NYC 9/11 Public Portal Document

Analytical Data

EMSL Analytical, Inc.
307 West 38th Street, New York, NY 10018
Phone: (212) 290-0051 Fax: (212) 290-0058 Email: manhattanlab@emsl.com

Attn: **Arnel Javal**
TRC Environmental Consultants
1430 Broadway, 10th Floor
New York, NY 10018

Fax: (212) 221-7840 Phone: (212) 221-7822
Project: **48970-0210/ LMDC - 130 LIBERTY STREET - NEW YORK, NY**

Customer ID: TRCE51
Customer PO: 489720-SC001
Received: 09/29/05 1:24 PM
EMSL Order: 030529115

EMSL Proj: 130 Liberty Deconstruction
Analysis Date: 9/30/2005
Report Date: 10/3/2005

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Sample	Volume (Liters)	Area Analyzed (mm^2)	Non Asb	Asbestos Type(s)	# Structures ≥ 0.5µ < 5µ	# Structures ≥5µ	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm^2)	Asbestos Concentration (S/cc)	Notes
ASBESTOS-ST1-9/28/05 *030529115-0001*	4680.00	0.0520	1	None Detected			0.0016	**<19.00**	**<0.0016**	
ASBESTOS-ST2-9/28/05 *030529115-0002*	4680.00	0.0520	0	None Detected			0.0016	**<19.00**	**<0.0016**	
ASBESTOS-ST4-9/28/05 *030529115-0003*	4680.00	0.0520	7	None Detected			0.0016	**<19.00**	**<0.0016**	
ASBESTOS-ST5-9/28/05 *030529115-0004*	4680.00	0.0520	0	None Detected			0.0016	**<19.00**	**<0.0016**	
ASBESTOS-ST6-9/28/05 *030529115-0005*	4680.00	0.0520	0	None Detected			0.0016	**<19.00**	**<0.0016**	
ASBESTOS-ST7-9/28/05 *030529115-0006*	4680.00	0.0520	1	None Detected			0.0016	**<19.00**	**<0.0016**	
ASBESTOS-ST8-9/28/05 *030529115-0007*	4680.00	0.0520	0	Chrysotile	4	1	0.0016	**96.00**	**0.0079**	
ASBESTOS-ST9-9/28/05 *030529115-0008*	4680.00	0.0520	0	Chrysotile	1	0	0.0016	**19.00**	**0.0016**	

Analyst(s)

Caidong Shi (5)
George Williams (7)

Jose Arriaga
or other approved signatory

Disclaimers: The laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This lab is only responsible for data reported in structures/mm^2. This report may not be reproduced, except in full, without written approval by EMSL. This report must not be used to claim product endorsement. As per 40 CFR 763, the initial screening test may not be applied to samples with collected volumes of <1200 liters. This report relates only to the samples reported above.
Accredited for NVLAP PLM/TEM #101048-9, NY State ELAP #11506

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Fax: (212) 221-7840 Phone: (212) 221-7822
Project: **48970-0210/ LMDC - 130 LIBERTY STREET - NEW YORK, NY**

Customer ID: TRCE51
Customer PO: 489720-SC001
Received: 09/29/05 1:24 PM
EMSL Order: 030529115

EMSL Proj: 130 Liberty Deconstruction
Analysis Date: 9/30/2005
Report Date: 10/3/2005

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Sample	Volume (Liters)	Area Analyzed (mm^2)	Non Asb	Asbestos Type(s)	# Structures ≥ 0.5µ < 5µ	# Structures ≥5µ	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm^2)	Asbestos Concentration (S/cc)	Notes
ASBESTOS-ST10-9/28/05 *030529115-0009*	4680.00	0.0520	0	None Detected			0.0016	**<19.00**	**<0.0016**	
ASBESTOS-ST100-9/28/05 *030529115-0010*	4680.00	0.0520	0	None Detected			0.0016	**<19.00**	**<0.0016**	
ASBESTOS-FBB-9/28/05 *030529115-0011*	0.00	0.1300	0	None Detected				**<7.70**		
ASBESTOS-EMSLMETHODBLANK *030529115-0012*	0.00	0.1300	0	None Detected				**<7.70**		

Analyst(s)

