0069732

SAF-RC-001
Industrial Hygiene Sampling
FINAL DATA

NO DISTRIBUTION REQUIRED

COMMENTS:

SDG 06-T-1208 SAF-RC-001

Rad only X Chem only Rad & Chem

X Complete Partial

300 Area 333 Bldg

RECEIVED
JUN 01 2006
EDMC

DATA CHEM LABORATORIES, INC.

SUBMITTED TO:

Denise Pitts
Washington Closure Hanford
3070 George Washington Way, MSIN L1-07
Richland, WA 99354

RECEIVED APR 2006

REFERENCE DATA:

Client Sample No.:	J11DF0 through J11DF2
P.O. No.:	Not Available
Sample Location:	300 Area 333 Bldg.
Sample Type:	MCE Air Filters
Method Reference:	Airborne Asbestos by TEM NIOSH 7402
DCL Set ID No.:	06-T-1208
DCL Sample ID No.:	06-07294 through 06-07300
Date Received:	3/22/2006
Preparation Date:	3/24/2006

Analysis Date: 3/31/2006

The samples indicated on the following data sheet(s) were analyzed by Transmission Electron Microscopy (TEM) for airborne asbestos and other fibers using the NIOSH Method 7402 protocol. The TEM grid mounts were scanned at low magnification (135 X) for general loading and integrity of the carbon film. Suitable openings were then analyzed for fibers at a higher magnification (5,600 X). Individual fiber measurements, selected area electron diffraction (SAED) patterns, and energy dispersive X-ray analysis (EDXA) spectra were obtained at approximately 10,000 X. Analysis was performed on a Philips CM-12 TEM with EDAX Model PV9800 providing energy dispersive X-ray analysis (EDXA) capabilities.

Results apply only to portions of samples analyzed and are tabulated on the following data sheet(s). Representative EDXA spectra and selected area electron diffraction (SAED) measurements of asbestos types detected are included and are referenced to the fiber identification numbers listed on the count sheets. The analytical sensitivity (AS) for this method has been determined to be one confirmed asbestos fiber in the total number of grid openings analyzed. Concentrations in fibers/mL are based on air volumes or times and flow rates provided by the client.

Alex Bell
Analyst

Anna Marie Ristich
Section Manager

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CINCINNATI OFFICE
4388 GLENDALE-MILFORD ROAD
CINCINNATI, OHIO 45242-3706
513 733-5336, FAX 513 733-5347

WEST COAST OFFICE
11 SANTA YORMA COURT
NOVATO, CALIFORNIA 94945
800 280-8071, FAX 415 893-9469

DataChem Laboratories TEM NIOSH 7402 Test Report

DCL Sample Set ID: 06-T-1208
Client: Washington Closure Hanford
Sample Location: 300 Area 333 Bldg.

SAMPLING DATA

Filter Type:	MCE, 0.8 µm
Collection Area:	385 mm^2

ANALYSIS DATA

Magnification:	9,170 X
Calibration Constant:	1 cm = 1.09 µm
EDXA Resolution:	158.4 eV
Accelerating Voltage:	100 keV
Camera Constant:	29.6 mm-Å

SAMPLE IDENTIFICATION					
Client ID:	J11DF0	J11DD0	J11DJ0	J11DC8	J11DC9
DCL ID:	06-07294	06-07295	06-07296	06-07297	06-07298
Volume (L):	73.00	223.00	174.00	314.00	76.00
No. Openings Analyzed:	25	28	6	6	8
Avg. Grid Opening Area:	0.0099	0.0099	0.0099	0.0099	0.0099
AS: Fibers/mm^2:	4.04	3.61	16.84	16.84	12.63
AS: Fibers/mL:	0.0213	0.0062	0.0372	0.0206	0.0640
Asbestos Fibers					
Chrysotile:	8.5	4	2	3	2
Amosite:	54.5	21	28	23.5	23
Crocidolite:	0	0	0	0	0
Actinolite-Tremolite:	0	0	0	0	0
Anthophyllite:	0	0	0	0	0
Total Asbestos					
Count:	63	25	30	26.5	25
Fibers/mm^2:	254.55	90.19	505.05	446.13	315.66
Fibers/mL:	1.3425	0.1557	1.1175	0.5470	1.5990
Total Non-Asbestos Fibers					
Count:	9	2	2	0	0
Fibers/mm^2:	36.36	7.22	33.67	<LOD	<LOD
Fibers/mL:	0.1918	0.0125	0.0745	<LOD	<LOD
Types:	Organic Cellulose	Mg-Si-Al-Fe	Mg-Al-Si-Ca Si		

ND = None Detected *AS = Analytical Sensitivity*

***Comments*:

Alex Bell
Analyst

Anna Marie Ristich
Section Manager

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DataChem Laboratories TEM NIOSH 7402 Test Report

DCL Sample Set ID: 06-T-1208
Client: Washington Closure Hanford
Sample Location: 300 Area 333 Bldg.

