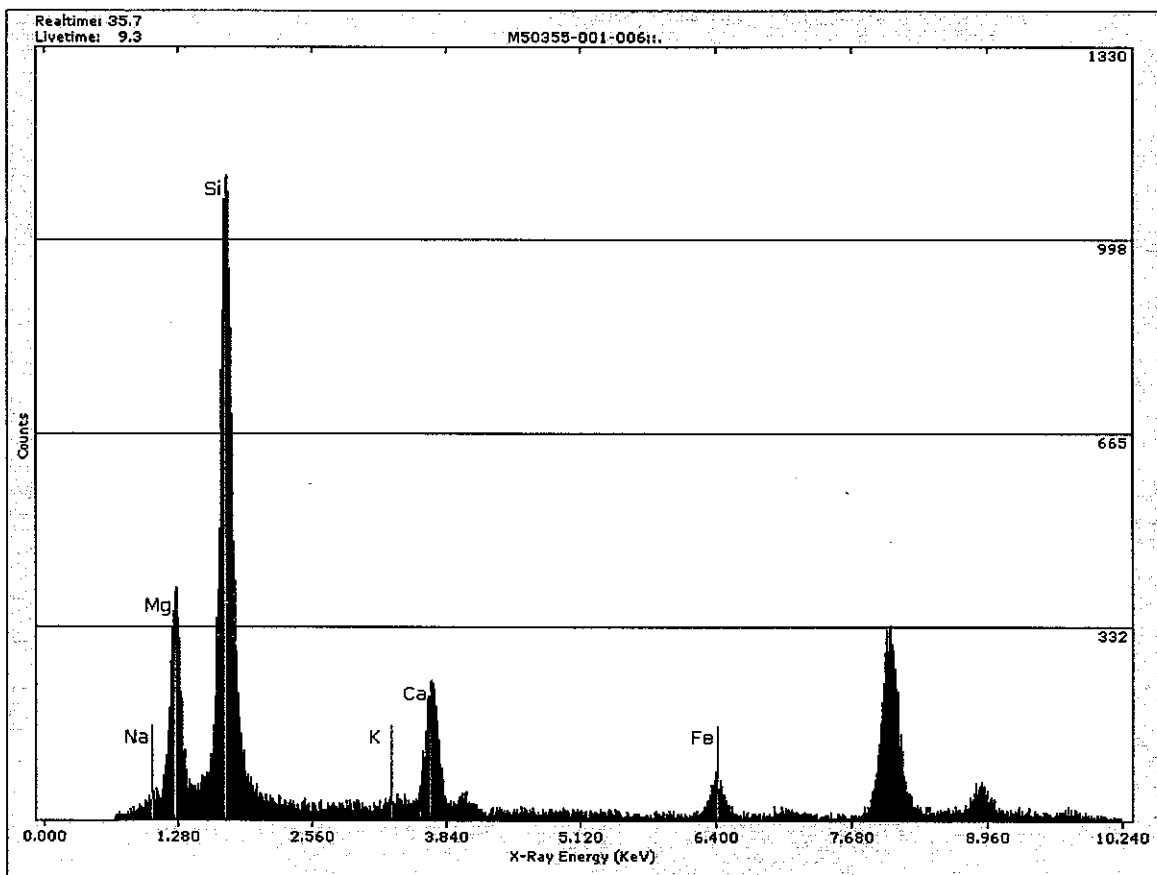


42914

M50355-001-006

1 um



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 <sup>2</sup> ):	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

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

0806F

0806F

Number of grids prepared:	3
Prepared by:	ddmunt
Preparation date:	12/29/09
Preparation Type:	Indirect
Primary filter area (mm <sup>2</sup> ):	385
Secondary Filter Area (mm <sup>2</sup> ):	1297
F-factor: [proposed value shown, cell formula can be over-written if necessary]	0.003
Filter Status:	Analyzed
Analyzed by:	M.Motamedi
Analysis date:	12/31/09

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

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 <sup>2</sup> )	1297
Media	Dust	Preparation	Indirect	F-factor	3.00E-03
Sample Type	Field Sample	Sample Status	Analyzed	Grid opening area (mm <sup>2</sup> )	0.0113
Dust Collection Area (300)		Analysis Date	#####	# GOs counted	10
QA Sample Type	Not QC	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 <sup>2</sup> )	Dust Loading (c) (s/cm2)	95% Confidence Interval	
<b>Total TEM-EPASM Structures</b>					<b>Binning Rule Description:</b>
Total Asbestos	5	4.4E+01	6.4E+04	2.1E+04 - 1.5E+05	
Total Chrysotile (CH)	1	8.8E+00	1.3E+04	3.2E+02 - 7.1E+04	Apply to fibers (F) only:
Total Amphibole	4	3.5E+01	5.1E+04	1.4E+04 - 1.3E+05	L ≥ 0.5um, AR ≥ 3
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	No restrictions for other structure types.
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	
<b>PCM Equivalent Structures (PCME)</b>					<b>Binning Rule Description:</b>
Total Asbestos	3	2.7E+01	3.8E+04	7.9E+03 - 1.1E+05	
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	Apply to all structures where Total column > 0:
Total Amphibole	3	2.7E+01	3.8E+04	7.9E+03 - 1.1E+05	L > 5um, W ≥ 0.25um, AR ≥ 3
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	
<b>AHERA(d) Structures</b>					<b>Binning Rule Description:</b>
Total Asbestos	5	4.4E+01	6.4E+04	2.1E+04 - 1.5E+05	
Total Chrysotile (CH)	1	8.8E+00	1.3E+04	3.2E+02 - 7.1E+04	Apply to fibers (F) only:
Total Amphibole	4	3.5E+01	5.1E+04	1.4E+04 - 1.3E+05	L ≥ 0.5um, AR ≥ 5
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	No restrictions for other structure types.
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	
<b>Berman Crump (2003) Structures</b>					<b>Binning Rule Description:</b>
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	
Total Chrysotile (CH)	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	Apply to all structures where Total column > 0:
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 4.7E+04	L > 10um, W ≤ 0.4um
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/mm<sup>2</sup>) = 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 &lt;0.5um.

**National Asbestos Data Entry Spreadsheet (NADES) f - & 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:	D24192	Number of grids prepared:	3
Instrument:	JEOL 1200EX	Date received by lab:	12/28/09	Prepared by:	ddmont
Voltage (KV):	100	Lab Job Number:	M50355	Preparation date:	12/29/09
Magnification:	20 K	Lab Sample Number:	M50355-002	Preparation Type: (D=Direct, I=Indirect, IA=Indirect, ashed)	indirect
Grid opening area (mm <sup>2</sup> ):	0.0113	Chain of Custody Number:	R01-091222JM-12/23/09-0001	Primary Filter Area (mm <sup>2</sup> ):	385
Scale: 1L =	1.000	Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)	field sample	Secondary Filter Area (mm <sup>2</sup> ):	1297
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	F- factor:	
Filter Size (mm):	25.000	Media: (Air, Dust, N/A)	dust	Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)	analyzed
Filter Pore Size (um):	0.450	Air volume (L) or dust area (cm <sup>2</sup> ):	300	Analized by:	M. K. A.
Method SOP (Revision No.):	5755.030			Analysis date:	12/31/09
Grid Storage Location:	7728				

Indirect Prep, Not Ashed	
1	Fraction of primary filter used
100	Total resuspension volume (mL)
300	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-BD01-02 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
Analized 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	12/31/09

(a) Enter dimensions either in absolute units ( $\mu\text{m}$ ) 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

**tremolite**

LA

OA

**NAM**

**Libby amphibole**

other amphibole

**non-asbestos ma**

OM

Amosite

## Trem-Act

other mineral type

Solid solution serie

Solid solution serie

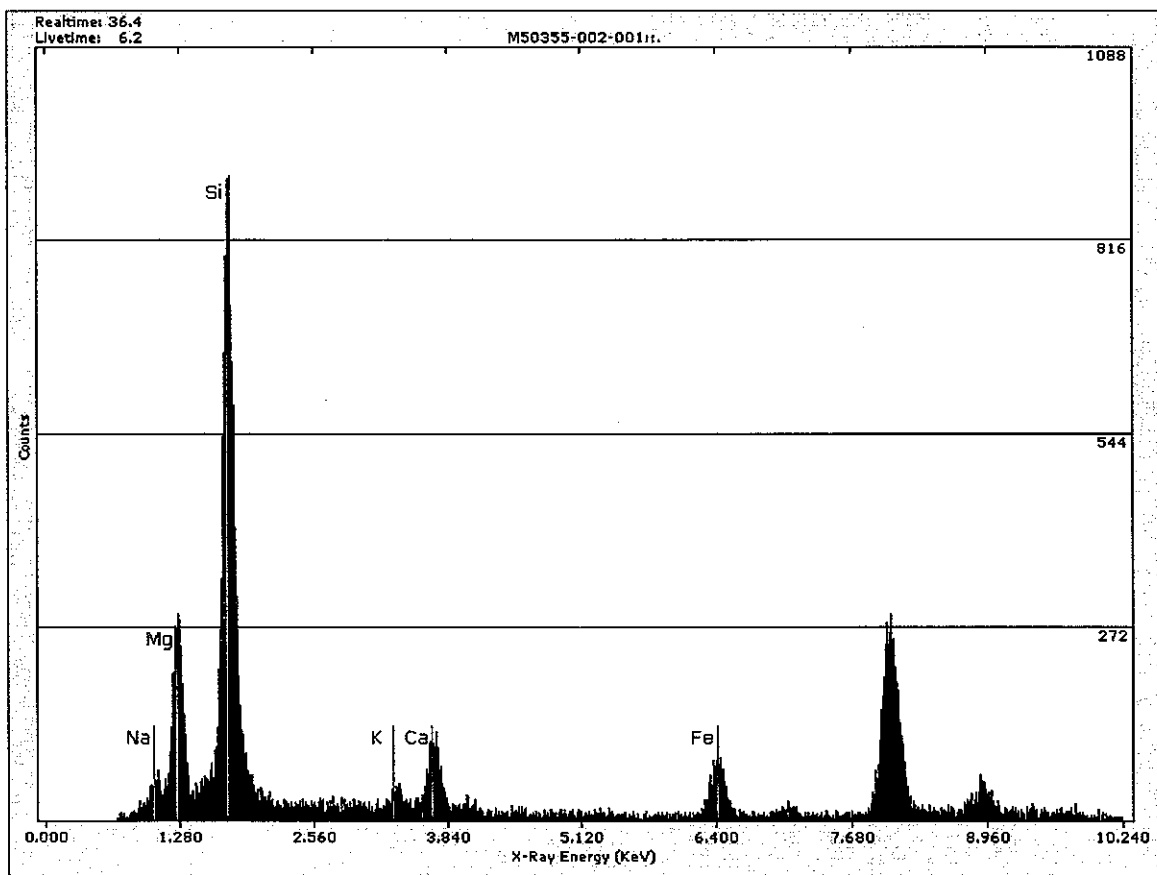
(specify in "other mineral description" field)

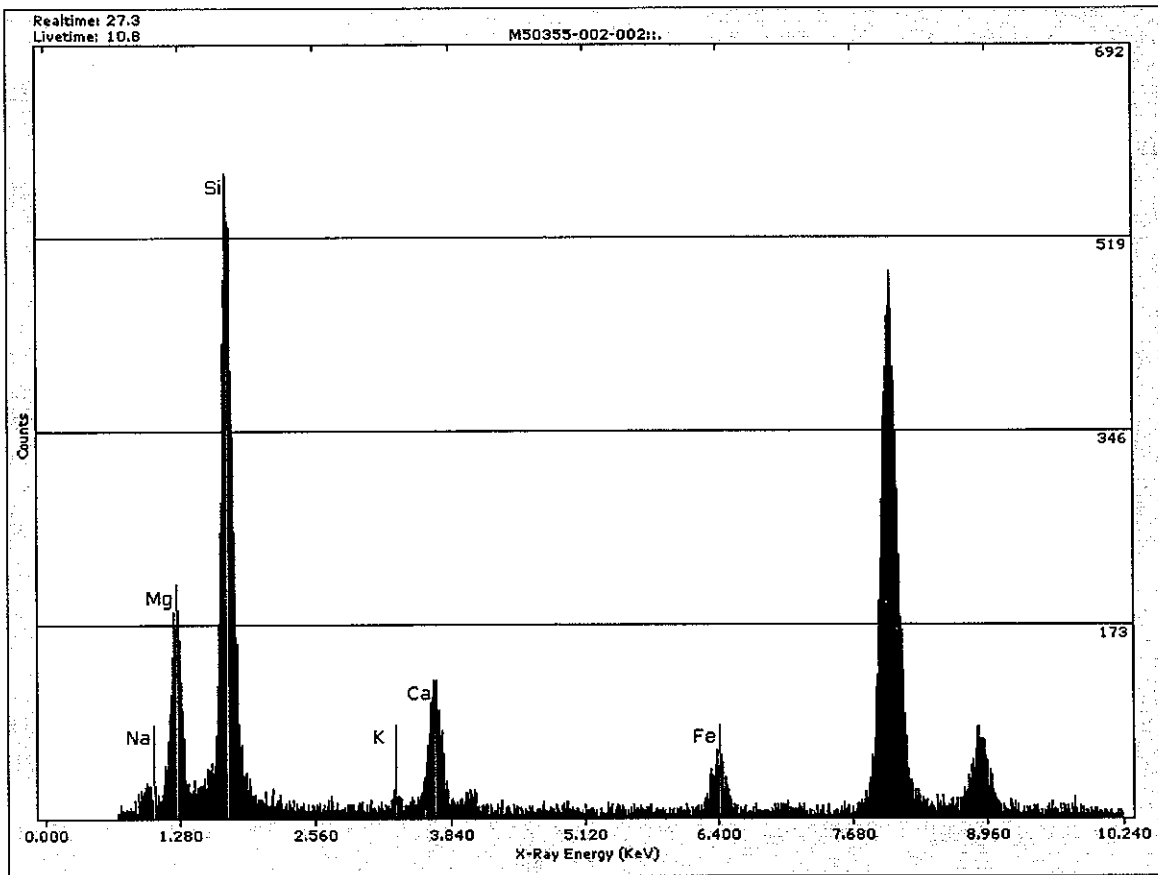
amosite, cummingtonite-grunerite

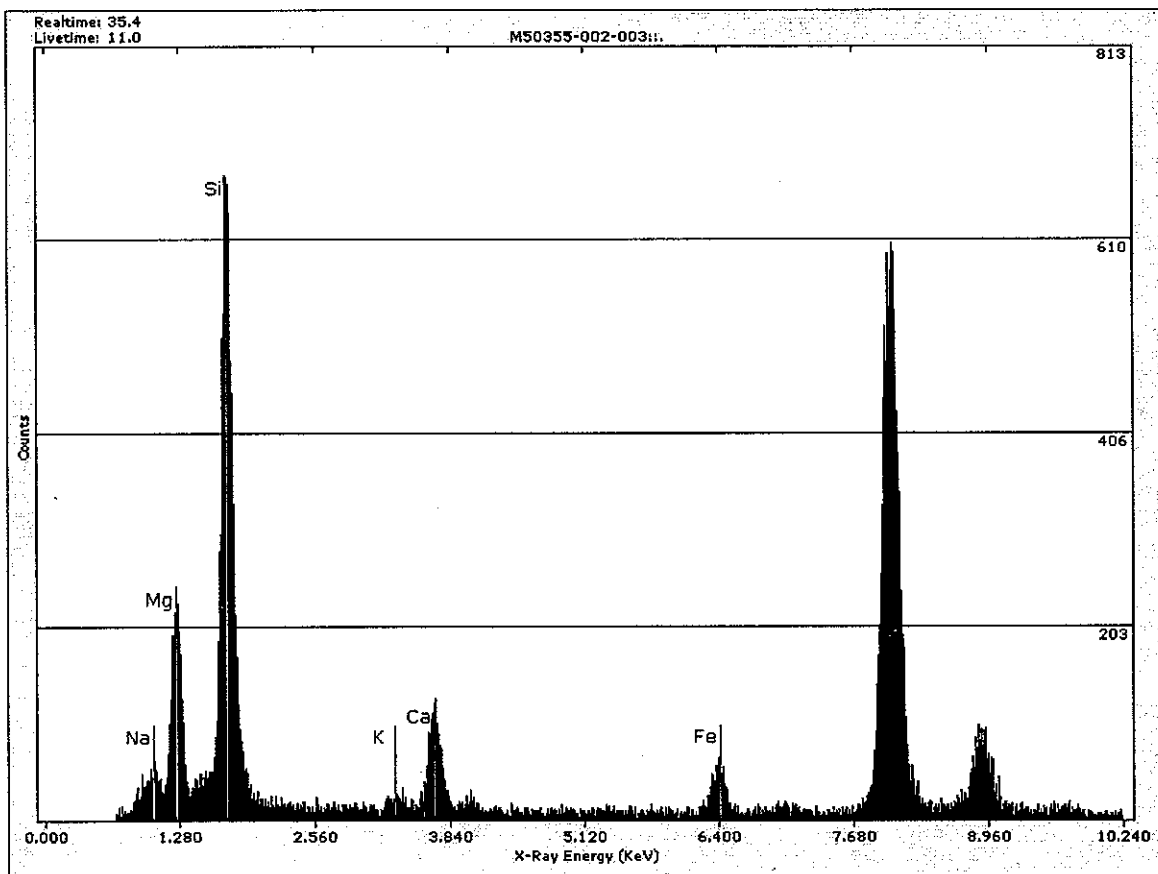
remolite-Actinolite

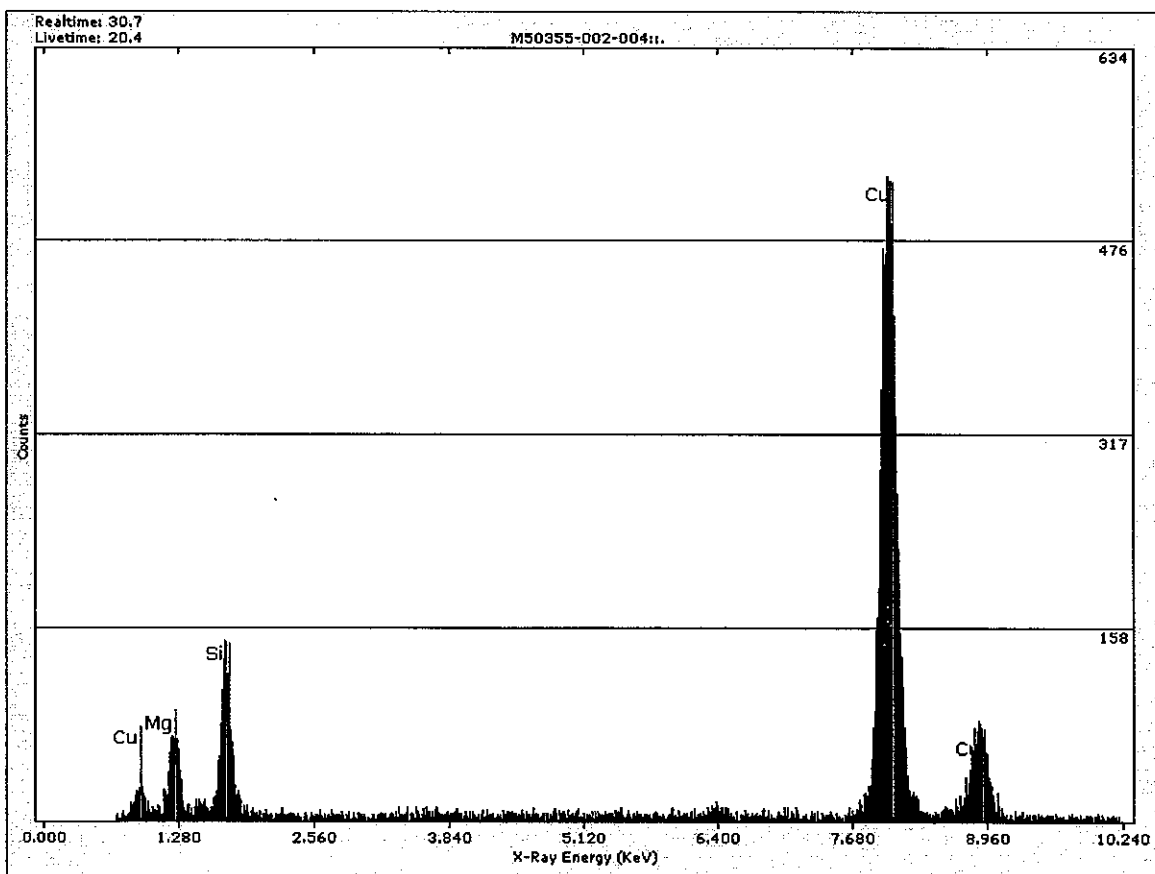
(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.