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George Williams (7)

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TEMAHERA-1

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0205291LS

CHAIN OF CUSTODY RECORD

Project Name: LMDC - 130 Liberty Street - NY, NY
Project No.: 48970-0210
Sampling Date(s): 9/28/2005
Laboratory: EMSL
Laboratory P.O.:
Shipping Date(s): 9/29/2005
Shipper's Name: Keith Darocha

Sample Code	Sampled Date	Container Size	Container G/P	MATRIX: Aqueous	Organic Solvent	Ash/Soil/Sediment (Solid)	Acidic	Basic	Other	Description	ANALYSIS: Trace Metals*	Mercury	HCl	Cl2	Particulate Matter	PCDD/PCDF	Semivolatile Organics	Volatile Organics	Physical Parameters*	AHERA Mod. (TEM/SEM)				Vol (m³) / Comments
Asbestos - ST1 - 9/28/05	9/28/2005	TEM	P						X	TEM & SEM (If Needed)										X				4.68
Asbestos - ST2 - 9/28/05	9/28/2005	TEM	P						X	TEM & SEM (If Needed)										X				4.68
Asbestos - ST4 - 9/28/05	9/28/2005	TEM	P						X	TEM & SEM (If Needed)										X				4.68
Asbestos - ST5 - 9/28/05	9/28/2005	TEM	P						X	TEM & SEM (If Needed)										X				4.68
Asbestos - ST6 - 9/28/05	9/28/2005	TEM	P						X	TEM & SEM (If Needed)										X				4.68
Asbestos - ST7 - 9/28/05	9/28/2005	TEM	P						X	TEM & SEM (If Needed)										X				4.68
Asbestos - ST8 - 9/28/05	9/28/2005	TEM	P						X	TEM & SEM (If Needed)										X				4.68
Asbestos - ST9 - 9/28/05	9/28/2005	TEM	P						X	TEM & SEM (If Needed)										X				4.68
Asbestos - ST10 - 9/28/05	9/28/2005	TEM	P						X	TEM & SEM (If Needed)										X				4.68
Asbestos - ST100 - 9/28/05	9/28/2005	TEM	P						X	TEM & SEM (If Needed)										X				4.68
Asbestos - FBR - 9/28/05	9/28/2005	TEM	P						X	Analysis Only If Detected in Samples										X				0

Relinquished by: [signature] Date/Time: 9/29/05 12:00
Received by: [signature] Date/Time: 9/29/05 1212
Relinquished by: Date/Time:
Received by: Date/Time:
Remarks (*):

TRC

NYC 9/11 Public Portal Document
CITY_DEP_WORBY_CANNATA_SUBP_000076870
NYC-WTC_000424880

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EMSL Analytical, Inc.
307 West 38th Street, New York, NY 10018
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Attn: **Donald Hoeschele**
TRC Environmental Consultants
1430 Broadway, 10th Floor
New York, NY 10018

Fax: (212) 221-7840 Phone: (212) 221-7822

Project: #47000-0010-00002/
LOWER MANHATTAN DEVELOPMENT CORPORATION/
130 LIBERTY STREET/ NEW YORK, NEW YORK/ POST-ABATEMENT

Customer ID: TRCE51
Customer PO:
Received: 09/30/05 11:56 PM
EMSL Order: 030529430

EMSL Proj: 130 Liberty Street
Analysis Date: 10/1/2005
Report Date: 10/3/2005

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Sample	Volume (Liters)	Area Analyzed (mm²)	Non Asb	Asbestos Type(s)	# Structures ≥ 0.5µ < 5	# Structures ≥ 5µ	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)	Notes
T-093005-084 030529430-0001	1250.00	0.0650	0	None Detected			0.0047	<15.00	<0.0047	
T-093005-085 030529430-0002	1250.00	0.0650	0	None Detected			0.0047	<15.00	<0.0047	
T-093005-086 030529430-0003	1250.00	0.0650	0	None Detected			0.0047	<15.00	<0.0047	
T-093005-087 030529430-0004	1250.00	0.0650	0	None Detected			0.0047	<15.00	<0.0047	
T-093005-088 030529430-0005	1250.00	0.0650	0	None Detected			0.0047	<15.00	<0.0047	
T-093005-089 030529430-0006	1250.00	0.0650	0	None Detected			0.0047	<15.00	<0.0047	

