



February 7, 2002

Mr. Bernard P. Orlan
Director, Environmental Health & Safety
New York City Board of Education
28-11 Queens Plaza North
Long Island City, NY 11101-4008

Re: Summary of wipe and air sampling for asbestos, respirable particulates concentrations, Mercury, PCBs, Silica, Fiberglass, VOCs, Dioxins and Metals @ Stuyvesant H.S. (M477)

Dear Mr. Orlan:

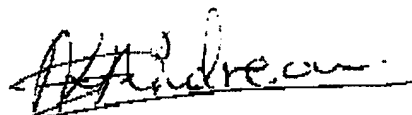
At your request, ATC Associates Inc. (ATC) is pleased to provide you with the summary of results for the wipe and air sampling performed at Stuyvesant H.S. (M477). All the results were tabulated in the attached tables.

It is our pleasure to provide these wipe/air sampling services to the New York City Board of Education. If you have any questions about this report, please call (212) 353-8280, extension 261 or 298.

Sincerely,
ATC ASSOCIATES INC.


Arnel Jayal
Project Manager

Reviewed by:


Andreas C. Andreou
Senior Project Manager

Respirable Particulates Concentrations and Ambient area air sample TEM results for asbestos

Date	Total Number of readings collected	Outdoor Readings ($\mu\text{g}/\text{m}^3$)	Range of Indoor readings ($\mu\text{g}/\text{m}^3$)	Number of readings $>40 \mu\text{g}/\text{m}^3$ to $\leq 65 \mu\text{g}/\text{m}^3$ (24 hrs average)	Number of readings $> 65 \mu\text{g}/\text{m}^3$ (24 hrs average)	Number of air samples collected for asbestos TEM analysis	Results of TEM asbestos analysis (structures/mm ²) (Area clearance criteria <70 structures/mm ²)
9/21/01	Indoor Air Quality Assessment (IAQ) did not started at this point					13	No structures Detected
10/4/01						5	No structures Detected
10/5/01						60	22.2 structures/mm ² were detected in one sample
10/6/01						7	No structures Detected
10/7/01						7	No structures Detected
10/8/01						7	No structures Detected
10/9/01	104	20 and 30	10 - 30	0	0	12	No structures Detected
10/10/01	102	16 and 18	12 - 35	1	0	12	No structures Detected
10/11/01	96	33 and 42	18 - 43	1	0	12	No structures Detected
10/12/01	99	58	18 - 50	30	0	12	No structures Detected
10/13/01	Indoor air quality assessment was not performed - Weekend					12	22.2 structures/mm ² were detected in one sample
10/14/01	Indoor air quality assessment was not performed - Weekend					12	No structures Detected
10/15/01	102	12 and 14	9 - 33	0	0	12	No structures Detected
10/16/01	114	25 and 35	12 - 37	0	0	13	No structures Detected
10/17/01	121	5 and 8	4 - 27	0	0	12	No structures Detected
10/18/01	105	9 and 14	4 - 26	0	0	20	22.2 structures/mm ² were detected in one sample
10/19/01	101	21 and 75	13 - 47	17	0	21	No structures Detected
10/20/01	No respirable particulate readings were collected - Weekend					20	No structures Detected
10/21/01	No respirable particulate readings were collected - Weekend					20	22.2 structures/mm ² were detected in one sample
10/22/01	101	74 and 145	27 - 104	46	33	21	No structures Detected
10/23/01	128	108 and 136	52 - 132	19	107	21	No structures Detected
10/24/01	101	76 and 81	27 - 86	62	26	21	No structures Detected
10/25/01	101	17 and 54	11 - 52	16	0	21	No structures Detected
10/26/01	99	21 and 33	9 - 28	0	0	21	22.2 structures/mm ² were detected in one sample
10/27/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
10/28/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
10/29/01	101	23 and 48	12 - 41	1	0	21	No structures Detected
10/30/01	124	34 and 53	12 - 131	0	1	21	No structures Detected
10/31/01	116	24 and 46	12 - 38	0	0	21	No structures Detected
11/1/01	115	83 and 107	37 - 88	85	18	21	No structures Detected
11/02/01	117	54 and 78	38 - 81	87	20	21	No structures Detected
11/3/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
11/4/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
11/5/01	118	27 and 36	5 - 21	0	0	21	No structures Detected
11/6/01	119	14 and 16	5 - 15	0	0	21	No structures Detected
11/7/01	118	30, 31 and 31	17 - 41	1	0	21	No structures Detected
11/8/01	120	54 and 58	18 - 61	7	0	21	22.24 structures/mm ² were detected in one sample
11/9/01	116	26 and 30	9 - 28	0	0	21	22.24 structures/mm ² were detected in two samples
11/10/01	No respirable particulate readings were collected - Weekend					21	22.24 structures/mm ² were detected in three samples
11/11/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
11/12/01	No respirable particulate readings were collected - Veterans Day Holiday					21	22.24 structures/mm ² were detected in one sample
11/13/01	117	42 and 52	21 - 52	19	0	21	No structures Detected
11/14/01	117	44 and 50	19 - 46	4	0	21	No structures Detected