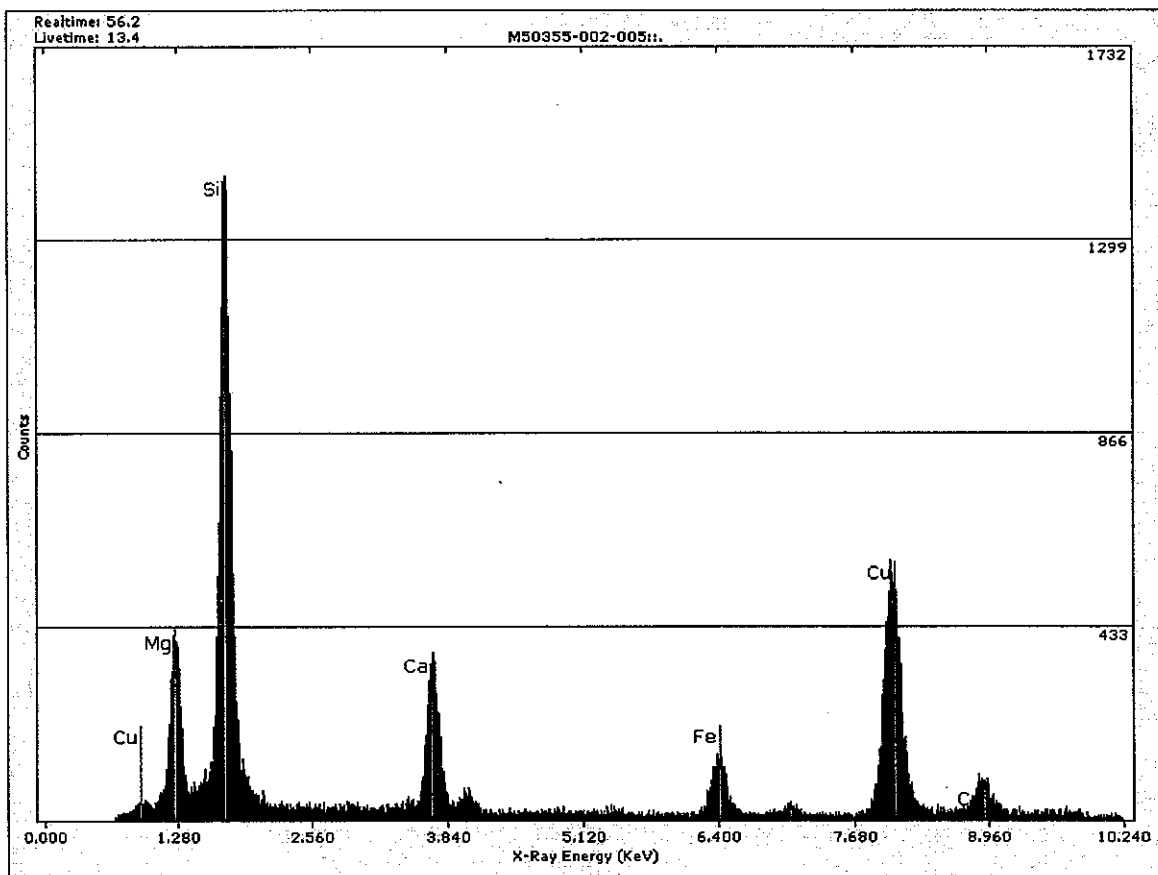












National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

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 <sup>2</sup> ):	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

Client Sample Number:	D24193
Date received by lab:	12/28/09
Lab Job Number:	M50355
Lab Sample Number:	M50355-003
Chain of Custody Number:	91222JM-12/23/09-000

0806F

Site/Project Identifier Code:

R01-081222JM  
0806F

F-factor Input Parameters:

Indirect Prep, Not Ashed

1	Fraction of primary filter used
100	Total resuspension volume (mL)
1	Volume applied to secondary filter (mL)
0.010	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 (mm <sup>2</sup> ):	385
Secondary Filter Area (mm <sup>2</sup> ):	1297
F-factor: [proposed value shown, cell formula can be over-written if necessary]	0.010
Filter Status:	Analyzed
Analyzed by:	M.Molamed
Analysis date:	12/31/09

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

COMMENTS

Location: P0001-BD01-03 Sub Location: AS-03; one serial dilution was prepared to put final volume of 1ml 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	D24193	Lab Sample Number	M50355-003	Effective filter area (mm <sup>2</sup> )	1297
Media	Dust	Preparation	Indirect	F-factor	1.00E-02
Sample Type	Field Sample	Sample Status	Analyzed	Grid opening area (mm <sup>2</sup> )	0.0116
Dust Collection Area (	300	Analysis Date	#####	# GOs counted	10
QA Sample Type	Not QC	Method SOP	5755.03	Sensitivity (1/cm2)	3.7E+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 <sup>2</sup> )	Dust Loading (c) (s/cm <sup>2</sup> )	95% Confidence Interval	
<b>Total TEM-EPASM Structures</b>					<b>Binning Rule Description:</b>
Total Asbestos	15	1.3E+02	5.6E+04	3.1E+04 - 9.2E+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)	8	6.9E+01	3.0E+04	1.3E+04 - 5.9E+04	
Total Amphibole	7	6.0E+01	2.6E+04	1.0E+04 - 5.4E+04	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
Libby amphibole (LA)	7	6.0E+01	2.6E+04	1.0E+04 - 5.4E+04	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
<b>PCM Equivalent Structures (PCME)</b>					<b>Binning Rule Description:</b>
Total Asbestos	4	3.4E+01	1.5E+04	4.1E+03 - 3.8E+04	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 - 1.4E+04	
Total Amphibole	4	3.4E+01	1.5E+04	4.1E+03 - 3.8E+04	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
Libby amphibole (LA)	4	3.4E+01	1.5E+04	4.1E+03 - 3.8E+04	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
<b>AHERA (d) Structures</b>					<b>Binning Rule Description:</b>
Total Asbestos	15	1.3E+02	5.6E+04	3.1E+04 - 9.2E+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)	8	6.9E+01	3.0E+04	1.3E+04 - 5.9E+04	
Total Amphibole	7	6.0E+01	2.6E+04	1.0E+04 - 5.4E+04	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
Libby amphibole (LA)	7	6.0E+01	2.6E+04	1.0E+04 - 5.4E+04	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
<b>Berman Crump (2003) Structures</b>					<b>Binning Rule Description:</b>
Total Asbestos	1	8.6E+00	3.7E+03	9.4E+01 - 2.1E+04	Apply to all structures where Total column > 0: $L > 10\mu\text{m}$ , $W \leq 0.4\mu\text{m}$
Total Chrysotile (CH)	1	8.6E+00	3.7E+03	9.4E+01 - 2.1E+04	
Total Amphibole	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
actinolite (AC)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
amosite (AM)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
anthophyllite (AN)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
crocidolite (CR)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
tremolite (TR)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
Libby amphibole (LA)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
other amphibole (OA)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
other mineral class (OM)	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
Solid Soln: Amosite	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	
Solid Soln: Trem-Act	0	0.0E+00	0.0E+00	0.0E+00 - 1.4E+04	

(a) Based on countable structures only

(b) Loading on Filter (s/mm<sup>2</sup>) = (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/cm<sup>2</sup>) = (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 &lt;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:	D24193	Number of grids prepared:	3
Instrument:	JEOL 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:	M50355-003	Preparation Type: (D=Direct, I=Indirect, IA=Indirect, ashed)	indirect
Grid opening area (mm <sup>2</sup> ):	0.0116	Chain of Custody Number:	R01-091222JM-12/23/09-0001	Primary Filter Area (mm <sup>2</sup> ):	385
Scale: 1L =	1.000	Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)	field sample	Secondary Filter Area (mm <sup>2</sup> ):	1297
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	F- factor:	
Filter Size (mm):	25.000	Media: (Air, Dust, N/A)	dust	Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)	analyzed
Filter Pore Size (um):	0.450	Air volume (L) or dust area (cm <sup>2</sup> ):	300	Analized by:	H. Munt
Method SOP (Revision No.):	5755.030			Analysis date:	12/31/09
Grid Storage Location:	7728.000				

F-factor Input Parameters:

Indirect Prep, Not Ashed

1	Fraction of primary filter used
100	Total resuspension volume (mL)
	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-BD01-03 Sub Location: AS-03

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
Analized 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.

## Page 10 of 10

Preparation Type	indirect
Analysis Date	12/31/09

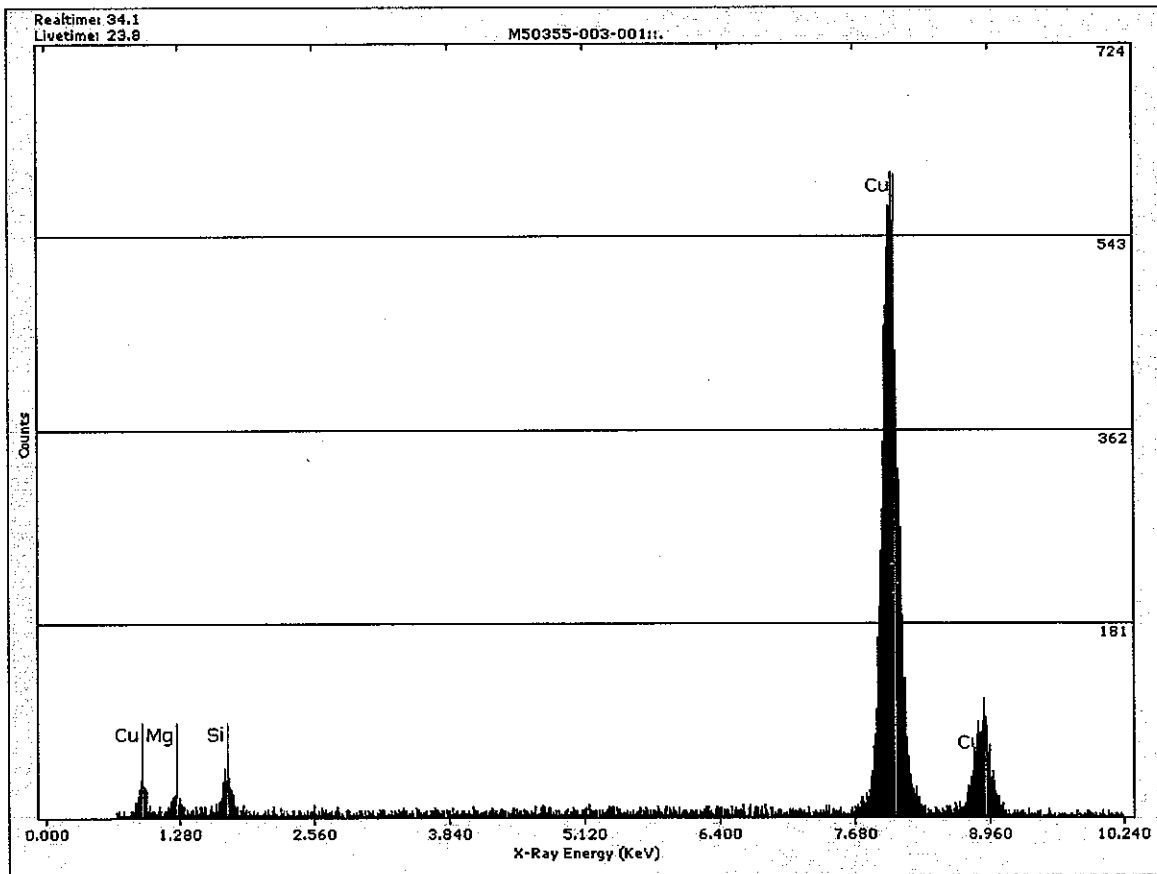
(a) Enter dimensions either in absolute units ( $\mu\text{m}$ ) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

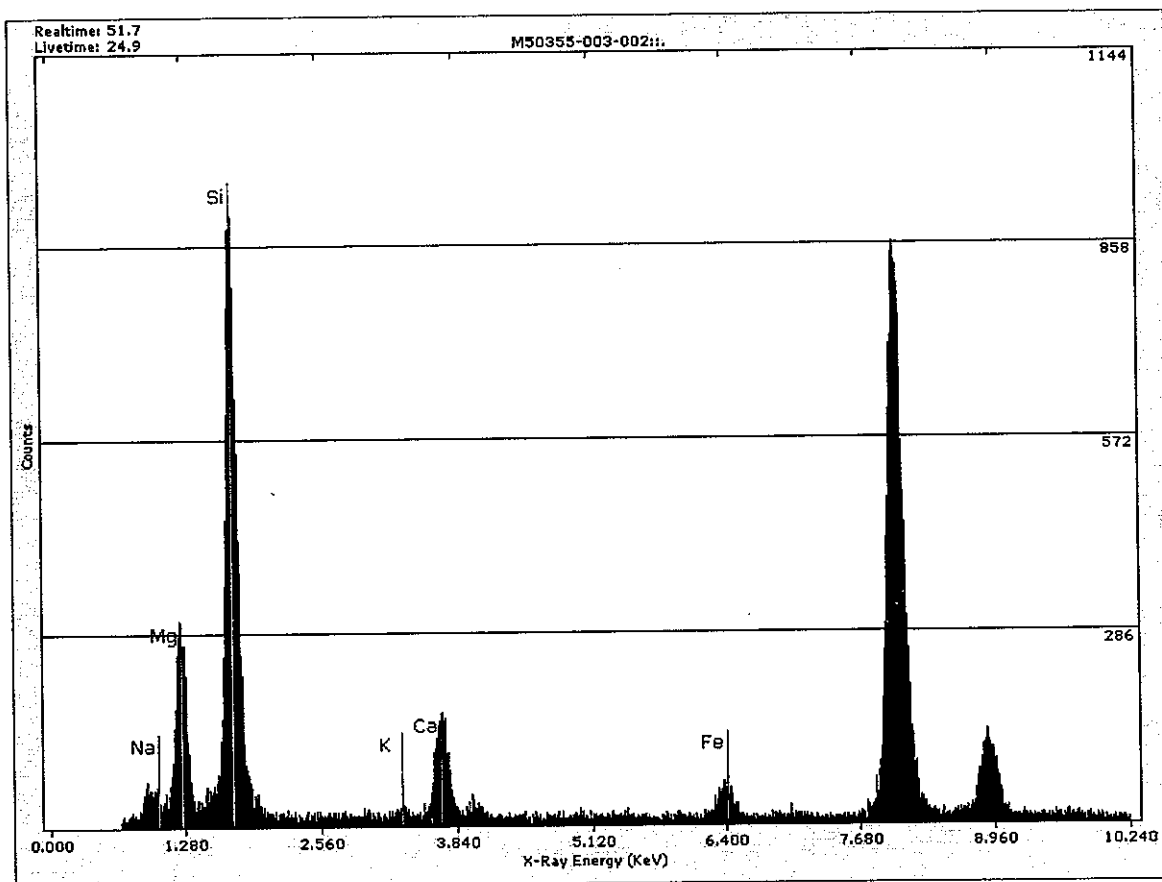
(c) Valid Mineral Types:

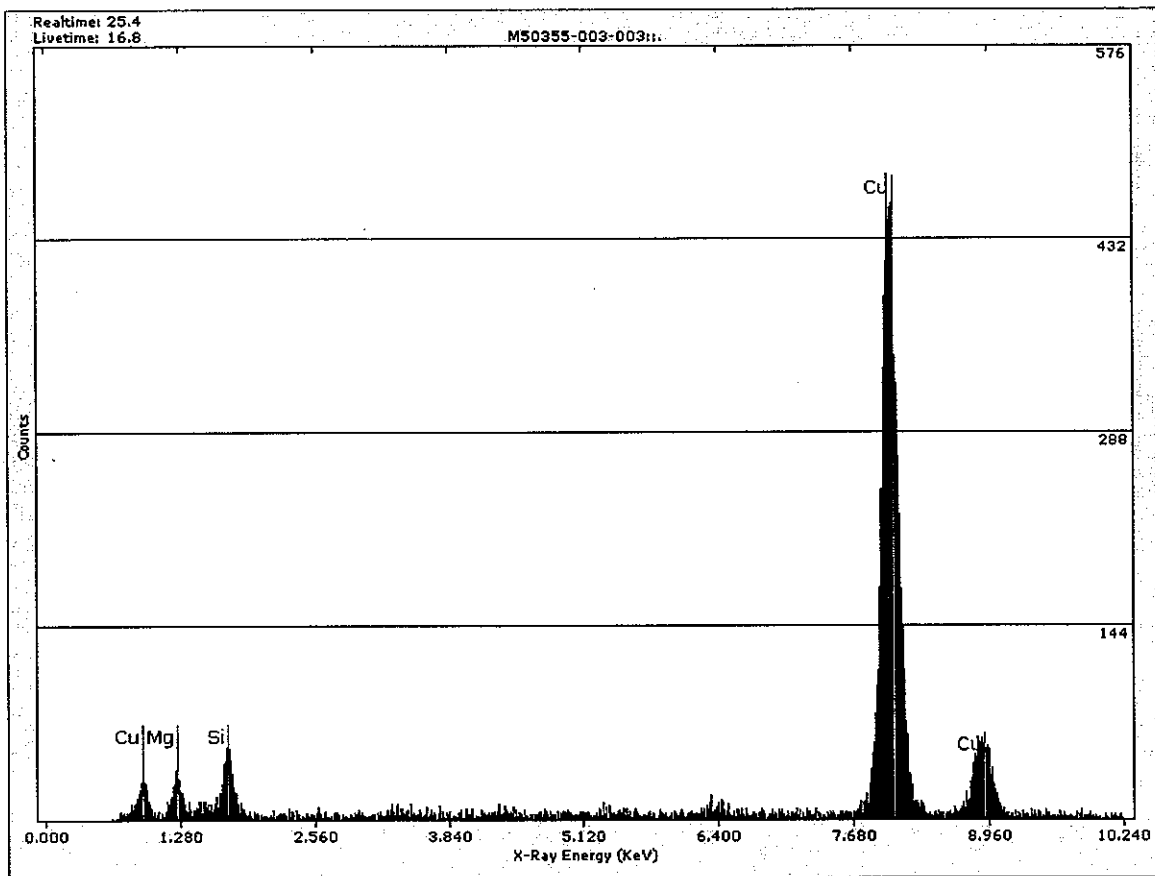
AC	actinolite
AM	amosite
AN	anthophyllite

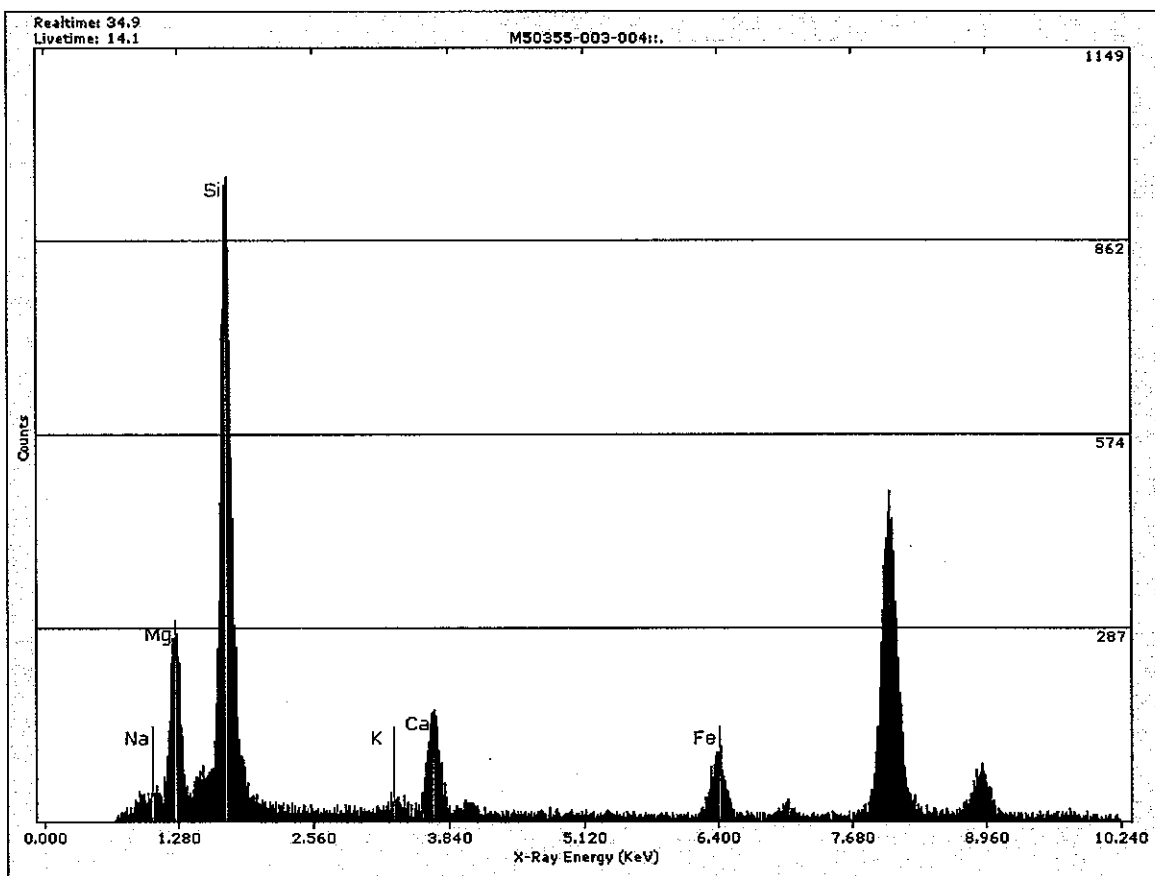
other mineral type	(specify in "other mineral description" field)
OM	
Amosite	
Trem-Act	

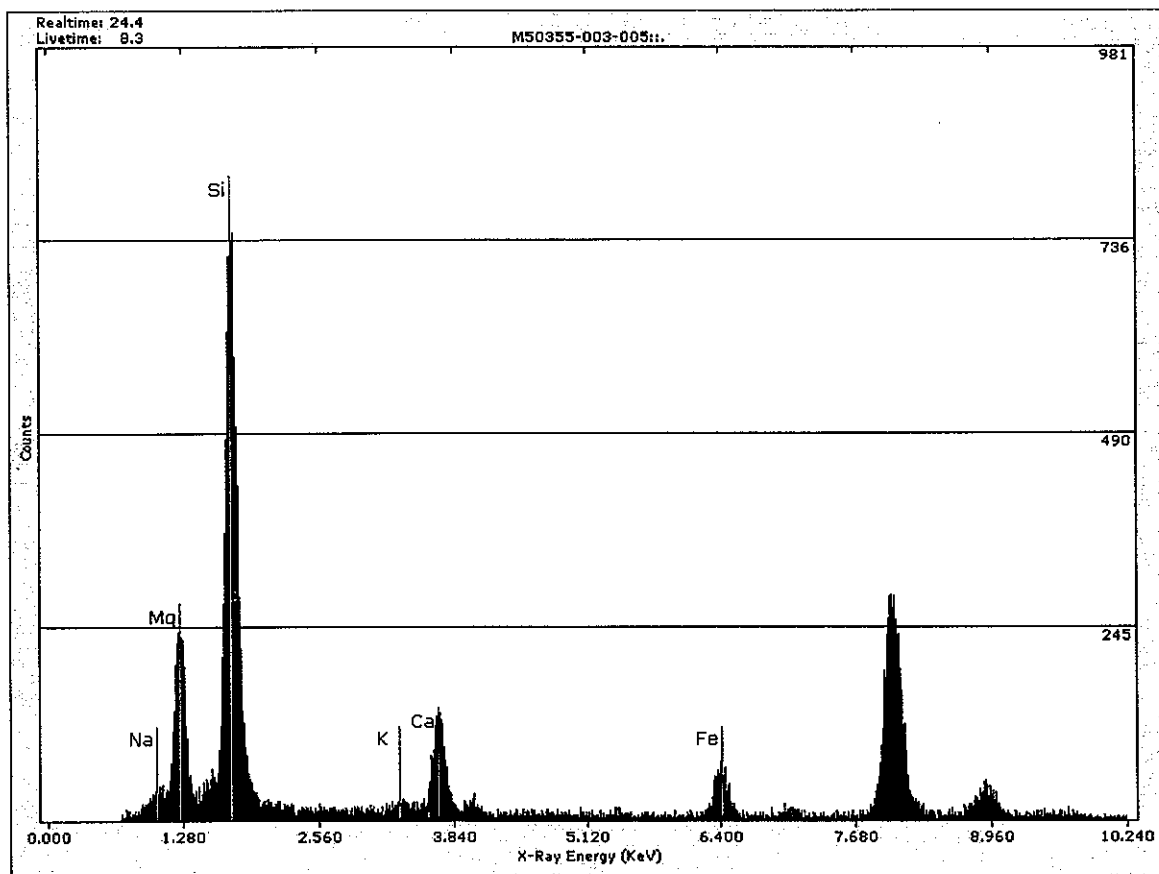
(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.

