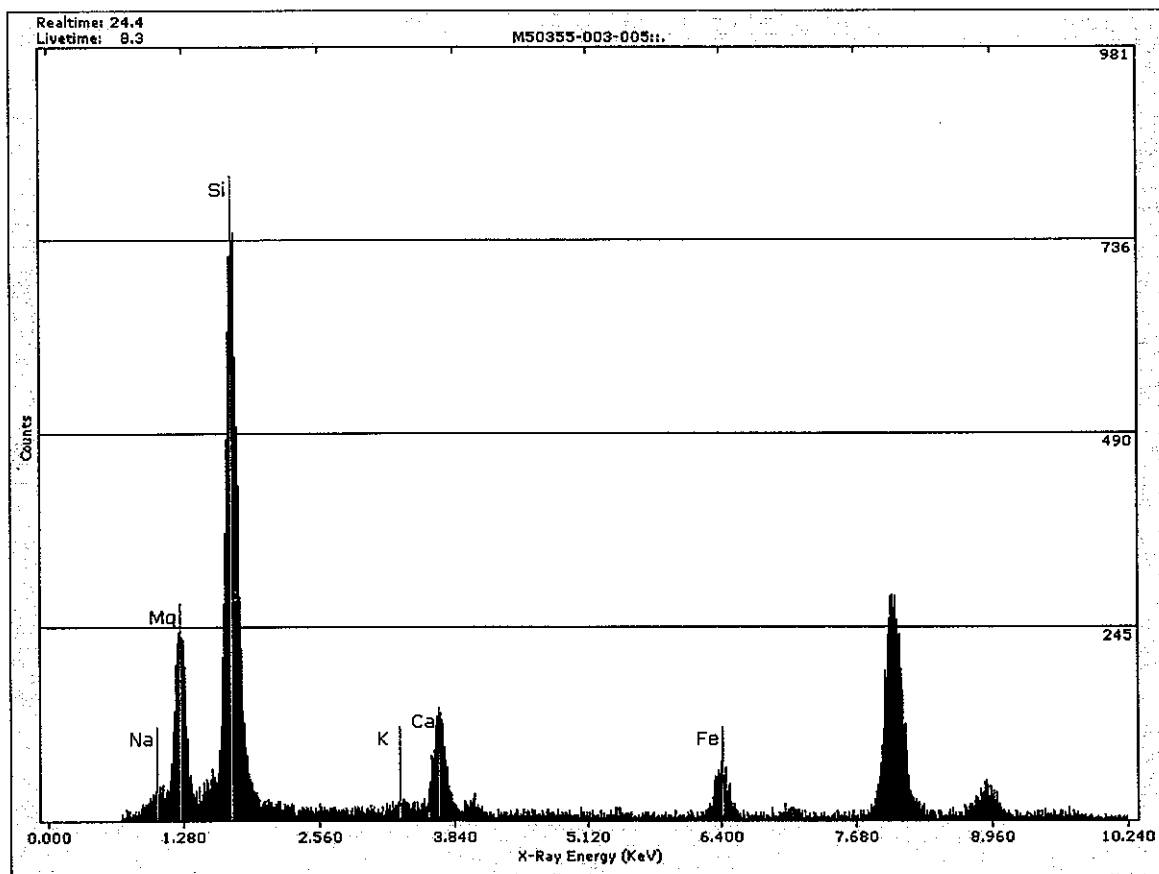
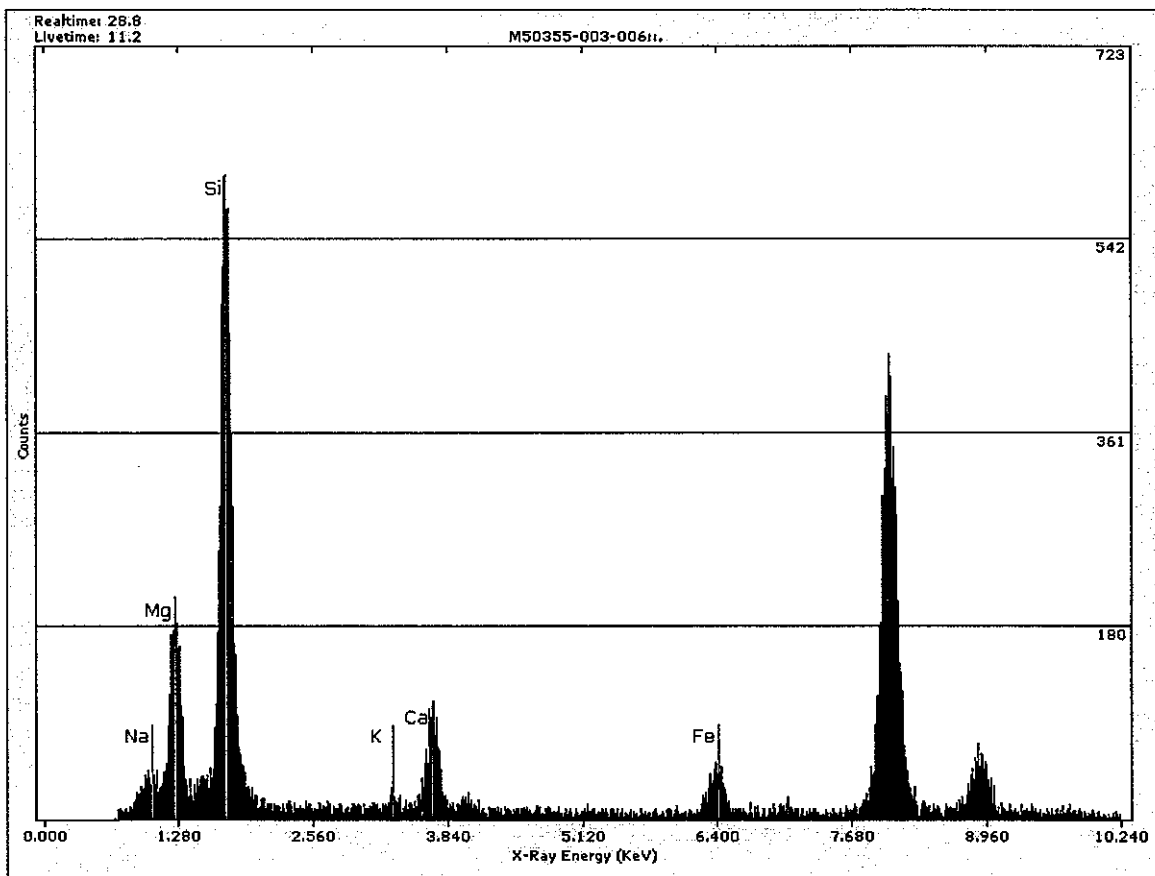
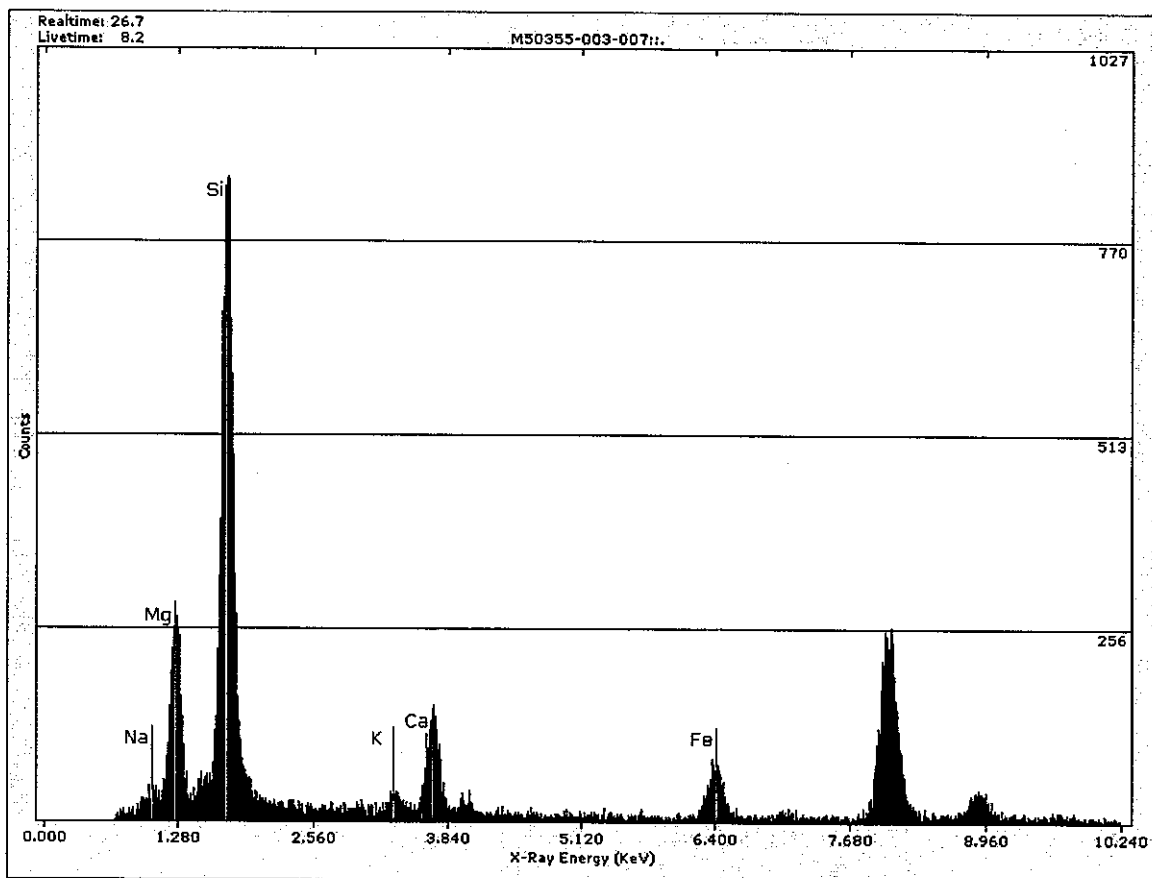
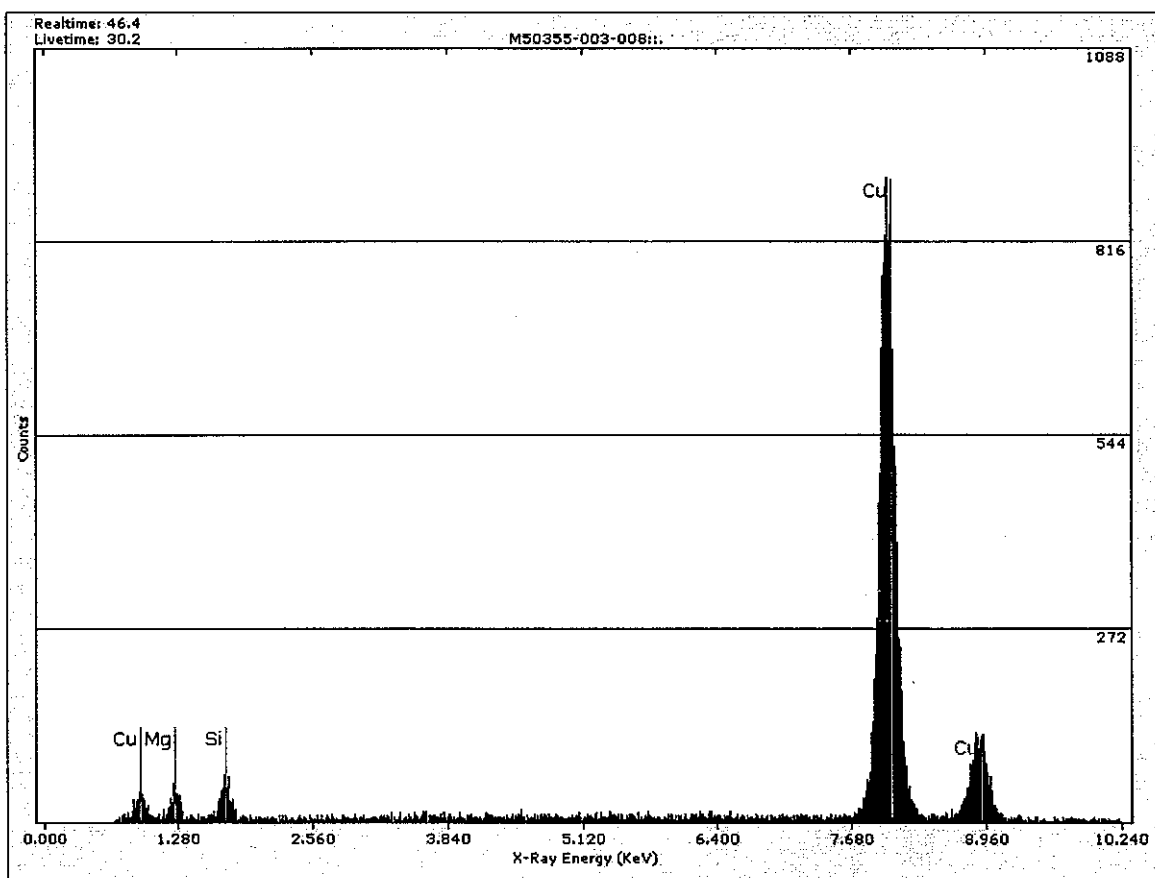