Analyst(s)
David Chen (6)

Jose Arriaga
or other approved signatory

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Accredited for NVLAP PLM/TEM #101048-0, NY State ELAP #11508

TEMAHERA-1 THIS IS THE LAST PAGE OF THE REPORT. 1

CITY_DEP_WORBY_CANNATA_SUBP_000076871

NYC-WTC_000424881

PAGE 03/03 EMSL NYC 212-298-2538 10:27 10/03/2005

TRC ASBESTOS AIR MONITORING DATA AND CHAIN OF CUSTODY FORM

Client: Lower Manhattan Development Corporation	Project Manager: Donald Hoeschele	Laboratory/Location: EMSL	Turnaround Time: ☐ Immediate ☐ 3 Hours ☐ 6 Hours ☐ 12 Hours ☑ 24 Hours ☐ Other
Project Name & Location: 130 Liberty Street, New York, New York	Project Monitor/Air Sampling Technician: R Da Rocca / A Osmanke		
Project Number: 47000-0010-00002 Interior Roof Finals	Date: 09/20/05	Rotometer Number: TRC-015	☐ PCM (0.8) micron MCE Cassette Filter Manufacturer: Lot: ☑ TEM (0.45) micron MCE Cassette Filter Manufacturer: EMS

Type: ☐ Background ☑ Post-Abatement ☐ Environmental ☐ Pre-Abatement ☐ OSHA ☐ Ambient ☐ Abatement ☐ Other

AIR SAMPLE INFORMATION

Sample I.D. Number	Pump #	OWA	Sample Location	Time (24 Hr. Clock) Start	End	Total (Minutes)	Flow Rate (L/Min.) Start	End	Avg.	Total Air Volume (liters)	# Fibers/ Fields Minus Blank	Fibers/ Structure Conc.
T-092005-R13	1	DWA	North East of Roof DWA	1645	1853	125	10	10	10	1250		
T-092005-R14	2	DWA	North West of Roof DWA	1647	1852	125	10	10	10	1250		
T-092005-R15	3	DWA	South West of Roof	1650	1855	125	10	10	10	1250		
T-092005-R16	4	DWA	South East of Roof	1652	1857	125	10	10	10	1250		
T-093005-R17	5	DWA	Center of Roof	1654	1859	125	10	10	10	1250		
T-093005-R18	—	—	Blank	—	—							
T-093005-R19	—	—	Blank	—	—							
T-093005-R20	—	—	Blank	—	—							

CHAIN OF CUSTODY

Relinquished By	Date	Time	Received By	Date	Time	Lab ELAP No.	Date	Time	Microscope Make/Serial No.
[signature]	93005	1155	[signature]	9/30	11:59	Analyzed By			
						QC By			
						Lab Batch No.			

Transmit Results To	Fax No.	Pager No.	Comments:	Analysis Methodology
Dhoeschele@trcsolutions.com			EMAIL TO : dhoeschele@trcsolutions.com	PCM – NIOSH 7400A TEM – AHERA TEM – NIOSH 7402