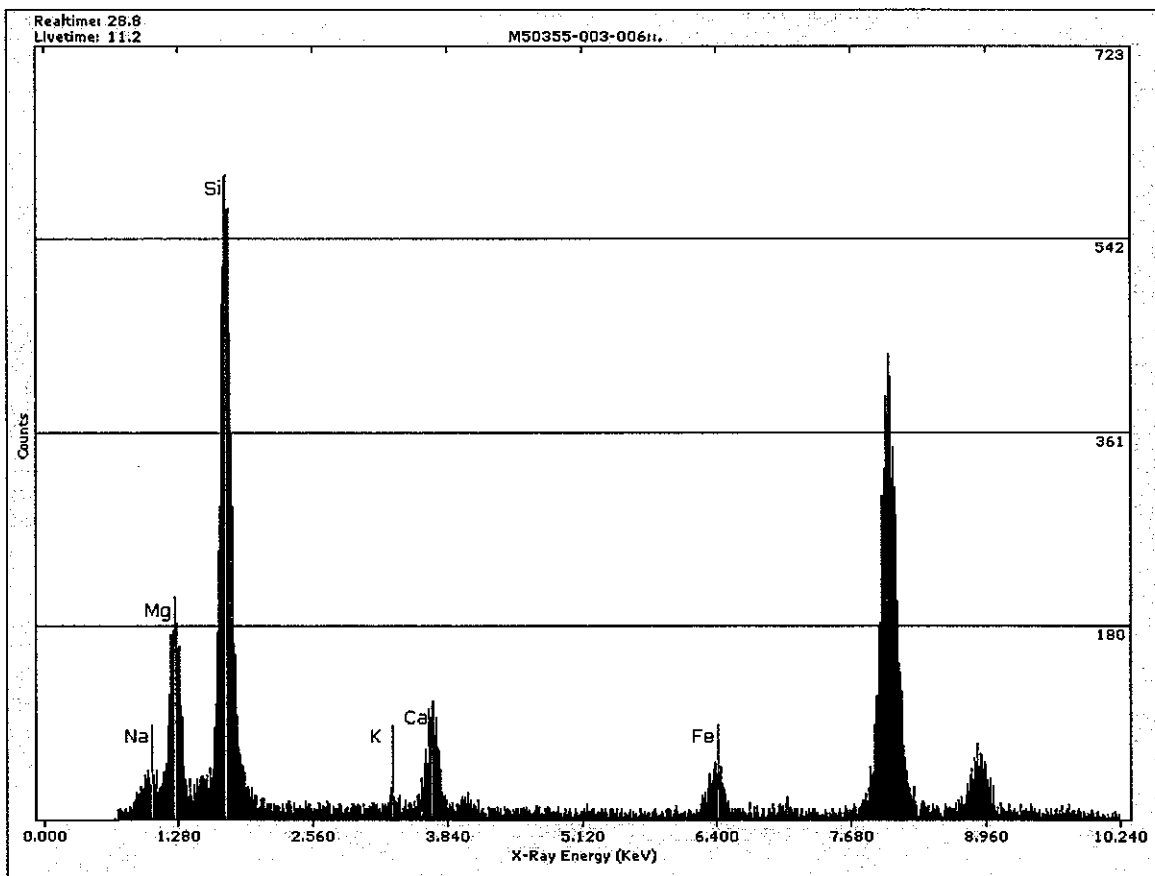




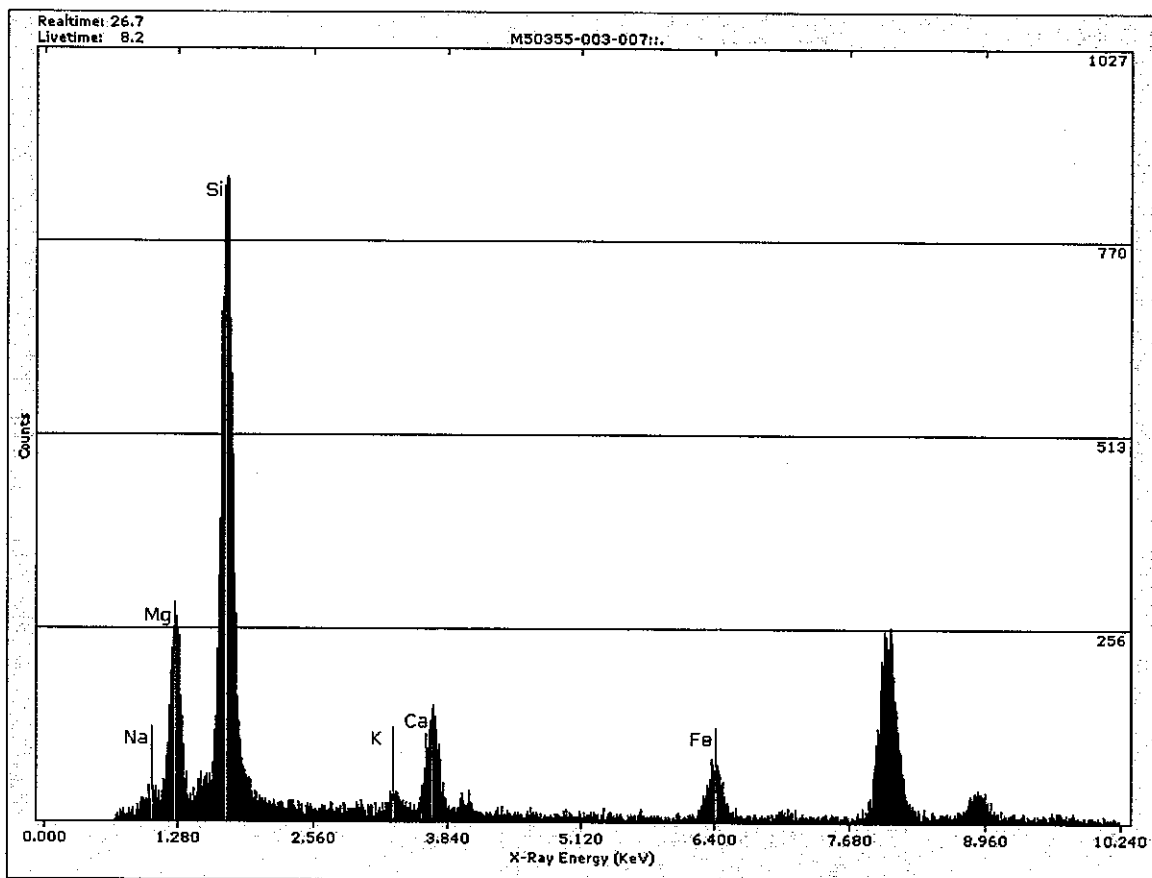


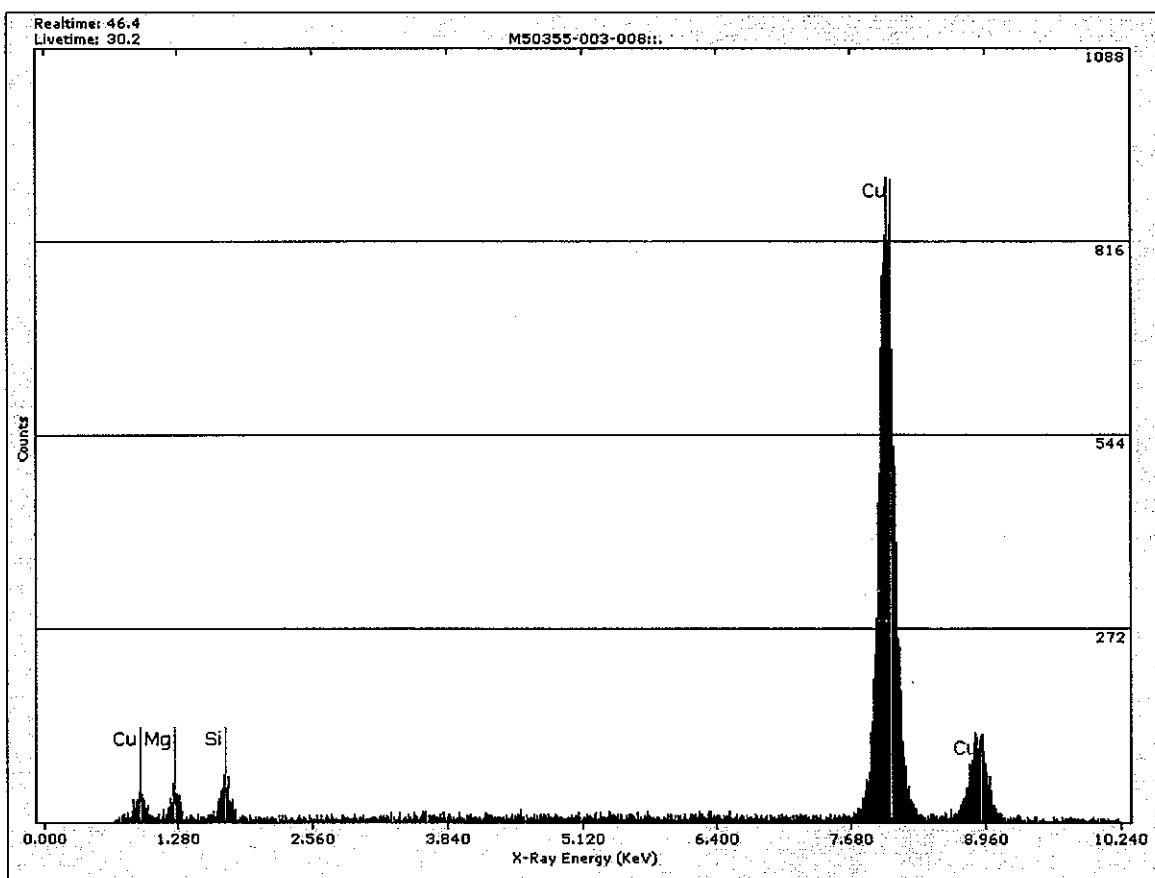


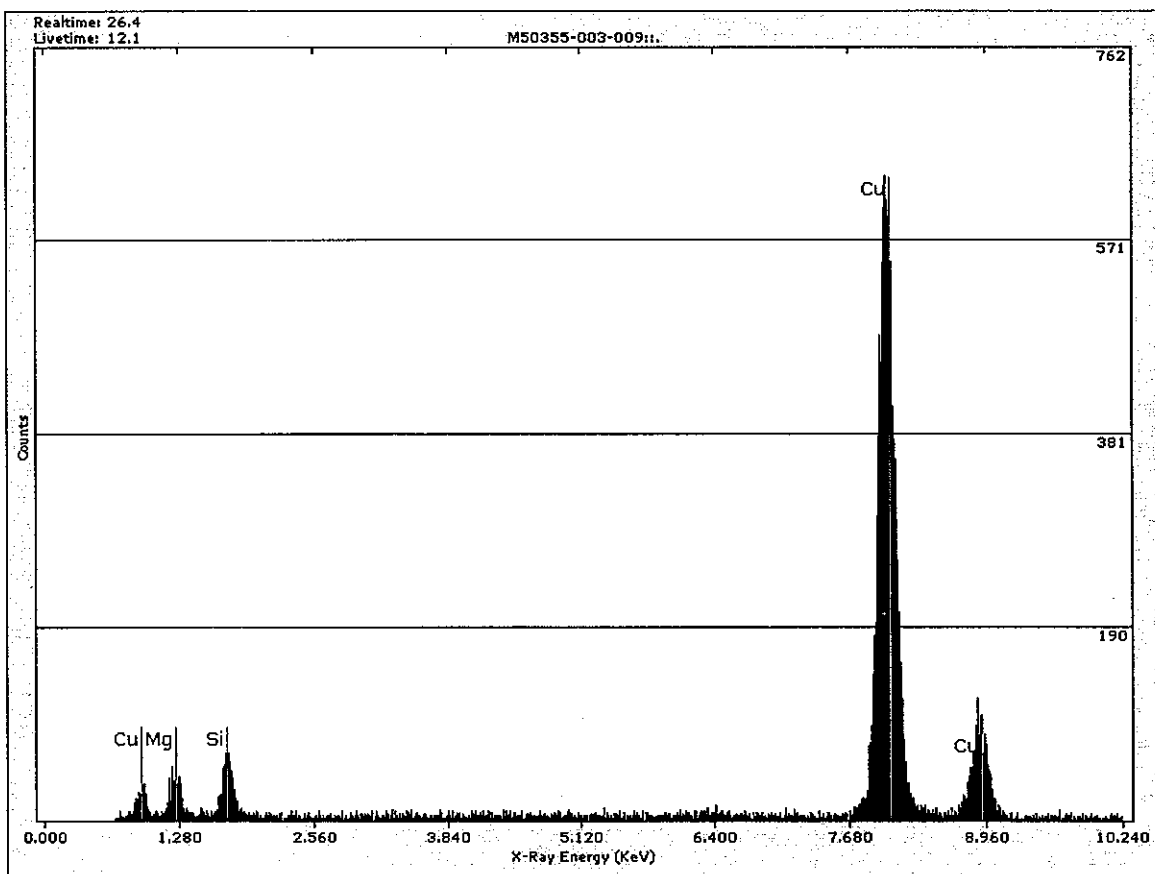


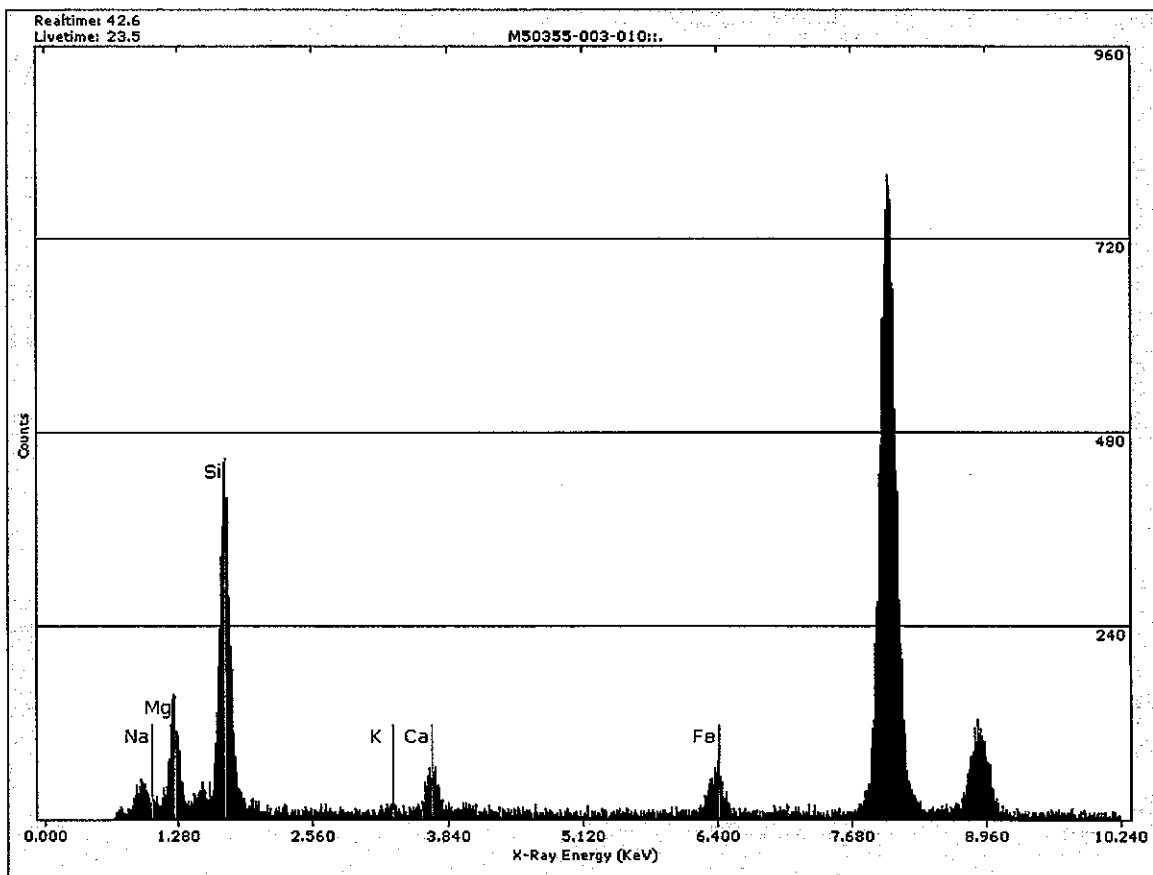


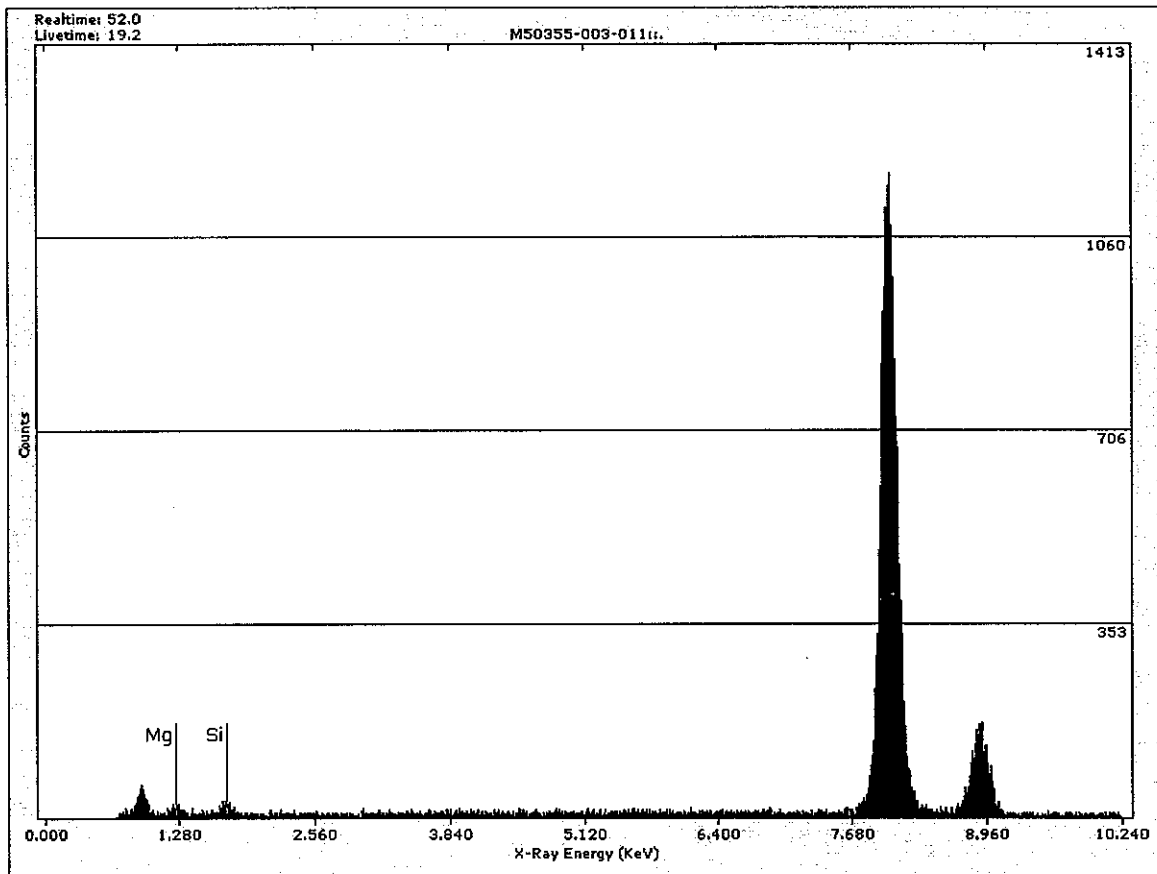


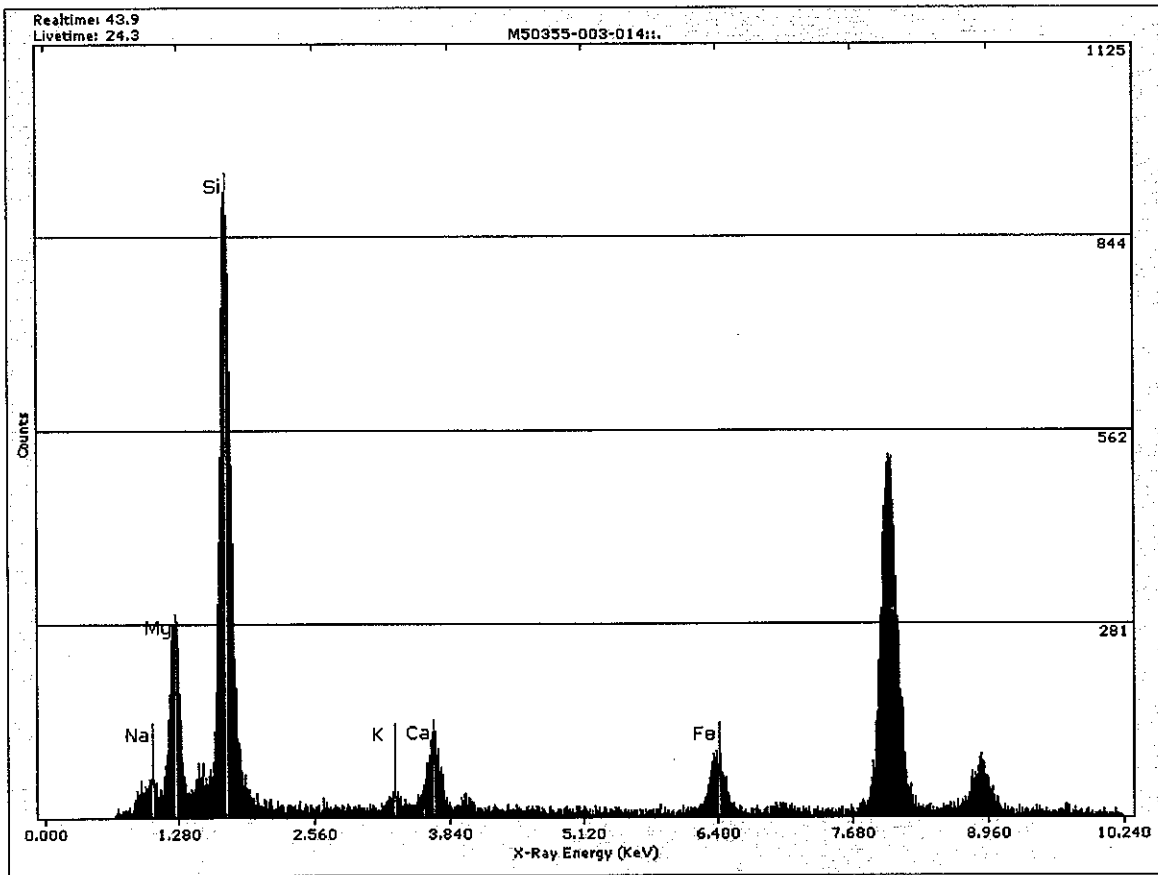












National Asbestos Data Entry Spreadsheet (NADES) for Air & Dust Analysis by Superfund TEM

Enter Site or Project Name Here:	
State/Federal Site or Project Identifier:	
Laboratory name:	MAS
Instrument:	JEOL 1200EX#3
Voltage (kV):	100
Magnification:	20 K
Grid opening area (mm <sup>2</sup> ):	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 <sup>2</sup> ):	385
Secondary Filter Area (mm <sup>2</sup> ):	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 <sup>2</sup> ):	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  
ANALYTICAL REPORT

SAMPLE/ANALYSIS INFORMATION				ANALYSIS PARAMETERS	
Field Sample Number	D24194	Lab Sample Number	M50355-004	Effective filter area (mm <sup>2</sup> )	1297
Media	Dust	Preparation	Indirect	F-factor	3.00E-02
Sample Type	Field Sample	Sample Status	Analyzed	Grid opening area (mm <sup>2</sup> )	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/cm <sup>2</sup> )	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 <sup>2</sup> )	Dust Loading (c) (s/cm <sup>2</sup> )	95% Confidence Interval	
<b>Total TEM-EPASM Structures</b>					<b>Binning Rule Description:</b>
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	
<b>PCM Equivalent Structures (PCME)</b>					<b>Binning Rule Description:</b>
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	
<b>AHERA (d) Structures</b>					<b>Binning Rule Description:</b>
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	
<b>Berman Crump (2003) Structures</b>					<b>Binning Rule Description:</b>
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/mm<sup>2</sup>) = 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/cm<sup>2</sup>) = (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 &lt;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 <sup>2</sup> ):	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 <sup>2</sup> ):	300
Method SOP (Revision No.):	5755.030		
Grid Storage Location:	7728.000		

Number of grids prepared:	3
Prepared by:	ddmunt
Preparation date:	12/29/09
Preparation Type: (D=Direct, I=Indirect, IA=Indirect, ashed)	indirect
Primary Filter Area (mm <sup>2</sup> ):	385
Secondary Filter Area (mm <sup>2</sup> ):	1297
F- factor:	
Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)	analyzed
Analyzed by:	H. Vetter
Analysis date:	1/4/2010

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)

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

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	11/4/10

[illegible]

(a) Enter dimensions either in absolute units ( $\mu\text{m}$ ) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

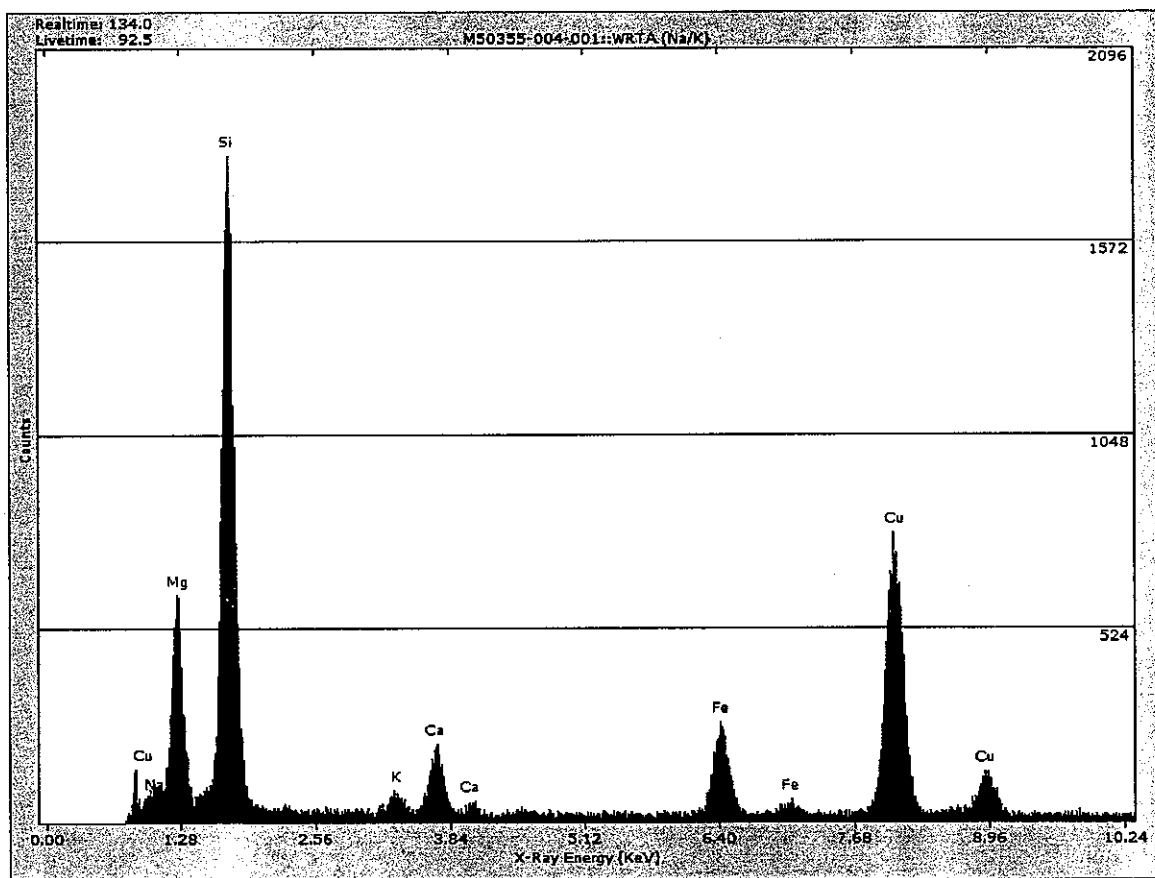
(a) Enter dimensions either in absolute units (mm) or in

