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ATHENICA
ENVIRONMENTAL SERVICES INC.
Tel. (718) 784-7490
Fax. (718) 784-4085

AIRBORNE ASBESTOS ANALYSIS BY TRANSMISSION ELECTRON MICROSCOPY

CLIENT: Warren & Panzer Engineers, P.C.
LABORATORY ID #: T02-10-049
ANALYT. METHODOLOGY: AHERA
FILTER TYPE: M.C.E.
AVERAGE G.O. AREA (mm^2): 0.013838

PROJECT: NYC DEP, 17 John Street
DATE OF REPORT: 10/09/02
DATE OF ANALYSIS: 10/09/02
EFFECTIVE FILTER AREA (mm^2): 385

LABORATORY RESULTS

CLIENT #	LAB. ID #	LOCATION	VOLUME (lt)	G.O.'s ANALYZED	AREA ANALYZED (mm^2)	ANALYT. SENSITIV. (struct./cm^3)	TOTAL ASBESTOS AIR CONC. (struc./cm^3)	TOTAL ASBESTOS FILTER CONC. (str./mm^2)	AIR CONC. FOR STRUCT. 0.5≤S<5μm	AIR CONC. FOR STRUCT. S≥5.0μm	ASBEST. TYPE CHRYS.	AMPHIB. ASBEST TYPE SPECIFY
01	T02-10-049-2923	Personal decon clean room	1680	4	0.0554	0.0041	**<0.0041**	**<18.07**	NA	NA	NA	NA
02	T02-10-049-2924	North area on roof	1680	4	0.0554	0.0041	**<0.0041**	**<18.07**	NA	NA	NA	NA
03	T02-10-049-2925	East area on roof	1680	4	0.0554	0.0041	**<0.0041**	**<18.07**	NA	NA	NA	NA
04	T02-10-049-2926	West area on roof	1680	4	0.0554	0.0041	**<0.0041**	**<18.07**	NA	NA	NA	NA
05	T02-10-049-2927	South area on roof	1680	4	0.0554	0.0041	**<0.0041**	**<18.07**	NA	NA	NA	NA

ANALYST
E. Dimitrakas

LABORATORY DIRECTOR
Spiro Dongaris

LABORATORY CERTIFICATION NUMBERS: NVLAP 101958, ELAP 10955

- Athenica Environmental Services Inc. (AES), is responsible only for information pertaining to samples taken by its employees.
- Air sampling cassettes will be stored for sixty (60) days. AES Inc., should be notified within this time frame for a true duplicate analysis.
- If AES Inc., did not conduct the sampling, the reported airborne concentration was derived based on information provided by the client. Under these circumstances, the air concentration data is supplied solely for the convenience of the client.
- The report relates only to items tested. This report must not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. Test reports may not be reproduced except in full and with prior approval of AES Inc.
- The liability of Athenica Environmental Services Inc. with respect to the services charged, shall in no event exceed the amount of the invoice.

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TEM DEPARTMENT

Tel. (718) 784-7490
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TEM AHERA COUNTSHEET

CLIENT : Jaros Baron Eng	DATE : 10/09/02
PROJECT : NYC DEP 11 John St	ANALYST : GRD
BATCH # : 702.010-049	CLIENT ID # : 01
SAMPLE ID # : 702.010-049-2923	VOLUME (lt) : 1680
G.O. AREA (mm^2) : 0.015838	GO's TO ANALYZE : 4
MAGNIFICATION :	ACC. VOLTAGE (KeV) : 100
INSTRUMENT : JEOL 100CX II	FILTER AREA (mm^2) : 385
ANALYTICAL METHODOLOGY: EPA FEDERAL REGISTER, VOL. 52, No 210,OCT. 30, 1987, #40 CFR, PART 763, APPENDIX A TO SUBPART E	

GRID	GO ID	Str. #	Str. Classf.	L (µm)	W (µm)	Structure sketch	SAED	EDXA	PHOTO#	ID
A	C10	NSS								
	C4	NSS								
B	C2	NSS								
	G2	NSS								