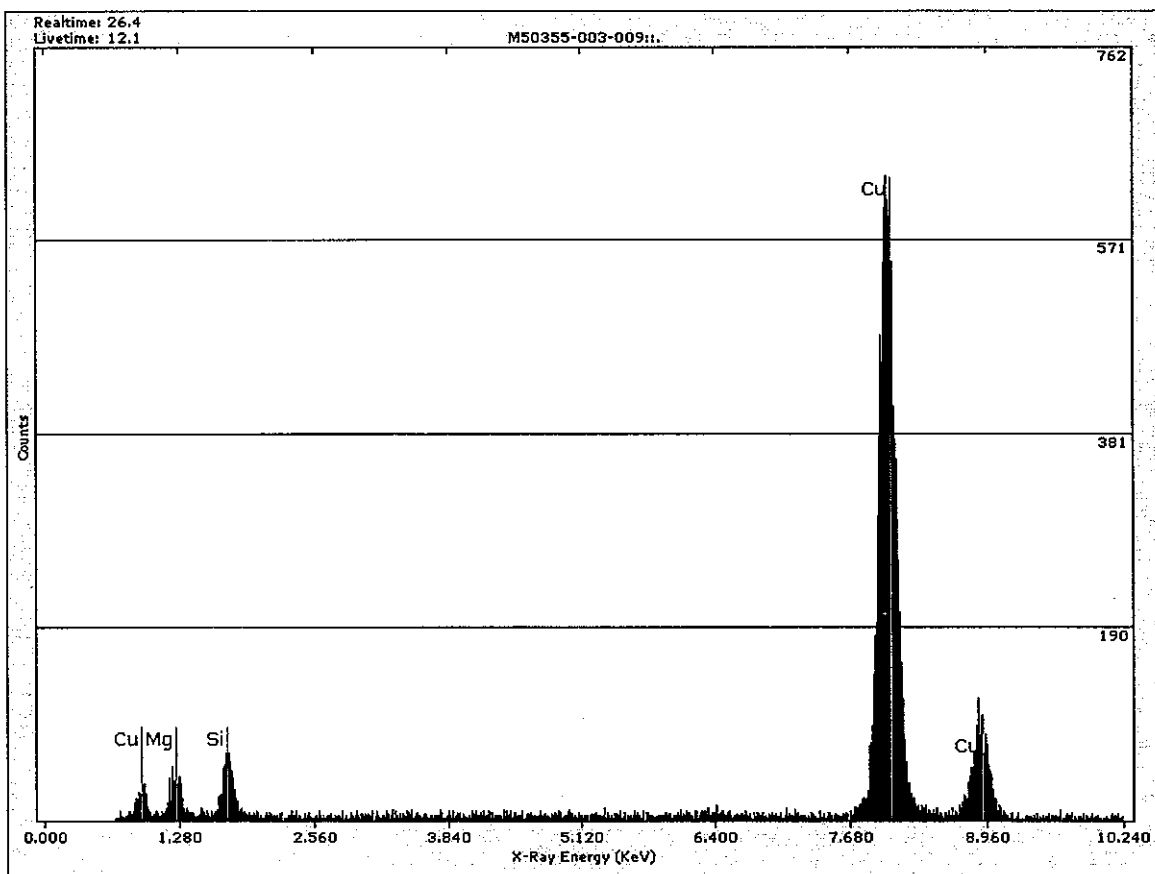
Appendix C - Part 2

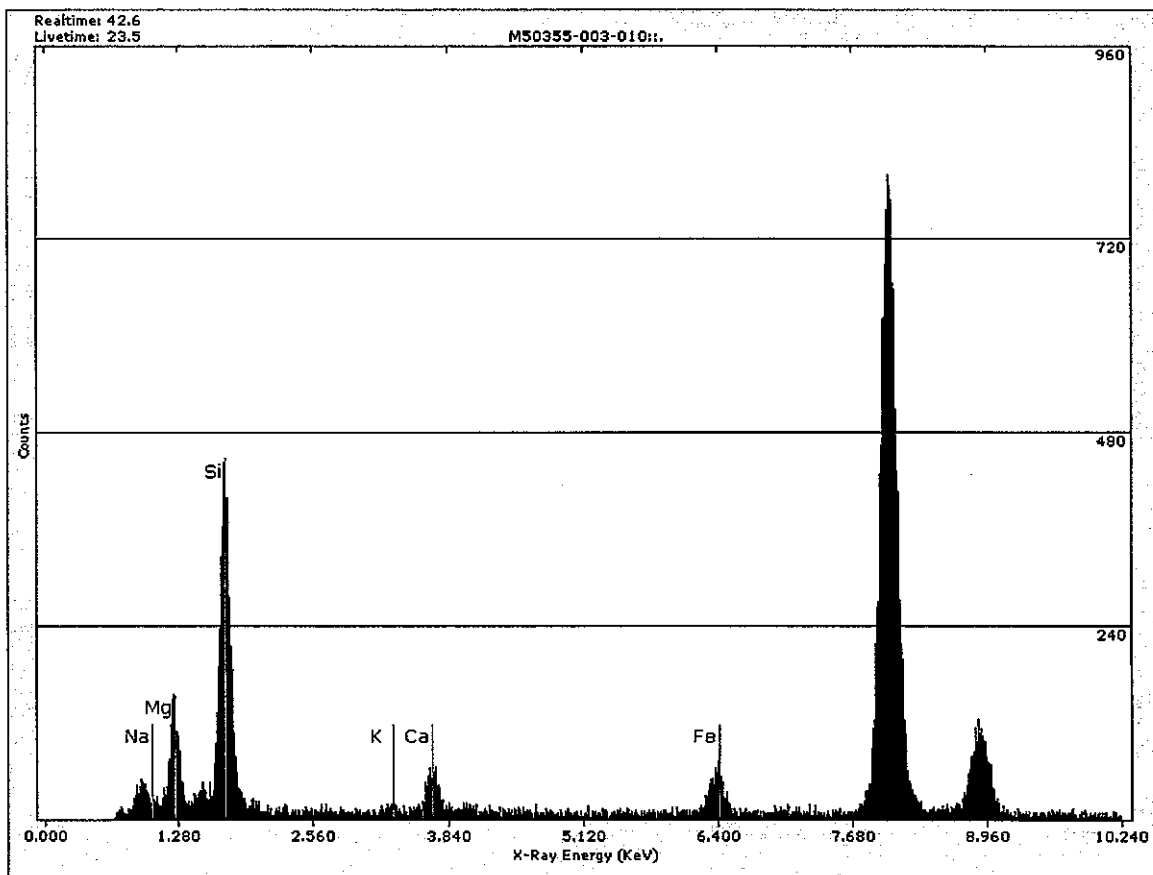


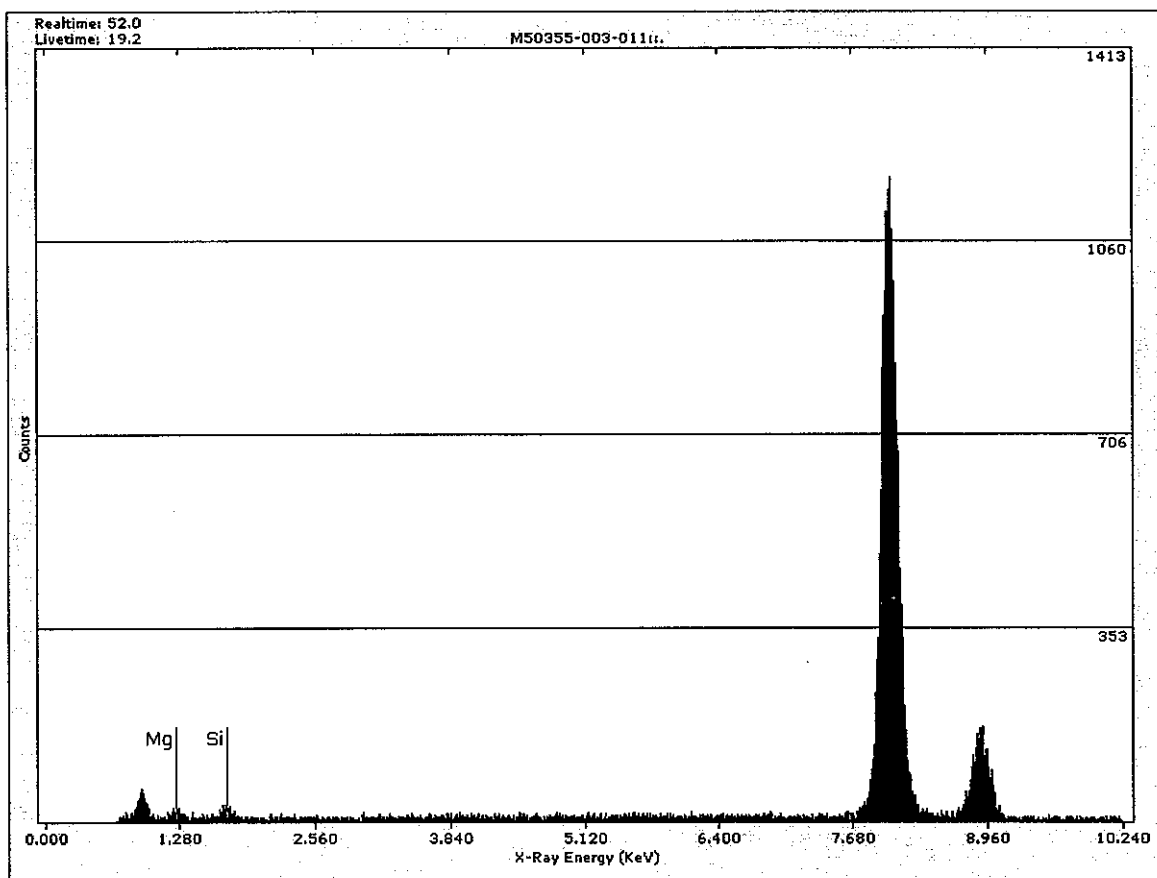


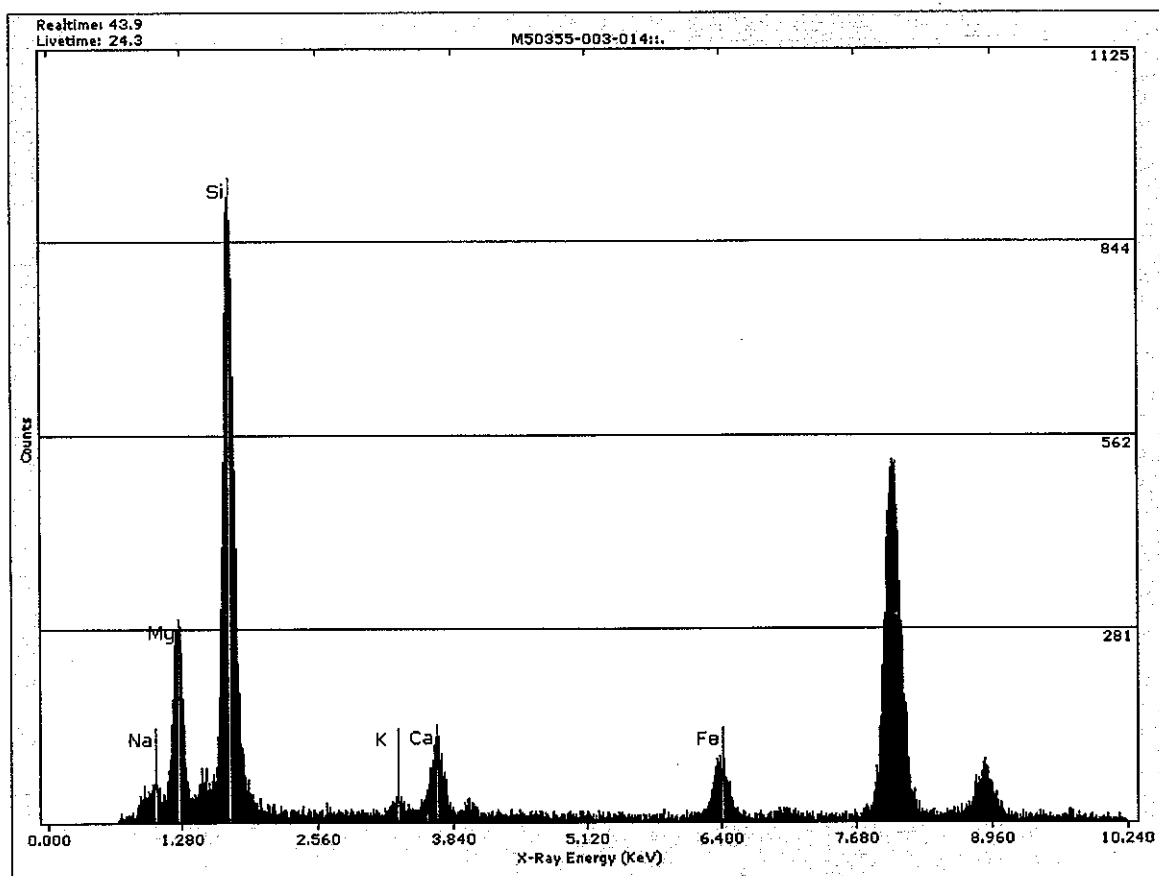












National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

Enter Site or Project Name Here:	
State/Federal Site or Project Identifier:	
Laboratory name:	MAS
Instrument:	JEOL 1200EX#3
Voltage (kV):	100
Magnification:	20 K
Grid opening area (mm ²):	0.0120
Scale: 1L =	1.000
Scale: 1D =	1.000
Filter Size (mm):	25.000
Filter Pore Size (um):	0.450
Method SOP (Revision No.):	5755.03
Grid Storage Location:	7728.000

Site/Project Identifier Code:	
0806F	
Client Sample Number:	D24194
Date received by lab:	12/28/09
Lab Job Number:	M50355
Lab Sample Number:	M50355-004
Chain of Custody Number:	91222JM-12/23/09-000

0806F

Number of grids prepared:	3
Prepared by:	ddmout
Preparation date:	12/29/09
Preparation Type:	Indirect
Primary filter area (mm ²):	385
Secondary Filter Area (mm ²):	1297
F-factor: [proposed value shown, cell formula can be over-written if necessary]	0.030
Filter Status:	Analyzed
Analyzed by:	A. Keeton
Analysis date:	01/04/10

Sample Type:	Field Sample
QC Sample Type:	Not QC
Media:	Dust
Air volume (L) or dust area (cm ²):	300

F-factor Input Parameters:

Indirect Prep, Not Ashed	
1	Fraction of primary filter used
100	Total resuspension volume (mL)
3	Volume applied to secondary filter (mL)
0.030	F-factor

Indirect Prep, Ashed	
	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)
	F-factor

COMMENTS

Location: P0001-BD01-04 Sub Location: AS-04; one serial dilution was prepared to put final volume of 3ml of the original resuspension onto the secondary filter

☐ Check box if this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

CLIENT SAMPLE ID: D24194
LAB SAMPLE ID: M50355-004Media: Dust
Sample Prep: IndirectSample Type: Field Sample
QC Sample Type: Not QC
Sample Status: Analyzed
Analysis Date: 3/4/2010Data Entry by: ddmcourt
Data Entry Date: 1/6/2010QA by: K Simpson
QA Date: 1/7/2009ERROR CHECK
OK - No errors foundERROR
CODE

ABBREVIATED NOTES:

(a) Enter dimensions either in absolute units (um) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

(b) See Annex D of ISO10312 for identification codes.

(c) Valid Mineral Types:

AC actinolite

AM amosite

AN anthophyllite

CH chrysotile

CR crocidolite

TR tremolite

LA Libby amphibole

OA other amphibole

NAM non-asbestos material

Amosite Solid solution series: Amosite, cummingtonite-grunerite

Trem-Act Solid solution series: Tremolite-Actinolite

OM other mineral type (specify in "other mineral description" field)

OM Description Standard Selections:

Sepiolite

Wollastonite

Winchite

Richterite

Eriolite

(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.

ERROR CODES:

A Primary/Total entry is not sequential

B Mineral class type is not valid

C Structure dimensions are missing or are not valid

D total # structures with complex do not match information provided in s

E # structures > 5um w/in complex do not match information provided in s

F structure type with complex does not match information provided in s

G Identified as non-countable structure (total = 0) without comment

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM
ANALYTICAL REPORT

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	D24194	Lab Sample Number	M50355-004	Effective filter area (mm ²)	1297
Media	Dust	Preparation	Indirect	F-factor	3.00E-02
Sample Type	Field Sample	Sample Status	Analyzed	Grid opening area (mm ²)	0.0120
Dust Collection Area (300)		Analysis Date	1/4/2010	# GOs counted	10
QA Sample Type	Not QC	Method SOP	5755.03	Sensitivity (1/cm2)	1.2E+03
Stopping Rule(s): GO = 10, Structures = 100, Sensitivity = 1.00E+03					

Desired Confidence Interval (%): 95

Number of Structures with Fatal Data Entry Errors 0
(Structures with fatal errors are excluded from calculations below)

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm ²)	Dust Loading (c) (s/cm ²)	95% Confidence Interval	
Total TEM-EPASM Structures					Binning Rule Description:
Total Asbestos	4	3.3E+01	4.8E+03	1.3E+03 - 1.2E+04	Apply to fibers (F) only: $L \geq 0.5\mu\text{m}$, $AR \geq 3$ No restrictions for other structure types.
Total Chrysotile (CH)	2	1.7E+01	2.4E+03	2.9E+02 - 8.7E+03	
Total Amphibole	2	1.7E+01	2.4E+03	2.9E+02 - 8.7E+03	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Libby amphibole (LA)	2	1.7E+01	2.4E+03	2.9E+02 - 8.7E+03	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
PCM Equivalent Structures (PCME)					Binning Rule Description:
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	Apply to all structures where Total column > 0: $L > 5\mu\text{m}$, $W \geq 0.25\mu\text{m}$, $AR \geq 3$
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
AHERA (d) Structures					Binning Rule Description:
Total Asbestos	4	3.3E+01	4.8E+03	1.3E+03 - 1.2E+04	Apply to fibers (F) only: $L \geq 0.5\mu\text{m}$, $AR \geq 5$ No restrictions for other structure types. Most "secondary" structures (structures that are part of a primary complex structure) are excluded.
Total Chrysotile (CH)	2	1.7E+01	2.4E+03	2.9E+02 - 8.7E+03	
Total Amphibole	2	1.7E+01	2.4E+03	2.9E+02 - 8.7E+03	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Libby amphibole (LA)	2	1.7E+01	2.4E+03	2.9E+02 - 8.7E+03	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Berman Crump (2003) Structures					Binning Rule Description:
Total Asbestos	1	8.3E+00	1.2E+03	3.0E+01 - 6.7E+03	Apply to all structures where Total column > 0: $L > 10\mu\text{m}$, $W \leq 0.4\mu\text{m}$
Total Chrysotile (CH)	1	8.3E+00	1.2E+03	3.0E+01 - 6.7E+03	
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 4.4E+03	

(a) Based on countable structures only

(b) Loading on Filter (s/mm²) = N structures / (GOs Counted * GO Area)

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000)

Dust Loading (s/cm²) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area)

(d) Yamate results are expected to be similar to AHERA, but use of AHERA for Yamate may be biased low due to the exclusion of structures <0.5um.

Enter Site or Project Name Here:		R01-091222JM-12/23/09-0001		Site/Project Identifier Code: 0806F	
State/Federal Site or Project Identifier:		Case: 0806F			

Laboratory name:	MAS	Client Sample Number:	D24194
Instrument:	JEOL 1200EX	Date received by lab:	12/28/09
Voltage (kV):	100	Lab Job Number:	M50355
Magnification:	20 K	Lab Sample Number:	M50355-004
Grid opening area (mm ²):	0.012	Chain of Custody Number:	R01-091222JM-12/23/09-0001
Scale: 1L =	1.000	Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)	field sample
Scale: 1D =	1.000	QC Sample Type: (Not QC, LB=Lab Blank, RS=Recount Same, RD, Recount Diff., RP=Reprep., VA=Verified Analysis, IL=Interlab)	not qc
Filter Size (mm):	25.000	Media: (Air, Dust, N/A)	dust
Filter Pore Size (um):	0.450	Air volume (L) or dust area (cm ²):	300
Method SOP (Revision No.):	5755.030		
Grid Storage Location:	7728.000		

Number of grids prepared:	3
Prepared by:	ddmont
Preparation date:	12/29/09
Preparation Type: (D=Direct, I=Indirect, IA=Indirect, ashed)	indirect
Primary Filter Area (mm ²):	385
Secondary Filter Area (mm ²):	1297
F- factor:	
Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)	analyzed
Analyzed by:	11/4/2010
Analysis date:	

Indirect Prep, Not Ashed	Indirect Prep, Ashed
1	Fraction of primary filter used
100	Total resuspension volume (mL)
43	Volume applied to secondary filter (mL)
	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)

COMMENTS

Location: P0001-BD01-04 Sub Location: AS-04

If sample was analyzed using more than one TEM instrument, enter TEM instrument details below.

Instrument #2	Instrument #3
Instrument:	
Voltage (kV):	
Magnification:	

If sample was analyzed by more than one analyst or across multiple analysis dates, enter analysis details below.

Analyst #2	Analyst #3
Analyzed by:	
Analysis date:	

IMPORTANT NOTE: If this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates, be sure to complete the column labeled "Multiple" when entering raw structure results for each grid opening.

STRUCTURE INFORMATION

Client Sample No.:	D24194
Lab Sample No.:	M50355-004

Sample Type	dust
QC Sample Type	not QA

Preparation Type	indirect
Analysis Date	4/10

[illegible]

(a) Enter dimensions either in absolute units (um) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

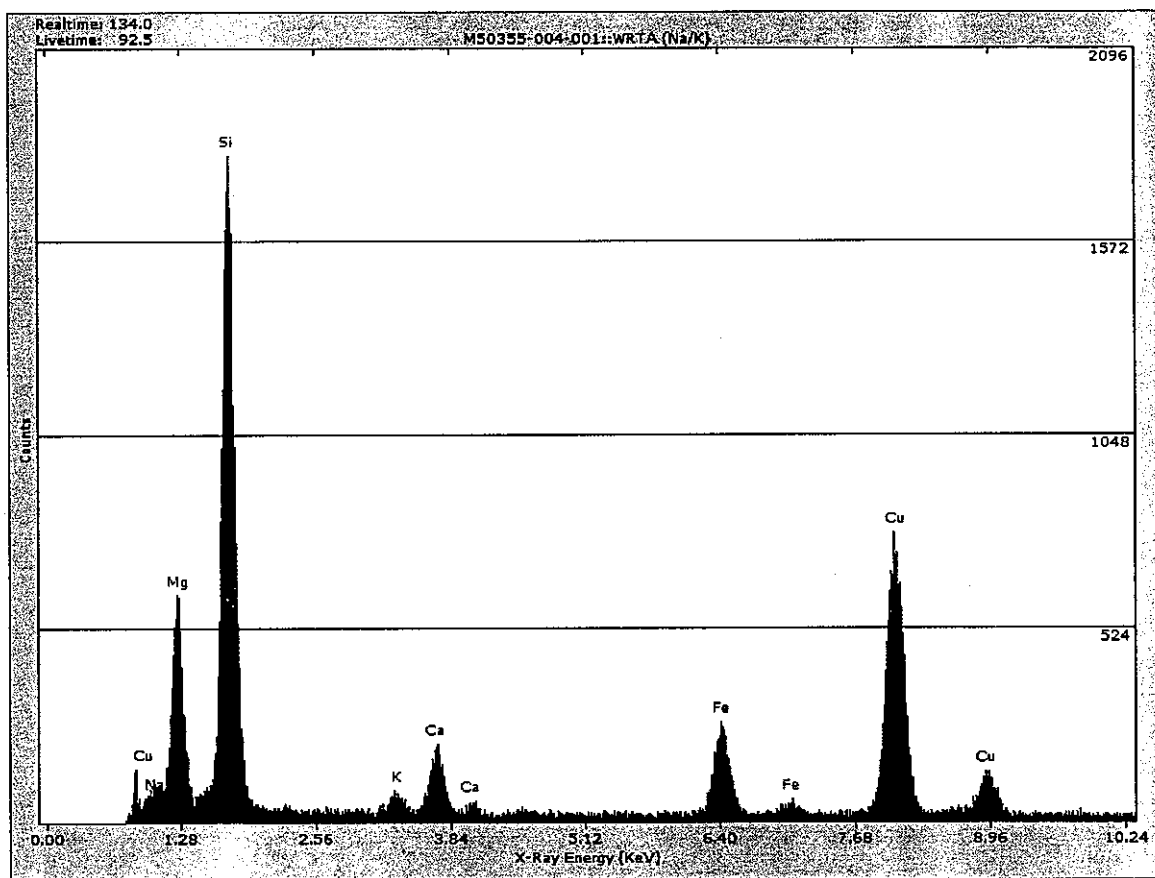
(a) Enter dimensions either in absolute units (mm) or in

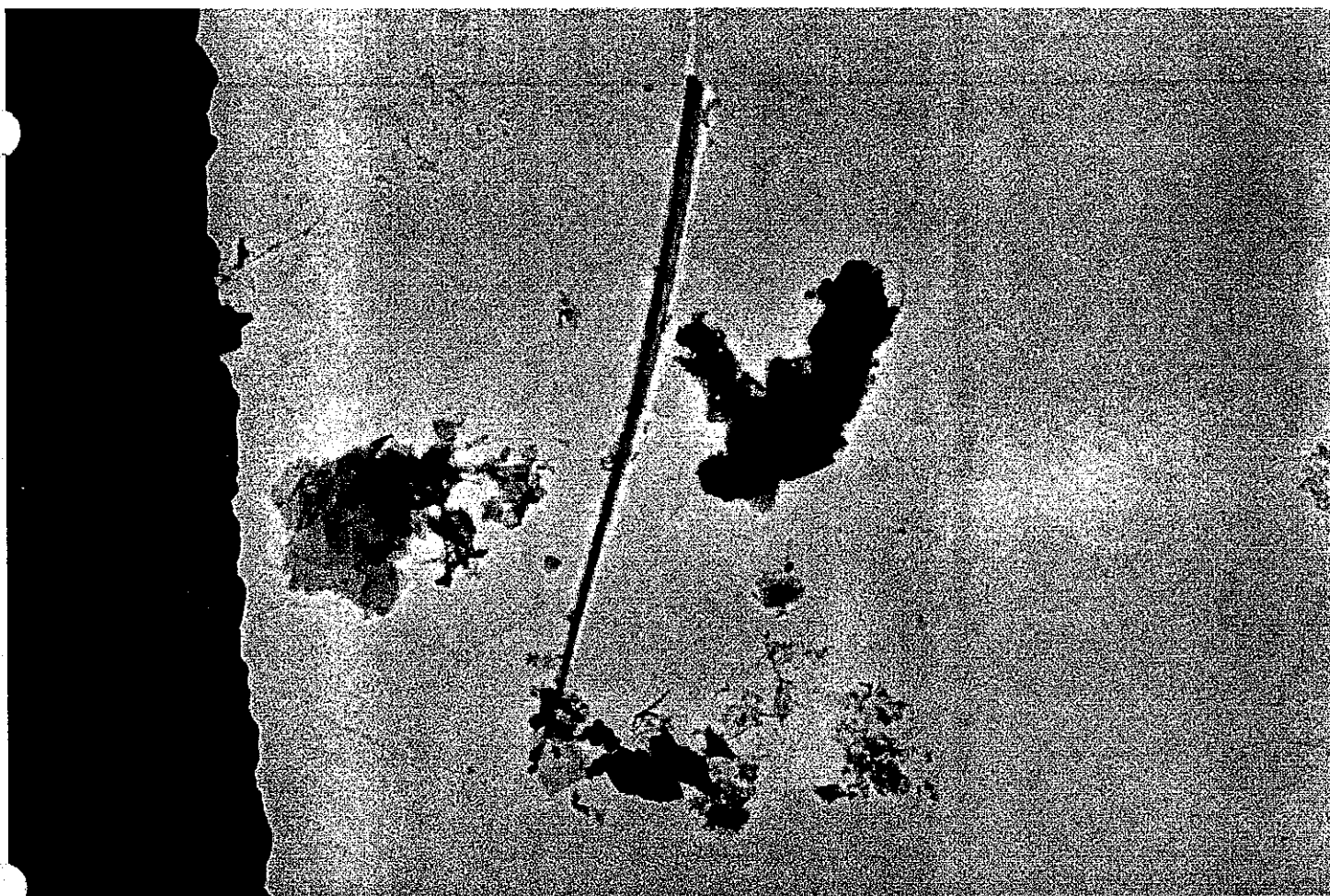
Valid Mineral Types:

AC	actinolite
AM	amosite
AN	anthophyllite

OM	other mineral type	(specify in "other mineral description" field)
Amosite	Solid solution series: Amosite, cummingtonite-grunerite	
Trem-Act	Solid solution series: Tremolite-Actinolite	

(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.