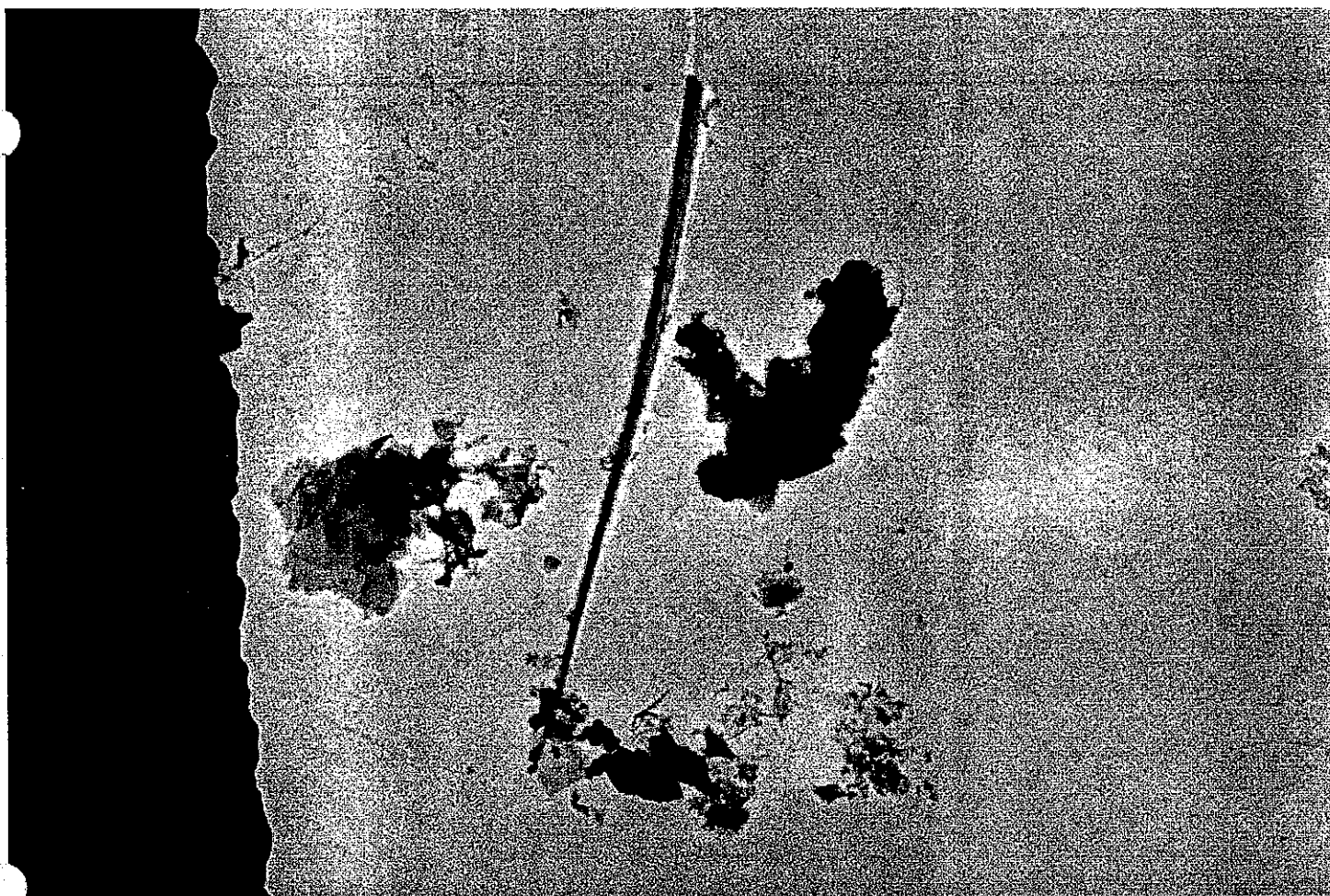
(b) See Annex D of ISO 10312 for identification codes.

**Valid Mineral Types:**  
AC actinolite  
AM amosite  
AN anthophyllite

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.