Analytical Sensitivity (str/cm^3):	0.0041	Eucentricity check :	✓
Concentration (str/cm^3) :	<0.0041	*Grid acceptance criteria check :	(A)...✓. (B).✓...
Concentration (str/mm^2) :	<18.07	**CHR. # STRUCT. : F	M C B
Number of Asbestos Structures :	0.5≤S<5µm ..0...	**AMPH. # STRUCT.:F	M C B
	S≥5µm .....0....	Specify AMPH. Type : AM.	ACT. TRE.
Number of Non-asbestos Structures:.....	0.....	CRO. ANTH.	

*Replica covers >50%,at least 20 GO's with no overlapping or folded replica, intact GO's have >50% coverage, <50% Undissolved filter, <5% holes or opaque areas, <10% particulate coverage.
** CHR.=chrysotile, AMPH.=amphibole, AM.=amosite, ACT.=actinolite, TRE.=tremolite, CRO.=crocidolite, ANTH.=anthophyllite.

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TEM DEPARTMENT

TEM AHERA COUNTSHEET

CLIENT : Warren Parker Grp	DATE : 10/09/02
PROJECT : NYC DEP 17 John St	ANALYST : GRD
BATCH # : T02.010-049	CLIENT ID # : 02
SAMPLE ID # : T02.010-049-2924	VOLUME (lt) : 1680
G.O. AREA (mm^2) : 0.013858	GO's TO ANALYZE : 4
MAGNIFICATION :	ACC. VOLTAGE (KeV) : 100
INSTRUMENT : JEOL 100CX II	FILTER AREA (mm^2) : 385
ANALYTICAL METHODOLOGY: EPA FEDERAL REGISTER, VOL. 52, No 210,OCT. 30, 1987, #40 CFR, PART 763, APPENDIX A TO SUBPART E	

GRID	GO ID	Str. #	Str. Classf.	L (µm)	W (µm)	Structure sketch	SAED	EDXA	PHOTO#	ID
B	E2	N>2								
	G9	N>2								
A	B9	N>2								
	E3	N>2								

Analytical Sensitivity (str/cm^3): 0.0041	Eucentricity check : J
Concentration (str/cm^3) : <0.0041	*Grid acceptance criteria check : (A)...✓ (B)...✓
Concentration (str/mm^2) : <1E-07	**CHR. # STRUCT. : F M C B
Number of Asbestos Structures : 0.5≤S<5µm ..0...	**AMPH. # STRUCT.:F M C B
S≥5µm ....0....	Specify AMPH. Type : AM. ACT. TRE.
Number of Non-asbestos Structures:.....0.....	CRO. ANTH.

*Replica covers >50%,at least 20 GO's with no overlapping or folded replica, intact GO's have >50% coverage, <50% Undissolved filter, <5% holes or opaque areas, <10% particulate coverage.
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TEM DEPARTMENT

TEM AHERA COUNTSHEET

CLIENT : Warren Parker Grp	DATE : 10/09/02
PROJECT : NYC DEP 11 John St	ANALYST : GRD
BATCH # : 702.010-049	CLIENT ID # : 03
SAMPLE ID # : 702.012-049-2925	VOLUME (lt) : 1680
G.O. AREA (mm^2) : 0.013838	GO's TO ANALYZE : 4
MAGNIFICATION :	ACC. VOLTAGE (KeV) : 100
INSTRUMENT : JEOL 100CX II	FILTER AREA (mm^2) : 385
ANALYTICAL METHODOLOGY: EPA FEDERAL REGISTER, VOL. 52, No 210,OCT. 30, 1987, #40 CFR, PART 763, APPENDIX A TO SUBPART E	

GRID	GO ID	Str. #	Str. Classf.	L (µm)	W (µm)	Structure sketch	SAED	EDXA	PHOTO#	ID
A	G3	N>5								
	D8	N>5								
B	C4	N>5								
	D9	N>5								

Analytical Sensitivity (str/cm^3): 0.0041	Eucentricity check : ✓
Concentration (str/cm^3) : <0.0041	*Grid acceptance criteria check : (A)..✓ (B)..✓
Concentration (str/mm^2) : <0.07	**CHR. # STRUCT. : F M C B
Number of Asbestos Structures : 0.5≤S<5µm ...0.	**AMPH. # STRUCT. : F M C B
S≥5µm .....0...	Specify AMPH. Type : AM. ACT. TRE.
Number of Non-asbestos Structures:.....0....	CRO. ANTH.