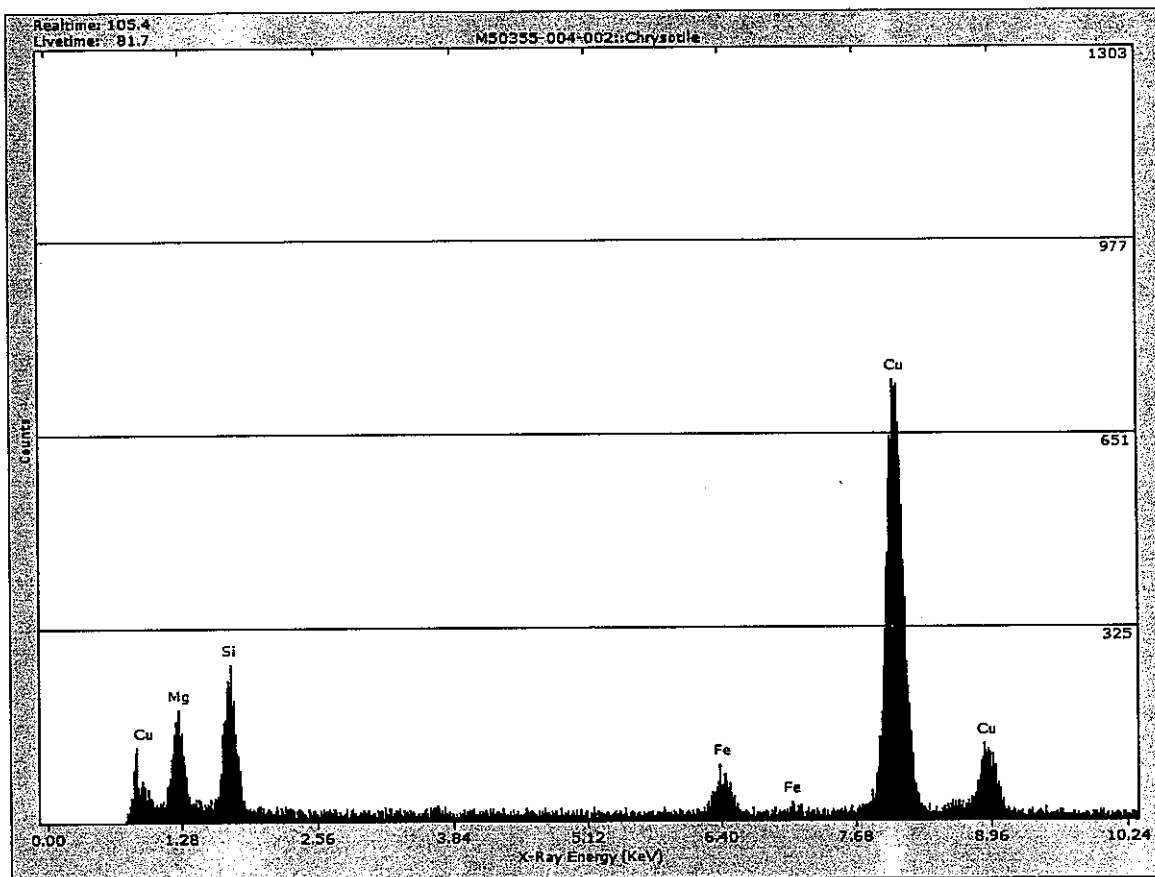


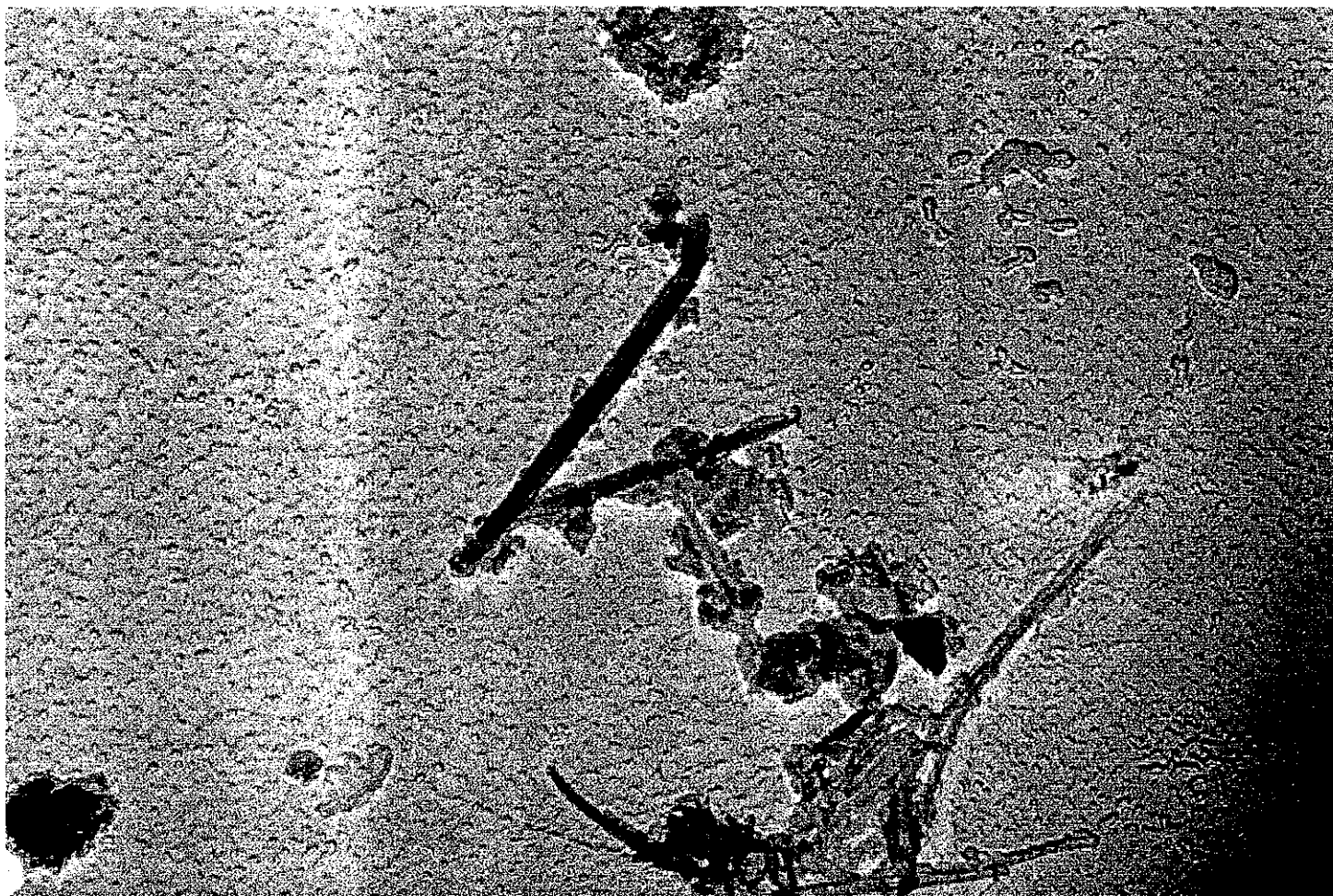


32474

M50355-004-001 WRTA Fiber x4K

1.0 microns

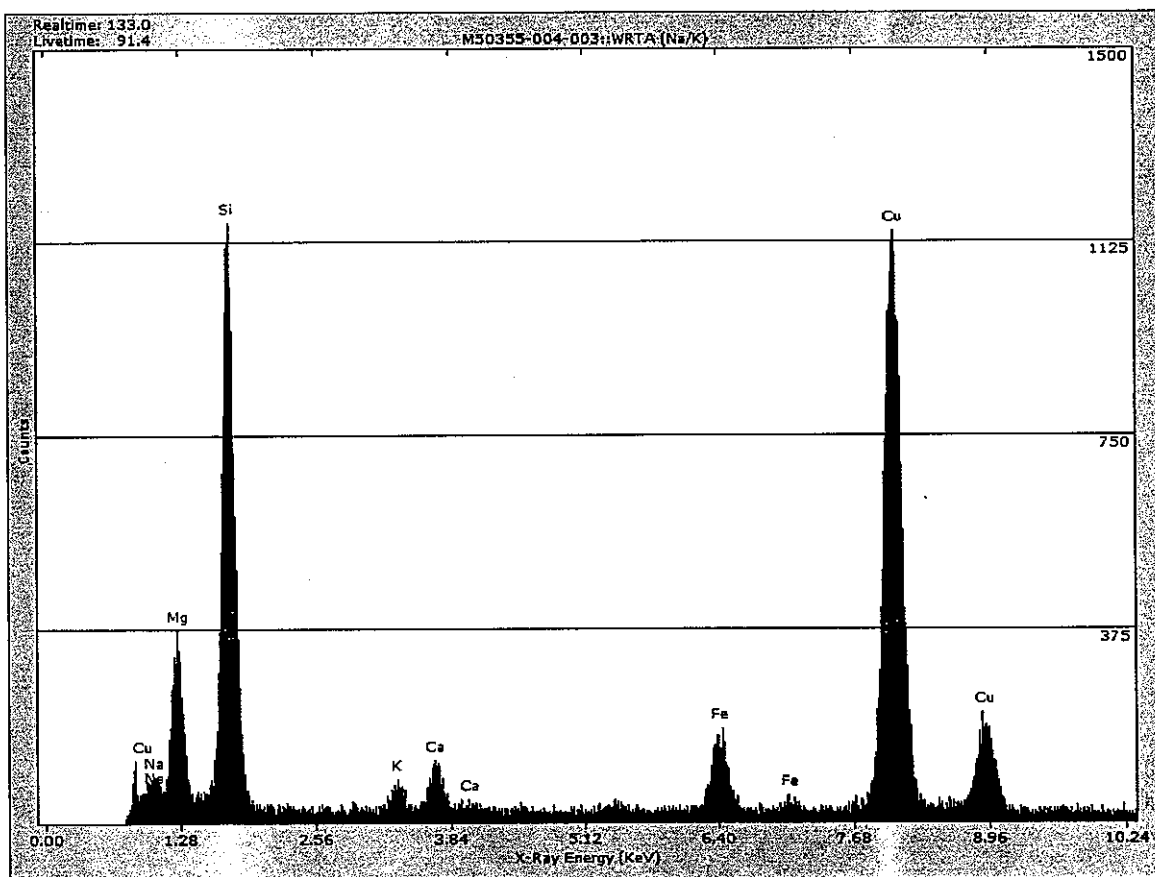


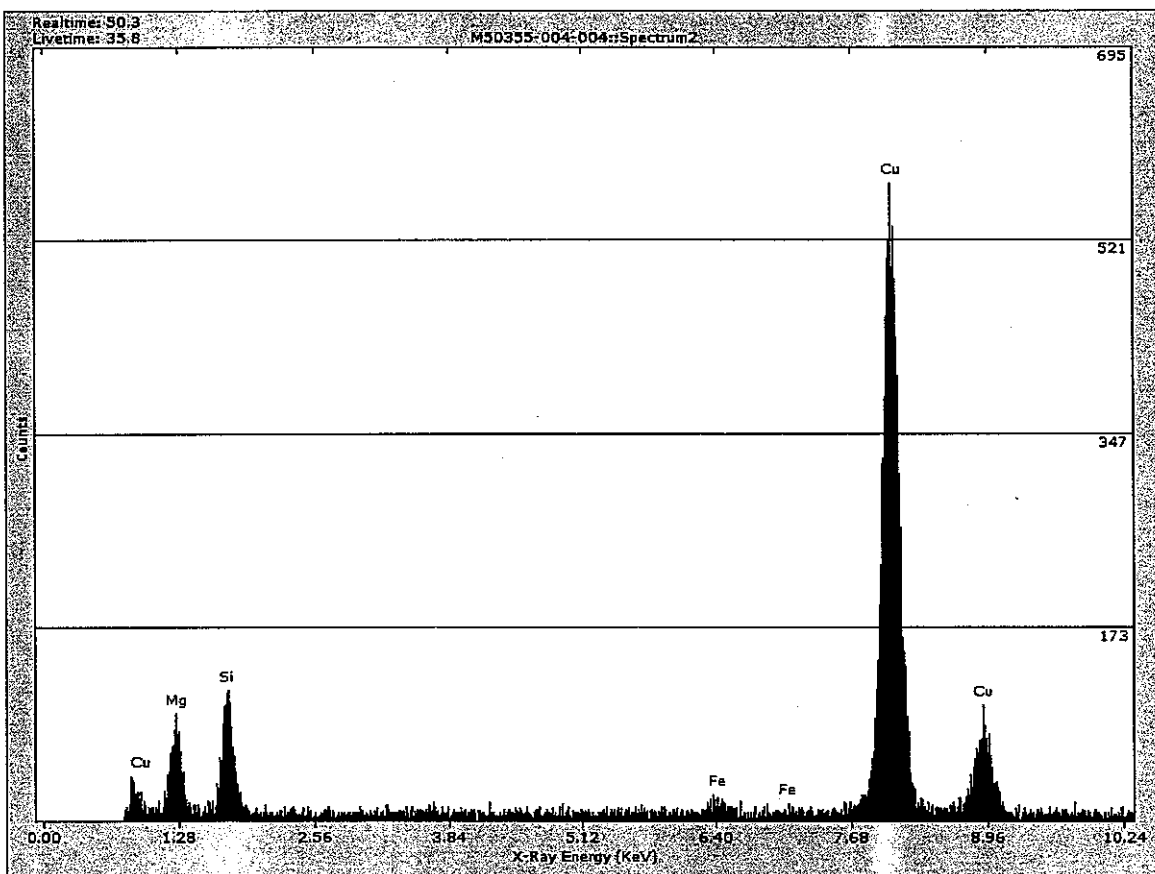


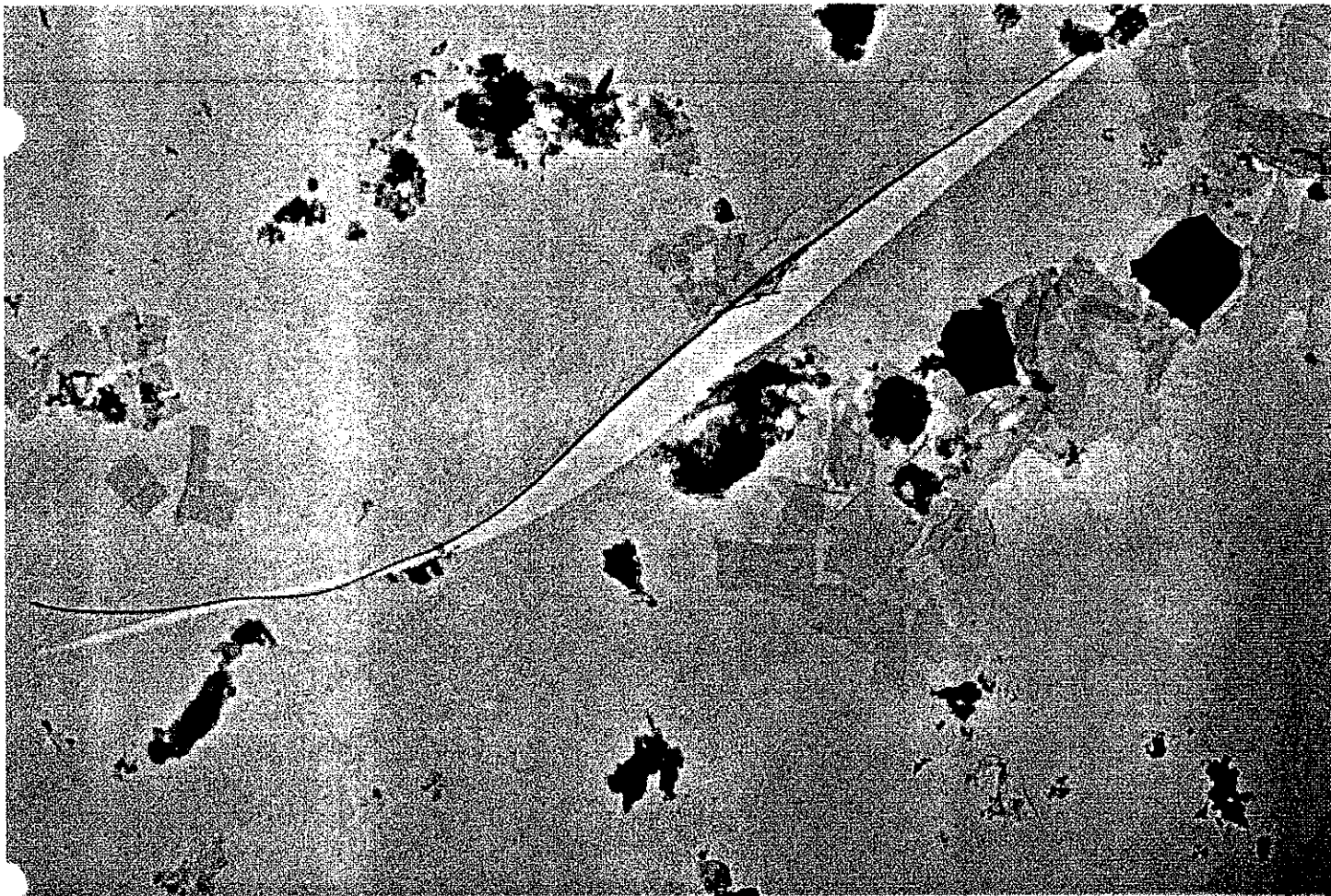
32476

M50355-004-002 Chrysotile x25K

0.5 microns







32479

M50355-004-004 Chrysotile Fiber x2.5k

5.0 microns

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

Enter Site or Project Name Here:

State/Federal Site or Project Identifier:

Laboratory name: MAS

Instrument: JEOL 1200EX#4

Voltage (kV): 100

Magnification: 20 K

Grid opening area (mm²): 0.0112

Scale: 1L = 1,000

Scale: 1D = 1,000

Filter Size (mm): 25,000

Filter Pore Size (um): 0.450

Method SOP (Revision No.): 5755.03

Grid Storage Location: 7728.000

R01-091222JM

0806F

Client Sample Number: D24195

Date received by lab: 12/28/09

Lab Job Number: M50355

Lab Sample Number: M50355-005

Chain of Custody Number: 91222JM-12/23/09-000

Sample Type: Field Sample

QC Sample Type: Not QC

Media: Dust

Air volume (L) or dust area (cm²): 300

0806F

Number of grids prepared: 3

Prepared by: ddmount

Preparation date: 12/29/09

Preparation Type: Indirect

Primary filter area (mm²): 385

Secondary Filter Area (mm²): 1297

F-factor: [proposed value shown, cell formula can be over-written if necessary] 0.500

Filter Status: Analyzed

Analyzed by: M.Motamedi

Analysis date: 01/04/10

F-factor Input Parameters:

Indirect Prep, Not Ashed

1	Fraction of primary filter used
100	Total resuspension volume (mL)
50	Volume applied to secondary filter (mL)
0.500	F-factor

Indirect Prep, Ashed

	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)
	F-factor

COMMENTS

Location: P0001-BD01-05 Sub Location: AS-05

☐ Check box if this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

CLIENT SAMPLE ID: D24195
LAB SAMPLE ID: M50355-C

Data Entry by:	ddmount
Data Entry Date:	1/6/2010

Media	Dust
Sample Prep	Indirect

QA by:	K. Simpson
QA Date:	1/7/2010

Sample Type	Field Sample
QC Sample Type	Not QC
Sample Status	Analyzed
Analysis Date	1/4/2010

ERROR CHECK	OK - No errors found
-------------	----------------------

[illegible]

ABBREVIATED NOTES:

(a) Enter dimensions either in absolute units (um) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

(b) See Annex D of ISO10312 for identification codes.