0.30529 U31

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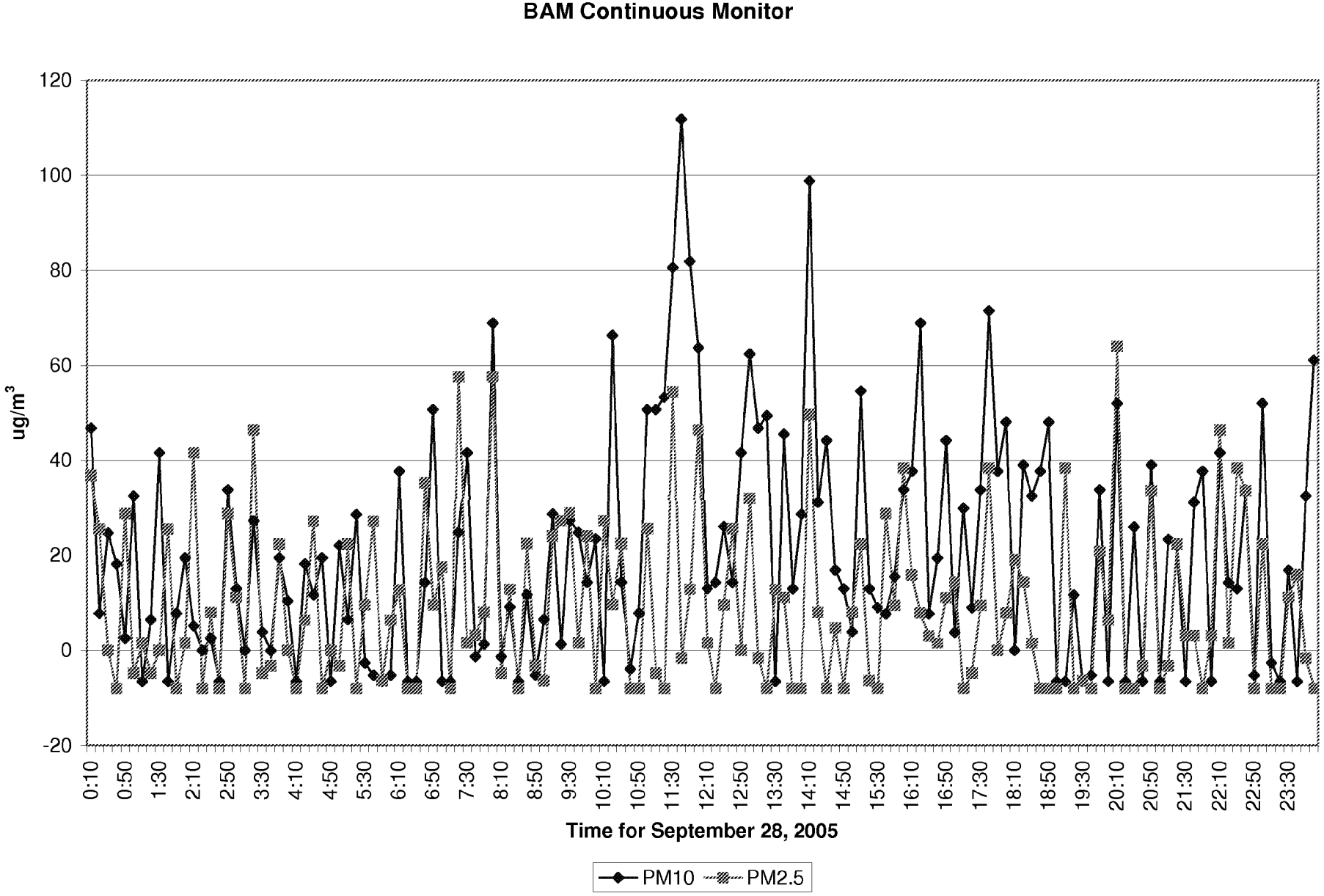
Particulate Data

NYC-WTC_000424884

NYC 9/11 Public Portal Document

CITY_DEP_WORBY_CANNATA_SUBP_000076874

PM10/PM2.5 Air Results for Station 8, Northeast Area Station (roof level) as recorded by a Met One E-BAM Continuous Monitor



130 Liberty Street Deconstruction Project

NYC-WTC_000424885

CITY_DEP_WORBY_CANNATA_SUBP_000076875

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PM10/PM2.5 Air Results for Station 8, Northeast Area Station (roof level) as recorded by a Met One E-BAM Continuous Monitor
September 28, 2005