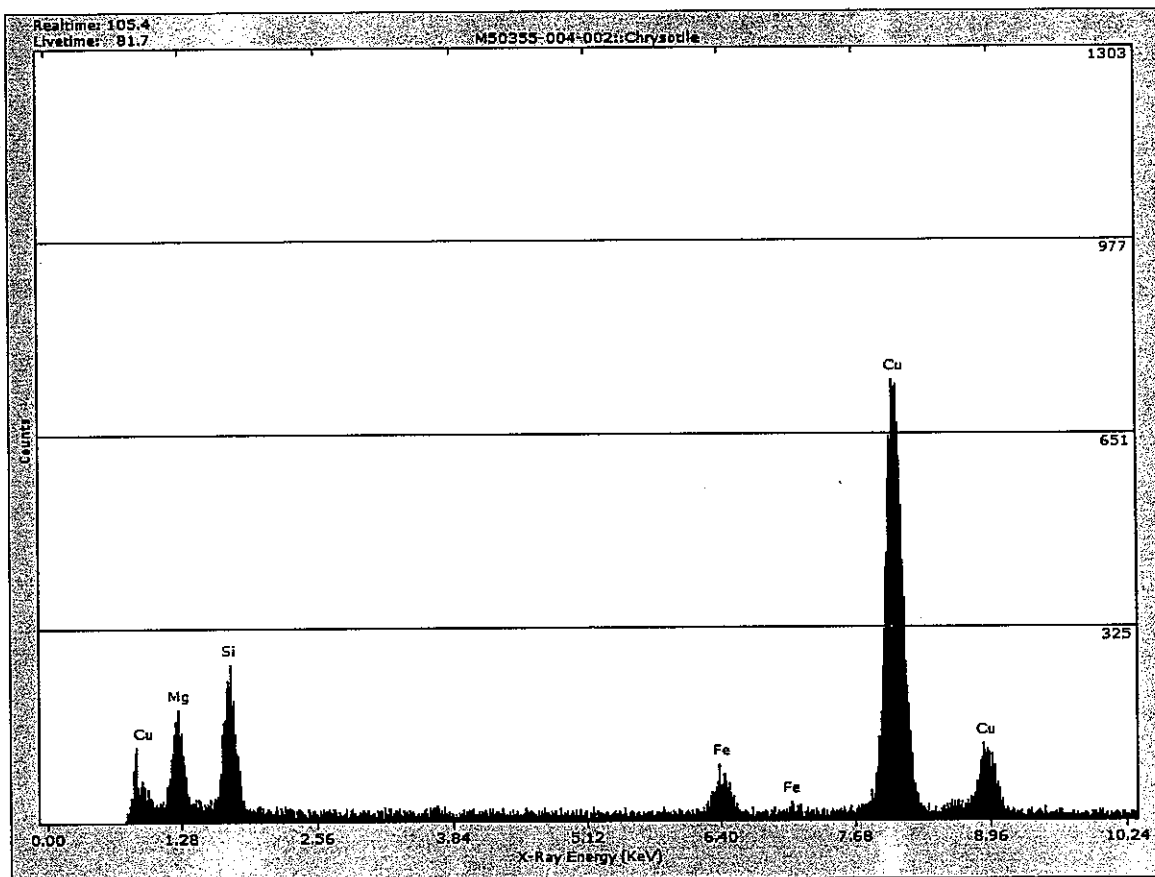


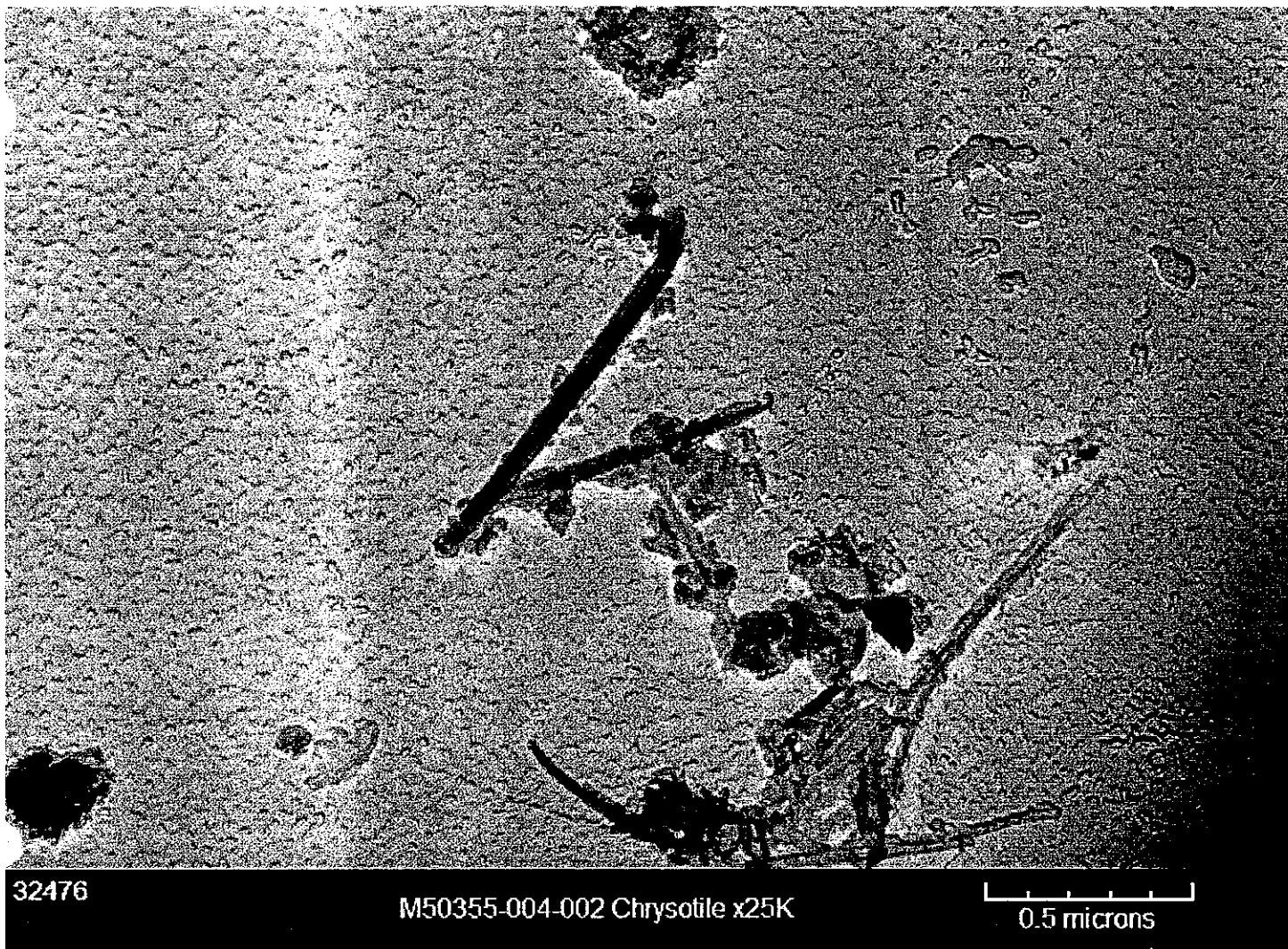


32474

M50355-004-001 WRTA Fiber x4K

  
1.0 microns

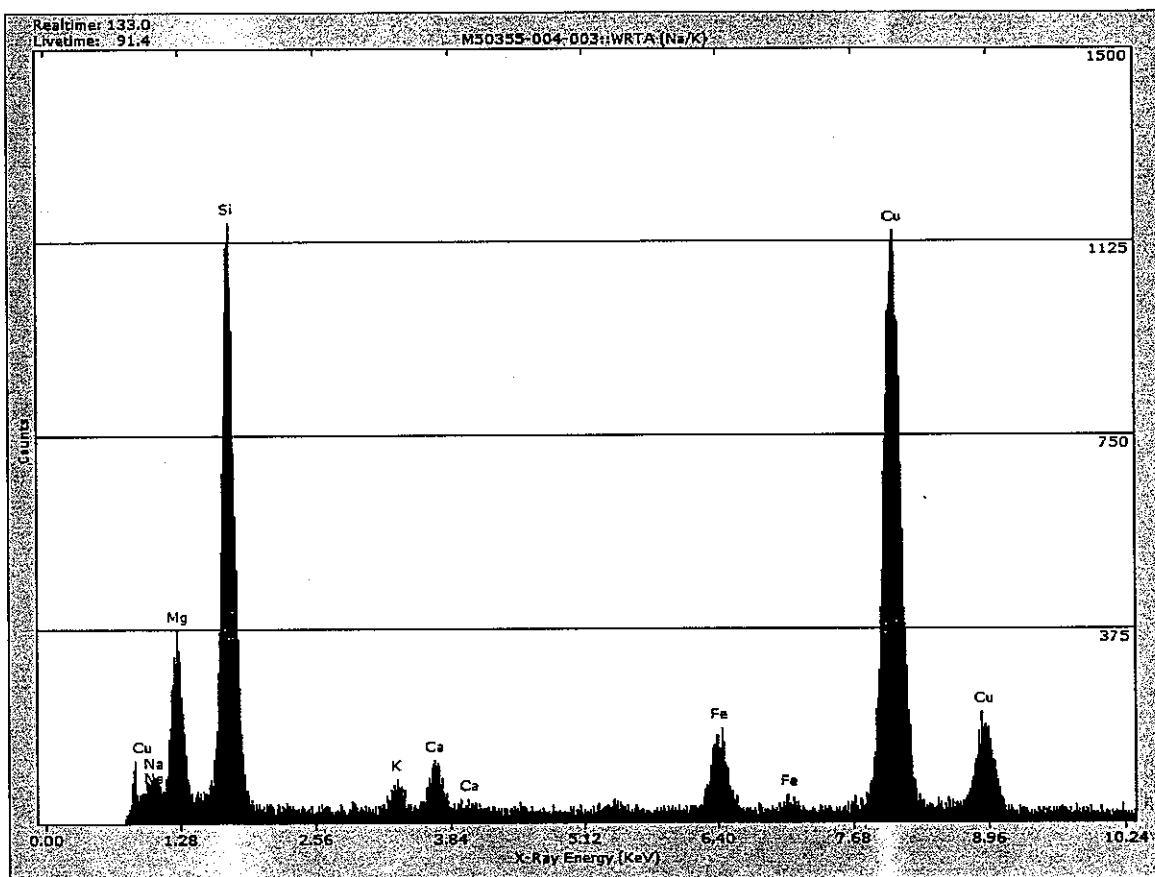




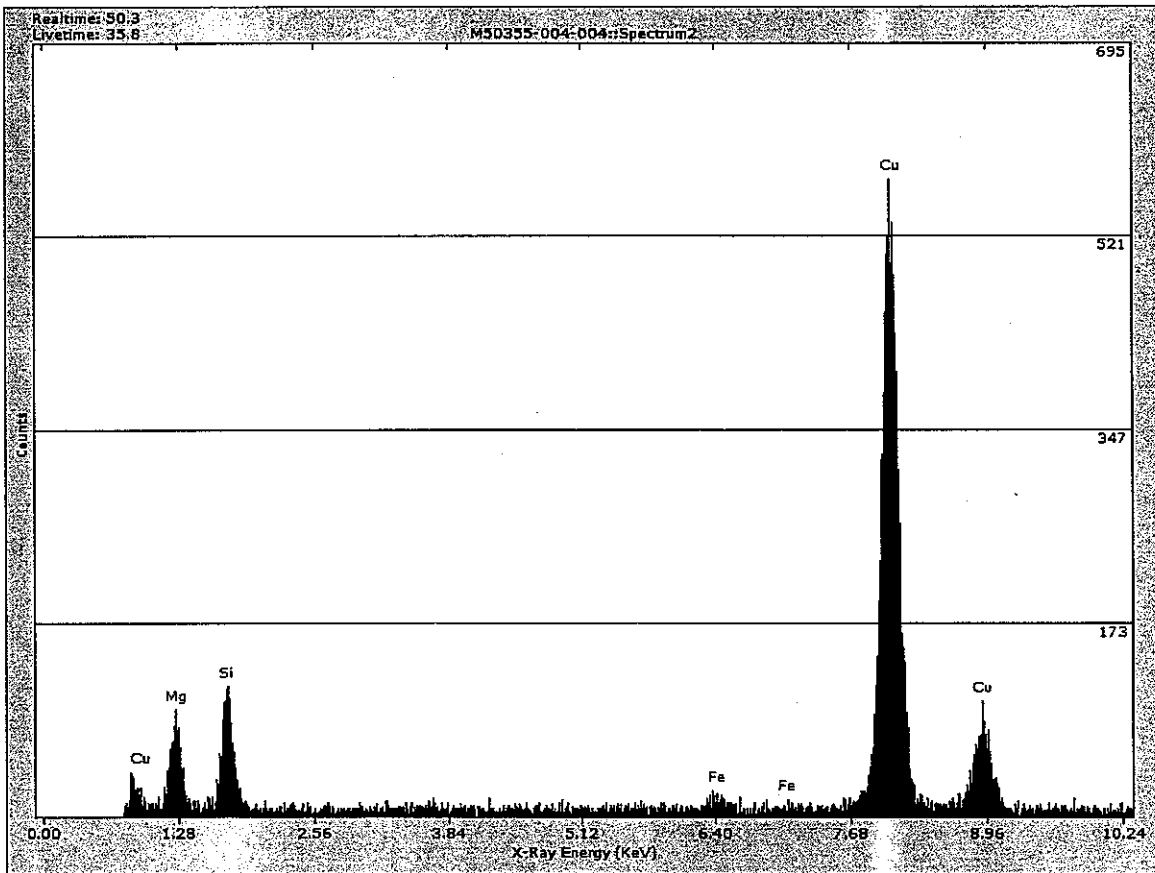
32476

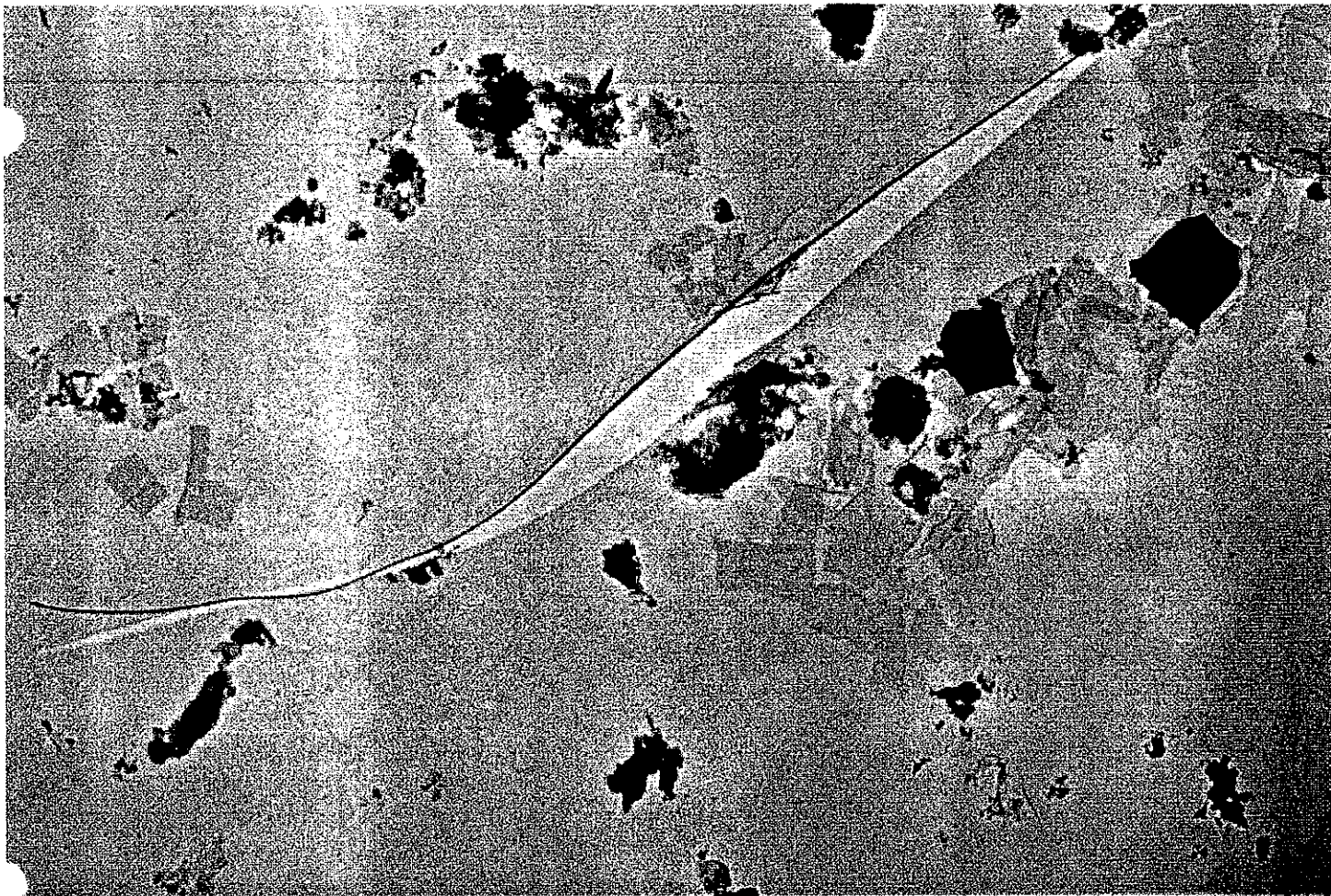
M50355-004-002 Chrysotile x25K

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 (mm <sup>2</sup> ):	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	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 (cm <sup>2</sup> ):	300	

Number of grids prepared:	3
Prepared by:	ddmunt
Preparation date:	12/29/09
Preparation Type:	Indirect
Primary filter area (mm <sup>2</sup> ):	385
Secondary Filter Area (mm <sup>2</sup> ):	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

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
-------------	----------------------

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;

actinolite

AM amanita

AN  
AN

CH	characteristic
CH	characteristic

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2000

...remonte "

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

## Richtlinie

*Enionia*

(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

Structure dimensions are missing or are not valid

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

# structure is sum of not match information provided in  
# structure is sum of not match information provided in  
# structure is sum of not match information provided in

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C Identified as non-convertible 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	D24195	Lab Sample Number	M50355-005	Effective filter area (mm <sup>2</sup> )	1297
Media	Dust	Preparation	Indirect	F-factor	5.00E-01
Sample Type	Field Sample	Sample Status	Analyzed	Grid opening area (mm <sup>2</sup> )	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 <sup>2</sup> )	Dust Loading (c) (s/cm <sup>2</sup> )	95% Confidence Interval	
<b>Total TEM-EPASM Structures</b>					<b>Binning Rule Description:</b>
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	
<b>PCM Equivalent Structures (PCME)</b>					<b>Binning Rule Description:</b>
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	
<b>AHERA (d) Structures</b>					<b>Binning Rule Description:</b>
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	
<b>Berman Crump (2003) Structures</b>					<b>Binning Rule Description:</b>
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/mm<sup>2</sup>) = 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/cm<sup>2</sup>) = (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 &lt;0.5um.

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

R01-091222JM-12/23/09-0001	Site/Project Identifier Code: 0806F
Case: 0806F	

Laboratory name:	MAS
Instrument:	JEOL 1200EX
Voltage (kV):	100
Magnification:	20 K
Grid opening area (mm <sup>2</sup> ):	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:	R01-091222JM-12/23/09-0001

Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)	field sample
QC Sample Type: (Not QC, LB=Lab Blank, RS=Recount Same, RD, Recount Diff., RP=Reprep., VA=Verified Analysis, IL=Interlab)	not qc
Media: (Air, Dust, N/A)	dust
Air volume (L) or dust area (cm <sup>2</sup> ):	300

Number of grids prepared:	3
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Prepared by:	ddimont
Preparation date:	12/29/09
Preparation Type: (D=Direct, I=Indirect, IA=Indirect, ashed)	Indirect
Primary Filter Area (mm <sup>2</sup> ):	385
Secondary Filter Area (mm <sup>2</sup> ):	1297
F- factor:	
Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)	analyzed
Analyzed by:	M. M. M.
Analysis date:	11/4/10

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)

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	
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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

[illegible]

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

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:	
Laboratory name:	MAS
Instrument:	JEOL 1200EX#4
Voltage (kV):	100
Magnification:	20 K
Grid opening area (mm <sup>2</sup> ):	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:	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

0806F
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Number of grids prepared:	3
Prepared by:	ddmunt
Preparation date:	12/29/09
Preparation Type:	Indirect
Primary filter area (mm <sup>2</sup> ):	385
Secondary Filter Area (mm <sup>2</sup> ):	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:	Field Sample
QC Sample Type:	Not QC
Media:	Dust
Air volume (L) or dust area (cm <sup>2</sup> ):	300

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: F0001-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:	ddmount
Data Entry Date:	1/6/2010

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

[illegible]

**ERROR CHECK**  
OK - No errors found

ERROR CODE	DESCRIPTION
0000	OK
0001	Invalid parameter
0002	Invalid parameter
0003	Invalid parameter
0004	Invalid parameter
0005	Invalid parameter
0006	Invalid parameter
0007	Invalid parameter
0008	Invalid parameter
0009	Invalid parameter
0010	Invalid parameter
0011	Invalid parameter
0012	Invalid parameter
0013	Invalid parameter
0014	Invalid parameter
0015	Invalid parameter
0016	Invalid parameter
0017	Invalid parameter
0018	Invalid parameter
0019	Invalid parameter
0020	Invalid parameter
0021	Invalid parameter
0022	Invalid parameter
0023	Invalid parameter
0024	Invalid parameter
0025	Invalid parameter
0026	Invalid parameter
0027	Invalid parameter
0028	Invalid parameter
0029	Invalid parameter
0030	Invalid parameter
0031	Invalid parameter
0032	Invalid parameter
0033	Invalid parameter
0034	Invalid parameter
0035	Invalid parameter
0036	Invalid parameter
0037	Invalid parameter
0038	Invalid parameter
0039	Invalid parameter
0040	Invalid parameter
0041	Invalid parameter
0042	Invalid parameter
0043	Invalid parameter
0044	Invalid parameter
0045	Invalid parameter
0046	Invalid parameter
0047	Invalid parameter
0048	Invalid parameter
0049	Invalid parameter
0050	Invalid parameter
0051	Invalid parameter
0052	Invalid parameter
0053	Invalid parameter
0054	Invalid parameter
0055	Invalid parameter
0056	Invalid parameter
0057	Invalid parameter
0058	Invalid parameter
0059	Invalid parameter
0060	Invalid parameter
0061	Invalid parameter
0062	Invalid parameter
0063	Invalid parameter
0064	Invalid parameter
0065	Invalid parameter
0066	Invalid parameter
0067	Invalid parameter
0068	Invalid parameter
0069	Invalid parameter
0070	Invalid parameter
0071	Invalid parameter
0072	Invalid parameter
0073	Invalid parameter
0074	Invalid parameter
0075	Invalid parameter
0076	Invalid parameter
0077	Invalid parameter
0078	Invalid parameter
0079	Invalid parameter
0080	Invalid parameter
0081	Invalid parameter
0082	Invalid parameter
0083	Invalid parameter
0084	Invalid parameter
0085	Invalid parameter
0086	Invalid parameter
0087	Invalid parameter
0088	Invalid parameter
0089	Invalid parameter
0090	Invalid parameter
0091	Invalid parameter
0092	Invalid parameter
0093	Invalid parameter
0094	Invalid parameter
0095	Invalid parameter
0096	Invalid parameter
0097	Invalid parameter
0098	Invalid parameter
0099	Invalid parameter

**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:**

	OM Description	Sepiolite	Wollastonite	Winchite	Richterite	Fritzscheite
AC	actinolite					
AM	amosite					
AN	anthophyllite					
CH	chrysotile					
CR	crocidolite					
TR	tremolite					
LA	Libby amphibole					
OA	other amphibole					
NAM	non-asbestos					
Amosite	Solid solution					
Trem-Act	Solid solution					
OM	other mineral					

(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:**

	Primary/Total entry is not sequential
A	Mineral class type is not valid
B	Structure dimensions are missing or are not valid
C	Structure dimensions are missing or are not valid
D	total # structures with complex do not match information provided in # structures > 5um with complex do not match information provided in structure type with complex does not match information provided in s (identified as non-countable structure (total = 0) without comment
E	
F	
G	

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 <sup>2</sup> )	1297
Media	Dust	Preparation	Indirect	F-factor	5.00E-01
Sample Type	Field Sample	Sample Status	Analyzed	Grid opening area (mm <sup>2</sup> )	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 <sup>2</sup> )	Dust Loading (c) (s/cm2)	95% Confidence Interval	
<b>Total TEM-EPASM Structures</b>					<b>Binning Rule Description:</b>
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	
<b>PCM Equivalent Structures (PCME)</b>					<b>Binning Rule Description:</b>
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	
<b>AHERA (d) Structures</b>					<b>Binning Rule Description:</b>
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	
<b>Berman Crump (2003) Structures</b>					<b>Binning Rule Description:</b>
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/mm<sup>2</sup>) = 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 &lt;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 (mm<sup>2</sup>): 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.): 5755.030

Grid Storage Location: 7728.000

Client Sample Number: D24196

Date received by lab: 12/28/09

Lab Job Number: M50355

Lab Sample Number: M50355-006

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 (mm<sup>2</sup>): 385

Secondary Filter Area (mm<sup>2</sup>): 1297

F-factor:

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

Analyzed by: H. Melt

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 (cm<sup>2</sup>): 300

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.

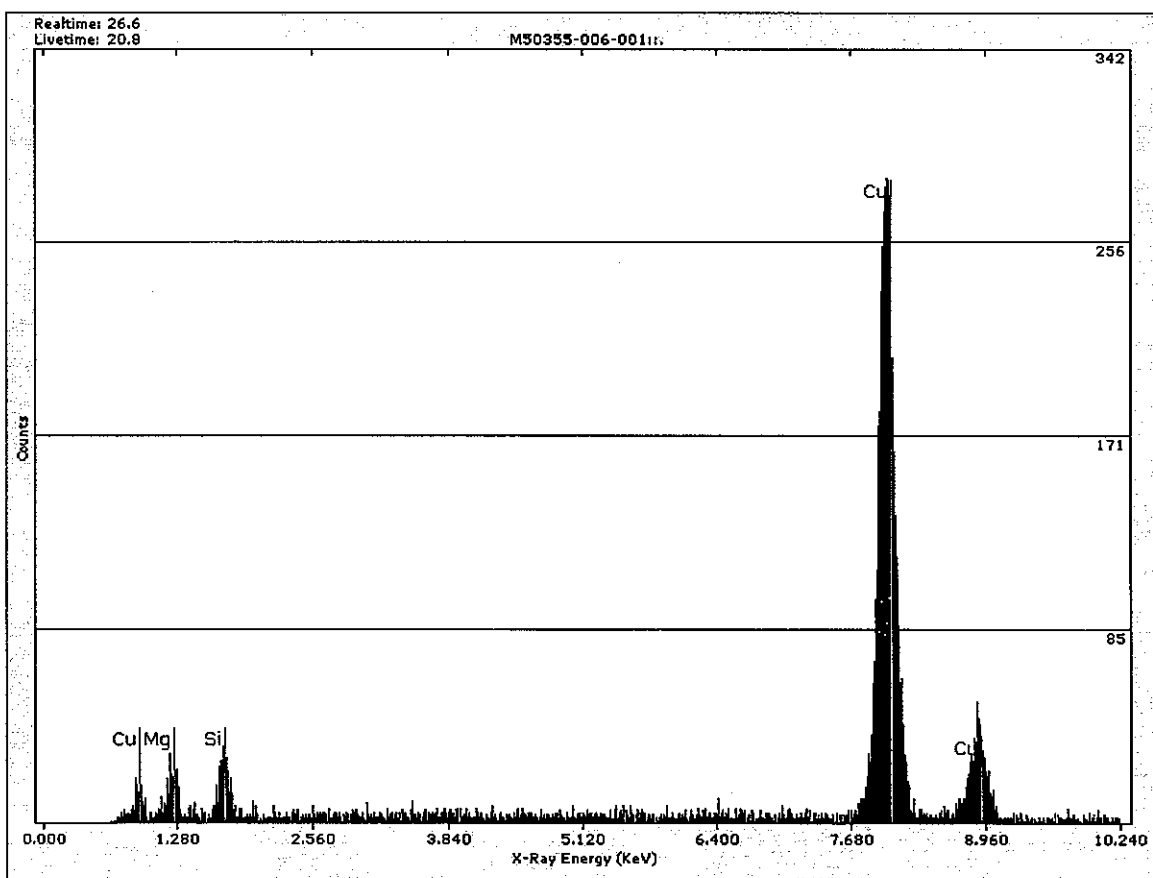
Analyst #2	Analyst #3
Analyzed by:	
Analysis date:	

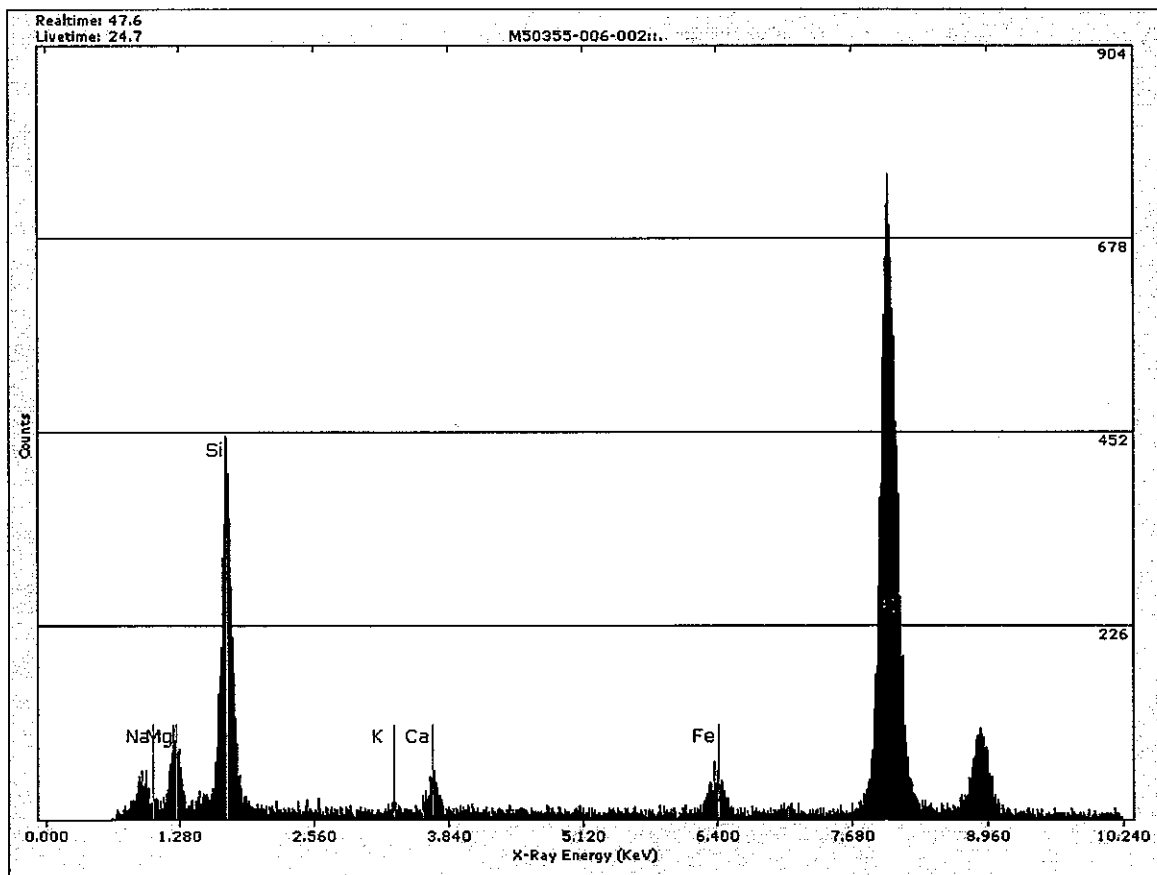
IMPORTANT NOTE: If this sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates, be sure to complete the column labeled "Multiple" when entering raw structure results for each grid opening.