(c) Valid Mineral Types:

AC actinolite

AM amosite

Frequency	IN
average	IN

CH	anhydrous
CH	anhydrous

CH
CH
CH

CP
CP
CP

14. **Remolite**

Libby ampibole A7

OA other amphibole

NAM non-asbestos material

Amosite Solid solution series: Amosite, cummingtonite-grunerite

Trem-Act Solid solution series: Tremolite-Actinolite

OM other mineral type (specify in "other mineral description" field)

OM Description Standard Selections:

Seplalife

Wollastonite

Winchite

Richterite

Enionita

(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.

ERROR CODES:

A Primary/Total entry is not sequential

B Mineral class type is not valid

C Structural dimensions are missing or are not valid

total # structures w/in complex do not match information provided in s

```
# structures > sum(wm) #  
# peptides containing at least one yielding 100% similarity  
3 111
```

```
E # structures >= 3 will coalesce to match 11 and 11 again, provided it
E # structure type with complex does not match information provided in 3
```

C identified as non-convertible structure (total = 2) without comment

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM
ANALYTICAL REPORT

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	D24195	Lab Sample Number	M50355-005	Effective filter area (mm ²)	1297
Media	Dust	Preparation	Indirect	F-factor	5.00E-01
Sample Type	Field Sample	Sample Status	Analyzed	Grid opening area (mm ²)	0.0112
Dust Collection Area (300	Analysis Date	1/4/2010	# GOs counted	4
QA Sample Type	Not QC	Method SOP	5755.03	Sensitivity (1/cm2)	1.9E+02
Stopping Rule(s): GO = 10, Structures = 100, Sensitivity = 1.00E+03					

Desired Confidence Interval (%): 95

Number of Structures with Fatal Data Entry Errors 0
(Structures with fatal errors are excluded from calculations below)

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm ²)	Dust Loading (c) (s/cm ²)	95% Confidence Interval	
Total TEM-EPASM Structures					Binning Rule Description:
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	Apply to fibers (F) only: $L \geq 0.5\mu\text{m}$, $AR \geq 3$ No restrictions for other structure types.
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
PCM Equivalent Structures (PCME)					Binning Rule Description:
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	Apply to all structures where Total column > 0: $L > 5\mu\text{m}$, $W \geq 0.25\mu\text{m}$, $AR \geq 3$
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
AHERA (d) Structures					Binning Rule Description:
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	Apply to fibers (F) only: $L \geq 0.5\mu\text{m}$, $AR \geq 5$ No restrictions for other structure types. Most "secondary" structures (structures that are part of a primary complex structure) are excluded.
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Berman Crump (2003) Structures					Binning Rule Description:
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	Apply to all structures where Total column > 0: $L \geq 10\mu\text{m}$, $W \leq 0.4\mu\text{m}$
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 7.1E+02	

(a) Based on countable structures only

(b) Loading on Filter (s/mm²) = N structures / (GOs Counted * GO Area)(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000)
Dust Loading (s/cm²) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area)

(d) Yamate results are expected to be similar to AHERA, but use of AHERA for Yamate may be biased low due to the exclusion of structures <0.5um.

Enter Site or Project Name Here:

State/Federal Site or Project Identifier:

R01-091222-JM-12/23/09-0001

Case: 0806F

Site/Project Identifier Code: 0806F

F-factor Input Parameters:

Laboratory name: MAS

Instrument: JEOL 1200EX

Voltage (kV): 100

Magnification: 20 K

Grid opening area (mm²): 0.0112

Scale: 1L = 1.000

Scale: 1D = 1.000

Filter Size (mm): 25.000

Filter Pore Size (um): 0.450

Method SOP (Revision No.): 5755.030

Grid Storage Location: 7728.000

Client Sample Number: D24195

Date received by lab: 12/28/09

Lab Job Number: M50355

Lab Sample Number: M50355-005

Chain of Custody Number: R01-091222-JM-12/23/09-0001

Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)

QC Sample Type: (Not QC, LB=Lab Blank, RS=Recount Same, RD, Recount Diff., RP=Reprep., VA=Verified Analysis, IL=Interlab)

Media: (Air, Dust, N/A)

Air volume (L) or dust area (cm²): 300

Number of grids prepared: 3

Prepared by: ddumont

Preparation date: 12/29/09

Preparation Type: (D=Direct, I=Indirect, IA=Indirect, ashed)

Primary Filter Area (mm²): 385

Secondary Filter Area (mm²): 1297

F-factor:

Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)

Analyzed by: M. M. M.

Analysis date: 11/4/10

Indirect Prep, Not Ashed

1	Fraction of primary filter used
100	Total resuspension volume (mL)
50	Volume applied to secondary filter (mL)

Indirect Prep, Ashed

	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)

COMMENTS

Location: P0001-BD01-05 Sub Location: AS-05

If sample was analyzed using more than one TEM instrument, enter TEM instrument details below.

Instrument #2	Instrument #3
Instrument:	
Voltage (KV):	
Magnification:	

If sample was analyzed by more than one analyst or across multiple analysis dates, enter analysis details below.

Analyst #2	Analyst #3
Analyzed by:	
Analysis date:	

IMPORTANT NOTE: If this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates, be sure to complete the column labeled "Multiple" when entering raw structure results for each grid opening.

Preparation Type	indirect
Analysis Date	1/4/10

other mineral type (specify in "other mineral description" field)
Solid solution series: Amosite, cummingtonite-grunerite
Solid solution series: Tremolite-Actinolite

(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

Enter Site or Project Name Here:

State/Federal Site or Project Identifier:

R01-091222JM

0806F

Site/Project Identifier Code:

0806F

F-factor Input Parameters:

Indirect Prep, Not Ashed

1	Fraction of primary filter used
100	Total resuspension volume (mL)
50	Volume applied to secondary filter (mL)
0.500	F-factor

Indirect Prep, Ashed

	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)
	F-factor

Number of grids prepared: 3

Prepared by: ddmount

Preparation date: 12/29/09

Preparation Type: Indirect

Primary filter area (mm²): 385

Secondary Filter Area (mm²): 1297

F-factor: [proposed value shown, cell formula can be over-written if necessary]

Filter Status: Analyzed

Analyzed by: M.Motamedi

Analysis date: 01/04/10

Client Sample Number: D24196

Date received by lab: 12/28/09

Lab Job Number: M50355

Lab Sample Number: M50355-006

Chain of Custody Number: 91222JM-12/23/09-000

Sample Type: Field Sample

QC Sample Type: Not QC

Media: Dust

Air volume (L) or dust area (cm²): 300

Laboratory name: MAS

Instrument: JEOL 1200EX#4

Voltage (kV): 100

Magnification: 20 K

Grid opening area (mm²): 0.0116

Scale: 1L = 1,000

Scale: 1D = 1,000

Filter Size (mm): 25,000

Filter Pore Size (um): 0.450

Method SOP (Revision No.): 5755.03

Grid Storage Location: 7728.000

COMMENTS

Location: P0001-BD01-06 Sub Location: AS-06

☐ Check box if this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

CLIENT SAMPLE ID: D24196
LAB SAMPLE ID: M50355-006

Media	Dust
Sample Prep	Indirect

Field Sample	Sample Type
Not QC	QC Sample Type
Analyzed	Sample Status
1/4/2010	Analysis Date

Data Entry by:	ddmunt	QA by:	K.Simpson
Data Entry Date:	1/6/2010	QA Date:	1/7/2010

QA by:	K.Simpson
QA Date:	17/2010

ERROR CHECK
OK - No errors found

[illegible]

ABBREVIATED NOTES:

(a) Enter dimensions either in absolute units (um) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

(b) See Annex D of ISO10312 for identification codes.

(c) Valid Mineral Types:

AC actinolite

AM amosite

AN anthophyllite

CH chrysotile

CR crocidolite

TR tremolite

LA Libby amphibio

OA other amphibians

NAM non-asbestos

Amosite Solid solution :

Trem-Act Solid solution

OM other mineral (e.g., limestone)

OM Descrip

Sepia

World

Winch

Richte

(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.

ERROR CODES:

A Primary/Total entry is not sequential

B Mineral class type is not valid

C Structure dimensions are missing or are not valid

D total # structures with complex do not match information provided in €

structures > 5um w/in complex do not match information provided in

F structure type w/in complex does not match information provided in s:

G (identified as non-countable structure (total = 0) without comment

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM
ANALYTICAL REPORT

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	D24196	Lab Sample Number	M50355-006	Effective filter area (mm ²)	1297
Media	Dust	Preparation	Indirect	F-factor	5.00E-01
Sample Type	Field Sample	Sample Status	Analyzed	Grid opening area (mm ²)	0.0116
Dust Collection Area (300		Analysis Date	1/4/2010	# GOs counted	4
QA Sample Type	Not QC	Method SOP	5755.03	Sensitivity (1/cm2)	1.9E+02
Stopping Rule(s): GO = 10, Structures = 100, Sensitivity = 1.00E+03					

Desired Confidence Interval (%): 95

Number of Structures with Fatal Data Entry Errors 0
(Structures with fatal errors are excluded from calculations below)

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm ²)	Dust Loading (c) (s/cm2)	95% Confidence Interval	
Total TEM-EPASM Structures					Binning Rule Description:
Total Asbestos	2	4.3E+01	3.7E+02	4.5E+01 - 1.3E+03	Apply to fibers (F) only: $L \geq 0.5\mu\text{m}$, $AR \geq 3$ No restrictions for other structure types.
Total Chrysotile (CH)	1	2.2E+01	1.9E+02	4.7E+00 - 1.0E+03	
Total Amphibole	1	2.2E+01	1.9E+02	4.7E+00 - 1.0E+03	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Libby amphibole (LA)	1	2.2E+01	1.9E+02	4.7E+00 - 1.0E+03	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
PCM Equivalent Structures (PCME)					Binning Rule Description:
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	Apply to all structures where Total column > 0: $L > 5\mu\text{m}$, $W \geq 0.25\mu\text{m}$, $AR \geq 3$
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
AHERA (d) Structures					Binning Rule Description:
Total Asbestos	2	4.3E+01	3.7E+02	4.5E+01 - 1.3E+03	Apply to fibers (F) only: $L \geq 0.5\mu\text{m}$, $AR \geq 5$ No restrictions for other structure types. Most "secondary" structures (structures that are part of a primary complex structure) are excluded.
Total Chrysotile (CH)	1	2.2E+01	1.9E+02	4.7E+00 - 1.0E+03	
Total Amphibole	1	2.2E+01	1.9E+02	4.7E+00 - 1.0E+03	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Libby amphibole (LA)	1	2.2E+01	1.9E+02	4.7E+00 - 1.0E+03	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Berman Crump (2003) Structures					Binning Rule Description:
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	Apply to all structures where Total column > 0: $L > 10\mu\text{m}$, $W \leq 0.4\mu\text{m}$
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 6.9E+02	

(a) Based on countable structures only

(b) Loading on Filter (s/mm²) = N structures / (GOs Counted * GO Area)

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000)

Dust Loading (s/cm2) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area)

(d) Yamate results are expected to be similar to AHERA, but use of AHERA for Yamate may be biased low due to the exclusion of structures <0.5um.

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM
SAMPLE/ANALYSIS INFORMATION

Enter Site or Project Name Here:		R01-091222JM-12/23/09-0001		Site/Project Identifier Code: 0806F	
State/Federal Site or Project Identifier:					
Case: 0806F					

Laboratory name:	MAS	Client Sample Number:	D24196	Number of grids prepared:	3
Instrument:	JEO 1200EX	Date received by lab:	12/28/09	Prepared by:	ddmunt
Voltage (KV):	100	Lab Job Number:	M50355	Preparation date:	12/29/09
Magnification:	20 K	Lab Sample Number:	M50355-006	Preparation Type: (D=Direct, I=Indirect, IA=Indirect, ashed)	indirect
Grid opening area (mm ²):	0.0116	Chain of Custody Number:	R01-091222JM-12/23/09-0001	Primary Filter Area (mm ²):	385
Scale: 1L =	1.000			Secondary Filter Area (mm ²):	1297
Scale: 1D =	1.000			F- factor:	
Filter Size (mm):	25.000	Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)	field sample	Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)	analyzed
Filter Pore Size (um):	0.450	QC Sample Type: (Not QC, LB=Lab Blank, RS=Recount Same, RD, Recount Diff, RP=Reprep., VA=Verified Analysis, IL=Interlab)	not qc	Analyzed by:	H. Melt
Method SOP (Revision No.):	5755.030	Media: (Air, Dust, N/A)	dust	Analysis date:	11/4/10
Grid Storage Location:	7728.000	Air volume (L) or dust area (cm ²):	300		

Indirect Prep, Not Ashed		Indirect Prep, Ashed	
1	Fraction of primary filter used		Fraction of primary filter used
100	Total resuspension volume (mL)		Total resuspension volume, pre-ashing (mL)
50	Volume applied to secondary filter (mL)		Volume applied to filter for ashing (mL)
			Fraction of filter that was ashed
			Volume used to resuspend ashed residue (mL)
			Volume applied to secondary filter (mL)

COMMENTS

Location: P0001-BD01-06 Sub Location: AS-06

If sample was analyzed using more than one TEM instrument, enter TEM instrument details below.

Instrument #2	Instrument #3
Instrument:	
Voltage (KV):	
Magnification:	

If sample was analyzed by more than one analyst or across multiple analysis dates, enter analysis details below.

Analyst #2	Analyst #3
Analyzed by:	
Analysis date:	

IMPORTANT NOTE: If this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates, be sure to complete the column labeled "Multiple" when entering raw structure results for each grid opening.

National Asbestos Data Entry Spreadsheet (NADES) for Air & Soil Analysis by Superfund TEM

Preparation Type	indirect
Analysis Date	1-4-10

[illegible]

(a) Enter dimensions either in absolute units (um) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

(b) See Annex D of ISO 10312 for identification codes.