Time	PM10 ug/m3	PM2.5 ug/m3	Time	PM10 ug/m3	PM2.5 ug/m3	Time	PM10 ug/m3	PM2.5 ug/m3	Time	PM10 ug/m3	PM2.5 ug/m3
0:10	46.8	36.8	6:30	-6.5	-8	12:50	41.6	0	19:10	-6.5	38.4
0:20	7.8	25.6	6:40	14.3	35.2	13:00	62.4	32	19:20	11.7	-8
0:30	24.7	0	6:50	50.7	9.6	13:10	46.8	-1.6	19:30	-6.5	-6.4
0:40	18.2	-8	7:00	-6.5	17.6	13:20	49.4	-8	19:40	-5.2	-8
0:50	2.6	28.8	7:10	-6.5	-8	13:30	-6.5	12.8	19:50	33.8	20.8
1:00	32.5	-4.8	7:20	24.7	57.6	13:40	45.5	11.2	20:00	-6.5	6.4
1:10	-6.5	1.6	7:30	41.6	1.6	13:50	13	-8	20:10	52	64
1:20	6.5	-4.8	7:40	-1.3	3.2	14:00	28.6	-8	20:20	-6.5	-8
1:30	41.6	0	7:50	1.3	8	14:10	98.8	49.6	20:30	26	-8
1:40	-6.5	25.6	8:00	68.9	57.6	14:20	31.2	8	20:40	-6.5	-3.2
1:50	7.8	-8	8:10	-1.3	-4.8	14:30	44.2	-8	20:50	39	33.6
2:00	19.5	1.6	8:20	9.1	12.8	14:40	16.9	4.8	21:00	-6.5	-8
2:10	5.2	41.6	8:30	-6.5	-8	14:50	13	-8	21:10	23.4	-3.2
2:20	0	-8	8:40	11.7	22.4	15:00	3.9	8	21:20	22.1	22.4
2:30	2.6	8	8:50	-5.2	-3.2	15:10	54.6	22.4	21:30	-6.5	3.2
2:40	-6.5	-8	9:00	6.5	-6.4	15:20	13	-6.4	21:40	31.2	3.2
2:50	33.8	28.8	9:10	28.6	24	15:30	9.1	-8	21:50	37.7	-8
3:00	13	11.2	9:20	1.3	27.2	15:40	7.8	28.8	22:00	-6.5	3.2
3:10	0	-8	9:30	27.3	28.8	15:50	15.6	9.6	22:10	41.6	46.4
3:20	27.3	46.4	9:40	24.7	1.6	16:00	33.8	38.4	22:20	14.3	1.6
3:30	3.9	-4.8	9:50	14.3	24	16:10	37.7	16	22:30	13	38.4
3:40	0	-3.2	10:00	23.4	-8	16:20	68.9	8	22:40	33.8	33.6
3:50	19.5	22.4	10:10	-6.5	27.2	16:30	7.8	3.2	22:50	-5.2	-8
4:00	10.4	0	10:20	66.3	9.6	16:40	19.5	1.6	23:00	52	22.4
4:10	-6.5	-8	10:30	14.3	22.4	16:50	44.2	11.2	23:10	-2.6	-8
4:20	18.2	6.4	10:40	-3.9	-8	17:00	3.9	14.4	23:20	-6.5	-8
4:30	11.7	27.2	10:50	7.8	-8	17:10	29.9	-8	23:30	16.9	11.2
4:40	19.5	-8	11:00	50.7	25.6	17:20	9.1	-4.8	23:40	-6.5	16
4:50	-6.5	0	11:10	50.7	-4.8	17:30	33.8	9.6	23:50	32.5	-1.6
5:00	22.1	-3.2	11:20	53.3	-8	17:40	71.5	38.4	0:00	61.1	-8
5:10	6.5	22.4	11:30	80.6	54.4	17:50	37.7	0			
5:20	28.6	-8	11:40	111.8	-1.6	18:00	48.1	8			
5:30	-2.6	9.6	11:50	81.9	12.8	18:10	0	19.2			
5:40	-5.2	27.2	12:00	63.7	46.4	18:20	39	14.4			
5:50	-6.5	-6.4	12:10	13	1.6	18:30	32.5	1.6			
6:00	-5.2	6.4	12:20	14.3	-8	18:40	37.7	-8			
6:10	37.7	12.8	12:30	26	9.6	18:50	48.1	-8			
6:20	-6.5	-8	12:40	14.3	25.6	19:00	-6.5	-8			