Preparation Type	indirect
Analysis Date	1-4-10

[illegible]

(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 (mm<sup>2</sup>): 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 (cm<sup>2</sup>): 300

Number of grids prepared: 3

Prepared by: ddmount

Preparation date: 12/29/09

Preparation Type: Indirect

Primary filter area (mm<sup>2</sup>): 385

Secondary Filter Area (mm<sup>2</sup>): 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 <sup>2</sup> )	1297
Media	Dust	Preparation	Indirect	F-factor	5.00E-02
Sample Type	Field Sample	Sample Status	Analyzed	Grid opening area (mm <sup>2</sup> )	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 <sup>2</sup> )	Dust Loading (c) (s/cm <sup>2</sup> )	95% Confidence Interval	
<b>Total TEM-EPASM Structures</b>					<b>Binning Rule Description:</b>
Total Asbestos	2	1.8E+01	1.5E+03	1.8E+02 - 5.5E+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)	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	
<b>PCM Equivalent Structures (PCME)</b>					<b>Binning Rule Description:</b>
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+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 - 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	
<b>AHERA (d) Structures</b>					<b>Binning Rule Description:</b>
Total Asbestos	2	1.8E+01	1.5E+03	1.8E+02 - 5.5E+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)	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	
<b>Berman Crump (2003) Structures</b>					<b>Binning Rule Description:</b>
Total Asbestos	0	0.0E+00	0.0E+00	0.0E+00 - 2.8E+03	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 - 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	

(a) Based on countable structures only

(b) Loading on Filter (s/mm<sup>2</sup>) = 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/cm<sup>2</sup>) = (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 &lt;0.5μm.

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 (mm<sup>2</sup>): 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

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 (cm<sup>2</sup>): 300

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 (mm<sup>2</sup>): 385

Secondary Filter Area (mm<sup>2</sup>): 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)

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

AMI  
AN

“...and, just as the

CH chrysotile

CR  
crocidolite

TR tremolite

LA

CA

## NAIV

**Libby amphibole**

other amphibole

**non-asbestos mat**

CM

mosit

## Use

other mineral type

Solid solution series

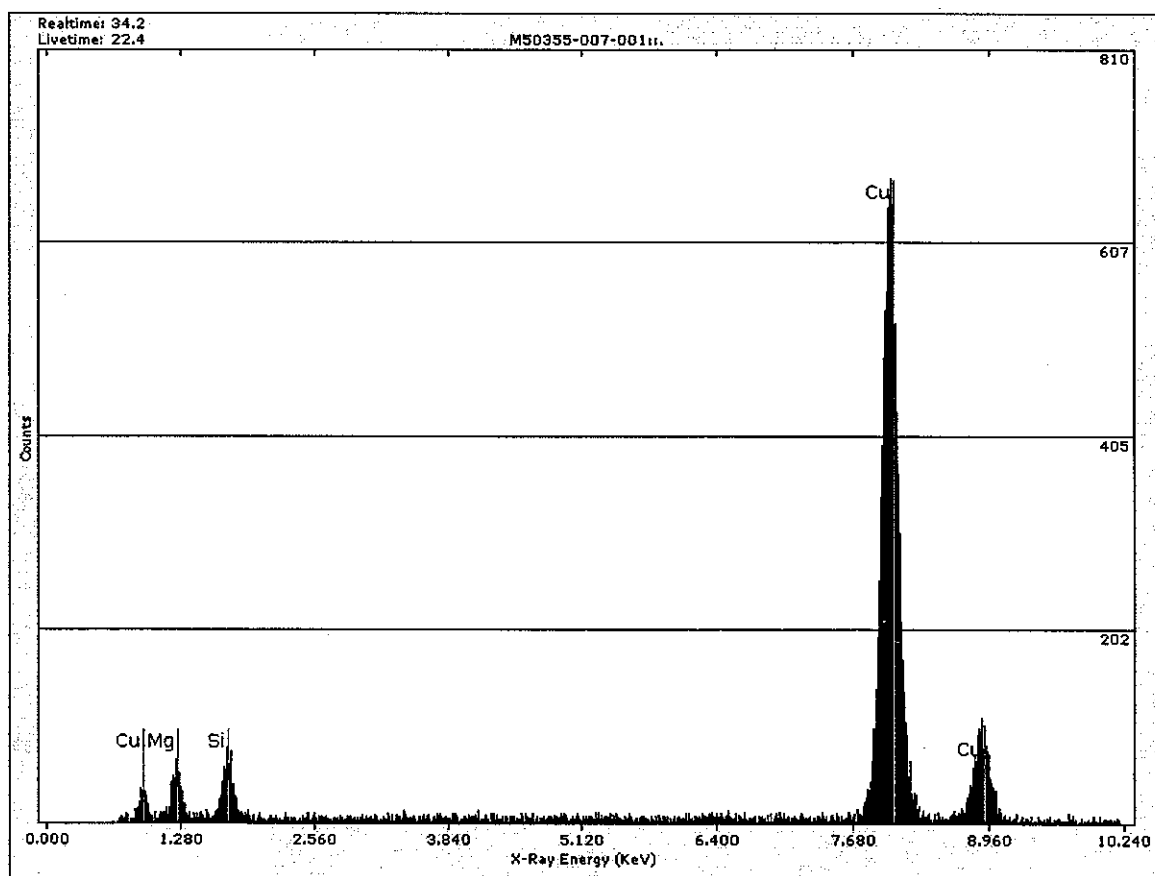
Solid solution series

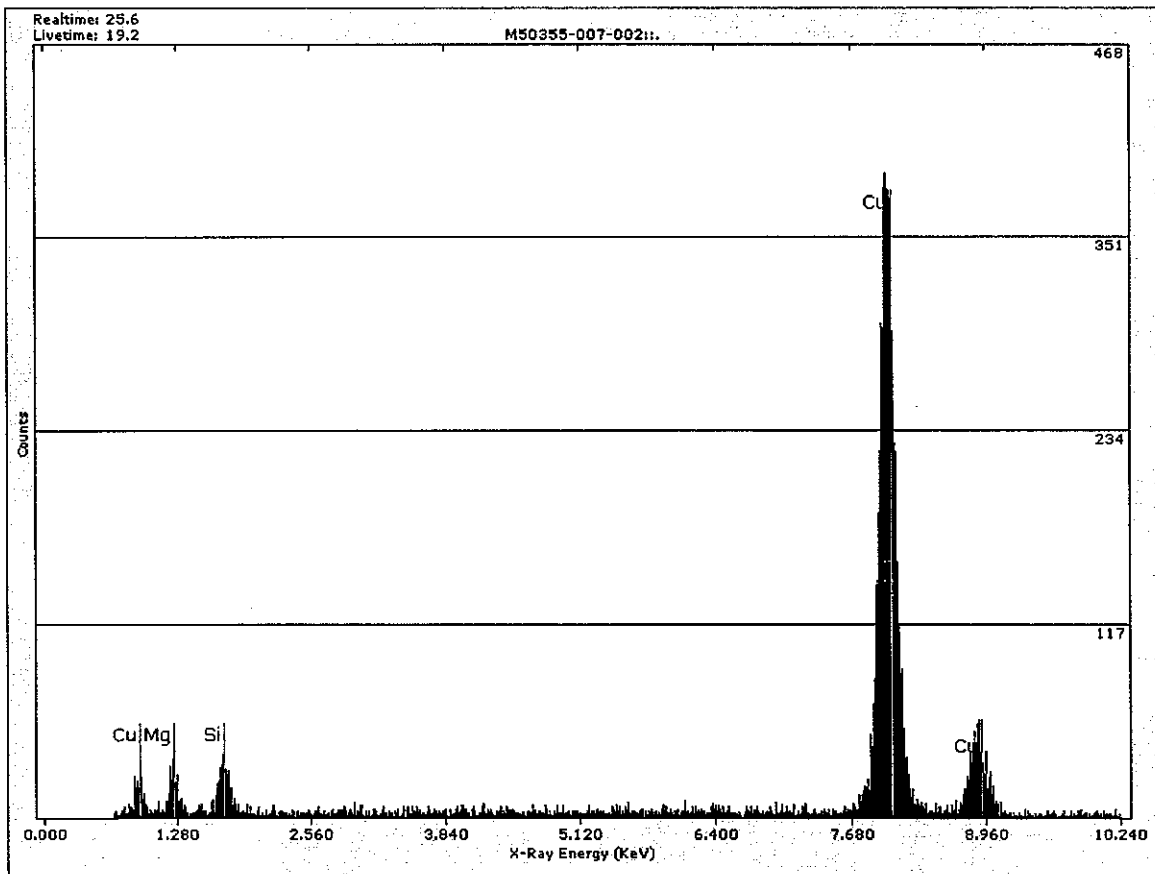
(specify in "other mineral description" field)

Amosite, cummingtonite-grunerite

Remolite-Actinolle

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





FILE:

:

0806F: MAS: D24198: 01-04-10: M50355: TEM/EP/ASM/IXIS

FILE TYPE:

Original

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

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

R01-091222JM
0806F

Site/Project Identifier Code:
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0806F
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Laboratory name:	MAS
Instrument:	JEOL 1200EX#4
Voltage (KV):	100
Magnification:	20 K
Grid opening area (mm <sup>2</sup> ):	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 <sup>2</sup> ):	

Number of grids prepared:	3
Prepared by:	ddmount
Preparation date:	12/29/09
Preparation Type:	Indirect
Primary filter area (mm <sup>2</sup> ):	385
Secondary Filter Area (mm <sup>2</sup> ):	1297
F-factor: [proposed value shown, cell formula can be over-written if necessary]	0.500
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)
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-BD01-08 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 <sup>2</sup> )	1297
Media	Dust	Preparation	Indirect	F-factor	5.00E-01
Sample Type	Field Blank	Sample Status	Analyzed	Grid opening area (mm <sup>2</sup> )	0.0114
Dust Collection Area		Analysis Date	1/4/2010	# GOs counted	10
QA Sample Type	Not QC	Method SOP	5755.03	Sensitivity (1/cm2)	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 <sup>2</sup> )	Dust Loading (c) (s/cm <sup>2</sup> )	95% Confidence Interval
<b>Total TEM-EPASM Structures</b>				
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
<b>PCM Equivalent Structures (PCME)</b>				
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
<b>AHERA (d) Structures</b>				
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
<b>Berman Crump (2003) Structures</b>				
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 &gt; 0:

L &gt; 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 &gt; 0:

L &gt; 10um, W ≤ 0.4um

(a) Based on countable structures only

(b) Loading on Filter (s/mm<sup>2</sup>) = 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/cm<sup>2</sup>) = (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 &lt;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
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F-factor Input Parameters:

Laboratory name:	MAS
Instrument:	JEOL 1200EX
Voltage (kV):	100
Magnification:	20 K
Grid opening area (mm <sup>2</sup> ):	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:	D24198
Date received by lab:	12/28/09
Lab Job Number:	M50355
Lab Sample Number:	M50355-008
Chain of Custody Number:	R01-091222JM-12/23/09-0001

Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)	field blank
QC Sample Type: (Not QC, LB=Lab Blank, RS=Recount Same, RD=Recount Diff, RP=Reprep, VA=Verified Analysis, IL=Interlab)	not QC
Media: (Air, Dust, N/A)	dust
Air volume (L) or dust area (cm <sup>2</sup> ):	

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)

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 <sup>2</sup> ):	385
Secondary Filter Area (mm <sup>2</sup> ):	1297
F- factor:	
Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)	analyzed
Analyzed by:	H. [Signature]
Analysis date:	1-4-10

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 #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 (um) or in screen units. If reported as screen units, confirm that the Length & Dimension Scales are set as appropriate.

(c) 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.

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 <sup>2</sup> ):	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
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Number of grids prepared:	3
Prepared by:	ddmount
Preparation date:	12/29/09
Preparation Type:	Indirect
Primary filter area (mm <sup>2</sup> ):	385
Secondary Filter Area (mm <sup>2</sup> ):	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 <sup>2</sup> ):	

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 <sup>2</sup> )	1297
Media	N/A	Preparation	Indirect	F-factor	5.00E-01
Sample Type	Lot Blank	Sample Status	Analyzed	Grid opening area (mm <sup>2</sup> )	0.0116
		Analysis Date	1/4/2010	# GOs counted	10
QA Sample Type	Not QC	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 <sup>2</sup> )		95% Confidence Interval
<b>Total TEM-EPASM Structures:</b>				
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
<b>PCM Equivalent Structures (PCME):</b>				
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
<b>AHERA (d) Structures:</b>				
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
<b>Berman/Crump (2003) Structures:</b>				
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 &gt; 0:

L &gt; 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 &gt; 0:

L &gt; 10um, W ≤ 0.4um

(a) Based on countable structures only

(b) Loading on Filter (s/mm<sup>2</sup>) = 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/cm<sup>2</sup>) = (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 &lt;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 (mm<sup>2</sup>): 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.): 5755.030

Grid Storage Location: 7728.000

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

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 (cm<sup>2</sup>): NA

Number of grids prepared: 3

Prepared by: ddmmont

Preparation date: 12/29/09

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

Primary Filter Area (mm<sup>2</sup>): 385

Secondary Filter Area (mm<sup>2</sup>): 1297

F-factor:

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

Analyzed by: M. B. 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)

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 (mm²):	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 (mm²):	
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.McMamed
Analysis date:	01/07/10

Sample Type:	Lab QC
QC Sample Type:	Lab Blank
Media:	N/A
Air volume (L) or dust area (cm²):	

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







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 <sup>2</sup> )	1297
Media	N/A	Preparation	Indirect	F-factor	5.00E-01
Sample Type	Lab QC	Sample Status	Analyzed	Grid opening area (mm <sup>2</sup> )	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 <sup>2</sup> )		95% Confidence Interval
<b>Total TEM-EPASM Structures</b>				
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
<b>PCM Equivalent Structures (PCME)</b>				
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
<b>AHERA (d) Structures</b>				
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
<b>Berman Crump (2003) Structures</b>				
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 &gt; 0:

L &gt; 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 &gt; 0:

L &gt; 10um, W ≤ 0.4um

(a) Based on countable structures only

(b) Loading on Filter (s/mm<sup>2</sup>) = 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/cm<sup>2</sup>) = (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 &lt;0.5um.

Date Printed: 1/7/2010  
Time Printed: 12:11 PM

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:	
Instrument:	JEOL 1200EX	Date received by lab:	
Voltage (kV):	100	Lab Job Number:	M50355
Magnification:	20 K	Lab Sample Number:	M50355-000
Grid opening area (mm <sup>2</sup> ):	0.0114	Chain of Custody Number:	R01-091222-IM-12/23/09-0001
Scale: 1L =	1.000	Sample Type: (FS=Field Sample, FB=Field Blank, LT=Lot Blank, QC=Lab QC)	Lab QC
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)	Lab Blank
Filter Size (mm):		Media: (Air, Dust, N/A)	N/A
Filter Pore Size (um):	0.450	Air volume (L) or dust area (cm <sup>2</sup> ):	
Method SOP (Revision No.):	5755.030		
Grid Storage Location:	7728.000		

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 <sup>2</sup> ):	
Secondary Filter Area (mm <sup>2</sup> ):	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		Fraction of primary filter used	1
	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.



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<sup>2</sup>): 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 (cm<sup>2</sup>): 300

Number of grids prepared: 3

Prepared by: ddmount

Preparation date: 12/29/09

Preparation Type: Indirect

Primary filter area (mm<sup>2</sup>): 385

Secondary Filter Area (mm<sup>2</sup>): 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 <sup>2</sup> )	1297
Media	Dust	Preparation	Indirect	F-factor	3.00E-03
Sample Type	Field Sample	Sample Status	Analyzed	Grid opening area (mm <sup>2</sup> )	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 <sup>2</sup> )	Dust Loading (c) (s/cm <sup>2</sup> )	95% Confidence Interval	
<b>TOTAL TEN-EPASM Structures</b>					<b>Binning Rule Description:</b>
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	
<b>RCM Equivalent Structures (PCME)</b>					<b>Binning Rule Description:</b>
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	
<b>AHERA (d) Structures</b>					<b>Binning Rule Description:</b>
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	
<b>Berman Crump (2003) Structures</b>					<b>Binning Rule Description:</b>
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/mm<sup>2</sup>) = 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/cm<sup>2</sup>) = (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 &lt;0.5μm.

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 (mm<sup>2</sup>): 8.0113  
Scale: 1L = 1.000  
Scale: 1D = 1.000  
Filter Size (mm): 25.000  
Filter Pore Size (um): 0.450  
Method SOP (Revision No.): 5755.030  
Grid Storage Location: 7728

Client Sample Number: D24192  
Date received by lab: 12/28/09  
Lab Job Number: M50355  
Lab Sample Number: M50355-002  
Chain of Custody Number: R01-091222JM-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=RepRap., VA=Verified Analysis, IL=Interlab)  
Media: (Air, Dust, N/A)  
Air volume (L) or dust area (cm<sup>2</sup>): 300

Number of grids prepared: 3  
Prepared by: ddmount  
Preparation date: 12/29/09  
Preparation Type: (D=Direct, IA=Indirect, ashed)  
Primary Filter Area (mm<sup>2</sup>): 385  
Secondary Filter Area (mm<sup>2</sup>): 1297  
F-factor:  
Filter Status: (A=Analyzed, O=Overloaded, D=Damaged, M=Missing, C=Cancelled)  
Analyzed by: [Signature]  
Analysis date: 1-7-10

Indirect Prep, Not Ashed

1	Fraction of primary filter used
100	Total resuspension volume (mL)
3	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-BD01-02 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.