(c) Valid Mineral Types:

AC	actinolite
AM	amosite
AN	anthophyllite

LA	Libby amphibole
OA	other amphibole
NAM	non-asbestos material

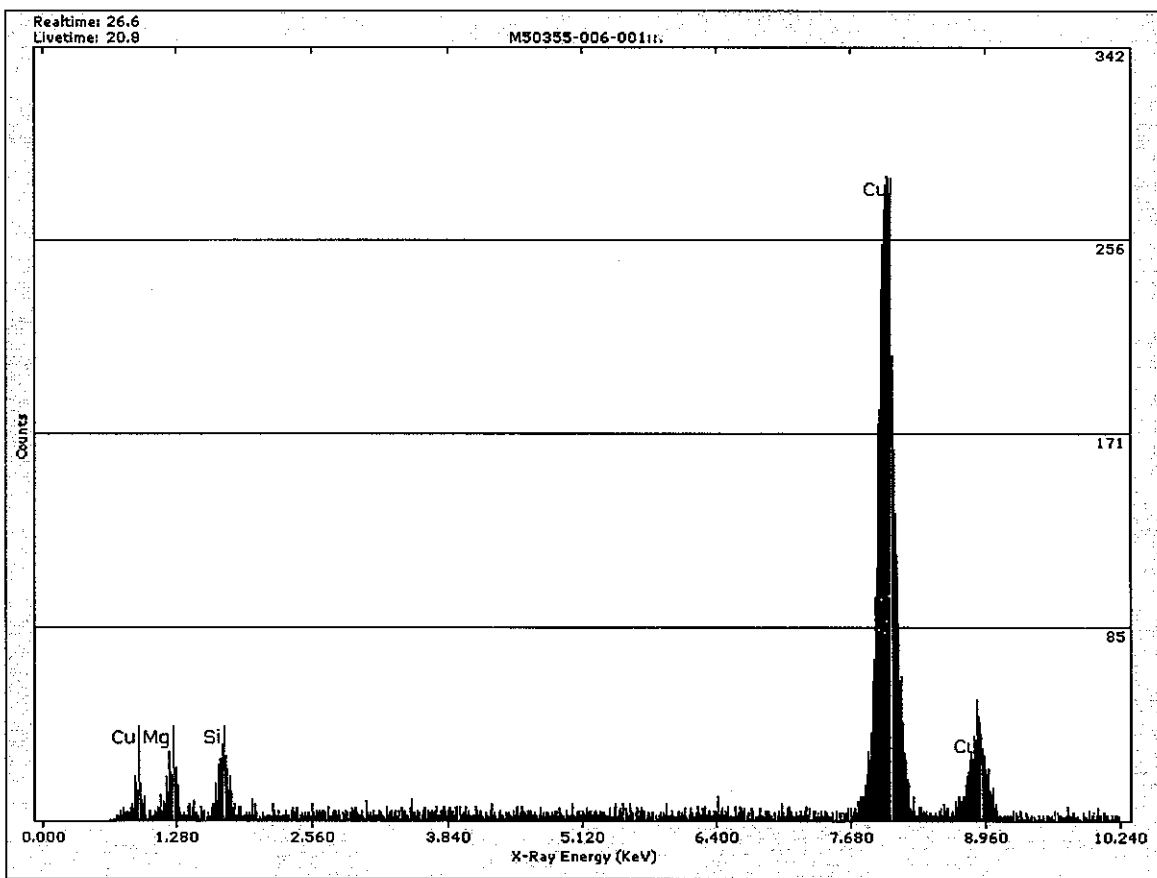
OM
Amosite
Trem-Act

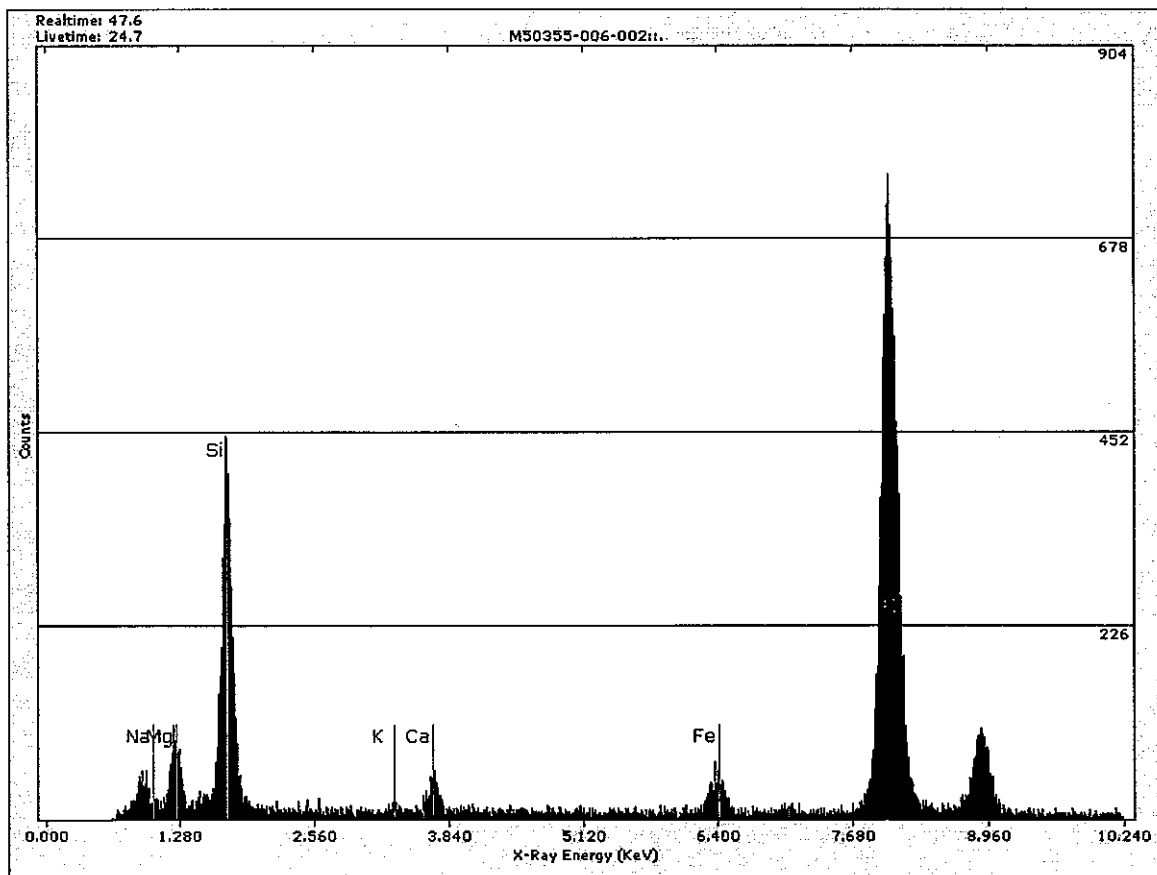
other mineral type
Solid solution series
Solid solution series

(specify in "other mineral description" section)

q" field)

(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.





National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

Enter Site or Project Name Here:
State/Federal Site or Project Identifier:

R01-091222JM
0806F

Site/Project Identifier Code:
0806F

Laboratory name: MAS
Instrument: JEOL 1200EX#4
Voltage (KV): 100
Magnification: 20 K
Grid opening area (mm²): 0.0114
Scale: 1L = 1.000
Scale: 1D = 1.000
Filter Size (mm): 25.000
Filter Pore Size (um): 0.450
Method SOP (Revision No.): 5755.03
Grid Storage Location: 7728.000

Client Sample Number: D24197
Date received by lab: 12/28/09
Lab Job Number: M50355
Lab Sample Number: M50355-007
Chain of Custody Number: 91222JM-12/23/09-000

Sample Type: Field Sample
QC Sample Type: Not QC
Media: Dust
Air volume (L) or dust area (cm²): 300

Number of grids prepared: 3
Prepared by: ddmount
Preparation date: 12/29/09
Preparation Type: Indirect
Primary filter area (mm²): 385
Secondary Filter Area (mm²): 1297
F- factor: [proposed value shown, cell formula can be over-written if necessary] 0.050
Filter Status: Analyzed
Analyzed by: M. Molamed
Analysis date: 01/04/10

F-factor Input Parameters:

Indirect Prep, Not Ashed

1	Fraction of primary filter used
100	Total resuspension volume (mL)
5	Volume applied to secondary filter (mL)
0.050	F-factor

Indirect Prep, Ashed

Fraction of primary filter used

Total resuspension volume, pre-ashing (mL)

Volume applied to filter for ashing (mL)

Fraction of filter that was ashed

Volume used to resuspend ashed residue (mL)

Volume applied to secondary filter (mL)

F-factor

COMMENTS

Location: P0001-BD01-06 Sub Location: AS-06; a serial dilution was prepared to put a final volume of 5ml onto the secondary filter

☐ Check box if this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM
ANALYTICAL REPORT

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	D24197	Lab Sample Number	M50355-007	Effective filter area (mm ²)	1297
Media	Dust	Preparation	Indirect	F-factor	5.00E-02
Sample Type	Field Sample	Sample Status	Analyzed	Grid opening area (mm ²)	0.0114
Dust Collection Area (300)		Analysis Date	1/4/2010	# GOs counted	10
QA Sample Type	Not QC	Method SOP	5755.03	Sensitivity (1/cm2)	7.6E+02
Stopping Rule(s): GO = 10, Structures = 100, Sensitivity = 1.00E+03					

Desired Confidence Interval (%): 95

Number of Structures with Fatal Data Entry Errors: 0
(Structures with fatal errors are excluded from calculations below)

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm ²)	Dust Loading (c) (s/cm ²)	95% Confidence Interval
Total TEM-EPASM Structures				
Total Asbestos	2	1.8E+01	1.5E+03	1.8E+02 - 5.5E+03
Total Chrysotile (CH)	2	1.8E+01	1.5E+03	1.8E+02 - 5.5E+03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03

Binning Rule Description:

Apply to fibers (F) only:

L ≥ 0.5um, AR ≥ 3

No restrictions for other structure types.

PCM Equivalent Structures (PCME)				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03

Binning Rule Description:

Apply to all structures where Total column > 0:

L > 5um, W ≥ 0.25um, AR ≥ 3

AHERA (d) Structures				
Total Asbestos	2	1.8E+01	1.5E+03	1.8E+02 - 5.5E+03
Total Chrysotile (CH)	2	1.8E+01	1.5E+03	1.8E+02 - 5.5E+03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03

Binning Rule Description:

Apply to fibers (F) only:

L ≥ 0.5um, AR ≥ 5

No restrictions for other structure types.

Most "secondary" structures (structures that are part of a primary complex structure) are excluded.

Berman Crump (2003) Structures				
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03

Binning Rule Description:

Apply to all structures where Total column > 0:

L > 10um, W ≤ 0.4um

(a) Based on countable structures only

(b) Loading on Filter (s/mm²) = N structures / (GOs Counted * GO Area)

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000)

Dust Loading (s/cm²) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area)

(d) Yamate results are expected to be similar to AHERA, but use of AHERA for Yamate may be biased low due to the exclusion of structures <0.5um.

Enter Site or Project Name Here:

State/Federal Site or Project Identifier:

R01-091222JM-12/23/09-0001

Case: 0806F

Site/Project Identifier Code: 0806F

F-factor Input Parameters:

Laboratory name: MAS

Instrument: JEOL 1200EX

Voltage (KV): 100

Magnification: 20 K

Grid opening area (mm²): 0.0114

Scale: 1L = 1.000

Scale: 1D = 1.000

Filter Size (mm): 25.000

Filter Pore Size (um): 0.450

Method SOP (Revision No.): 5755.030

Grid Storage Location: 7728.000

Client Sample Number: D24197

Date received by lab: 12/28/09

Lab Job Number: M50355

Lab Sample Number: M50355-007

Chain of Custody Number: R01-091222JM-12/23/09-0001

Number of grids prepared: 3

Prepared by: ddmount

Preparation date: 12/29/09

Preparation Type: (D=Direct, I=Indirect, IA=Indirect, ashed)

Primary Filter Area (mm²): 385

Secondary Filter Area (mm²): 1297

F- factor:

Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)

Analyzed by: [Signature]

Analysis date: 1-4-10

Indirect Prep, Not Ashed

1	Fraction of primary filter used
100	Total resuspension volume (mL)
5	Volume applied to secondary filter (mL)

Indirect Prep, Ashed

	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)

Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)

QC Sample Type: (Not QC, LB=Lab Blank, RS=Recount Same, RD, Recount Diff., RP=Reprep., VA=Verified Analysis, IL=Interlab)

Media: (Air, Dust, N/A)

Air volume (L) or dust area (cm²): 300

COMMENTS

Location: P0001-BD01-07 Sub Location: AS-07

If sample was analyzed using more than one TEM instrument, enter TEM instrument details below.

Instrument #2	Instrument #3
Instrument:	
Voltage (KV):	
Magnification:	

If sample was analyzed by more than one analyst or across multiple analysis dates, enter analysis details below.

Analyst #2	Analyst #3
Analyzed by:	
Analysis date:	

IMPORTANT NOTE: If this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates, be sure to complete the column labeled "Multiple" when entering raw structure results for each grid opening.

STRUCTURE INFORMATION

Preparation Type	indirect
Analysis Date	1-4-10

(a) Enter dimensions either in absolute units (μm) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

(b) See Annex D of ISO 10312 for identification codes.

(c) Valid Mineral Types:

AC actinolite

AM amosite
AN anthophyllite

Anticorporalities

AC actinolite

AM amosite

AN anthophyllite

CH

CR

TR

chrysotile

crocidolite

tremolite

LA

OA

NAN

Libby amphibole

other amphibole

non-asbestos ma

ole

ple

material

CM

mosit

Am-A

other mine

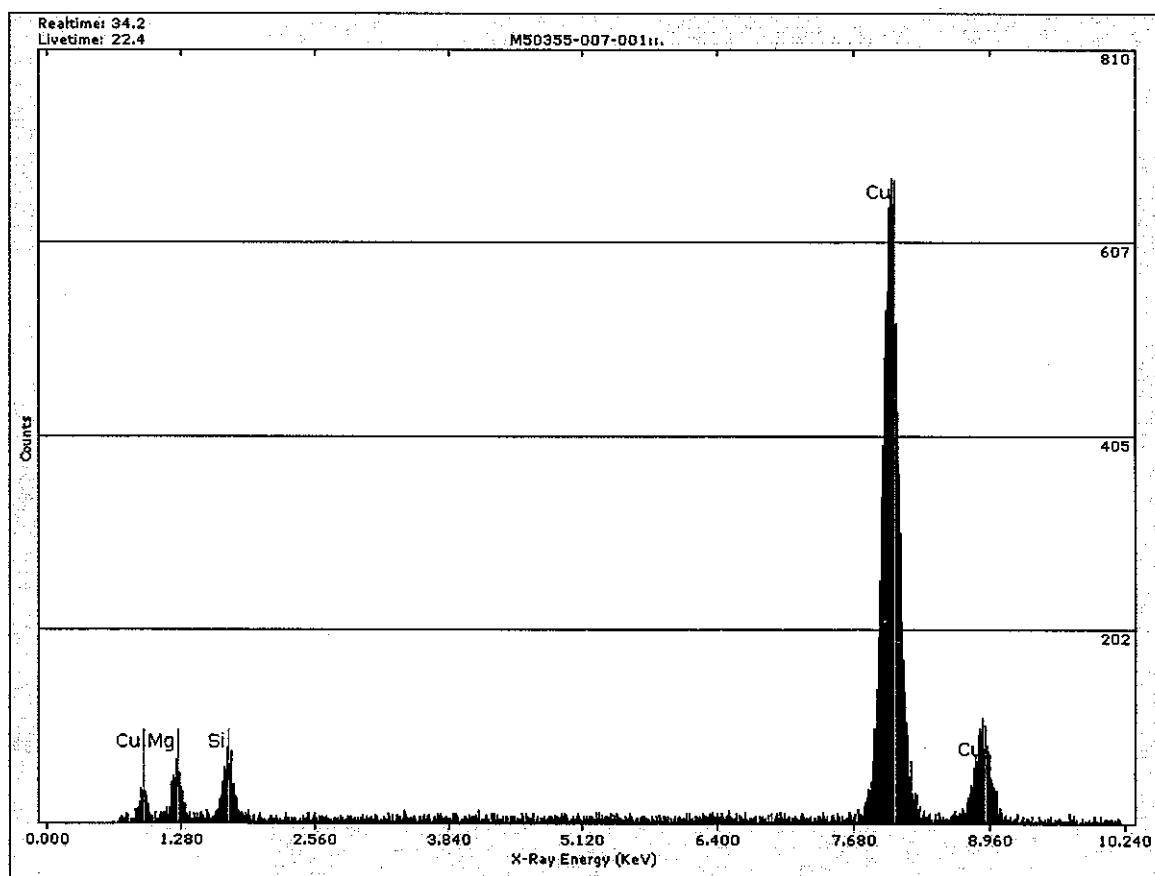
Solid solut

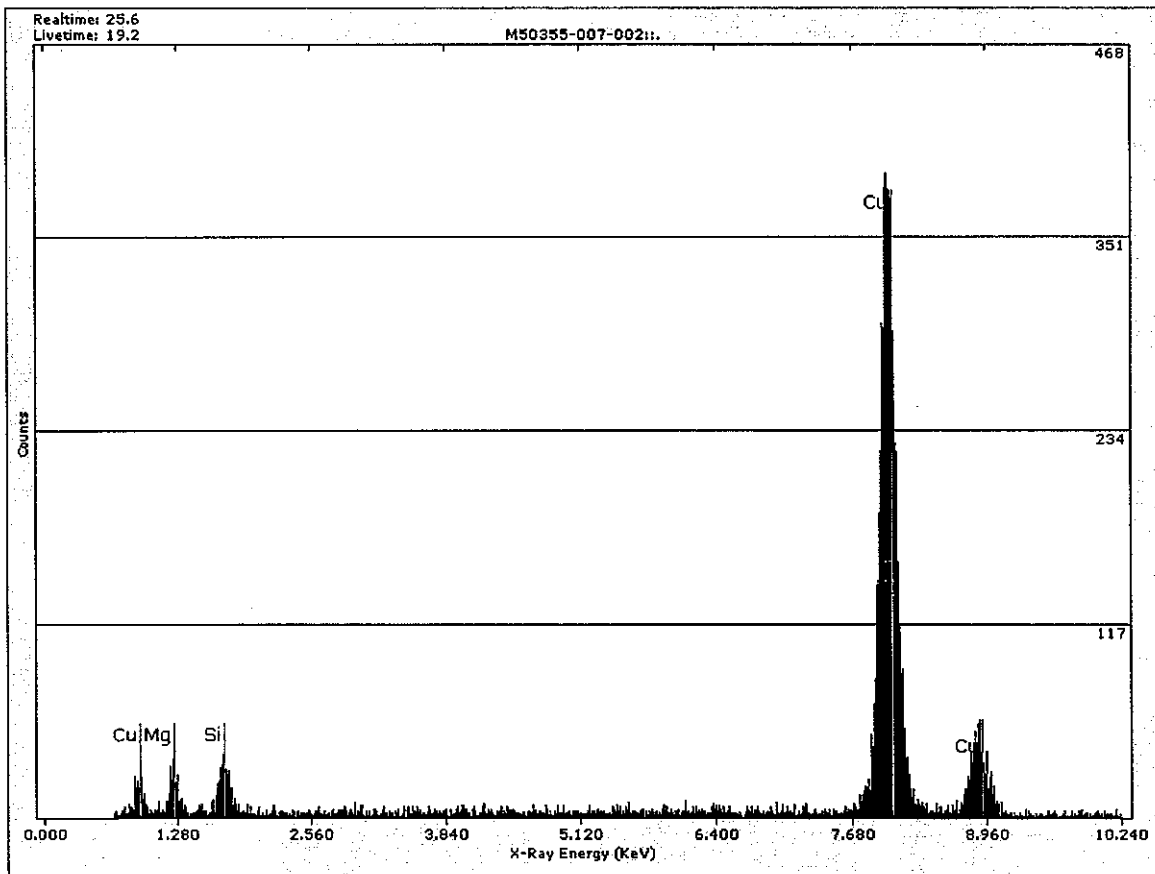
Solid solution

l type	(specify)
1	1
2	2
3	3
4	4
5	5
6	6
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10	10
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90	90
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92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

series: Amosite, "

series: remote





FILE:

0806F: MAS: D24198_01-04-10_M50355-TEM/EPAS/MS/1515

FILE TYPE:

Original

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

Enter Site or Project Name Here:	
State/Federal Site or Project Identifier:	

R01-091222JM
0806F

Site/Project Identifier Code:

0806F

F-factor Input Parameters:

Laboratory name:	MAS
Instrument:	JEOL 1200EX#4
Voltage (KV):	100
Magnification:	20 K
Grid opening area (mm ²):	0.0114
Scale: 1L =	1.000
Scale: 1D =	1.000
Filter Size (mm):	25.000
Filter Pore Size (um):	0.450
Method SOP (Revision No.):	5755.03
Grid Storage Location:	7728.000

Client Sample Number:	D24198
Date received by lab:	12/28/09
Lab Job Number:	M50355
Lab Sample Number:	M50355-008
Chain of Custody Number:	91222JM-12/23/09-000

Sample Type:	Field Blank
QC Sample Type:	Not QC
Media:	Dust
Air volume (L) or dust area (cm ²):	

Number of grids prepared:	3
Prepared by:	ddmount
Preparation date:	12/29/09
Preparation Type:	Indirect
Primary filter area (mm ²):	385
Secondary Filter Area (mm ²):	1297
F-factor: [proposed value shown, cell formula can be over-written if necessary]	0.500
Filter Status:	Analyzed
Analyzed by:	M.Motamedi
Analysis date:	01/04/10

1	Fraction of primary filter used
100	Total resuspension volume (mL)
50	Volume applied to secondary filter (mL)
0.500	F-factor

Indirect Prep, Not Ashed

	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)
	F-factor

Indirect Prep, Ashed

COMMENTS

Location: P0001-BD01-08 Sub Location: AS-08

☐ Check box if this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM
ANALYTICAL REPORT

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	D24198	Lab Sample Number	M50355-008	Effective filter area (mm ²)	1297
Media	Dust	Preparation	Indirect	F-factor	5.00E-01
Sample Type	Field Blank	Sample Status	Analyzed	Grid opening area (mm ²)	0.0114
Dust Collection Area		Analysis Date	1/4/2010	# GOs counted	10
QA Sample Type	Not QC	Method SOP	5755.03	Sensitivity (1/cm ²)	blank
Stopping Rule(s): GO = 10, Structures = 100, Sensitivity = 1.00E+03					