*Replica covers >50%,at least 20 GO's with no overlapping or folded replica, intact GO's have >50% coverage, <50% Undissolved filter, <5% holes or opaque areas, <10% particulate coverage.
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TEM AHERA COUNTSHEET

CLIENT : Ware & Parker Eng	DATE : 10/09/02
PROJECT : NYC DEP. 11 John St	ANALYST : GRD
BATCH # : 702.012-049	CLIENT ID # : 04
SAMPLE ID # : 702.012-049-2926	VOLUME (lt) : 1680
G.O. AREA (mm^2) : 0.013838	GO's TO ANALYZE : 4
MAGNIFICATION :	ACC. VOLTAGE (KeV) : 100
INSTRUMENT : JEOL 100CX II	FILTER AREA (mm^2) : 385
ANALYTICAL METHODOLOGY: EPA FEDERAL REGISTER, VOL. 52, No 210,OCT. 30, 1987, #40 CFR, PART 763, APPENDIX A TO SUBPART E	

GRID	GO ID	Str. #	Str. Classf.	L (µm)	W (µm)	Structure sketch	SAED	EDXA	PHOTO#	ID
B	C7	NSS								
	I8	NSS								
A	G7	NSS								
	B6	NSS								

Analytical Sensitivity (str/cm³):	0.0041	Eucentricity check :	✓
Concentration (str/cm³) :	<0.0041	*Grid acceptance criteria check :	(A) ✓ (B) ✓
Concentration (str/mm²) :	<18.07	**CHR. # STRUCT. : F M C B	
Number of Asbestos Structures : 0.5≤S<5µm	0	**AMPH. # STRUCT.: F M C B	
S≥5µm	0	Specify AMPH. Type : AM. ACT. TRE.	
Number of Non-asbestos Structures:	0	CRO. ANTH.	

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TEM DEPARTMENT

TEM AHERA COUNTSHEET

CLIENT : Warren Pareen Eng	DATE : 10/29/02
PROJECT : NYC DEP. 11 John St	ANALYST : ERD
BATCH # : 702.010-049	CLIENT ID # : 05
SAMPLE ID # : 702.010-049-292 F	VOLUME (lt) : 1680
G.O. AREA (mm^2) : 0.013838	GO's TO ANALYZE : 4
MAGNIFICATION :	ACC. VOLTAGE (KeV) : 120
INSTRUMENT : JEOL 100CX II	FILTER AREA (mm^2) : 385

ANALYTICAL METHODOLOGY: EPA FEDERAL REGISTER, VOL. 52, No 210,OCT. 30, 1987, #40 CFR, PART 763, APPENDIX A TO SUBPART E

GRID	GO ID	Str. #	Str. Classf.	L (µm)	W (µm)	Structure sketch	SAED	EDXA	PHOTO#	ID
A	B8	N>9								
	E3	N>9								
B	G3	N>9								
	H9	N>9								

Analytical Sensitivity (str/cm^3): 0.0041	Eucentricity check : ✓
Concentration (str/cm^3) : <0.0041	*Grid acceptance criteria check : (A)...✓ (B)...✓
Concentration (str/mm^2) : <18.07	**CHR. # STRUCT. : F M C B
Number of Asbestos Structures : 0.5≤S<5µm ...0..	**AMPH. # STRUCT.:F M C B
S≥5µm .....0...	Specify AMPH. Type : AM. ACT. TRE.
Number of Non-asbestos Structures:.....2....	CRO. ANTH.

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