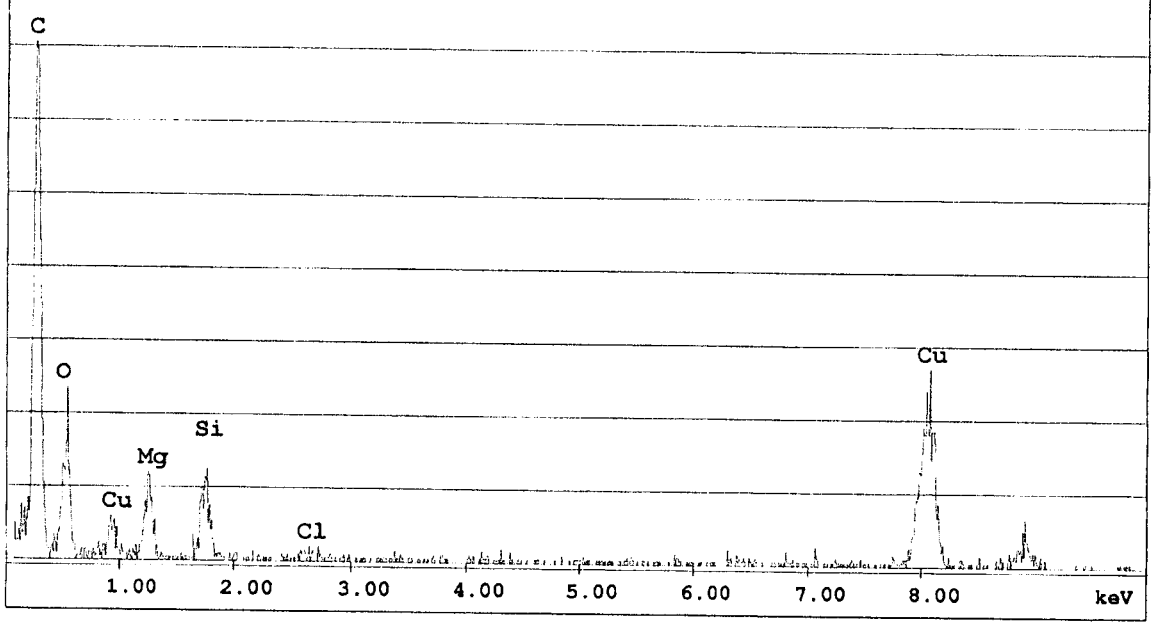


c:\edax32\genesis\genspc.spc

Label:1111460 06 Chrysotile

kV:100.0 X Tilt:35.0 Y Tilt:0.0 Det Type:SUTW+ Res:132 Amp.T:100.0

FS : 200 Lsec : 17 18-Nov-2011 12:21:08



DC1111460

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-040-725	Page 1 of 2

Collector: Joe Inione	Company Contact: Tom Edmundson; Telephone No.: 509.947.5192	Project Coordinator: KESSNER, JH	Price Code: 9K; Data Turnaround: SMS 11-17-11 ~~7 Days~~ ASAP
Project Designation: 300 Area D4 Waste Characterization Sampling - Other Solid	Sampling Location: 308 Floor Tile	SAF No.: RC-040	
Ice Chest No.: N/A	Field Logbook No.: EL-1518-24; COA: RD4MXX2F00	Method of Shipment: FEDEX	
Shipped To: ALS Laboratories - Cincinnati	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: ~~See OSPC~~ N/A 11-17-11 A7 11-11-11 7 977 5127 1765	

POSSIBLE SAMPLE HAZARDS/REMARKS

Asbestos

Special Handling and/or Storage

N/A

Preservation	None									
Type of Container	G P or Whirl Pack									
No. of Container(s)	1									
Volume	5g									
SAMPLE ANALYSIS	Asbestos-TEM									

Sample No.		Matrix *	Sample Date	Sample Time									
J1MWJ9	01	OTHER SOLID	11-17-11	1240	✓								
J1MWK0	02	OTHER SOLID		1250	✓								
J1MWK1	03	OTHER SOLID		1300	✓								
J1MWK2	04	OTHER SOLID		1310	✓								
J1MWK3	05	OTHER SOLID		1320	✓								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: [signature]	Date Time: 11-17-11 1450	Received By/Stored In: SM Sexton [signature]	Date Time: 11/17/11 1450
Relinquished By/Removed From: SM Sexton [signature] WCH	Date Time: 11/17/11 1500	Received By/Stored In: FEDEX	Date Time:
Relinquished By/Removed From:	Date Time:	Received By/Stored In: [signature]	Date Time: 11/18/11 10:03
Relinquished By/Removed From:	Date Time:	Received By/Stored In:	Date Time:
Relinquished By/Removed From:	Date Time:	Received By/Stored In:	Date Time:
Relinquished By/Removed From:	Date Time:	Received By/Stored In:	Date Time:

SPECIAL INSTRUCTIONS

Analyze tile only, not mastic SMS 11-17-11

REVIEWED BY A7 DATE 11-17-11

Matrix *: 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

LABORATORY SECTION	Received By: Steve Wilcox	Title	Date Time: 11/18/11 10:03
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date Time

WCH-EE-011

Fed-x

DC 1111460

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-040-725	Page 2 of 2

Collector: Joe Tinians	Company Contact: Tom Edmundson; Telephone No.: 509.947.5192	Project Coordinator: KESSNER, JH	Price Code: 9K; Data Turnaround: SMS 11-17-11 ~~7 Days~~ ASAP
Project Designation: 300 Area D4 Waste Characterization Sampling - Other Solid	Sampling Location: 308 Floor Tile	SAF No.: RC-040	
Ice Chest No.: N/A	Field Logbook No.: EL-1518-24; COA: RD4MXX2F00	Method of Shipment: FEDEX	
Shipped To: ALS Laboratories - Cincinnati	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: SMS 11-17-11 ~~See OSPC~~ ~~N/A~~ A7 11-17-11 7977 5127 1765	

POSSIBLE SAMPLE HAZARDS/REMARKS

Asbestos

Special Handling and/or Storage

N/A

Preservation	None									
Type of Container	G/P or Whirl Pack									
No. of Container(s)	1									
Volume	5g									
SAMPLE ANALYSIS	Asbestos-TEM									

Sample No.	Matrix *	Sample Date	Sample Time										
J1MWK4 06	OTHER SOLID	11 17 11	1330	✓									

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By Removed From: J Tinians	Date Time: 11-17-11 / 1450	Received By Stored In: Sm Sexton	Date Time: 1450 11/17/11
Relinquished By Removed From: NCH Sm Sexton	Date Time: 1500 11/17/11	Received By Stored In: FEDEX	Date Time:
Relinquished By Removed From:	Date Time:	Received By Stored In: [signature]	Date Time: 11/18/11 10:03
Relinquished By Removed From:	Date Time:	Received By Stored In:	Date Time:
Relinquished By Removed From:	Date Time:	Received By Stored In:	Date Time:
Relinquished By Removed From:	Date Time:	Received By Stored In:	Date Time:

SPECIAL INSTRUCTIONS

Analyze tile only, not mastic SMS 11-17-11

REVIEWED BY A7 DATE 11-17-11

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: [signature]	Title:	Date Time: 11/18/11 10:03
FINAL SAMPLE DISPOSITION	Disposal Method:	Disposed By:	Date Time:

WCH-EE-011

Fed-ex