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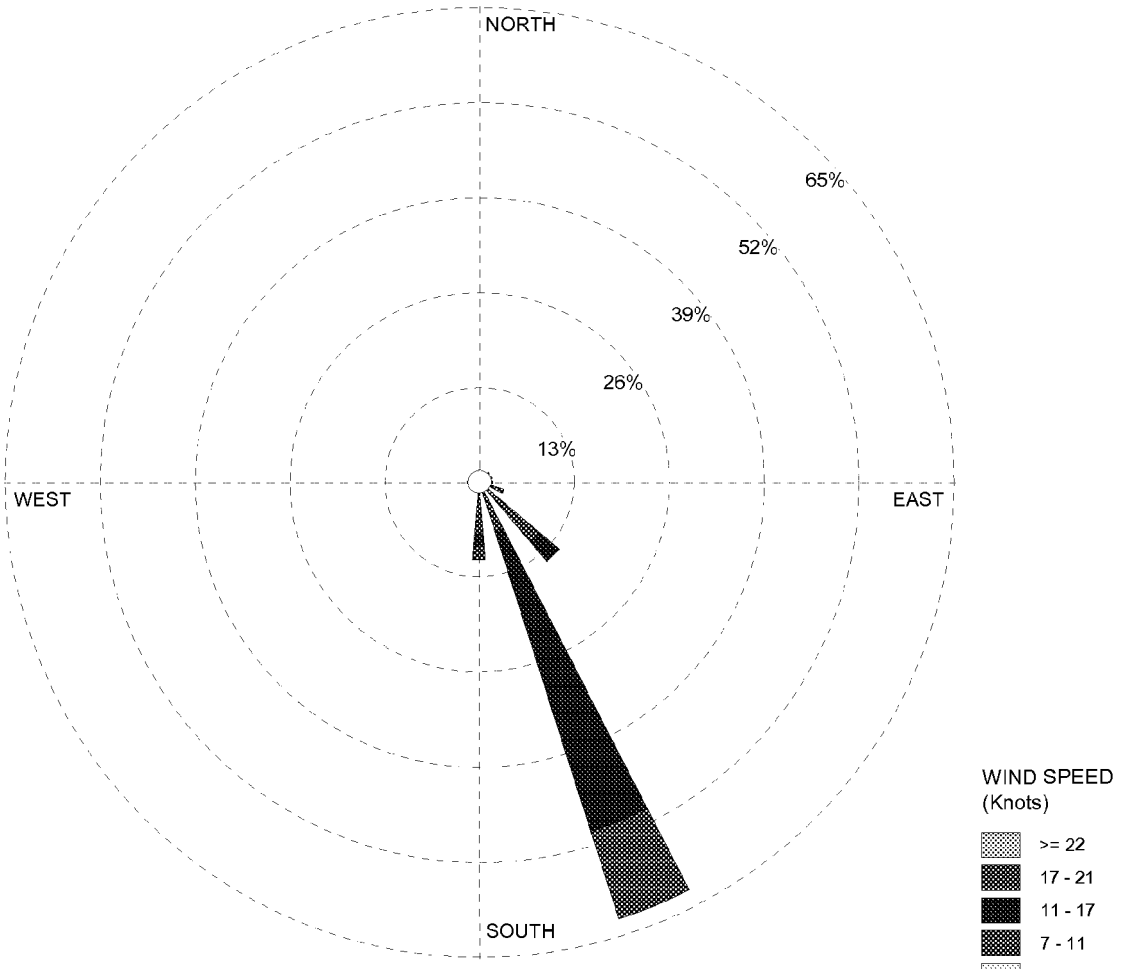
Meteorological Data

WIND ROSE PLOT:
130 Liberty Street, Roof Station

DISPLAY:
Wind Speed
Direction (blowing from)



COMMENTS:

DATA PERIOD: September 28, 2005 **09:30 - 23:10**	COMPANY NAME:	
	MODELER:	
CALM WINDS: **0.00%**	TOTAL COUNT:	
AVG. WIND SPEED: **12.60 Knots**	DATE: **10/3/2005**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

NYC 9/11 Public Portal Document

Visual Inspection Reports

NYC 9/11 Public Portal Document

September 28, 2005 Field Notes/Visual Observations
130 Liberty Street
Deconstruction Project

13:55	White particles seen floating northward in west side of Site. Source of particles is road repair work on Albany Street on southwest side of Site.
14:15	Regional cutting wood on northeast side of Site. Some dust emitted in same area by the movement of the scaffolding equipment.
14:35	Grey smoke drifting northward on west side of Site. Source of smoke is road repair. Work on Albany Street on southwest side of Site.

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Photographs

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