Desired Confidence Interval (%): 95

Number of Structures with Fatal Data Entry Errors 0
(Structures with fatal errors are excluded from calculations below)

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm ²)	Dust Loading (c) (s/cm ²)	95% Confidence Interval
Total TEM-EPASM Structures				
Total Asbestos	0	0.0E+00	blank	blank - blank
Total Chrysotile (CH)	0	0.0E+00	blank	blank - blank
Total Amphibole	0	0.0E+00	blank	blank - blank
actinolite (AC)	0	0.0E+00	blank	blank - blank
amosite (AM)	0	0.0E+00	blank	blank - blank
anthophyllite (AN)	0	0.0E+00	blank	blank - blank
crocidolite (CR)	0	0.0E+00	blank	blank - blank
tremolite (TR)	0	0.0E+00	blank	blank - blank
Libby amphibole (LA)	0	0.0E+00	blank	blank - blank
other amphibole (OA)	0	0.0E+00	blank	blank - blank
other mineral class (OM)	0	0.0E+00	blank	blank - blank
Solid Soln: Amosite	0	0.0E+00	blank	blank - blank
Solid Soln: Trem-Act	0	0.0E+00	blank	blank - blank
PCM Equivalent Structures (PCME)				
Total Asbestos	0	0.0E+00	blank	blank - blank
Total Chrysotile (CH)	0	0.0E+00	blank	blank - blank
Total Amphibole	0	0.0E+00	blank	blank - blank
actinolite (AC)	0	0.0E+00	blank	blank - blank
amosite (AM)	0	0.0E+00	blank	blank - blank
anthophyllite (AN)	0	0.0E+00	blank	blank - blank
crocidolite (CR)	0	0.0E+00	blank	blank - blank
tremolite (TR)	0	0.0E+00	blank	blank - blank
Libby amphibole (LA)	0	0.0E+00	blank	blank - blank
other amphibole (OA)	0	0.0E+00	blank	blank - blank
other mineral class (OM)	0	0.0E+00	blank	blank - blank
Solid Soln: Amosite	0	0.0E+00	blank	blank - blank
Solid Soln: Trem-Act	0	0.0E+00	blank	blank - blank
AHERA (d) Structures				
Total Asbestos	0	0.0E+00	blank	blank - blank
Total Chrysotile (CH)	0	0.0E+00	blank	blank - blank
Total Amphibole	0	0.0E+00	blank	blank - blank
actinolite (AC)	0	0.0E+00	blank	blank - blank
amosite (AM)	0	0.0E+00	blank	blank - blank
anthophyllite (AN)	0	0.0E+00	blank	blank - blank
crocidolite (CR)	0	0.0E+00	blank	blank - blank
tremolite (TR)	0	0.0E+00	blank	blank - blank
Libby amphibole (LA)	0	0.0E+00	blank	blank - blank
other amphibole (OA)	0	0.0E+00	blank	blank - blank
other mineral class (OM)	0	0.0E+00	blank	blank - blank
Solid Soln: Amosite	0	0.0E+00	blank	blank - blank
Solid Soln: Trem-Act	0	0.0E+00	blank	blank - blank
Berman Crump (2003) Structures				
Total Asbestos	0	0.0E+00	blank	blank - blank
Total Chrysotile (CH)	0	0.0E+00	blank	blank - blank
Total Amphibole	0	0.0E+00	blank	blank - blank
actinolite (AC)	0	0.0E+00	blank	blank - blank
amosite (AM)	0	0.0E+00	blank	blank - blank
anthophyllite (AN)	0	0.0E+00	blank	blank - blank
crocidolite (CR)	0	0.0E+00	blank	blank - blank
tremolite (TR)	0	0.0E+00	blank	blank - blank
Libby amphibole (LA)	0	0.0E+00	blank	blank - blank
other amphibole (OA)	0	0.0E+00	blank	blank - blank
other mineral class (OM)	0	0.0E+00	blank	blank - blank
Solid Soln: Amosite	0	0.0E+00	blank	blank - blank
Solid Soln: Trem-Act	0	0.0E+00	blank	blank - blank

Binning Rule Description:

Apply to fibers (F) only:

L ≥ 0.5um, AR ≥ 3

No restrictions for other structure types.

Binning Rule Description:

Apply to all structures where Total column > 0:

L > 5um, W ≥ 0.25um, AR ≥ 3

Binning Rule Description:

Apply to fibers (F) only:

L ≥ 0.5um, AR ≥ 5

No restrictions for other structure types.

Most "secondary" structures (structures that are part of a primary complex structure) are excluded.

Binning Rule Description:

Apply to all structures where Total column > 0:

L > 10um, W ≤ 0.4um

(a) Based on countable structures only

(b) Loading on Filter (s/mm²) = N structures / (GOs Counted * GO Area)

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000)

Dust Loading (s/cm²) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area)

(d) Yamate results are expected to be similar to AHERA, but use of AHERA for Yamate may be biased low due to the exclusion of structures <0.5um.

Enter Site or Project Name Here:		R01-091222JM-12/23/09-0001	
State/Federal Site or Project Identifier:		Case: 0806F	
Laboratory name:	MAS	Client Sample Number:	D24198
Instrument:	JEOL 1200EX	Date received by lab:	12/28/09
Voltage (kV):	100	Lab Job Number:	M50355
Magnification:	20 K	Lab Sample Number:	M50355-008
Grid opening area (mm ²):	0.0114	Chain of Custody Number:	R01-091222JM-12/23/09-0001
Scale: 1L =	1,000	Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)	field blank
Scale: 1D =	1,000	QC Sample Type: (Not QC, LB=Lab Blank, RS=Recount Same, RD=Recount Diff, RP=Reprep, VA=Verified Analysis, IL=Interlab)	not QC
Filter Size (mm):	25,000	Media: (Air, Dust, N/A)	dust
Filter Pore Size (um):	0.450	Air volume (L) or dust area (cm ²):	
Method SOP (Revision No.):	5755.030		
Grid Storage Location:	7728.000		

Site/Project Identifier Code:		0806F	
Number of grids prepared:	3	Prepared by:	ddmount
Preparation date:	12/29/09	Preparation Type: (D=Direct, I=Indirect, IA=Indirect, ashed)	indirect
Primary Filter Area (mm ²):	385	Secondary Filter Area (mm ²):	1297
F- factor:		Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)	analyzed
Analized by:		Analysis date:	1-4-10

F-factor Input Parameters:

Indirect Prep, Not Ashed	
1	Fraction of primary filter used
100	Total resuspension volume (mL)
30	Volume applied to secondary filter (mL)

Indirect Prep, Ashed	
	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)

COMMENTS

Location: P0001-BD01-08 Sub Location: AS-08

If sample was analyzed using more than one TEM instrument, enter TEM instrument details below.

Instrument:	Instrument #2	Instrument #3
Voltage (kV):		
Magnification:		

If sample was analyzed by more than one analyst or across multiple analysis dates, enter analysis details below.

Analized by:	Analyst #2	Analyst #3
Analysis date:		

IMPORTANT NOTE: If this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates, be sure to complete the column labeled "Multiple" when entering raw structure results for each grid opening.

STRUCTURE INFORMATION

Preparation Type	indirect
Analysis Date	1-4-10

(a) Enter dimensions either in absolute units (um) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

(c) Valid Mineral Types:

other mineral type	(specify in "other mineral description" field)
OM	
Amosite	Solid solution series: Amosite, cummingtonite-grunerite
Trem-Act	Solid solution series: Tremolite-Actinolite

(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

Enter Site or Project Name Here:	
State/Federal Site or Project Identifier:	
Laboratory name:	MAS
Instrument:	JEOL 1200EX#4
Voltage (kV):	100
Magnification:	20 K
Grid opening area (mm ²):	0.0116
Scale: 1L =	1,000
Scale: 1D =	1,000
Filter Size (mm):	25,000
Filter Pore Size (um):	0.450
Method SOP (Revision No.):	5755.03
Grid Storage Location:	7728.000

R01-091222JM	Site/Project Identifier Code:
0806F	
Client Sample Number:	D24199
Date received by lab:	12/28/09
Lab Job Number:	M50355
Lab Sample Number:	M50355-009
Chain of Custody Number:	91222JM-12/23/09-000

0806F

Number of grids prepared:	3
Prepared by:	ddmount
Preparation date:	12/29/09
Preparation Type:	Indirect
Primary filter area (mm ²):	385
Secondary Filter Area (mm ²):	1297
F- factor: [proposed value shown, cell formula can be over-written if necessary]	0.500
Filter Status:	Analyzed
Analyzed by:	M.Motamedi
Analysis date:	01/04/10

Sample Type:	Lot Blank
QC Sample Type:	Not QC
Media:	N/A
Air volume (L) or dust area (cm ²):	

F-factor Input Parameters:

Indirect Prep, Not Ashed

1	Fraction of primary filter used
100	Total resuspension volume (mL)
50	Volume applied to secondary filter (mL)
0.500	F-factor

Indirect Prep, Ashed

	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)
	F-factor

COMMENTS

Location: P0001-BD01-09 Sub Location: AS-09

☐ Check box if this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM
ANALYTICAL REPORT

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	D24199	Lab Sample Number	M50355-009	Effective filter area (mm ²)	1297
Media	N/A	Preparation	Indirect	F-factor	5.00E-01
Sample Type	Lot Blank	Sample Status	Analyzed	Grid opening area (mm ²)	0.0116
QA Sample Type	Not QC	Analysis Date	1/4/2010	# GOs counted	10
		Method SOP	5755.03	Sensitivity (—)	blank
Stopping Rule(s): GO = 10, Structures = 100, Sensitivity = 1.00E+03					

Desired Confidence Interval (%): 95

Number of Structures with Fatal Data Entry Errors 0

(Structures with fatal errors are excluded from calculations below)

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm ²)		95% Confidence Interval
Total TEM-EPASM Structures				
Total Asbestos	0	0.0E+00	blank	blank - blank
Total Chrysotile (CH)	0	0.0E+00	blank	blank - blank
Total Amphibole	0	0.0E+00	blank	blank - blank
actinolite (AC)	0	0.0E+00	blank	blank - blank
amosite (AM)	0	0.0E+00	blank	blank - blank
anthophyllite (AN)	0	0.0E+00	blank	blank - blank
crocidolite (CR)	0	0.0E+00	blank	blank - blank
tremolite (TR)	0	0.0E+00	blank	blank - blank
Libby amphibole (LA)	0	0.0E+00	blank	blank - blank
other amphibole (OA)	0	0.0E+00	blank	blank - blank
other mineral class (OM)	0	0.0E+00	blank	blank - blank
Solid Soln: Amosite	0	0.0E+00	blank	blank - blank
Solid Soln: Trem-Act	0	0.0E+00	blank	blank - blank
PCM Equivalent Structures (PCME)				
Total Asbestos	0	0.0E+00	blank	blank - blank
Total Chrysotile (CH)	0	0.0E+00	blank	blank - blank
Total Amphibole	0	0.0E+00	blank	blank - blank
actinolite (AC)	0	0.0E+00	blank	blank - blank
amosite (AM)	0	0.0E+00	blank	blank - blank
anthophyllite (AN)	0	0.0E+00	blank	blank - blank
crocidolite (CR)	0	0.0E+00	blank	blank - blank
tremolite (TR)	0	0.0E+00	blank	blank - blank
Libby amphibole (LA)	0	0.0E+00	blank	blank - blank
other amphibole (OA)	0	0.0E+00	blank	blank - blank
other mineral class (OM)	0	0.0E+00	blank	blank - blank
Solid Soln: Amosite	0	0.0E+00	blank	blank - blank
Solid Soln: Trem-Act	0	0.0E+00	blank	blank - blank
AHERA (d) Structures				
Total Asbestos	0	0.0E+00	blank	blank - blank
Total Chrysotile (CH)	0	0.0E+00	blank	blank - blank
Total Amphibole	0	0.0E+00	blank	blank - blank
actinolite (AC)	0	0.0E+00	blank	blank - blank
amosite (AM)	0	0.0E+00	blank	blank - blank
anthophyllite (AN)	0	0.0E+00	blank	blank - blank
crocidolite (CR)	0	0.0E+00	blank	blank - blank
tremolite (TR)	0	0.0E+00	blank	blank - blank
Libby amphibole (LA)	0	0.0E+00	blank	blank - blank
other amphibole (OA)	0	0.0E+00	blank	blank - blank
other mineral class (OM)	0	0.0E+00	blank	blank - blank
Solid Soln: Amosite	0	0.0E+00	blank	blank - blank
Solid Soln: Trem-Act	0	0.0E+00	blank	blank - blank
Berman Crump (2003) Structures				
Total Asbestos	0	0.0E+00	blank	blank - blank
Total Chrysotile (CH)	0	0.0E+00	blank	blank - blank
Total Amphibole	0	0.0E+00	blank	blank - blank
actinolite (AC)	0	0.0E+00	blank	blank - blank
amosite (AM)	0	0.0E+00	blank	blank - blank
anthophyllite (AN)	0	0.0E+00	blank	blank - blank
crocidolite (CR)	0	0.0E+00	blank	blank - blank
tremolite (TR)	0	0.0E+00	blank	blank - blank
Libby amphibole (LA)	0	0.0E+00	blank	blank - blank
other amphibole (OA)	0	0.0E+00	blank	blank - blank
other mineral class (OM)	0	0.0E+00	blank	blank - blank
Solid Soln: Amosite	0	0.0E+00	blank	blank - blank
Solid Soln: Trem-Act	0	0.0E+00	blank	blank - blank

Binning Rule Description:

Apply to fibers (F) only:

L ≥ 0.5µm, AR ≥ 3

No restrictions for other structure types.

Binning Rule Description:

Apply to all structures where Total column > 0:

L > 5µm, W ≥ 0.25µm, AR ≥ 3

Binning Rule Description:

Apply to fibers (F) only:

L ≥ 0.5µm, AR ≥ 5

No restrictions for other structure types.

Most "secondary" structures (structures that are part of a primary complex structure) are excluded.

Binning Rule Description:

Apply to all structures where Total column > 0:

L > 10µm, W ≤ 0.4µm

(a) Based on countable structures only

(b) Loading on Filter (s/mm²) = (N structures / (GOs Counted * GO Area))

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000)

Dust Loading (s/cm²) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area)

(d) Yamate results are expected to be similar to AHERA, but use of AHERA for Yamate may be biased low due to the exclusion of structures <0.5µm.

Enter Site or Project Name Here:

State/Federal Site or Project Identifier:

R01-091222JM-12/23/09-0001

Case: 0806F

Client Sample Number: D24199

Date received by lab: 12/28/09

Lab Job Number: M50355

Lab Sample Number: M50355-009

Chain of Custody Number: R01-091222JM-12/23/09-0001

Site/Project Identifier Code: 0806F

Number of grids prepared: 3

Prepared by: ddmount

Preparation date: 12/29/09

Preparation Type: (D=Direct, I=Indirect, IA=Indirect, ashed)

Primary Filter Area (mm²): 385

Secondary Filter Area (mm²): 1297

F- factor:

Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)

Analyzed by: M. P. O.

Analysis date: 1-4-10

Indirect Prep, Not Ashed

1	Fraction of primary filter used
100	Total resuspension volume (mL)
50	Volume applied to secondary filter (mL)

Indirect Prep, Ashed

	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)

Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)

QC Sample Type: (Not QC, LB=Lab Blank, RS=Recount Same, RD, Recount Diff, RP=Reprep, VA=Verified Analysis, IL=Interlab)

Media: (Air, Dust, N/A)

Air volume (L) or dust area (cm²): NA

Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)

QC Sample Type: (Not QC, LB=Lab Blank, RS=Recount Same, RD, Recount Diff, RP=Reprep, VA=Verified Analysis, IL=Interlab)

Media: (Air, Dust, N/A)

Air volume (L) or dust area (cm²): NA

Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)

QC Sample Type: (Not QC, LB=Lab Blank, RS=Recount Same, RD, Recount Diff, RP=Reprep, VA=Verified Analysis, IL=Interlab)

Media: (Air, Dust, N/A)

Air volume (L) or dust area (cm²): NA

COMMENTS

Location: P0001-BD01-09 Sub Location: AS-09

If sample was analyzed using more than one TEM instrument, enter TEM instrument details below.

Instrument #2	Instrument #3
Instrument:	
Voltage (KV):	
Magnification:	

If sample was analyzed by more than one analyst or across multiple analysis dates, enter analysis details below.

Analyst #2	Analyst #3
Analyzed by:	
Analysis date:	

IMPORTANT NOTE: If this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates, be sure to complete the column labeled "Multiple" when entering raw structure results for each grid opening.

STRUCTURE INFORMATION

Preparation Type	indirect
Analysis Date	7-4-10

(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

Enter Site or Project Name Here:	
State/Federal Site or Project Identifier:	
Laboratory name:	MAS
Instrument:	JEOL 1200EX#4
Voltage (kV):	100
Magnification:	20 K
Grid opening area (mm ²):	0.0116
Scale: 1L =	1,000
Scale: 1D =	1,000
Filter Size (mm):	
Filter Pore Size (um):	
Method SOP (Revision No.):	5755.03
Grid Storage Location:	7728.000

Site/Project Identifier Code:	0806F
Client Sample Number:	
Date received by lab:	
Lab Job Number:	M50355
Lab Sample Number:	M50355-000
Chain of Custody Number:	91222JM-12/23/09-000

0806F

Number of grids prepared:	3
Prepared by:	ddmount
Preparation date:	12/29/09
Preparation Type:	Indirect
Primary filter area (mm ²):	
Secondary Filter Area (mm ²):	1297
F- factor: [proposed value shown, cell formula can be over-written if necessary]	0.500
Filter Status:	Analyzed
Analyzed by:	M.McMamed
Analysis date:	01/07/10

Sample Type:	Lab QC
QC Sample Type:	Lab Blank
Media:	N/A
Air volume (L) or dust area (cm ²):	

F-factor Input Parameters:

Indirect Prep, Not Ashed	
1	Fraction of primary filter used
100	Total resuspension volume (mL)
50	Volume applied to secondary filter (mL)
0.500	F-factor

Indirect Prep, Ashed	
	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)
	F-factor

COMMENTS

☐ Check box if this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates

R01-091222JM

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

CLIENT SAMPLE ID: 0

LAB SAMPLE ID: M50355-000

Data Entry by: dd/mount

Data Entry Date: 1/7/2010

Media

Sample Prep

QA by: K. Simpson

QA Date: 1/7/2009

Media

Sample Prep

QA by: K. Simpson

QA Date: 1/7/2009

Sample Type

QC Sample Type

Sample Status

Analysis Date

Lab/QC

Lab

Analyzed

1/7/2010

ERROR CHECK

OK - No errors found

ERROR
CODE

Comments

ABBREVIATED NOTES:

(a) Enter dimensions either in absolute units (um) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

(b) See Annex D of ISO10312 for identification codes.

(c) Valid Mineral Types:

AC actinolite

AM amosite

AN anthophyllite

CH chrysotile

CR crocidolite

TR tremolite

LA Libby amphibole

OA other amphibole

NAM non-asbestos material

Amosite Solid solution series: Amosite, cummingtonite-grunerite

Trem-Act Solid solution series: Tremolite-Actinolite

OM other mineral type (specify in "other mineral description" field)

OM Description Standard Selections:

Septicite

Wollastonite

Winchite

Richite

Eriolite

(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.