SAMPLING DATA		*ANALYSIS DATA*	
Filter Type:	MCE, 0.8 µm	Magnification:	9,170 X
Collection Area:	385 mm^2	Calibration Constant:	1 cm = 1.09 µm
		EDXA Resolution:	158.4 eV
		Accelerating Voltage:	100 keV
		Camera Constant:	29.6 mm-Å

SAMPLE IDENTIFICATION					
Client ID:	J11DF1	J11DF2			
DCL ID:	06-07299	06-07300			
Volume (L):	NA	NA			
No. Openings Analyzed:	40	40			
Avg. Grid Opening Area:	0.0099	0.0099			
AS: Fibers/mm^2:	2.53	2.53			
AS: Fibers/mL:	NA	NA			
Asbestos Fibers					
Chrysotile:	0	0			
Amosite:	0	0			
Crocidolite:	0	0			
Actinolite-Tremolite:	0	0			
Anthophyllite:	0	0			
Total Asbestos					
Count:	0	0			
Fibers/mm^2:	<LOD	<LOD			
Fibers/mL:	NA	NA			
Total Non-Asbestos Fibers					
Count:	0	0			
Fibers/mm^2:	<LOD	<LOD			
Fibers/mL:	NA	NA			
Types:					

ND = None Detected *AS = Analytical Sensitivity*

***Comments*:

Alex Bell
Analyst

Anna Marie Ristich
Section Manager

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06-A-1208

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: Carla Hughes	Company Contact: Denise A. Pitts and Henry W. Ruby	Telephone No.: 531-1229	Project Coordinator: Joan H. Kessner
Payroll #: 8C104	Sampling Location: 300 Area 333 Bldg.	SPECIAL INSTRUCTIONS: All relevant COAs must be provided: R33300 J451	SAF No.: RC-001
Type of Sample: AIR - Asbestos	Wipe Sample Media: Ghost ☐ Yes ☐ No; Other	ANALYSIS METHOD (SPECIFIC): NIOSH 7400	Method of Shipment: FED EX
Shipped To: DATAChem CINCINNATI			Bill of Lading/Air Bill No.: 8544 9435 1613
POSSIBLE SAMPLE HAZARD/REMARKS: Be, Ld, Pb			
Special Handling and/or Storage: NA			

3-20-06

MATRIX: A - AIR; WI - WIPE; X - OTHER

SAMPLE ANALYSIS

SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area ___ cm²	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold	Lead Wipe	Cd Wipe	Cd Airborne	
	Preservation (i.e., cooling required, etc.)				No	No	No	No	No	No	No	No	
J11DF0	A	3-20-06	73	Excursion Personal	X		06-07294						
J11DD0			223	Personal	X		07295						
J11DJ0			174	Personal	X		07296						CH 3-20-06
J11DC8			314	Personal	X		07297		CH 3-20-06				
J11DC9			76	Excursion Personal	X		07298						
J11DF1	↓	↓	N/A	Blank	X		07299						
J11DF2	A	3-20-06	N/A	Blank	X		07300						
					CH 3-20-06								

Enter on line below the first Sample Number from Page One:

J11DFO

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

SIGN / PRINT NAMES / USE MILITARY TIME

Relinquished By/Sign	DATE / TIME	Received By/Sign	DATE / TIME
Carla Hughes / Carla Hughes	3-20-06 / 1625	Locked Cabinet 300 Area, 3746 Bldg., Rm 16	3-20-06 / 0625
Y. Jones	3-21-06 1420	T.R. Edmundson T.R. Edmundson	3-21-06 1420
T.R. Edmundson WCH T.R. Edmundson	3-21-06 1445	FED EX	
Fed EX			3/22/06 10:20

LABORATORY SECTION	Received By	Title	DATE / TIME
		PCSO	3/22/06 10:20

REVIEWED BY: _____ DATE: _____

PRINT/SIGN NAME

WCH-SH-202 (08/29/2005)

COPY

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: Carla Hughes	Company Contact: Denise A. Pitts and Henry W. Ruby	Telephone No.: 531-1229	Project Coordinator: Joan H. Kessner	Data Turnaround: 24 hrs.
Payroll #: 8C104	Sampling Location: 300 Area 333 Bldg.	SPECIAL INSTRUCTIONS All relevant COAs must be provided: R33300 J451	SAF No. RC-001	
Type of Sample: AIR - Asbestos	Wipe Sample Media: Ghost ☐ Yes ☐ No Other ____ 3-20-06	ANALYSIS METHOD (SPECIFIC): NIOSH 7400	Method of Shipment: FED EX	
Shipped To: DATAChem CINCINNATI			Bill of Lading/Air Bill No.: 8544 9435 1613	
POSSIBLE SAMPLE HAZARD/REMARKS: Be, Ld, Pb	MATRIX: A - AIR; WI - WIPE; X - OTHER	Preservation (i.e., cooling required, etc.)		
Special Handling and/or Storage: NA				

SAMPLE ANALYSIS

SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area ____ cm²	Comments	Asbestos Airborne	Lead Airborne	Beryllium Airborne	Beryllium Wipe	Mold	Lead Wipe	Cd Wipe	Cd Airborne
					No	No	No	No	No	No	No	No
J11DF0	A	3-20-06	73	Excursion Personal	X							
J11DD0			223	Personal	X							
J11DJ0			174	Personal	X							
J11DC8			314	Personal	X							
J11DC9			76	Excursion Personal	X							
J11DF1			N/A	Blank	X							
J11DF2	A	3-20-06	N/A	Blank	X							

CH 3-20-06

CH 3-20-06

CH 3-20-06

FIELD SAMPLE COPY

Enter on line below the first Sample Number from Page One:

J11DF0

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

SIGN / PRINT NAMES / USE MILITARY TIME

Relinquished By/Sign	DATE / TIME	Received By/Sign	DATE / TIME
Carla Hughes / Carla Hughes	3-20-06 / 1625	Locked Cabinet 300 Area, 3746 Bldg., Rm 16	3-20-06 / 0625
Y. Jones	3-21-06 1420	T.R. Edmundson T.R. Edmundson	3-21-06 1420
T.R. Edmundson WCH T.R. Edmundson	3-21-06 1445	FED EX	

LABORATORY SECTION	Received By	Title	DATE / TIME

REVIEWED BY: _____ DATE: _____

PRINT/SIGN NAME