Date	Total Number of readings collected	Outdoor Readings ($\mu\text{g}/\text{m}^3$)	Range of indoor readings ($\mu\text{g}/\text{m}^3$)	Number of readings $>40 \mu\text{g}/\text{m}^3$ to $\leq 65 \mu\text{g}/\text{m}^3$ (24 hrs average)	Number of readings $> 65 \mu\text{g}/\text{m}^3$ (24 hrs average)	Number of air samples collected for asbestos TEM analysis	Results of TEM asbestos analysis (structures/mm ²) (Area clearance criteria <70 structures/mm ²)
11/15/01	116	140 and 140	58 - 116	3	111	21	No structures Detected
11/16/01	121	80 and 151	47 - 97	43	76	21	No structures Detected
11/17/01	186	16 and 24	6 - 12	0	0	21	No structures Detected
11/18/01	192	27 and 32	9 - 40	0	0	21	No structures Detected
11/19/01	120	50 and 94	20 - 57	26	0	21	No structures Detected
11/20/01	120	12 and 18	4 - 36	0	0	21	No structures Detected
11/21/01	123	26 and 27	11 - 47	1	0	21	No structures Detected
No sampling was performed - Thanksgiving Holiday							
11/23/01	No respirable particulate readings were collected - Thanksgiving Holiday					21	No structures Detected
11/24/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
11/25/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
11/26/01	120	39 and 73	15 - 63	47	0	21	No structures Detected
11/27/01	120	36 and 43	15 - 52	5	0	21	No structures Detected
11/28/01	123	50 and 87	22 - 63	39	0	21	No structures Detected
11/29/01	124	37 and 43	9 - 49	6	0	21	No structures Detected
11/30/01	124	84 and 89	27 - 66	90	1	21	No structures Detected
12/1/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
12/2/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
12/5/01	124	70 and 120	20 - 90	80	19	21	No structures Detected
12/4/01	124	110 and 113	30 - 94	77	30	21	No structures Detected
12/5/01	124	53 and 85	27 - 80	84	1	21	No structures Detected
12/6/01	123	47 and 58	27 - 70	66	2	21	No structures Detected
12/7/01	123	4 and 63	15 - 52	13	0	21	22.24 structures/mm ² were detected in one sample
12/8/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
12/9/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
12/10/01	123	76 and 85	23 - 66	56	1	21	No structures Detected
12/11/01	123	35 and 49	13 - 50	1	0	21	No structures Detected
12/12/01	127	58 and 60	26 - 63	14	0	21	No structures Detected
12/13/01	127	109 and 105	41 - 110	28	97	21	No structures Detected
12/14/01	126	85 and 89	31 - 107	84	33	21	No structures Detected
12/15/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
12/16/01	No respirable particulate readings were collected - Weekend					21	No structures Detected
12/17/01	127	38 and 54	14 - 34	0	0	21	No structures Detected
12/18/01	127	3 and 4	2 - 10	0	0	21	No structures Detected
12/19/01	126	22 and 31	11 - 28	0	0	21	No structures Detected
12/20/01	127	7 and 53	6 - 32	0	0	21	No structures Detected
12/21/01	118	12 and 26	3 - 14	0	0	21	No structures Detected
12/22/01	No respirable particulate readings were collected - School was closed for holidays					21	No structures Detected
12/23/01	No respirable particulate readings were collected - School was closed for holidays					21	No structures Detected
12/24/01	No respirable particulate readings were collected - School was closed for holidays					21	No structures Detected
12/25/01	No sampling was performed - Christmas day						
12/26/01	No respirable particulate readings were collected - School was closed for holidays					21	No structures Detected
12/27/01	No respirable particulate readings were collected - School was closed for holidays					21	One sample was not analyzed. No asbestos was detected by qualitative scan
12/28/01	85	32	10 - 31	0	0	21	No structures Detected
12/29/01	52	35	18 - 30	0	0	21	No structures Detected
12/30/01	94	30	9 - 29	0	0	21	No structures Detected
12/31/01	94	30	7 - 26	0	0	21	No structures Detected
1/1/02	No sampling was performed - New Year day						
1/2/02	127	15 and 30	5 - 19	0	0	21	No structures Detected
1/3/02	127	18 and 20	8 - 27	0	0	21	No structures Detected
1/4/02	127	20 and 23	5 - 20	0	0	21	No structures Detected
1/5/02	No respirable particulate readings were collected - Weekend					21	No structures Detected
1/6/02	No respirable particulate readings were collected - Weekend					21	No structures Detected
1/7/02	127	15 and 32	8 - 30	0	0	21	No structures Detected
1/8/02	127	12 and 15	5 - 17	0	0	21	No structures Detected
1/9/02	127	34 and 40	12 - 37	0	0	21	No structures Detected
1/10/02	123	38 and 49	13 - 38	0	0	21	No structures Detected