ERROR CODES:

A Primary/Total entry is not sequential

B Mineral class type is not valid

C Structure dimensions are missing or are not valid

D total # structures with complex do not match information provided in s

E # structures > 5um with complex do not match information provided in s

F structure type with complex does not match information provided in s

G Identified as non-countable structure (total = 0) without comment

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM
ANALYTICAL REPORT

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	0	Lab Sample Number	M50355-000	Effective filter area (mm ²)	1297
Media	N/A	Preparation	Indirect	F-factor	5.00E-01
Sample Type	Lab QC	Sample Status	Analyzed	Grid opening area (mm ²)	0.0116
QA Sample Type	LB	Analysis Date	1/7/2010	# GOs counted	10
		Method SOP	5755.03	Sensitivity (-)	blank
Stopping Rule(s): GO = 10, Structures = 100, Sensitivity = 1.00E+03					

Desired Confidence Interval (%): 95

Number of Structures with Fatal Data Entry Errors 0
(Structures with fatal errors are excluded from calculations below)

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm ²)		95% Confidence Interval
Total TEM-EPASM Structures				
Total Asbestos	0	0.0E+00	blank	blank - blank
Total Chrysotile (CH)	0	0.0E+00	blank	blank - blank
Total Amphibole	0	0.0E+00	blank	blank - blank
actinolite (AC)	0	0.0E+00	blank	blank - blank
amosite (AM)	0	0.0E+00	blank	blank - blank
anthophyllite (AN)	0	0.0E+00	blank	blank - blank
crocidolite (CR)	0	0.0E+00	blank	blank - blank
tremolite (TR)	0	0.0E+00	blank	blank - blank
Libby amphibole (LA)	0	0.0E+00	blank	blank - blank
other amphibole (OA)	0	0.0E+00	blank	blank - blank
other mineral class (OM)	0	0.0E+00	blank	blank - blank
Solid Soln: Amosite	0	0.0E+00	blank	blank - blank
Solid Soln: Trem-Act	0	0.0E+00	blank	blank - blank
PCM Equivalent Structures (PCME)				
Total Asbestos	0	0.0E+00	blank	blank - blank
Total Chrysotile (CH)	0	0.0E+00	blank	blank - blank
Total Amphibole	0	0.0E+00	blank	blank - blank
actinolite (AC)	0	0.0E+00	blank	blank - blank
amosite (AM)	0	0.0E+00	blank	blank - blank
anthophyllite (AN)	0	0.0E+00	blank	blank - blank
crocidolite (CR)	0	0.0E+00	blank	blank - blank
tremolite (TR)	0	0.0E+00	blank	blank - blank
Libby amphibole (LA)	0	0.0E+00	blank	blank - blank
other amphibole (OA)	0	0.0E+00	blank	blank - blank
other mineral class (OM)	0	0.0E+00	blank	blank - blank
Solid Soln: Amosite	0	0.0E+00	blank	blank - blank
Solid Soln: Trem-Act	0	0.0E+00	blank	blank - blank
AHERA (d) Structures				
Total Asbestos	0	0.0E+00	blank	blank - blank
Total Chrysotile (CH)	0	0.0E+00	blank	blank - blank
Total Amphibole	0	0.0E+00	blank	blank - blank
actinolite (AC)	0	0.0E+00	blank	blank - blank
amosite (AM)	0	0.0E+00	blank	blank - blank
anthophyllite (AN)	0	0.0E+00	blank	blank - blank
crocidolite (CR)	0	0.0E+00	blank	blank - blank
tremolite (TR)	0	0.0E+00	blank	blank - blank
Libby amphibole (LA)	0	0.0E+00	blank	blank - blank
other amphibole (OA)	0	0.0E+00	blank	blank - blank
other mineral class (OM)	0	0.0E+00	blank	blank - blank
Solid Soln: Amosite	0	0.0E+00	blank	blank - blank
Solid Soln: Trem-Act	0	0.0E+00	blank	blank - blank
Berman Crump (2003) Structures				
Total Asbestos	0	0.0E+00	blank	blank - blank
Total Chrysotile (CH)	0	0.0E+00	blank	blank - blank
Total Amphibole	0	0.0E+00	blank	blank - blank
actinolite (AC)	0	0.0E+00	blank	blank - blank
amosite (AM)	0	0.0E+00	blank	blank - blank
anthophyllite (AN)	0	0.0E+00	blank	blank - blank
crocidolite (CR)	0	0.0E+00	blank	blank - blank
tremolite (TR)	0	0.0E+00	blank	blank - blank
Libby amphibole (LA)	0	0.0E+00	blank	blank - blank
other amphibole (OA)	0	0.0E+00	blank	blank - blank
other mineral class (OM)	0	0.0E+00	blank	blank - blank
Solid Soln: Amosite	0	0.0E+00	blank	blank - blank
Solid Soln: Trem-Act	0	0.0E+00	blank	blank - blank

Binning Rule Description:

Apply to fibers (F) only:

L ≥ 0.5um, AR ≥ 3

No restrictions for other structure types.

Binning Rule Description:

Apply to all structures where Total column > 0:

L > 5um, W ≥ 0.25um, AR ≥ 3

Binning Rule Description:

Apply to fibers (F) only:

L ≥ 0.5um, AR ≥ 5

No restrictions for other structure types.

Most "secondary" structures (structures that are part of a primary complex structure) are excluded.

Binning Rule Description:

Apply to all structures where Total column > 0:

L > 10um, W ≤ 0.4um

(a) Based on countable structures only

(b) Loading on Filter (s/mm²) = N structures / (GOs Counted * GO Area)

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000)

Dust Loading (s/cm²) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area)

(d) Yamate results are expected to be similar to AHERA, but use of AHERA for Yamate may be biased low due to the exclusion of structures <0.5um.

Enter Site or Project Name Here:		R01-091222-IM-12/23/09-0001		Site/Project Identifier Code: 0806F	
State/Federal Site or Project Identifier:		Case: 0806F			
Laboratory name:	MAS	Client Sample Number:		Number of grids prepared:	3
Instrument:	JEOL 1200EX	Date received by lab:		Prepared by:	ddmount
Voltage (KV):	100	Lab Job Number:	M50355	Preparation date:	12/29/09
Magnification:	20 K	Lab Sample Number:	M50355-000	Preparation Type: (D=Direct, I=Indirect, IA=Indirect, ashed)	indirect
Grid opening area (mm ²):	0.0114	Chain of Custody Number:	R01-091222-IM-12/23/09-0001	Primary Filter Area (mm ²):	
Scale: 1L =	1.000			Secondary Filter Area (mm ²):	1287
Scale: 1D =	1.000	Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)	Lab QC	F- factor:	
Filter Size (mm):		QC Sample Type: (Not QC, LB=Lab Blank, RS=Recount Same, RD, Recount Diff., RP=Reprep., VA=Verified Analysis, IL=Interlab)	Lab Blank	Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)	analyzed
Filter Pore Size (um):	0.450	Media: (Air, Dust, N/A)	N/A	Analyzed by:	<i>[Signature]</i>
Method SOP (Revision No.):	5755.030	Air volume (L) or dust area (cm ²):		Analysis date:	1-7-10
Grid Storage Location:	7728.000				

Indirect Prep, Not Ashed	
1	Fraction of primary filter used
100	Total resuspension volume (mL)
50	Volume applied to secondary filter (mL)

Indirect Prep, Ashed	
	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)

COMMENTS

If sample was analyzed using more than one TEM Instrument, enter TEM Instrument details below.	
Instrument #2	Instrument #3
Instrument:	
Voltage (KV):	
Magnification:	

If sample was analyzed by more than one analyst or across multiple analysis dates, enter analysis details below.	
Analyst #2	Analyst #3
Analyzed by:	
Analysis date:	

IMPORTANT NOTE: If this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates, be sure to complete the column labeled "Multiple" when entering raw structure results for each grid opening.

STRUCTURE INFORMATION

Preparation Type	indirect
Analysis Date	1-7-10

1130

(a) Enter dimensions either in absolute units (um) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

(b) See Annex D of ISO 10312 for identification codes.

other mineral type	(specify in "other mineral description" field)
OM	
Amosite	Solid solution series: Amosite, cummingtonite-grunerite
Trem-Act	Solid solution series: Tremolite-Actinolite

(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

Enter Site or Project Name Here:

State/Federal Site or Project Identifier:

Laboratory name: MAS

Instrument: JEOL 1200EX#4

Voltage (kV): 100

Magnification: 20 K

Grid opening area (mm²): 0.0113

Scale: 1L = 1.000

Scale: 1D = 1.000

Filter Size (mm): 25.000

Filter Pore Size (um): 0.450

Method SOP (Revision No.): 5755.03

Grid Storage Location: 7728.000

R01-091222JM

0806F

Site/Project Identifier Code: 0806F

Client Sample Number: D24192

Date received by lab: 12/28/09

Lab Job Number: M50355

Lab Sample Number: M50355-002

Chain of Custody Number: 91222JM-12/23/09-000

Sample Type: Field Sample

QC Sample Type: Recount Sam

Media: Dust

Air volume (L) or dust area (cm²): 300

Number of grids prepared: 3

Prepared by: ddmount

Preparation date: 12/29/09

Preparation Type: Indirect

Primary filter area (mm²): 385

Secondary Filter Area (mm²): 1297

F- factor: [proposed value shown, cell formula can be over-written if necessary]

Filter Status: Analyzed

Analyzed by: M.Motamedi

Analysis date: 01/07/10

F-factor Input Parameters:

Indirect Prep, Not Ashed	
1	Fraction of primary filter used
100	Total resuspension volume (mL)
0.3	Volume applied to secondary filter (mL)
0.003	F-factor

Indirect Prep, Ashed	
	Fraction of primary filter used
	Total resuspension volume, pre-ashing (mL)
	Volume applied to filter for ashing (mL)
	Fraction of filter that was ashed
	Volume used to resuspend ashed residue (mL)
	Volume applied to secondary filter (mL)
	F-factor

COMMENTS

Location: P0001-BD01-02 Sub Location: AS-02; two serial dilutions were prepared to put final volume of 0.3ml of the original resuspension onto the secondary filter

☐ Check box if this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates

National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM
ANALYTICAL REPORT

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	D24192	Lab Sample Number	M50355-002	Effective filter area (mm ²)	1297
Media	Dust	Preparation	Indirect	F-factor	3.00E-03
Sample Type	Field Sample	Sample Status	Analyzed	Grid opening area (mm ²)	0.0113
Dust Collection Area (300)		Analysis Date	1/7/2010	# GOs counted	10
QA Sample Type	RS	Method SOP	5755.03	Sensitivity (1/cm2)	1.3E+04
Stopping Rule(s): GO = 10, Structures = 100, Sensitivity = 1.00E+03					

Desired Confidence Interval (%): 95

Number of Structures with Fatal Data Entry Errors 0
(Structures with fatal errors are excluded from calculations below)

Mineral Class	Number of Structures (a)	Loading on Filter (b) (s/mm ²)	Dust Loading (c) (s/cm ²)	95% Confidence Interval	
TOTAL TEM-EPASM Structures					Binning Rule Description:
Total Asbestos	5	4.4E+01	6.4E+04	2.1E+04 - 1.5E+05	Apply to fibers (F) only: $L \geq 0.5\mu\text{m}$, $AR \geq 3$ No restrictions for other structure types.
Total Chrysotile (CH)	1	8.8E+00	1.3E+04	3.2E+02 - 7.1E+04	
Total Amphibole	4	3.5E+01	5.1E+04	1.4E+04 - 1.3E+05	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
tremolite (TR)	1	8.8E+00	1.3E+04	3.2E+02 - 7.1E+04	
Libby amphibole (LA)	3	2.7E+01	3.8E+04	7.9E+03 - 1.1E+05	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
PCM Equivalent Structures (PCME)					Binning Rule Description:
Total Asbestos	3	2.7E+01	3.8E+04	7.9E+03 - 1.1E+05	Apply to all structures where Total column > 0: $L > 5\mu\text{m}$, $W \geq 0.25\mu\text{m}$, $AR \geq 3$
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Total Amphibole	3	2.7E+01	3.8E+04	7.9E+03 - 1.1E+05	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
tremolite (TR)	1	8.8E+00	1.3E+04	3.2E+02 - 7.1E+04	
Libby amphibole (LA)	2	1.8E+01	2.6E+04	3.1E+03 - 9.2E+04	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
AHERA (d) Structures					Binning Rule Description:
Total Asbestos	5	4.4E+01	6.4E+04	2.1E+04 - 1.5E+05	Apply to fibers (F) only: $L \geq 0.5\mu\text{m}$, $AR \geq 5$ No restrictions for other structure types. Most "secondary" structures (structures that are part of a primary complex structure) are excluded.
Total Chrysotile (CH)	1	8.8E+00	1.3E+04	3.2E+02 - 7.1E+04	
Total Amphibole	4	3.5E+01	5.1E+04	1.4E+04 - 1.3E+05	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
tremolite (TR)	1	8.8E+00	1.3E+04	3.2E+02 - 7.1E+04	
Libby amphibole (LA)	3	2.7E+01	3.8E+04	7.9E+03 - 1.1E+05	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Berman Crump (2003) Structures					Binning Rule Description:
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	Apply to all structures where Total column > 0: $L > 10\mu\text{m}$, $W \leq 0.4\mu\text{m}$
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	

(a) Based on countable structures only

(b) Loading on Filter (s/mm²) = N structures / (GOs Counted * GO Area)

(c) Air Concentration (s/cc) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Air Volume * 1000)

Dust Loading (s/cm²) = (N structures * EFA) / (GOs Counted * GO Area * F-factor * Dust Collection Area)

(d) Yamate results are expected to be similar to AHERA, but use of AHERA for Yamate may be biased low due to the exclusion of structures <0.5μm.

Enter Site or Project Name Here:		R01-091222JM-12/23/09-0001		Site/Project Identifier Code: 0806F	
State/Federal Site or Project Identifier:		Case: 0806F			

Laboratory name:	MAS	Client Sample Number:	D24192
Instrument:	JEOL 1200EX	Date received by lab:	12/28/09
Voltage (kV):	100	Lab Job Number:	M50355
Magnification:	20 K	Lab Sample Number:	M50355-002
Grid opening area (mm ²):	8.0113	Chain of Custody Number:	R01-091222JM-12/23/09-0001
Scale: 1L =	1.000	Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)	field sample
Scale: 1D =	1.000	QC Sample Type: (Not QC, LB=Lab Blank, RS=Recount Same, RD, Recount Diff, RP=RepRap, VA=Verified Analysis, IL=Interlab)	recount same
Filter Size (mm):	25.000	Media: (Air, Dust, N/A)	dust
Filter Pore Size (um):	0.450	Air volume (L) or dust area (cm ²):	300
Method SOP (Revision No.):	5755.030		
Grid Storage Location:	7728		

Number of grids prepared:	3
Prepared by:	ddmount
Preparation date:	12/28/09
Preparation Type: (D=Direct, IA=Indirect, IA=Indirect, ashed)	Indirect
Primary Filter Area (mm ²):	385
Secondary Filter Area (mm ²):	1297
F- factor:	
Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)	analyzed
Analyzed by:	<i>[Signature]</i>
Analysis date:	1-7-10

Indirect Prep, Not Ashed	Indirect Prep, Ashed
1	Fraction of primary filter used
100	Total resuspension volume (mL)
3	Volume applied to secondary filter (mL)

F-factor Input Parameters:

COMMENTS

Location: P0001-BD01-02 Sub Location: AS-02

If sample was analyzed using more than one TEM Instrument, enter TEM Instrument details below.

Instrument #2	Instrument #3
Instrument:	
Voltage (KV):	
Magnification:	

If sample was analyzed by more than one analyst or across multiple analysis dates, enter analysis details below.

Analyst #2	Analyst #3
Analyzed by:	
Analysis date:	

IMPORTANT NOTE: If this sample was analyzed using more than one Instrument, by more than one analyst, or across multiple analysis dates, be sure to complete the column labeled "Multiple" when entering raw structure results for each grid opening.

STRUCTURE INFORMATION

Client Sample No.:	D24192
Lab Sample No.:	M50355-002

Sample Type	dust
QC Sample Type	not QA

Preparation Type	indirect
Analysis Date	11/7/10

[illegible]

(a) Enter dimensions either in absolute units (um) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

(b) See Annex D of ISO 10312 for identification codes.

(c) Valid Mineral Types:

AC actinolite

AM amosite

AN anthophyllite

CH chrysotile

CR crocidolite

TR tremolite

LA Libby amphibole

OA other amphibole

JAM non-asbestos ma

OM

mosite

em-Act

other mineral type

Solid solution series

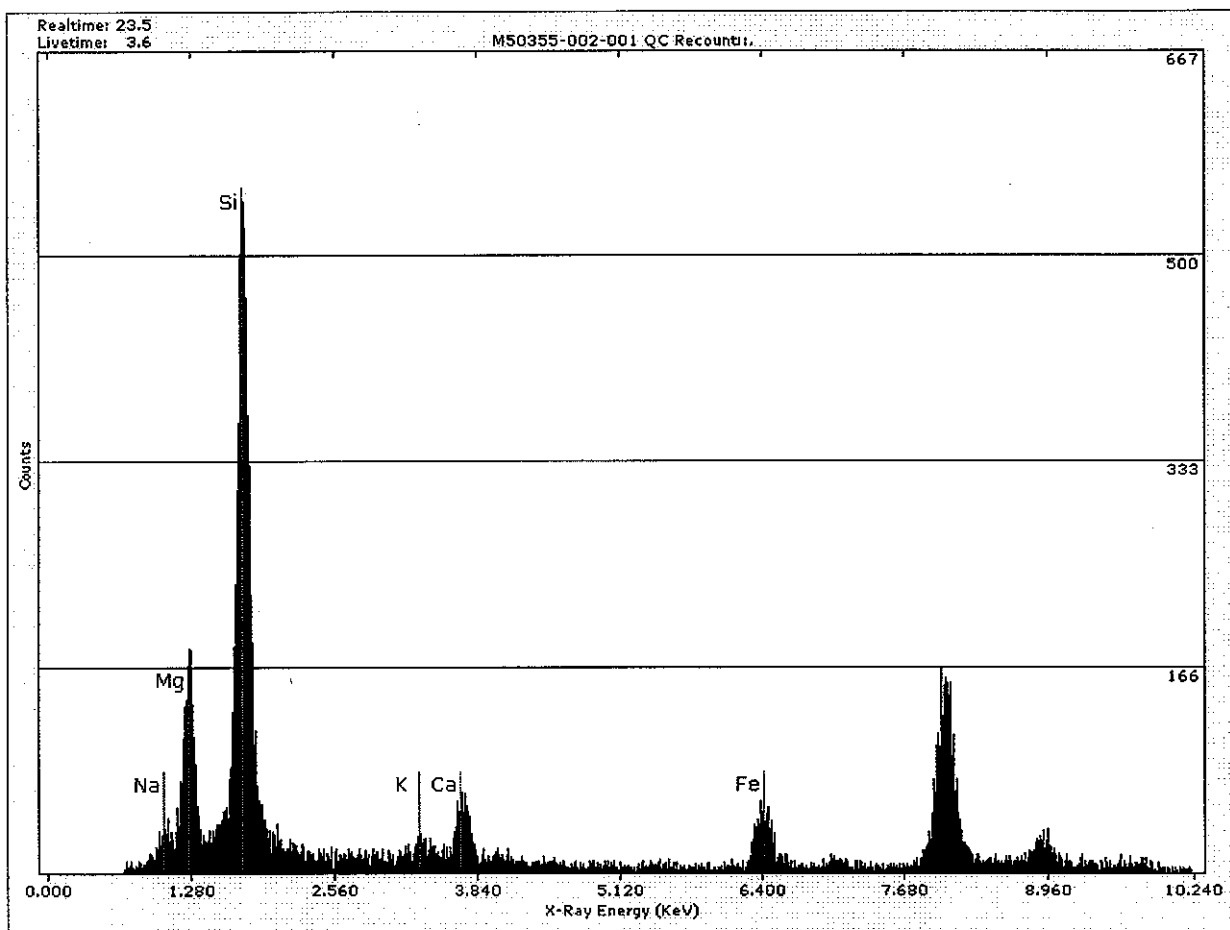
Solid solution series

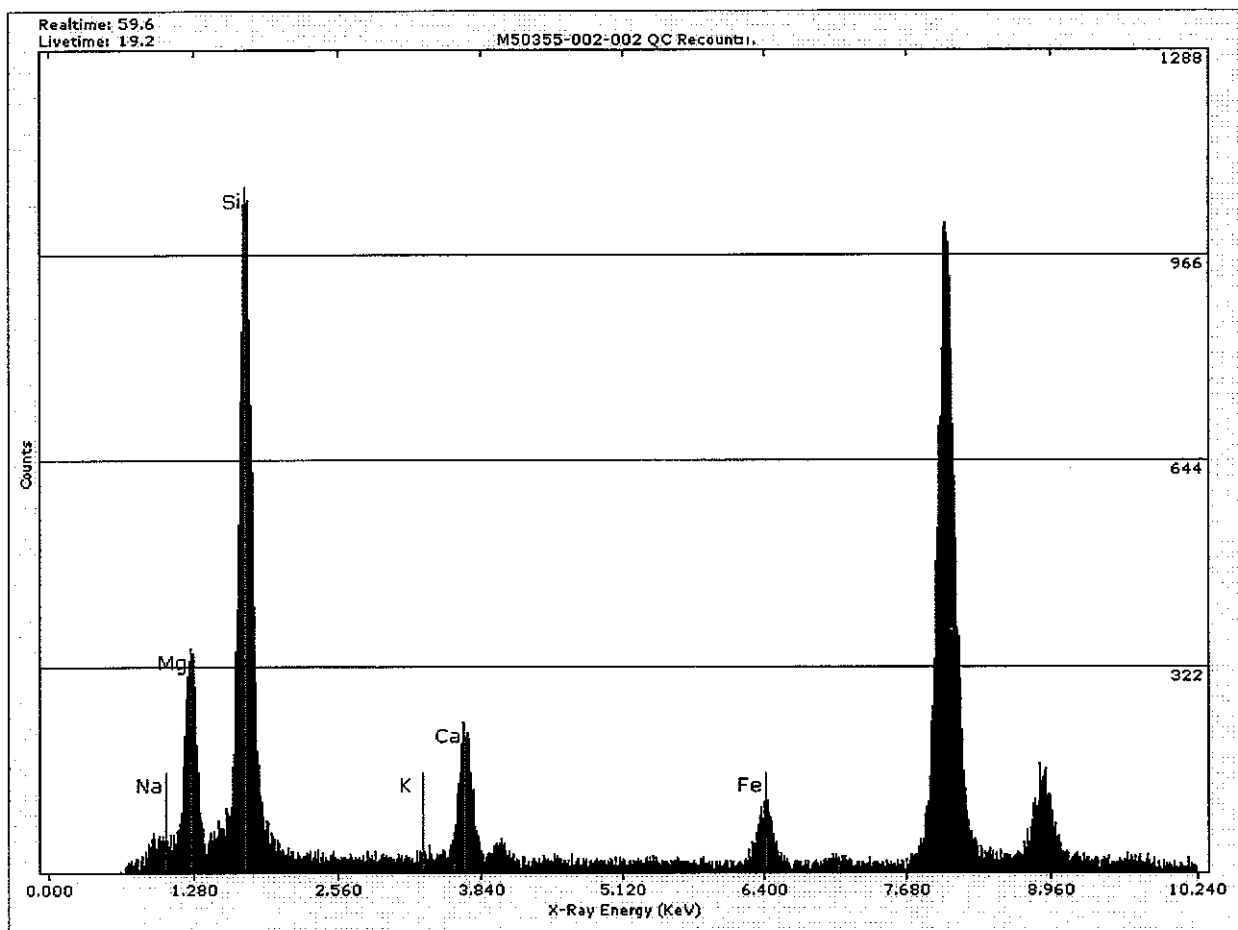
(specify in "other mineral description" field)

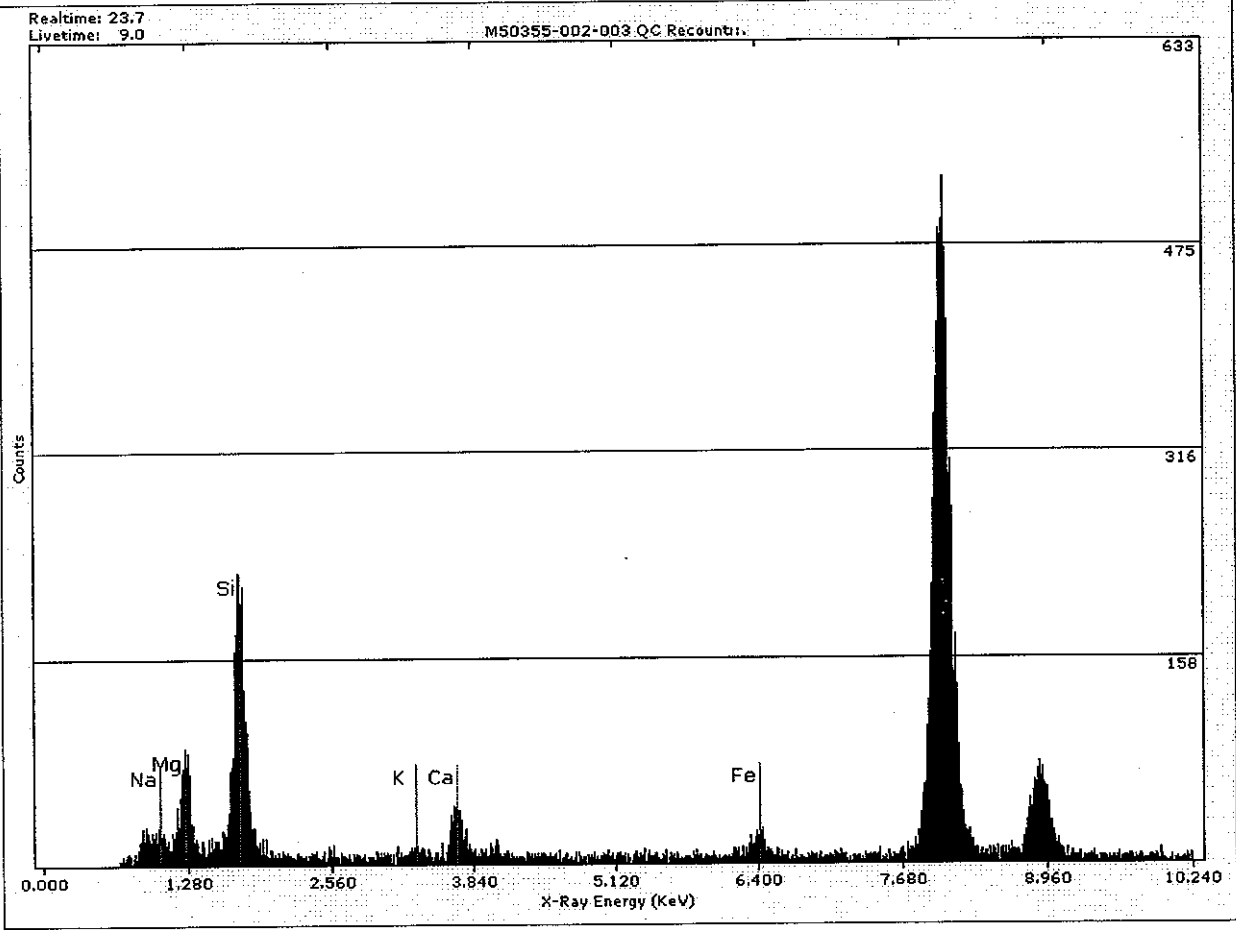
mosite, cummingtonite-grunerite

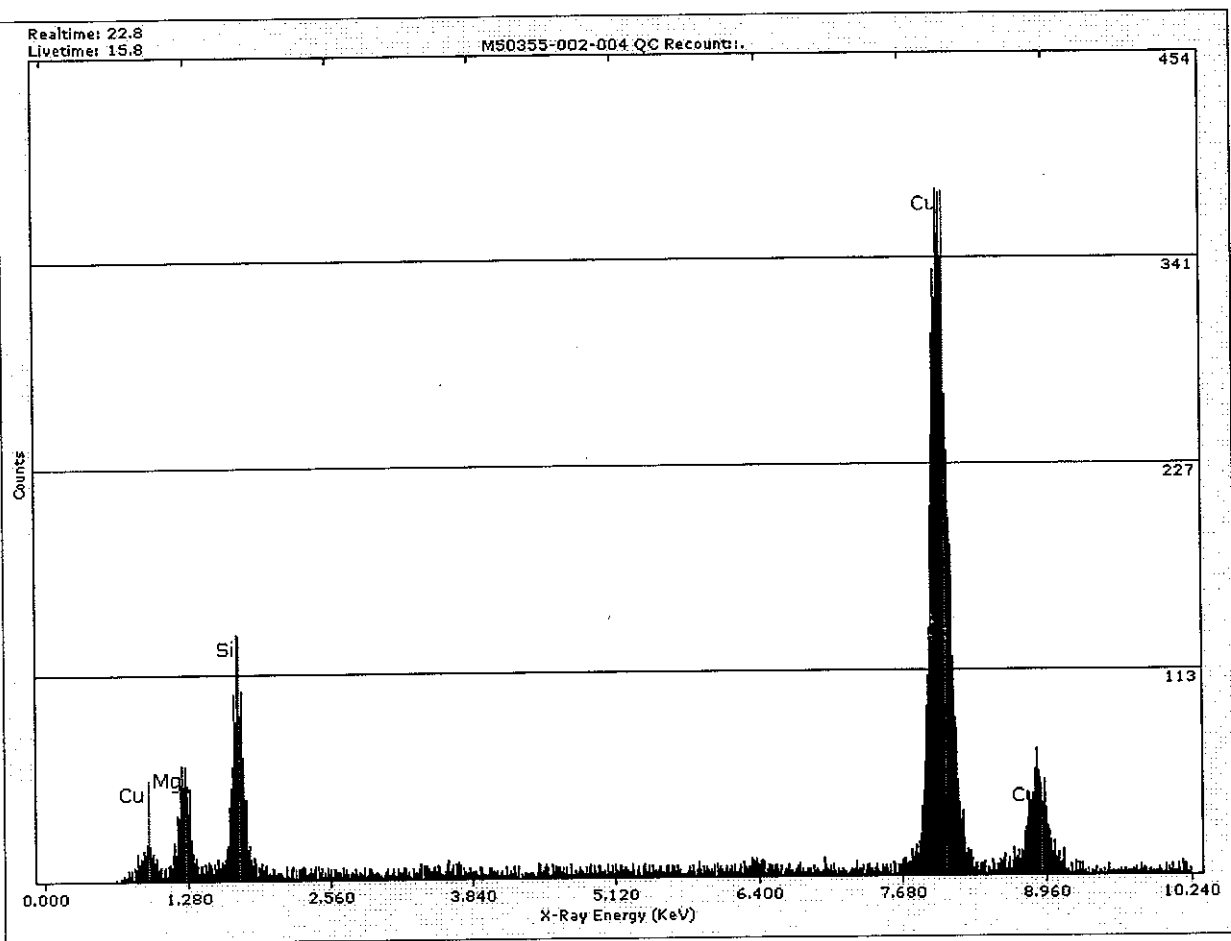
Pre-molite-Actinolite

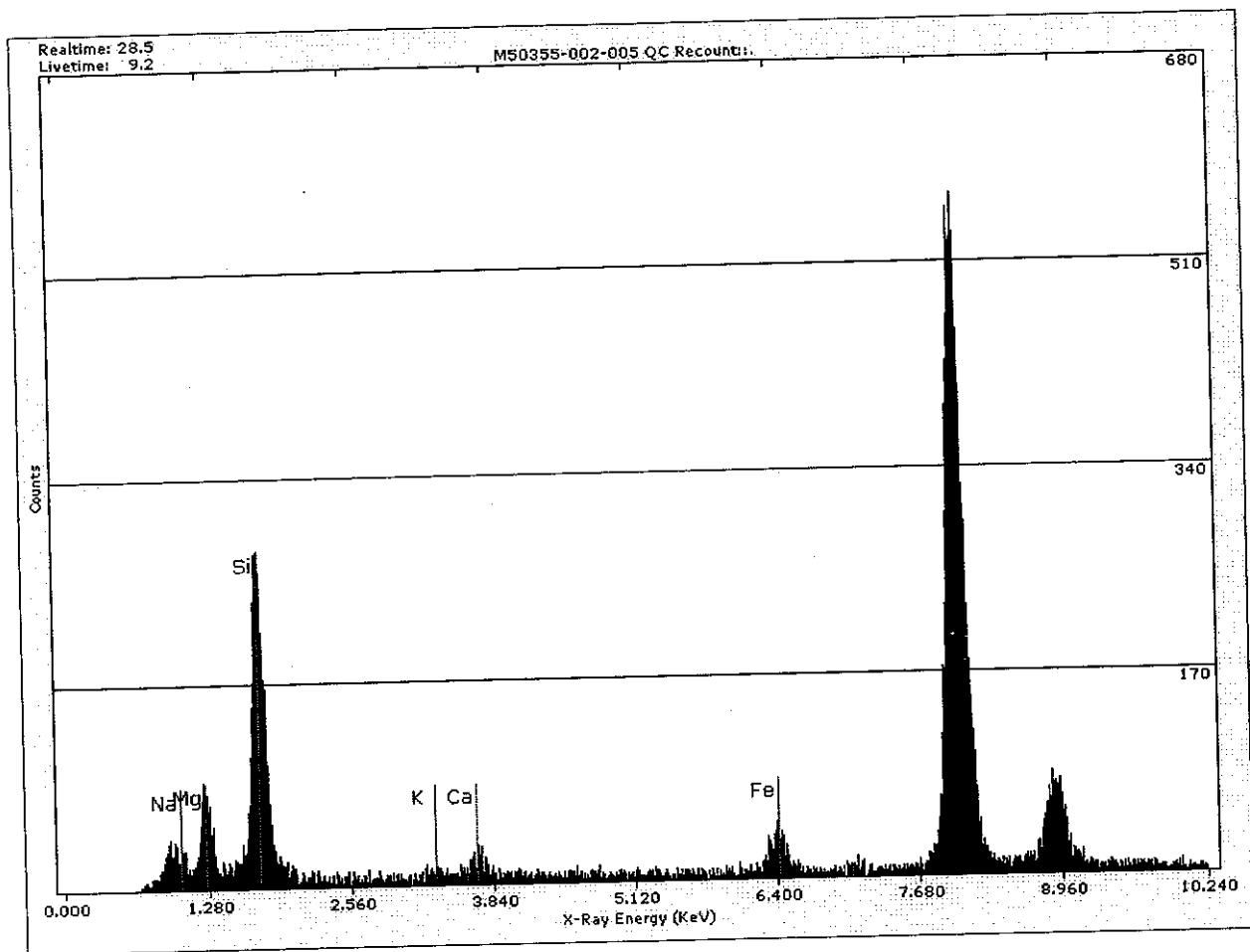
(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.











SECTION 3



PLM Report Forms

For

Dust and Bulk Sample Report

Site No.: R01-091222JM

Client No. 0806F

MAS Project No.: M50355



MAS, LLC
PLM ANALYSIS

Proj#-Spl# M50356 - 001 Analyst W.B. Egeland Date 1/7/2010
ClientName Weston Solutions, Inc. ClientSpl D24200
Location P0001-BD01-10
Type_Mat bulk
Gross Gold to dark brown. Flakes and books as well as remnants of plaster, gypsum board and paint
Visual materials.

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS

EST. VOL. %

NO ASBESTOS OBSERVED

Chrysotile.....
Amosite.....
Crocidolite.....
Tremolite/Actinolite.....
Anthophyllite.....

OTHER FIBROUS COMPONENTS

Cellulose -ribbony

X

NON FIBROUS COMPONENTS

Mineral grains
Vermiculite

X
X

Binder Description _____

Comments X = Materials detected. No asbestos observed after eight fields of view.

The method detection limit is 0.25% unless otherwise stated.

**MAS, LLC
PLM ANALYSIS**



Proj#-Spl# M50356 - 002 Analyst W.B. Egeland Date 1/7/2010
 ClientName Weston Solutions, Inc. ClientSpl D24201
 Location P0001-BD01-11
 Type_Mat bulk

Gross Gold to dark brown. Flakes and books as well as remnants of ceiling tile.
 Visual _____

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	<u>straight</u>		
Pleochroism	<u>none</u>		
Refract Index	<u>1.630/1.623</u>		
Sign^	<u>+</u>		
Extinction	<u>oblique</u>		
Birefringence	<u>low/mod</u>		
Melt	<u>no</u>		
Fiber Name	<u>tremolite/actinolite</u>		

ASBESTOS MINERALS

EST. VOL. %

Chrysotile.....
 Amosite.....
 Crocidolite.....
 Tremolite/Actinolite.....
 Anthophyllite.....

Trace

OTHER FIBROUS COMPONENTS

Min wool -isotropic
 Cellulose -ribbony

X
X

NON FIBROUS COMPONENTS

Perlite

 Vermiculite
 Binder

X

X
X

Binder Description _____

Comments X = Materials detected. No points out of 400 points contained asbestos. One small bundle of "Libby Amphibole" tremolite/actinolite observed in sample.

The method detection limit is 0.25% unless otherwise stated.

**MAS, LLC
PLM ANALYSIS**



Proj#-Spl# M50356 - 003 Analyst W.B. Egeland Date 1/7/2010
 ClientName Weston Solutions, Inc. ClientSpl D24202
 Location P0001-BD01-12
 Type_Mat bulk

Gross Gold to dark brown. Flakes and books as well as remnants of ceiling tile.
 Visual _____

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	<u>straight</u>		
Pleochroism	<u>none</u>		
Refract Index	<u>1.630/1.623</u>		
Sign^	<u>+</u>		
Extinction	<u>oblique</u>		
Birefringence	<u>low/mod</u>		
Melt	<u>no</u>		
Fiber Name	<u>tremolite/actinolite</u>		

ASBESTOS MINERALS

EST. VOL. %

Chrysotile.....
 Amosite.....
 Crocidolite.....
 Tremolite/Actinolite.....
 Anthophyllite.....

Trace

OTHER FIBROUS COMPONENTS

Min wool -isotropic
 Cellulose -ribbony

X
X

NON FIBROUS COMPONENTS

Perlite

 Vermiculite
 Binder

X

X
X

Binder Description _____

Comments X = Materials detected. No points out of 400 points contained asbestos. One small bundle of "Libby Amphibole" tremolite/actinolite observed in sample.

The method detection limit is 0.25% unless otherwise stated.

SECTION 4



Completed Chain of Custody Form

For

Dust and Bulk Sample Report

Site No.: R01-091222JM

Client No. 0806F

MAS Project No.: M50355

Chub

CHAIN OF CUSTODY RECORD

Site #: R01-091222JM

Contact Name: John Burton

Contact Phone: (978) 552-2130

No: R01-091222JM-12/23/09-0001

DateShipped: 12/23/2009

Lab: MAS

Lab Phone: (770) 866-3200

MS. A. 5. 5

<p>Special Instructions: 2-week TAT requested. Please send results to John Burton.</p>	SAMPLES TRANSFERRED FROM
	CHAIN OF CUSTODY #

[illegible]