Valid Mineral Types:

AC	actinolite
AM	amosite
AN	anthophyllite

LA	Libby amphibole
OA	other amphibole
JAM	non-asbestos ma

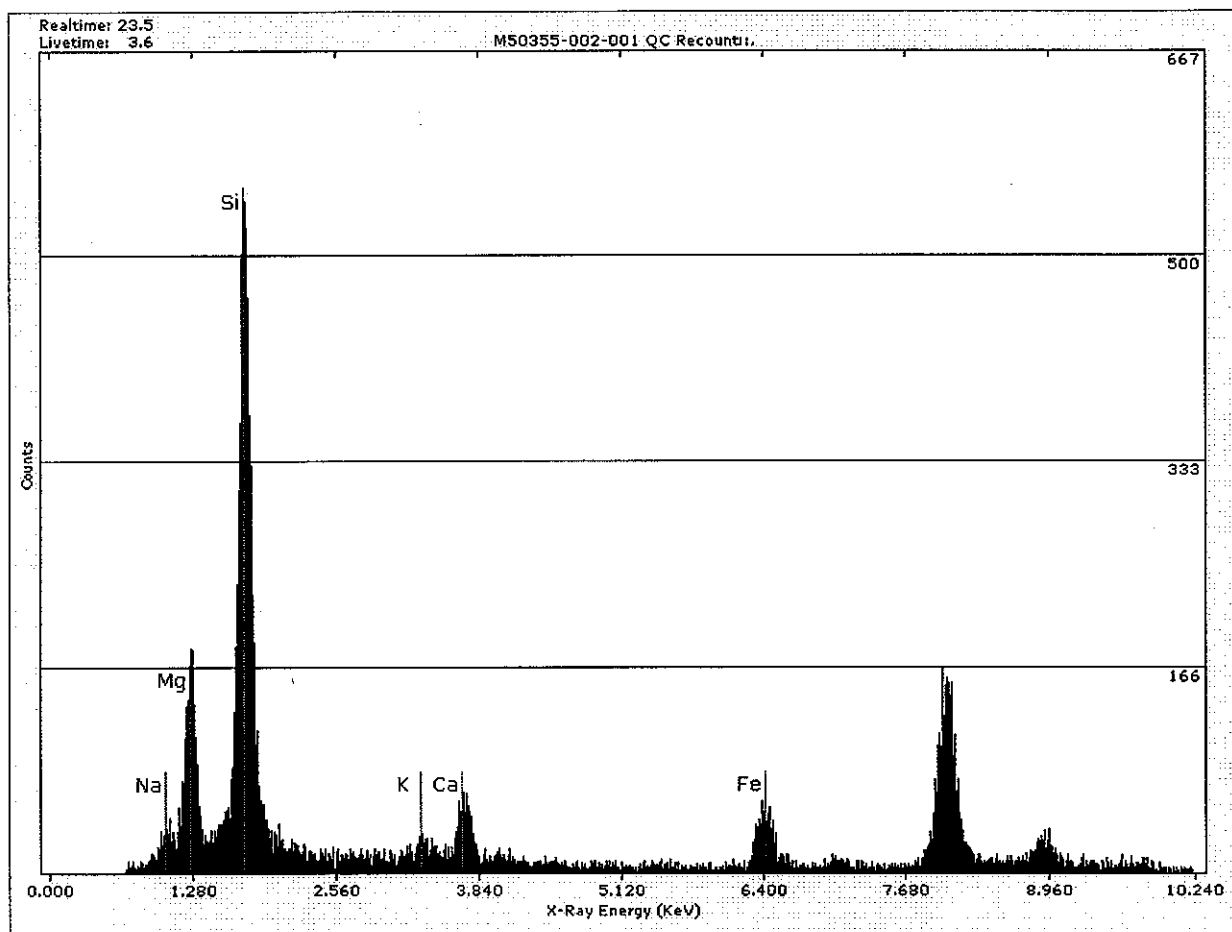
erial

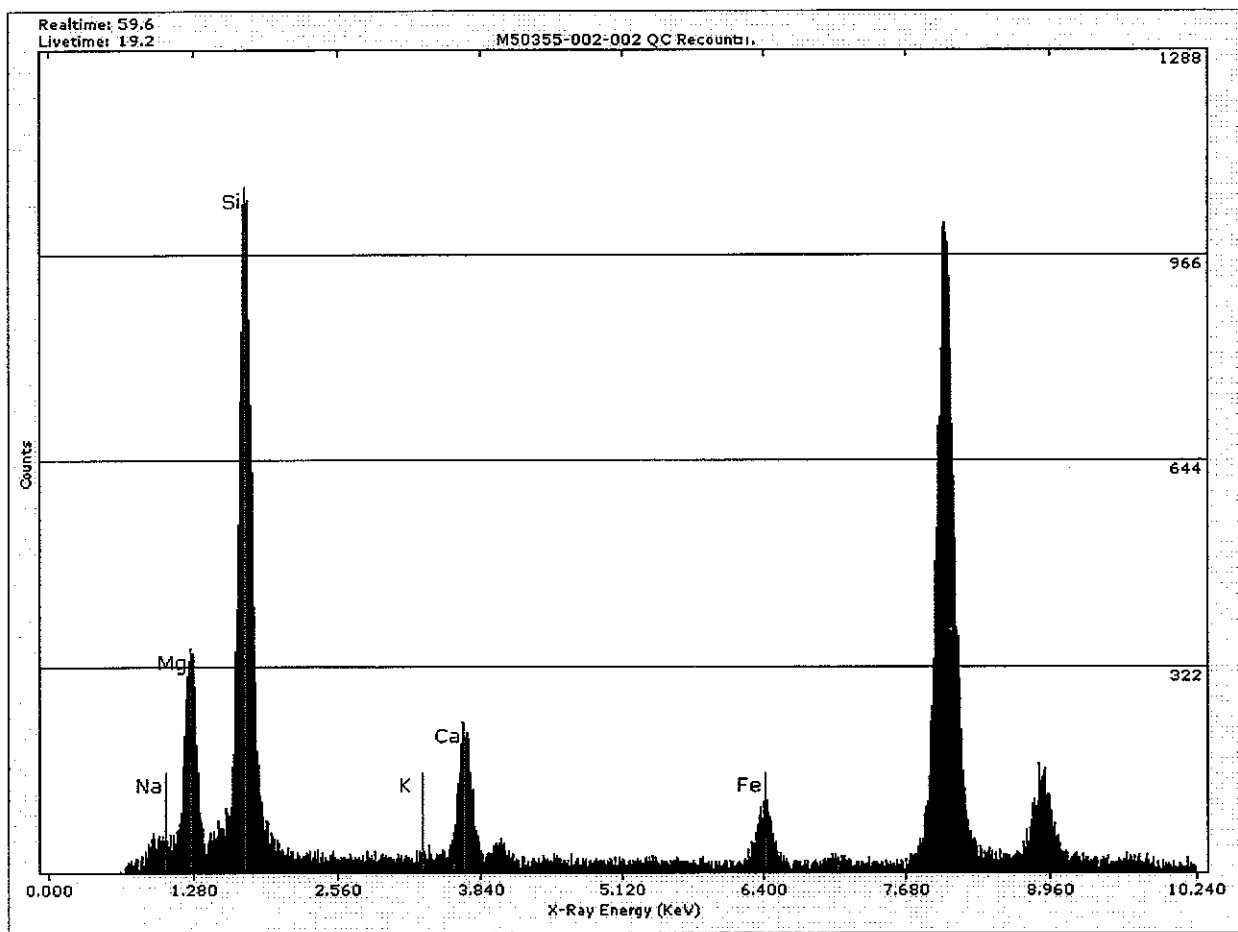
OM  
Amosite  
Trem-Act

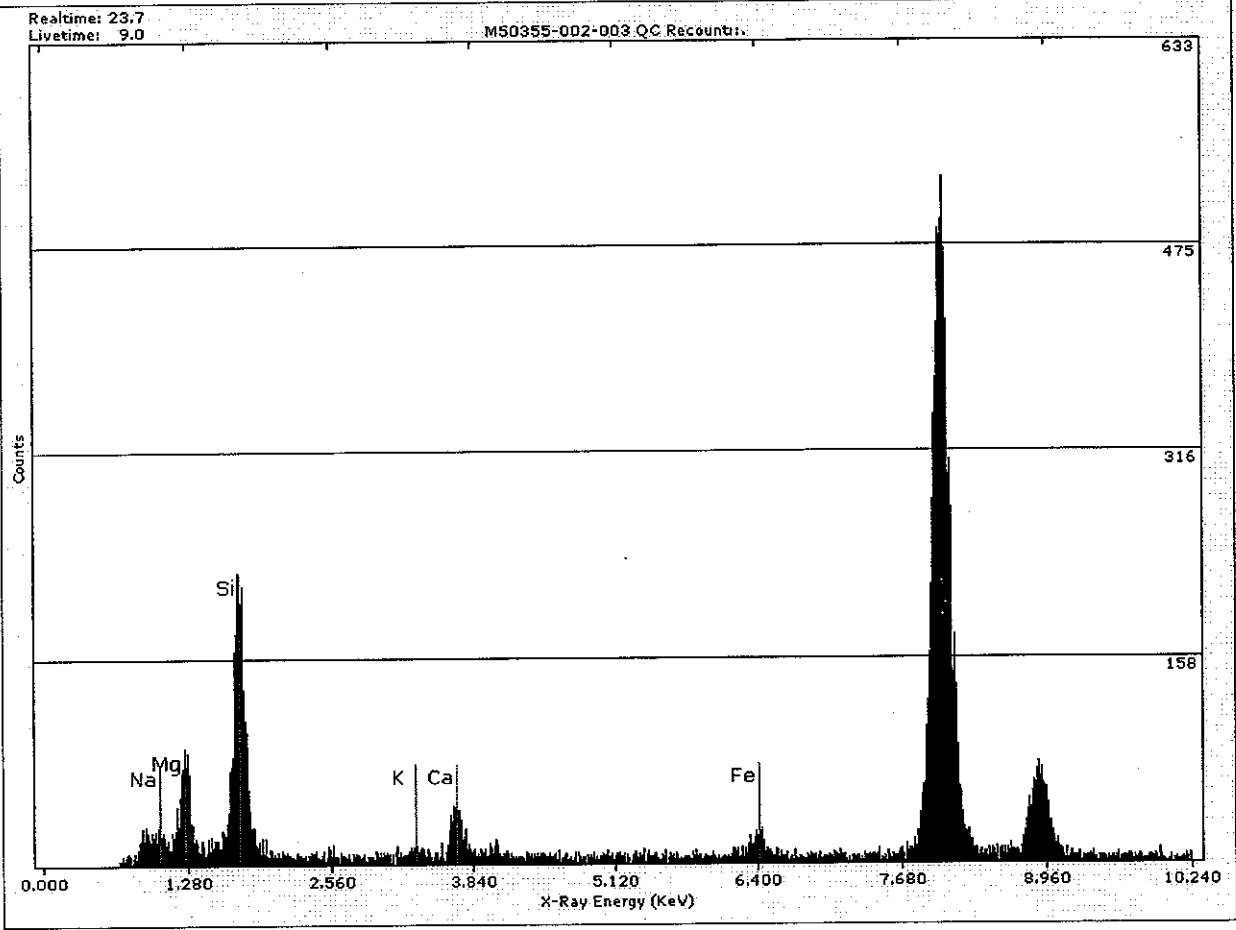
other mineral type  
Solid solution series  
Solid solution series

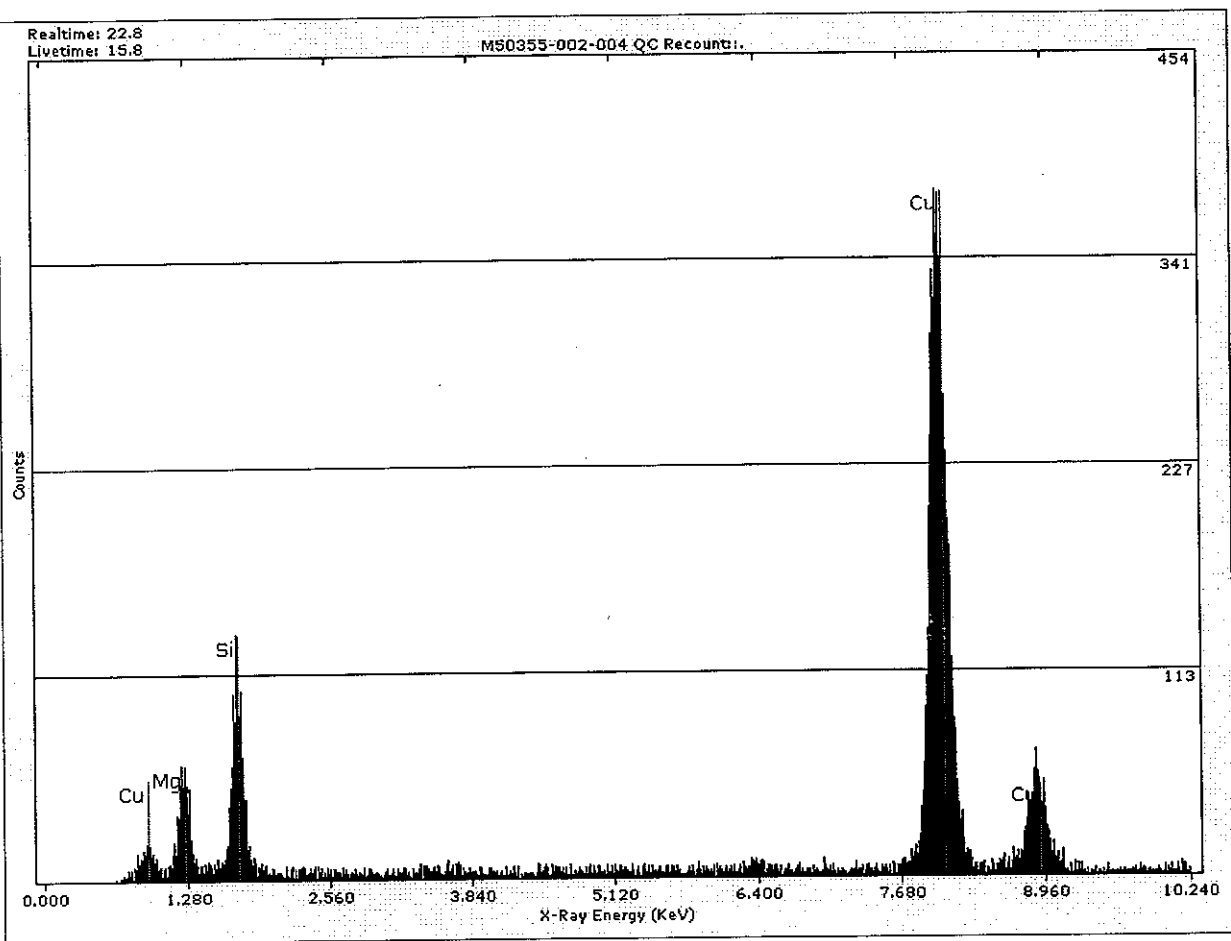
(specify in "other mineral description" field)  
Amosite, cummingtonite-grunerite  
remolite-Actinolite

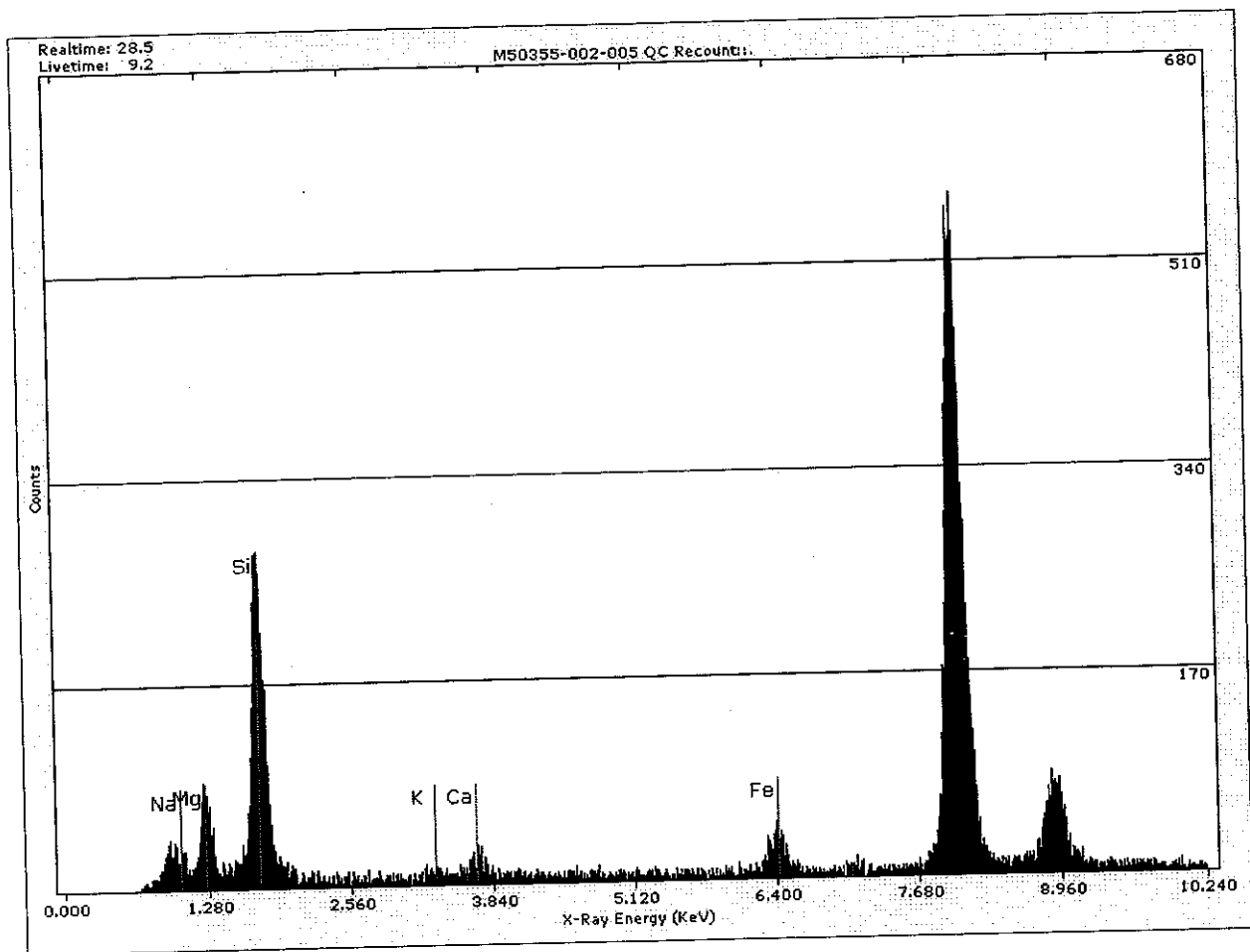
(d) Populate this field only if sample was analyzed using more than one instrument, by more than one analyst, or across multiple analysis dates.











# 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 Visual Gold to dark brown. Flakes and books as well as remnants of plaster, gypsum board and paint 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 Visual** Gold to dark brown. Flakes and books as well as remnants of ceiling tile.

**OPTICAL DATA FOR ASBESTOS IDENTIFICATION**

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

# SECTION 4



**Completed Chain of Custody Form**

**For**

**Dust and Bulk Sample Report**

**Site No.: R01-091222JM**

**Client No. 0806F**

**MAS Project No.: M50355**

Chen

**Sampler Signáture:**

**START, Andover, MA**

EPA Contract Number: EP-W-05-042

DAS No. 0806F

## 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**

[illegible]

## SAMPLES TRANSFERRED FROM

**CHAIN OF CUSTODY #**

**Special Instructions:** 2-week TAT requested. Please send results to John Burton.

[illegible]