Date	Total Number of readings collected	Outdoor Readings ($\mu\text{g}/\text{m}^3$)	Range of Indoor readings ($\mu\text{g}/\text{m}^3$)	Number of readings $>40 \mu\text{g}/\text{m}^3$ to $\leq 65 \mu\text{g}/\text{m}^3$ (24 hrs average)	Number of readings $> 65 \mu\text{g}/\text{m}^3$ (24 hrs average)	Number of air samples collected for asbestos TEM analysis	Results of TEM asbestos analysis (structures/mm2) (Area clearance criteria <70 structures/mm2)
1/11/02	127	26 and 57	15 - 34	0	0	21	No structures Detected
1/12/02	No respirable particulate readings were collected - Weekend					21	No structures Detected
1/13/02	No respirable particulate readings were collected - Weekend					21	No structures Detected
1/14/02	127	29 and 35	4 - 27	0	0	21	No structures Detected
1/15/02	127	79 and 83	16 - 71	60	3	21	No structures Detected
1/16/02	127	12 and 13	4 - 23	0	0	21	No structures Detected
1/17/02	127	45 and 53	10 - 40	0	0	21	No structures Detected
1/18/02	127	27 and 34	7 - 34	0	0	21	No structures Detected
1/19/02	No respirable particulate readings were collected - Weekend					21	No structures Detected
1/20/02	No respirable particulate readings were collected - Weekend					21	No structures Detected
1/21/02	No respirable particulate readings were collected - Martin Luther King Day					21	No structures Detected
1/22/02	100	21 and 21	10 - 26	0	0	21	No structures Detected
1/23/02	98	29 and 30	10 - 22	0	0	21	No structures Detected
1/24/02	126	62	7 - 25	0	0	21	No structures Detected
1/25/02	113	62 and 64	7 - 18	0	0	21	No structures Detected
1/26/02	No respirable particulate readings were collected - Weekend					21	No structures Detected
1/27/02	No respirable particulate readings were collected - Weekend					21	No structures Detected
1/28/02	107	69 and 72	8 - 43	2	0	21	No structures Detected
1/29/02	106	71 and 77	10 - 39	0	0	21	No structures Detected
1/30/02	105	54 and 62	17 - 32	0	0	21	No structures Detected
1/31/02	104	21 and 31	12 - 35	0	0	21	No structures Detected
2/1/02	93	31 and 36	15 - 32	0	0	21	No structures Detected
2/2/02	No respirable particulate readings were collected - Weekend					21	No structures Detected
2/3/02	No respirable particulate readings were collected - Weekend					21	No structures Detected
2/4/02	121	33 and 36	14 - 25 / 19	0	0	21	No structures Detected
2/5/02	124	42 and 48	11 - 23 / 17	0	0	21	No structures Detected
2/6/02	123	32 and 36	14 - 22 / 18	0	0	21	No structures Detected

