



AIRBORNE ASBESTOS ANALYSIS BY TRANSMISSION ELECTRON MICROSCOPY

CLIENT: Warren & Panzer Engineers, P.C.
LABORATORY ID #: T02-10-107
ANALYT. METHODOLOGY: AHERA
FILTER TYPE: M.C.E.
AVERAGE G.O. AREA (mm²): 0.013838

PROJECT: NYC DEP, 20 John Street
DATE OF REPORT: 10/18/02
DATE OF ANALYSIS: 10/18/02
EFFECTIVE FILTER AREA (mm²): 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	T02-10-107-3221	Exit to the roof	1800	4	0.0554	0.0039	<0.0039	<18.07	NA	NA	NA	NA
02	T02-10-107-3222	IWA 1 st left side of WA	1800	4	0.0554	0.0039	0.0039	18.07	0.0039	<0.0039	Chrys.	NA
03	T02-10-107-3223	IWA 2 nd left side of WA	1800	4	0.0554	0.0039	<0.0039	<18.07	NA	NA	NA	NA
04	T02-10-107-3224	IWA 3 rd left side of WA	1800	4	0.0554	0.0039	<0.0039	<18.07	NA	NA	NA	NA
05	T02-10-107-3225	IWA right side of WA	1800	4	0.0554	0.0039	<0.0039	<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.



ATHENICA

ENVIRONMENTAL SERVICES INC.

45-08 Greenpoint Avenue
Long Island City, N.Y. 11104

TEM DEPARTMENT

Tel. (718) 784-7490
Fax (718) 784-4085

TEM AHERA COUNTSHEET

CLIENT : WARREN & PANZER	DATE : 10/18/02
PROJECT : NYCDep/20 JOHN ST.	ANALYST : ESD
BATCH # : T02-10-107	CLIENT ID # : 01
SAMPLE ID # : T02-10-107-3221	VOLUME (lt) : 1800
G.O. AREA (mm ²) : 0.013838	GO's TO ANALYZE : 4
MAGNIFICATION : 19K	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	

GRJ D	GO ID	Str. #	Str. Classf.	L (μm)	W (μm)	Structure sketch	SAE D	EDXA	PHO TO#	ID
B	H3	N>>								
	C3	N>>								
A	IT	N>>								
	C5	N>>								

Analytical Sensitivity (str/cm ²): 0.0039	Eucentricity check : ✓
Concentration (str/cm ²): <0.0039	*Grid acceptance criteria check : (A)✓ (B).....
Concentration (str/mm ²): 4807	**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.

CITY_21MC100_011086516



ATHENICA
ENVIRONMENTAL SERVICES INC.

45-09 Greenpoint Avenue
Long Island City, N.Y. 11104

TEM DEPARTMENT

Tel. (718) 784-7480
Fax (718) 784-4085

TEM AHERA COUNTSHEET

CLIENT: WARREN & PANZER	DATE: 10/18/02
PROJECT: NYCDER/20 JOHN ST.	ANALYST: ENJ
BATCH #: T02-10-107	CLIENT ID #: 04
SAMPLE ID #: T02-10-107-3224	VOLUME (l): 1800
G.O. AREA (mm ²): 0.013838	GO's TO ANALYZE: 4
MAGNIFICATION: 19K	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	

[illegible]

Analytical Sensitivity (str/cm ³):	0.0039	Bucentricity check:	
Concentration (str/cm ³):	20.0039	*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 < 5 μm 0	**AMPH. # STRUCT.:	F M C B
	S ≥ 5 μm 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.

CITY_21MC100_011086519

Tel. (718) 784-7490
Fax (718) 784-4085

CLIENT : WARREN & PANZER	DATE : 10/18/02
PROJECT : NYCDep/20 JOHN ST.	ANALYST : ESD
BATCH # : T02-10-107	CLIENT ID # : 05
SAMPLE ID # : T02-10-107-3225	VOLUME (l) : 1800
G.O. AREA (mm ²) : 0.013838	GO's TO ANALYZE : 4
MAGNIFICATION : 19K	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	

[illegible]

Analytical Sensitivity (str/cm ³):	0.0039	Eucentricity check:	✓
Concentration (str/cm ³):	<0.0039	*Grid acceptance criteria check:	(A)..... (B).....
Concentration (str/mm ²):	<1807	**CHR. # STRUCT.:	F M C B
Number of Asbestos Structures:	0.5 ≤ S < 5 μm ... 9 ...	**AMPH. # STRUCT.:	F M C B
	S ≥ 5 μm ... 9 ...	Specify AMPH. Type:	AM. ACT. TRE.
Number of Non-asbestos Structures:	0	CRO. ANTH.	

** CHR.=chrysotile, AMPH.=amphibole, AM.=amosite, ACT.=actinolite, TRE.=tremolite, CRO.=crocidolite, ANTH.=anthophyllite.