STUYVESANT HIGH SCHOOL															
Date	LEAD-IN-WIPE-DUST SAMPLE			MERCURY	PCBS	SILICA (RESPIRABLE DUST)		FIBERGLASS		HYDROCARBONS		DIOXINS WIPE SAMPLE		METALS	
	# of Sample	Lead Conc. On Floor (ug/ft ²)	Lead Conc. On Window Sill (ug/ft ²)			Mercury Conc. (3 samples per day) (ng/m ³)	Concentration (3 samples per day) (ng/cm ²)	Range of Indoor Conc. (11 samples per day)	Range of Outdoor Conc. (1 sample day)	Results (10 samples per day)	Indoor Readings (2 samples per day)	Outdoor Reading (1 sample per day)	Indoor Surfaces Range of Conc. (2 samples per day) (ng/m ³)	Air Plenum Conc. (1 sample per day) (ng/m ³)	Indoor Readings (2 samples per day) (ng/m ³)
10/18/01	18	Swimming Pool = 46.1 Cdn. = 45.8	Below Guidance Level			No silica found above detection limit on 6 samples	No silica found above detection limit	Fiber glass was detected on 14 samples							
10/19/01						No silica found above detection limit on 10 samples	No silica found above detection limit								
10/20/01	5	All five area samples and field blanks results are below the OSHA Action Level of 30 ug/ft ²													
10/24/01	21	Below Guidance Level	Below Guidance Level			9 th Floor hallway = 0.017 mg/m ³	No silica found above detection limit	No fiberglass was detected on 15 samples							
10/25/01						No silica found above detection limit	No silica found above detection limit								
10/31/01	17	Below Guidance Level	Below Guidance Level			No silica found above detection limit	No silica found above detection limit	Non Detected							
11/02/01	17	Below Guidance Level	Below Guidance Level					Non Detected							
11/03/01									Hexane = 0.125 ppm (above detection limit)	None detected above limits of detection	0.001-19 to 0.001-19	0.031-4	Aluminum = 0.031-0.002 Chromium = 0.0002	Below limit of detection	
11/14/01	17	Below Guidance Level	Below Guidance Level		Below reporting limit of 2 ug/sample			Non Detected	Hexane = 0.184 ppm (above detection limit)	None detected above limits of detection	0.001-4 to 0.001-4	0.031	Below limit of detection	Chromium = 0.0003 Iron = 0.001	
11/15/01						Room 1035 = 0.023 mg/m ³ (Above Detection Limit)	No silica found above detection limit								
11/16/01				0.000191 to 0.000222		No silica found above detection limit	No silica found above detection limit								

STUYVESANT HIGH SCHOOL														
Date	LEAD-IN-WIPE-DUST SAMPLE			MERCURY	PCB'S	SILICA (RESPIRABLE DUST)		FIBERGLASS	HYDROCARBONS		DIOXINS WIPE SAMPLE		METALS	
	# of Sample	Lead Cont. On Floor (ug/m ²)	Lead Cont. On Window Sill (ug/m ²)			Mercury Conc. (3 samples per day) (ug/m ³)	Concentration (3 samples per day) (ug/cm ²)		Range of Indoor Conc. (11 samples per day)	Range of Outdoor Conc. (1 sample day)	Results (10 samples per day)	Indoor Readings (2 samples per day)	Outdoor Readings (1 sample per day)	Indoor Surfaces Range of Conc. (2 samples per day) (ug/m ²)
12/24/01				0.000179 to 0.000223	Below reporting limit of 2 ug/sample	No silica found above detection limit	No silica found above detection limit		None detected above limits of detection	None detected above limits of detection	0.00013 to 0.00044	0.0230	Chromium 0.0002 to 0.0011	None - 0.0004
12/21/01	17	Below Guidance Level	Below Guidance Level					None Detected						
12/27/01						No silica found above detection limit	No silica found above detection limit		None detected above limits of detection	None detected above limits of detection			Chromium 0.0001 to 0.0011	Below limit of detection
12/28/01	17	Below Guidance Level	Below Guidance Level		Below reporting limit of 2 ug / sample			None Detected			0.00015 to 0.00054	0.0115		
12/29/01					Below reporting limit of 2 ug / sample						0.00006 to 0.00026	0.0116		Levels of airborne metals did not exceed the limit of detection except for the blank sample with trace amount of chromium
12/30/01	17	Below Guidance Level	Below Guidance Level			No silica found above detection limit	No silica found above detection limit	None Detected	None detected above limits of detection	None detected above limits of detection				
12/31/01	17	Below Guidance Level	Below Guidance Level	Mercury was not detected in any of the samples at a level greater than in a blank		No silica found above detection limit	No silica found above detection limit	None Detected	None detected above limits of detection	None detected above limits of detection	0.00006 to 0.00046	0.0116	Chromium 0.0001 to 0.0011 found in 1 st floor main lobby, blank - 0.021, manganese per filter.	
12/14/02	17	Below Guidance Level	Below Guidance Level	0.000330 to 0.000289	Below reporting limit of 2 ug / sample	No silica found above detection limit	No silica found above detection limit	None Detected	Total Other B Hydrocarbons = 0.061 ppm	None detected above limits of detection	0.00006 to 0.00026	0.0116		None of the metals in the analytical panel were present at levels above the limits of detection
12/24/02	17	Below Guidance Level	Below Guidance Level	0.000210 to 0.000302	Below reporting limit of 2ug / sample	No silica found above detection limit	No silica found above detection limit	None Detected	None detected above limits of detection	None detected above limits of detection	0.00006 to 0.00046	0.0116		None of the metals in the analytical panel were present at levels above the limits of detection

STUYVESANT HIGH SCHOOL														
	LEAD-IN-WIPE-DUST SAMPLE			MERCURY	PCB'S	SILICA (RESPIRABLE DUST)		FIBERGLASS	HYDROCARBONS		DIOXINS WIPE SAMPLE		METALS	
Date	# of Sample	Lead Conc. On Floor (ug/m ²)	Lead Conc. On Window Sill (ug/m ²)	Mercury Conc. (3 samples per day) (ng/m ³)	Concentration (3 samples per day) (ug/cm ²)	Range of Indoor Conc. (11 samples per day)	Range of Outdoor Conc. (1 sample day)	Results (10 samples per day)	Indoor Readings (2 samples per day)	Outdoor Reading (1 sample per day)	Indoor Surfaces Range of Conc. (2 samples per day) (ug/m ²)	Air Plenum Conc. (1 sample per day) (ng/m ³)	Indoor Readings (2 samples per day) (ng/m ³)	Outdoor Reading (1 sample per day) (ng/m ³)
10/2/02	17	5 th Floor Conc. = 95.3 P th Floor Lobby = 116.8	3 rd Floor Area Conc. = 599.94					Non Detected						
10/5/02	9 (400-1 after cleanup)	Below Guidance Level		0.00021 to 0.00042					None detected above limits of detection	None detected above limits of detection	0.00030 and 0.00049	0.03	None at the metals in the analyzed wipe area process at levels above the limit of detection.	
1/4/02						No silica found above detection limit	No silica found above detection limit							
1/7/02	17	Below Guidance Level		0.000477 to 0.000375	Below reporting limit of 2 ug / sample	2 nd floor lobby = 0.944 ug/m ² Room 260 = 0.0133 ug/m ²	No silica found above detection limit	Non Detected	None detected above limits of detection	None detected above limits of detection	0.000356 and 0.00017	0.0019		
1/16/02	17	Below Guidance Level		0.000292 to 0.000302				Non Detected	None detected above limits of detection	None detected above limits of detection			The levels of asbestos metals did not exceed the limits of detection in any of the samples except for observations in the following locations: 1 st floor main lobby (0.00513 ug/m ³), 2 nd floor lobby near bridge entrance (0.00473 ug/m ³), roof air intake (0.00638 ug/m ³), and 11 th floor sample QP 296 (0.0009 ug/m ³ per filter)	
1/18/02					Below reporting limit of 2 ug / sample									
1/23/02	17	Below Guidance Level		Mercury was not detected in any of the samples at a level greater than in the blank	Below reporting limit of 2 ug / sample			Non Detected	None detected above limits of detection	None detected above limits of detection				The levels of asbestos metals did not exceed the limits of detection in any of the samples except for chromium which was also found in the blank.
01/29/02														
1/30/02	17	Below Guidance Level						Non Detected						